

**INDIAN TARIFF BOARD**

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**Written and Oral Evidence**

**recorded during enquiry into the**

**PAPER AND PAPER PULP  
INDUSTRIES**

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**Volume I**



DELHI: MANAGER OF PUBLICATIONS  
1939

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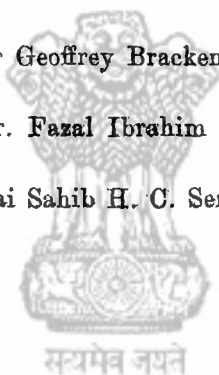
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1. No. 202-T. (1)/36.

GOVERNMENT OF INDIA.

DEPARTMENT OF COMMERCE.

*New Delhi, the 11th December, 1937.*

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RESOLUTION.

TARIFFS.

The protection afforded to the Paper and Paper Pulp Industries by the Bamboo Paper Industry (Protection) Act, 1932, will determine on the 31st March, 1939. A subsidiary enquiry into the question of classification of paper for tariff purposes was held by the Tariff Board in 1935 and, the action taken upon the Board's recommendations having resulted in a not inconsiderable extension of the range of protection previously enjoyed by the Indian paper-making industry, the Government of India decided to review the necessity or desirability of maintaining the extra measure of protection which was fortuitously afforded by the imposition of the revenue surcharge of 25 per cent. in 1931. This matter has accordingly been enquired into departmentally, but, owing to the complicated nature of the data to be examined and in view of the imminence of this further enquiry by the Tariff Board into the whole question of protection to the industry, the Government of India have taken no action in regard to the surcharge.

2. The Tariff Board is now requested to re-examine the question of the protection enjoyed by the paper and paper pulp industries in India and to report what protective measures (if any) should be continued after the 31st March, 1939.

3. If the Tariff Board is satisfied during the course of its investigations that the revenue surcharge on the paper protective duties is no longer justifiable it will be at liberty to make its recommendations in this behalf in advance of its main report.

4. In making its recommendations the Tariff Board will take all relevant considerations into account including those stated in parts (b) and (c) of the Resolution adopted by the Legislative Assembly on the 16th February, 1923.

5. Firms or persons interested in the paper-making industry or in industries dependent on the use of paper who desire that their views should be considered by the Tariff Board should address their representations to the Secretary to the Board.

## **2. Press Communiqué issued by the Tariff Board on the 23rd December, 1937.**

The Tariff Board has been requested by the Government of India to re-examine the question of the production enjoyed by the Paper and Paper Pulp Industries in India and to report what protective measure (if any) should be continued after the 31st March, 1939. The terms of the Resolution No. 202-T. (1)/36, dated the 11th December, 1937, are as follows:—

“ The protection afforded to the Paper and Paper Pulp Industries by the Bamboo Paper Industry (Protection) Act, 1932, will determine on the 31st March, 1939. A subsidiary enquiry into the question of classification of paper for tariff purposes was held by the Tariff Board in 1935, and the action taken upon the Board's recommendations having resulted in a not inconsiderable extension of the range of protection previously enjoyed by the Indian paper-making industry, the Government of India decided to review the necessity or desirability of maintaining the extra measure of protection, which was fortuitously afforded by the imposition of the revenue surcharge of 25 per cent. in 1931. This matter has accordingly been enquired into departmentally, but, owing to the complicated nature of the data to be examined and in view of the imminence of this further enquiry by the Tariff Board into the whole question of protection to the Industry, the Government of India have taken no action in regard to the surcharge.

“ 2. The Tariff Board is now requested to re-examine the question of the protection enjoyed by the Paper and Paper Pulp Industries in India and to report what protective measure (if any) should be continued after the 31st March, 1939.

“ 3. If the Tariff Board is satisfied during the course of its investigations that the revenue surcharge on the paper protective duties is no longer justifiable it will be at liberty to make its recommendations in this behalf in advance of its main report.

“ 4. In making its recommendations the Tariff Board will take all relevant considerations into account including those stated in parts (b) and (c) of the Resolution adopted by the Legislative Assembly on the 16th February, 1923.

“ 5. Firms or persons interested in the paper-making industry or in industries dependent on the use of paper who desire that their views should be considered by the Tariff Board should address their representations to the Secretary to the Board.”

2. Firms or persons interested in the Enquiry should submit written representations embodying such views as they wish the Board to take into consideration not later than the 25th January, 1938, to the Secretary, Tariff Board, 1, Council House Street, Calcutta.

**3. Circular letter No. 22, dated the 6th January, 1938, from the Tariff Board, to Manufacturers, Importers and Traders.**

With reference to the Government of India, Department of Commerce, Resolution No. 202-T. (1)/36, dated the 11th December, 1937, asking the Tariff Board to enquire into the desirability of continuing measures for the protection of the Bamboo Paper and Paper Pulp Industries after 31st March, 1939, when the present protective duties expire, I am directed to enclose a set of questionnaires issued to (a) Manufacturers, (b) Importers and Traders and (c) Newspapers, printers and publishers, and to request you to fill up any questions in which you are interested. The Board would be grateful if you could send your replies (with four spare copies) at an early date and in any case not later than the 31st January, 1938, addressed to the Secretary, Tariff Board, 1, Council House Street, Calcutta.

2. Since you had probably collected a good deal of information in connection with the classification of paper for tariff purposes which will be of assistance in answering the present questionnaires it is hoped that you will be able to send your replies within the date indicated. You will observe that the questions are on lines similar to the questions issued by the Tariff Board in 1931. A few modifications have been made and some additional questions added. For convenience of reference the questions are, as far as possible, numbered in the same way as in 1931. Apart from new questions what the Board require in the main is that information supplied during the Tariff Board enquiry of 1931 and 1936 should be brought up to date.

3. The Board propose to begin the taking of oral evidence early in February.



### Questionnaire for manufacturers.

1. Please state—

- (a) whether your concern is a public or private registered or unregistered firm;
- (b) if registered, whether it is registered in India or abroad and whether the capital is rupee or sterling capital;
- (c) the proportion of Indian shareholders in the Company and the shares held by Indians;
- (d) the extent to which Indians are represented on the Directorate and in the superior management of the Company.

Please specify the changes, if any, which have occurred in this respect since 1931-32.

2. What is the total capacity of your mills as at present equipped for the manufacture of (a) pulp and (b) paper?

3. What has been the actual output of the mills for each year since 1931-32 of (a) pulp and (b) paper?

4. Enumerate the chief classes of paper manufactured in your mills. What is the average percentage of the total output which each represents? Are there possibilities of manufacturing any other classes of paper?

5. What has been your annual consumption since 1931-32 of each of the primary materials? Please fill up Form I.

6. What is your estimate, according to recent experience, of the quantity of each of the primary materials required for one ton of (a) pulp and (b) paper?

7. What is your opinion on the availability of bamboo, grass and other indigenous materials and their suitability for the manufacture of paper?

8. Has there been any substantial change since 1931-32 as regards (a) the sources from which your primary materials are drawn, (b) the methods of collection and transport and (c) the terms of your concessions?

9. Please give for each year since 1931-32 the cost per ton delivered at the mill of bamboo and grass under the following heads:—

- (a) Cutting, carting and baling;
- (b) Railway freight;
- (c) Rent or royalty;
- (d) Other charges.

10. Have the present rates of railway freight on coal, bamboo, grass and other materials caused any special hardship to the industry? If so, please give particulars and state whether you have taken any action in the matter.

11. Please state the process of manufacture of pulp from—

- (a) bamboo,
- (b) grass,
- (c) other indigenous materials.

Please fill up Forms II and III. In regard to bamboo, please state—

- (a) whether the acid or the alkali process is more suitable;
- (b) the total capacity of the mill for the production of bamboo pulp;
- (c) the total output of bamboo pulp for each year since 1931-32;
- (d) modification in plant and machinery undertaken since 1931-32 or proposed;
- (e) the total expenditure incurred on modifications;
- (f) the provision for increased supplies of raw bamboo;



- (g) the cost at which bamboo can be delivered at the mill;
- (h) the extent to which coal consumption can be reduced;
- (i) the extent to which the cost of chemicals can be reduced;
- (j) the possibility of improving the quality of paper produced.

12. Please give a statement for each year since 1931-32 showing—

- (a) the quantity of each kind of foreign pulp imported by you;
- (b) the countries from which imported;
- (c) the port of importation;
- (d) f.o.b. price per ton of each kind;
- (e) freight, insurance, etc.;
- (f) landing charges, etc.;
- (g) transport charges to mill.

N.B.—If f.o.b. prices cannot be given, please give c.i.f. prices.

13. The Tariff Board in their last enquiry found that a small quantity of imported pulp was indispensable to the industry for some classes of paper. Please state the minimum quantity of imported pulp required in your mill for each class of paper and the purpose for which you need it.

14. What classes of paper are manufactured without the admixture of imported pulp and how do they compare with imported paper of similar qualities?

15. To what causes are variations in the price of wood pulp due? What do you estimate to be the probable trend of prices during the next few years?

16. Please give a brief account of the progress made by you since 1931-32 in the manufacture of paper from indigenous materials other than bamboo, specially in regard to quality.

17. Please fill up Form IV relating to auxiliary materials. According to your present practice what is the quantity of each of the auxiliary materials required per ton of finished paper?

18. As compared with the position in 1931-32, are the auxiliary materials more readily available in India at present? How does the quality and price compare with imported materials?

19. Please state what auxiliary materials can be recovered in the process of manufacture and what the percentage of recovery is, e.g., Soda. What improvements have you effected in recovery since 1931-32?

20. Please estimate the labour force employed in the extraction and collection of primary materials during the past six years.

21. Please give the details of the labour employed in your mill and the salaries paid during the past six years.

22. What progress has been made since 1931-32 in the substitution of Indian for imported labour and in the facilities given to Indian workmen to acquire training in skilled work? Please state how many apprentices you have employed.

23. What arrangements have you made for housing your labour? Please state what steps you have taken for promoting its welfare in other directions such as improved water supply, medical attendance, education, recreation.

24. Please state fully the changes, if any, which have occurred since the last Tariff Board enquiry in the arrangements for the supply of power in your mills, especially as regards (a) source of power, (b) cost and (c) consumption per unit of finished paper.

25. What do you estimate to be at present—

- (1) the total Indian production of paper:
- (2) the total Indian demand for—
  - (a) protected papers.
  - (b) unprotected papers.

26. Are there any possibilities of developing a market for Indian made pulp for paper or other purposes (a) in India and (b) abroad? What are the possibilities of establishing pulp mills? What are the possibilities of manufacturing mechanical pulp in India?

27. What has been the effect of the protective duty on wood pulp on (a) the paper industry in India and (b) the development of any other industry?

28. Please state in respect of those classes of paper which form the bulk of your output the prices at which imported paper has entered the country (the c.i.f. price, landing and other charges and duty to be shown separately).

29. Compare the railway freights paid by importers from the ports to selected up-country markets and the railway freights paid on the produce of your mill to the same market.

(N.B.—What is desired is concrete instances giving the name of the port, the names of the up-country stations, the distances, rates per maund per mile, etc.)

30. Please state for each year since 1931-32 the price realised by you for each principal class of paper manufactured.

(N.B.—The net price realised ex-factory should be given in each case. Please enclose samples.)

31. Please prepare a statement showing the prices at which during the past six years the products of your mill have been sold at up-country centres as compared with places in the vicinity of your factory. Do the former generally correspond with the latter if allowance is made for freight to destination? If not, please explain the reasons for the difference.

32. If the price realised by you for any class of paper is higher or lower than the price of the corresponding class of imported paper, please explain the reasons for the difference.

33. Have you any reason to suppose that prices at which foreign producers sell for export to India are unremunerative, i.e., below the cost of production, or leaving only a small margin of profit to the producer? If so, please state fully your reasons and the evidence on which you rely.

34. In which of the Indian markets is foreign competition keenest?

35. Is there any difference in price between bamboo paper and paper made from other indigenous materials? If so, how far is this difference due to quality and how far to other considerations?

36. Has there been any marked variation in quality of the various classes of paper produced by you since 1931-32? If so, please explain the nature and causes of such variation. Please also state the quantity of paper supplied to the Central and Provincial Governments and to State and other Railways and the price realised for each class of paper so supplied during the past six years.

37. To what extent, if any, have you been adversely affected by the application of the existing test for determining "Printing Paper" for Customs purposes? What remedies would you suggest either by way of modifications of the existing test or by other methods? Have you any suggestions to make about the adoption of a "sizing" test to distinguished between writing and printing paper?

38. Have you adopted since 1931-32 any new process of manufacture or installed new plant and machinery in replacement of or in addition to the old plant? If so, give a brief description of them and state whether the results have fulfilled the expectations entertained.

39. Please state the sums spent by you on extensions or alterations of plant and machinery since 1931-32 for (a) pulp and (b) paper. To what extent was the expenditure under (a) due to the special requirements of bamboo pulp?

40. Do you contemplate any important replacement or extension of the plant? If so, please give particulars.

41. What is the block value of your property as it stood in your books at the end of the last complete year for which figures are available under the following heads:—

- (a) leases and concessions:
- (b) lands:
- (c) buildings:
- (d) plant and machinery:
- (e) other assets.

42. What do you estimate would be the present day cost under the heads (1) buildings and (2) plant and machinery for erecting a mill having the same capacity as your mill?

43. Please state for each year since 1931-32—

- (1) the amount written off for depreciation:
- (2) the amount of reserve fund created, if any, either from surplus profits or from other sources.

44. Please prepare a statement showing for each year since 1931-32—

- (a) the amount of the paid up share capital ranking for dividend:
- (b) the actual amount distributed as dividends on each class of capital:
- (c) the percentage on the paid up share capital of each class which the dividend represented.

45. Please send copies of your balance sheet for each year since 1931-32.

46. Has the Company raised any debenture or other loans since 1931-32? If so, at what dates were they raised and what is the rate of interest payable? Please state amounts at present outstanding.

47. Please fill up the two Forms V and VI annexed to the questionnaire relating to the cost of manufacture.

48. Please estimate what further reductions in the present cost of manufacture are possible under each head on the assumption that conditions are normal and a full output is obtained.

49. Please furnish an estimate of—

- (1) the average value of the stocks of primary and auxiliary materials, stores and finished goods held by the Company,
- (2) the average outstandings in respect of goods sold by the Company.

50. What are your arrangements for the provision of working capital?

51. If you consider that protection should be continued, please state (i) in what form, (ii) at what rate and (iii) on what classes of paper protection should be granted in future. Please explain fully the grounds upon which your answers are based.

52. To what extent do you claim that the efficiency of manufacture in your mill has improved as judged by (1) reduction in the cost of production of (a) pulp and (b) paper, (2) by reduction in losses in the process of manufacture and (3) by improvement in the quality of the paper produced?

53. If protection is to be continued, do you consider that the classification of paper proposed by the Tariff Board in 1936 is satisfactory? Have you any modifications or simplifications to suggest?

54. It is open to the Tariff Board to make recommendations in regard to the existing surcharge on protective and revenue duties in advance of their main recommendations. Please state your views.

55. Please prepare a statement showing—

- (a) the effect of replacing protective duties by revenue duties on the finances of your Company, and
- (b) the effect of removing the existing surcharge (see Appendix IV of the last Tariff Board report).

N.B.—Please state, where necessary, whether the figures given are on a bone dry or air dry basis. If on a bone dry basis, please give the conversion rate to the air dry basis.

Form I.—*Primary Materials.*

1921-22.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.

*Bamboo—*

- (1) Quantity of material used . . . . .
- (2) Quantity of finished paper which material represents . . . . .
- (3) Percentage of (2) on the total quantity of paper manufactured . . . . .

*Grass—*

- (1) Quantity of material used . . . . .
- (2) Quantity of finished paper which material represents . . . . .
- (3) Percentage of (2) on the total quantity of paper manufactured . . . . .

*Waste-paper and Paper Cuttings—*

- (1) Quantity of material used . . . . .
- (2) Quantity of finished paper which material represents . . . . .
- (3) Percentage of (2) on the total quantity of paper manufactured . . . . .

*Other Indigenous Materials—*

- (1) Quantity of material used . . . . .
- (2) Quantity of finished paper which material represents . . . . .
- (3) Percentage of (2) on the total quantity of paper manufactured . . . . .

*Total Indigenous Materials—*

- (1) Quantity of material used . . . . .
- (2) Quantity of finished paper which material represents . . . . .
- (3) Percentage of (2) on the total quantity of paper manufactured . . . . .

*Imported Paper—*

- (1) Quantity of material used . . . . .
- (2) Quantity of finished paper which material represents . . . . .
- (3) Percentage of (2) on the total quantity of paper manufactured . . . . .

**Form II.—Total Expenditure incurred on the Production of Bleached Pulp.**

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Rs.	%	Rs.	%	Rs.	%
1. Primary materials (N.B.—Expenditure on each material to be shown separately as well as the quantity of each used.)						
2. Chemicals and other auxiliary materials (N.B.—Expenditure on each principal material, including bleaching material, to be shown separately as well as the quantity of each used.)						
3. Power and fuel						
4. Current repairs and maintenance						
5. Labour						
6. Supervision and establishment						
7. Any other items in cost of manufacture						
<b>Total</b>						
8. Insurance						
9. Rents, rates and taxes (excluding income-tax)						
10. Depreciation at statutory rates						
11. Interest on working capital						
12. Head office expenses and managing agents' commission						
13. Miscellaneous						
<b>Total</b>						
<b>Grand Total</b>						

Total output of pulp for the year in tons

N.B.—Overhead charges (items 8-13) will have to be apportioned as between pulp and paper.  
If Depreciation is calculated at rates different from the statutory rates, please state the rates.

III.—Cost per ton of Bleached Pulp.

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Rs.	%	Rs.	%	Rs.	%
1. Primary materials . . . . .						
(N.B.—Expenditure on each material to be shown separately as well as the quantity used.)						
2. Chemicals and other auxiliary materials . . . . .						
(N.B.—Expenditure on each principal material, including bleaching material to be shown separately as well as the quantity of each used).						
3. Power and fuel . . . . .						
4. Current repairs and maintenance . . . . .						
5. Labour . . . . .						
6. Supervision and establishment . . . . .						
7. Any other items in cost of manufacture . . . . .						
Total						
8. Insurance . . . . .						
9. Rents, rates and taxes (excluding income-tax) . . . . .						
10. Depreciation at statutory rates* . . . . .						
11. Interest on working capital . . . . .						
12. Head office expenses and managing agents' commission . . . . .						
13. Miscellaneous . . . . .						
Total						
Grand Total						
Total output of pulp for the year in tons . . . . .						

\* If depreciation is calculated at rates different from the statutory rate please state the rates.

## Form IV.—Auxiliary Materials.

1931-32. 1932-33. 1933-34. 1934-35. 1935-36. 1936-37.  
Tons. Price. Tons. Price. Tons. Price. Tons. Price. Tons. Price. Tons. Price.  
Rs. Rs. Rs. Rs. Rs. Rs.  
Per ton. Per ton. Per ton. Per ton. Per ton. Per ton.

*Pulpmaking material—*

Quantity of material used—

- (a) Indian . . . . .  
(b) Imported . . . . .

*Bleaching material—*

Quantity of material used—

- (a) Indian . . . . .  
(b) Imported . . . . .

*Loading materials—*

Quantity of material used—

- (a) Indian . . . . .  
(b) Imported . . . . .

*Sizing material—*

Quantity of material used—

- (a) Indian . . . . .  
(b) Imported . . . . .

*Any other auxiliary material—*

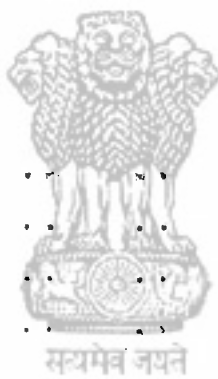
Quantity of material used—

- (a) Indian . . . . .  
(b) Imported . . . . .

*Total auxiliary materials—*

Quantity of material used—

- (a) Indian . . . . .  
(b) Imported . . . . .



**FORM V.—Total Expenditure incurred on the Production of Paper.**

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
	%	%	%	%	%	%

**Manufacturing expenses—**

1. Primary materials  
(N.B.—Expenditure on each material to be shown separately as well as the quantity of each used.)
2. Imported pulp
3. Auxiliary materials  
(N.B.—Expenditure on each principal material to be shown separately as well as the quantity of each used.)
4. Power and fuel
5. Current repairs and maintenance
6. Labour
7. Supervision and establishment—  
(a) salaries of technical staff  
(b) salaries of non-technical staff
8. Packing
9. Any other items in cost of manufacture
- Total

**Overhead charges—**

10. Selling expenses
11. Insurance
12. Rents, rates and taxes (excluding income-tax)
13. Depreciation at statutory rates
14. Interest on working capital
15. Head office expenses and managing agents' commission
16. Miscellaneous
- Total
- Grand Total

Total output of paper for the year in tons

N.B.—If depreciation is calculated at rates different from statutory rates, please state the rates.



**Form VI.—Works cost per ton of Finished Paper.**

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Rs.	%	Rs.	%	Rs.	%

**Manufacturing expenses—**

1. Primary materials  
(N.B.—Expenditure on each material to be shown separately as well as the quantity of each used.)
2. Imported pulp
3. Auxiliary materials  
(N.B.—Expenditure on each principal material to be shown separately as well as the quantity of each used.)
4. Power and fuel
5. Current repairs and maintenance
6. Labour
7. Supervision and establishment—  
(a) salaries of technical staff
- (b) salaries of non-technical staff
8. Packing
9. Any other items in cost of manufacture

**Overhead charges—**

10. Selling expenses
11. Insurance
12. Rates, taxes and taxes (excluding income-tax)
13. Depreciation at statutory rates
14. Interest on working capital
15. Head office expenses and managing agents' commission
16. Miscellaneous

Total

Grand Total

Total output of paper for the year in tons

N.B.—If depreciation is calculated at rates different from the statutory rates, please state the rates.

### Questionnaire for Importers and Traders.

1. Please state the prices at which the principal classes of imported paper which compete with Indian made paper have entered the country since 1931-32. Please state also the current price of each class of paper. The c.i.f. price, landing and other charges and duty should be stated separately in each case.
2. Please state the corresponding prices at which the principal classes of Indian made paper which compete with imported paper have been sold. Please enclose samples of each class of imported and Indian paper.
3. Is there any difference between the price realised by Indian mills for any class of paper and the price of the corresponding class of imported paper? If so, please explain the reasons for the difference.
4. Compare the railway freight paid by you from port to selected up-country markets and the railway freights paid on the produce of Indian mills to the same markets.  
(N.B.—What is desired is concrete instances giving the name of the port, the names of the up-country stations, the distances, rate per maund per mile, etc.)
5. Have you any reason to suppose that prices at which foreign producers sell for export to India are unremunerative, i.e., below the cost of production, or leaving only a small margin of profit to the producer? If so, please state fully your reasons and the evidence on which you rely.
6. In which of the Indian markets is foreign competition keenest?
7. Please prepare a statement showing the prices at which during the past six years the products of Indian mills have been sold at up-country centres as compared with places in the vicinity of factories.
8. Is there any difference in price between paper made from bamboo and paper made from other indigenous materials? If so, how far is the difference due to quality and how far to other considerations?
9. Has there been any marked variation since 1931-32 in the quality of the various classes of paper manufactured by Indian mills? If so, please explain the nature and causes of such variation.
10. To what extent has the quality of Indian made paper improved in the last six years?
11. Do you wish to make any representations on the methods adopted by the Customs Department for the appraisement of the dutiable value of imported paper?
12. To what extent, if any, have you been adversely affected by the existing tests for determining the amount of mechanical pulp in paper and for distinguishing between "Printing" and "Writing" paper. Have you any proposals to make about the modification of the existing tests or the introduction of new methods, e.g., a "Sizing" test to distinguish between printing and writing paper?
13. What has been the effect of the duty on imported wood pulp? What has been the effect of the variations in prices of imported wood pulp?
14. What, in your opinion, is likely to be the trend of prices of imported wood pulp and imported paper during the next few years?
15. What is your opinion on the possibility of developing a market for Indian made pulp for paper or other purposes (a) in India and (b) abroad? What, in your opinion, are the possibilities of establishing pulp mills?
16. What do you estimate to be at present—
  - (1) the total Indian production of paper:
  - (2) the total Indian demand for
    - (a) protected papers:
    - (b) unprotected papers?

17. What other industries are affected by protective duties on paper?

18. What are your views on the continuance of protection for the paper industry? If you consider that protection should be continued please state in what form. Please explain fully the grounds upon which your answers are based.

19. If protection is to be continued, do you consider that the classification of paper proposed by the Tariff Board in 1936 is satisfactory? Have you any modifications or simplifications to suggest?

20. It is open to the Tariff Board to make recommendations in regard to the existing surcharge on protective and revenue duties in advance of their main recommendations. Please state your views.



### Questionnaire for Newspapers, printers and publishers.

1. Please furnish a statement showing the quantity of paper used since 1931-32 under the following heads:—

(a) Imported.

(b) Indian.

2. How far has the quality of Indian paper improved and for what purposes can it be used?

3. What has been the effect of protection on the printing and publishing industries?

4. Has the cost of paper affected the amount of printing and publishing done in India? Please quote instances, if any.

5. To what extent are printed sheets unbound imported for the purpose of binding in India in order to evade Customs duty?

6. To what extent, if any, have you been adversely affected by the application of the existing tests for determining newsprint for Customs purposes? Have you any modifications to suggest?

7. What other industries are affected by protective duties on paper?

8. If you consider that protection should be continued, please state (i) in what form, (ii) at what rate, and (iii) on what classes of paper protection should be granted in future. Please explain fully the ground upon which your answers are based.

9. If protection is to be continued, do you consider that the classification of paper proposed by the Tariff Board in 1936 is satisfactory? Have you any modifications or simplifications to suggest?

10. It is open to the Tariff Board to make recommendations in regard to the existing surcharge on protective and revenue duties in advance of their main recommendations. Please state your views.



#### 4. India Paper Pulp Company, Limited, Calcutta.

##### A.—WRITTEN EVIDENCE.

(1) *Letter, dated the 31st January, 1938.*

We have pleasure in enclosing four copies of our replies to the Board's questionnaire, together with four sets of files containing the Company's Balance Sheets\* and samples of the paper it manufactures. We also enclose four copies of the Rules of the Company's Provident Fund.

##### REPLIES TO THE QUESTIONNAIRE FOR PAPER MANUFACTURERS.

1. (a) At the time of the last Tariff Board Inquiry in 1931 the India Paper Pulp Co., Ltd., was a private registered Company as stated in our evidence. Consequent, however, on the recommendations made by the Board in 1931 the Company was converted into a Public Registered Company in June 1933. No new capital was issued but existing shares were offered for sale and such sales were confined in the first instance to Indian Investors.

(b) The India Paper Pulp Co., Ltd., is registered in India with rupee capital.

(c) On 31st December, 1937, the Company's shares were held as follows:—

	Shares held.	Per cent.
(1) European . . . . .	25,254	84
Indian . . . . .	4,746	16
	<hr/>	<hr/>
	30,000	100
	<hr/>	<hr/>
	Number of shareholders.	Per cent.
(2) European . . . . .	29	16
Indian . . . . .	153	84
	<hr/>	<hr/>
	182	100
	<hr/>	<hr/>

(d) The Company has one European and two Indian Directors. In addition the superior management includes one Indian salesman in the Head Office, an Indian Forest Manager, one Indian Machineman, one Indian Engineer in charge of the Power Plant, and three senior grade chemists beside Assistant chemists. All these appointments have been made since 1931.

2. (a) Actual production in 1936-37 was only 4,834 tons bone-dry pulp, but there have since been additions to the plant which we estimate will shortly be capable of producing 6,000—6,500 tons per annum (bone-dry).

(b) The present capacity of our Mills for paper is approximately 6,600 tons per annum.

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\* Not published.

3. Our output since the year 1931-32 has been as follows:—

	Production of Dry Pulp at 44 per cent. yield from bamboo (tons).	Production of paper (tons).
1931-32 . . . . .	2,515	6,069
1932-33 . . . . .	2,478	5,868
1933-34 . . . . .	2,327	5,834
1934-35 . . . . .	3,168	6,261
1935-36 . . . . .	4,747	6,069
1936-37 . . . . .	4,834	6,435
	<u>20,069</u>	<u>37,136</u>

4. The chief classes of paper manufactured in our Mills are machine finished writings and printings and we give below the total quantity of each kind of paper produced by us from 1931-32, together with the average percentage of the total represented by each.

Our Mill was originally built to manufacture papers of the classes given and we consider it would not be economical to undertake in it the manufacture of other classes of paper.

*Analysis of Production of paper from 1931-32 to 1936-37, inclusive Bleached Writings and Drawing papers.*

	Quantity (tons)	Per cent. of whole.
Cream Laid . . . . .	17,694	47.65
Cream Wove . . . . .	253	0.68
Azure Laid and Wove . . . . .	1,681	4.53
Account Book . . . . .	682	1.84
White Cartridge . . . . .	269	0.72
Banks . . . . .	333	0.89
Tinted Writings . . . . .	387	1.04
Unbleached Cartridge . . . . .	40	0.11
Other sorts . . . . .	1	...
Total Bleached Writings and Drawing Papers . . . . .	<u>21,340</u>	<u>57.46</u>

*Bleached Printing Papers.*

	Quantity (tons).	Per cent. of whole.
White Printing . . . . .	9,764	26.29
Antique Laid and Wove . . . . .	323	0.87
Coloured Printing . . . . .	47	0.13
Duplicating . . . . .	486	1.31
Superior Badami . . . . .	260	0.70
Semi Bleached (Government) . . . . .	766	2.06
Other sorts . . . . .	7	0.02
Total Bleached Printing Papers . . . . .	<u>11,653</u>	<u>31.38</u>

*Bleached papers other than Printings, Writings and Drawing papers.*

	Quantity (tons).	Per cent. of whole.
Blottings (white and coloured) . . . . .	78	0·21
Pulp Boards (white and coloured) . . . . .	468	1·26
Other sorts . . . . .	7	0·02
<b>Total Bleached other than Printings, Writings and Drawing Papers . . . . .</b>	<b>553</b>	<b>1·49</b>

*Unbleached Papers.*

	Quantity (tons).	Per cent. of whole.
Unbleached Printing . . . . .	1,787	4·81
Common Badami . . . . .	1,293	3·48
Other sorts . . . . .	2	0·01
<b>Total Unbleached Papers . . . . .</b>	<b>3,082</b>	<b>8·30</b>
Wrapper for our own use in packing paper . . . . .	508	1·37
<b>GRAND TOTAL . . . . .</b>	<b>37,136</b>	<b>100·00</b>

5. As desired we attach Form I showing the consumption of primary materials in the manner required by the Board.

The quantity of finished paper represented by each material consumed has been calculated on the following arbitrary yield figures—

	Per cent.
1. Bamboo . . . . .	42
2. Paper Cuttings . . . . .	80
3. Rags . . . . .	80
4. China Clay . . . . .	75
5. Wood Pulp . . . . .	86

7. Our opinion regarding the total quantities of Bamboo available for the manufacture of paper remains unaltered since the last enquiry. Our view is that there is ample bamboo available to cover any possible development of the Industry for many years to come. We regret we are unable to express an opinion regarding the availability of grass and other indigenous materials as we are interested in bamboo only.

In our opinion Bamboo, of which we now have 16 years experience, is entirely suitable for the manufacture of the protected classes of paper commonly used in India.

8. (a) *Source of Bamboo supply.*—In 1931 we informed the Board that we had obtained supplies of bamboo from Chittagong at approximately the same cost as from Assam. At the same time we envisaged the possibility of obtaining supplies from the forests of Bihar and Orissa at rates cheaper than from Assam and Chittagong. Our late Forest Manager made various tours in Bihar and Orissa as a result of which we were able to negotiate for our requirements with Contractors in these Provinces. Supplies of an

experimental nature were made in 1930-31, and in 1932-33 we commenced making regular purchases. By 1935-36 the bulk of our bamboo requirements were being obtained from Bihar and Orissa and only a small proportion from Assam. About this time, however, with a view to obtaining supplies at still cheaper rates we turned our attention to Bengal. The result has been that supplies drawn from the provinces of Bihar, Orissa and Assam have diminished while supplies from our home province of Bengal have increased. We are now in touch with numerous contractors in this Province and we anticipate that the future will see the bulk of our bamboo requirements being drawn from Bengal.

(b) *Methods of collection and Transport.*—There has been no change in the method of collection of our bamboo since the date of the last Tariff Inquiry. In regard to transport, the bulk of our bamboo is now carried by rail traffic from the despatching station to Naihati by the East Indian Railway and the Eastern Bengal Railway. We are continuing to extract a proportion of our requirements from Assam and this traffic is handled by the Assam Bengal Railway and the Eastern Bengal Railway *via* Mymensingh and Santahar. Small supplies of bamboo are also sent forward by the Bengal Nagpur Railway from a few stations in Orissa. In view of the proximity of certain bamboo supply areas to our Mill we find it more convenient to take delivery of supplies from these areas by bullock cart direct into the Mill.

(c) *Terms of Concessions.*—We have made no changes in our leases since we last gave evidence before the Board.

9. In our answer to question 8 we explained that our bamboo supplies are drawn from Assam, Bihar and Bengal, and we therefore attach a statement showing (Form VII) the required figures separately under these three heads.

All our supplies of bamboo are purchased from contractors at an inclusive rate delivered to our Mills and it is not possible therefore for us to give actual figures for cutting, carting, baling, etc. In regard to Assam and Bihar and Orissa, however, we obtained certain figures from our late Forest Manager for the years 1931-32 to 1934-35 and which we believe may be regarded as substantially correct. For 1935-36 and 1936-37 the figures given have been estimated. In the case of Bengal, we have taken supplies from this Province only during the last three years and reliable detailed figures relative to cutting, carting, etc., are not yet available.

10. We do not consider that the present rates of Railway freights on coal, bamboo and other materials have caused any special hardship to the Industry.

11. (a) *Process of Manufacture.*—The process of manufacture of bamboo pulp by the Sulphite process consists of five main operations—

- (1) Bamboo preparation.
- (2) Acid making.
- (3) Cooking.
- (4) Washing.
- (5) Straining.

(1) *Bamboo Preparation.*—Bamboo is prepared for the Digesters either by chipping or crushing and we demonstrated the various methods and machines for the purpose during the Board's visit to our Mills.

(2) *Acid Making.*—The acid liquor is prepared by passing Sulphur Dioxide (prepared by burning Sulphur in a rotary burner) after cooling through a suspension of magnesia in water forming Sulphite of Magnesia in an excess of SO<sub>2</sub>, i.e., more SO<sub>2</sub> is absorbed than is actually necessary to combine with the magnesia. The SO<sub>2</sub> in combination as Magnesia-sulphite is referred to as combined SO<sub>2</sub> while the excess over this amount present is called free SO<sub>2</sub>.



(3) *Cooking*.—The next stage is cooking. The prepared bamboo is loaded into the digester and the necessary acid is pumped in. The digester is closed and the temperature is slowly raised by admitting steam to the vessel.

The digester consists of a mild steel shell lined with acid resisting brick. Our digesters are each 42 ft. over all and the original digesters have a capacity of 2,818 c. ft. each while the two newer digesters are each of 3,771 c. ft. capacity.

The pressure is raised to 70 lbs. gauge. Previously we used higher pressures but we find we are getting better results by keeping the temperature low and increasing the cooking time. With the better prepared bamboo which we hope to obtain from the new crusher we expect to decrease the cooking time or to reduce the cooking temperature—possibly both.

The cooking process is controlled by test samples of liquor drawn from the digester from time to time and gas and steam are relieved from the top of the digester at intervals.

When the test indicates that the cooking is complete the pressure is reduced and contents of the digester are blown off to the blow pit.

The blow pit consists of a large wooden tank with a false bottom. The false bottom on which the pulp is retained usually consists of perforated stainless steel sheets. The liquor containing the various non-cellulose materials present in the bamboo in solution drains through the perforations leaving the bamboo pulp behind.

(4) *Washing*.—Thereafter the pulp is given a number of washes in the tank and is then cut out by a high pressure jet of water and pumped into the storage chests. From these chests the pulp is again pumped to the sand tables over which it flows mixed with a large volume of water settling out any grit or other foreign material in transit.

(5) *Straining*.—From the sand-tables the pulp passes to the strainers. These consist of four rows of flat screens with cuts varying from .009 to .01. The good pulp passes through these slits and any unresolved fibre is retained. The good pulp is pumped to the concentrator where the water is extracted and the concentrated pulp drops into the storage chest ready to be taken across to the bleaching towers as required.

(b) We are unable to give any information on this portion of the question as we have never used grass and our plant is not suitable for using this material.

(c) The only other indigenous material we use is rag but the quantity used is so small that we believe the Board will not require any detailed description of the process. The pulp is usually produced by cooking the rag with soda ash and lime after which the pulp is washed and broken ready for addition to the beaters as required.

#### FORMS II AND III.

We have completed Forms II and III which will be found at the end of the volume.

In these forms we have shown the cost of Unbleached Pulp as this is the basis on which our records have all along been prepared. Apart from the actual cost of the bleach used there is little extra cost in bleaching since stores and labour in this stage do not exceed Rs. 1-8 per ton.

With regard to Bleach we have maintained figures of the cost per ton of bleached paper made. Since .44 tons pulp are required to make .42 tons paper it follows that for every ton bleached paper made we must have bleached 44/42 tons pulp. If therefore we multiply our bleach cost per

ton paper made by 42/44 we arrive at the bleaching cost per ton bone-dry unbleached pulp as follows:—

(A) *Bone-dry*—

	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37
Cost of bleach (42/44 of paper cost) .	19·02	20·67	18·66	20·24	17·85	17·80
Labour and Stores (Estimated) .	1·50	1·50	1·50	1·50	1·50	1·50
Total Bleach cost .	20·52	22·17	20·16	21·74	19·35	19·30
Cost of unbleached pulp .	195·46	197·07	186·42	166·15	149·72	148·28
Total cost .	215·98	219·24	206·58	187·89	169·07	167·58

Similarly the bleaching cost for air-dry pulp can be obtained by multiplying the above figure by 90/100 as follows:—

(B) *Air-Dry*—

	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37
Bleaching cost .	18·47	19·95	18·14	19·57	17·41	17·37
Cost of unbleached pulp . . .	175·92	177·36	167·78	149·54	134·75	133·45
Total cost .	194·39	197·31	185·92	169·11	152·16	150·82

Of the loss from 44 to 42 between unbleached pulp and paper we estimate 75 per cent. takes place in the bleaching stage. This is equivalent to a bleaching loss of 3·4 per cent. on the unbleached pulp, and by increasing the above figures proportionately we get the following final figures for the cost of bleached pulp.

	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37
Bone-Dry . . .	223·58	226·96	213·85	194·50	175·02	173·48
Air-Dry . . .	201·23	204·25	192·46	175·06	157·52	156·14

With special reference to bamboo we have pleasure in replying to the Board's questions as follows:—

(a) *Acid and Alkali Processes*.—The acid process only is used in our Mills and we therefore regret we are unable to express an opinion regarding the suitability of the alkali process.

(b) *Mill Capacity*.—As explained in our reply to Question No. 2 our Pulp Plant has been extended and we estimate that the full capacity of this plant for the production of bamboo pulp is between 6,000 tons and 6,500 tons per annum (bone-dry pulp).

(c) *Output of Pulp.*—The total output of bamboo pulp since 1931-32 has been as follows:—

	Tons.
1931-32 . . . . .	2,515
1932-33 . . . . .	2,478
1933-34 . . . . .	2,327
1934-35 . . . . .	3,168
1935-36 . . . . .	4,747
1936-37 . . . . .	4,834
	<hr/>
	20,069

(N.B.—These figures are for Dry Pulp.)

(d) *New Plant.*—We have installed four new flat Strainers to deal with our unbleached pulp. The cut in these Strainers is much finer than in the drum strainers originally used and the result is a cleaner product. Strainers of the type installed in our Mills are almost universally used in the United States and in Canada and also to a large extent in Europe.

We have also installed two new Digesters with a cubic capacity greater than the original digesters. The new digesters have their own independent blow pits circular in shape and which are each capable of taking a charge of two cooks. Our original Digesters have also been relined throughout.

A complete new acid plant to deal with the increased requirements of the Mill has been installed and a new pump and rotary sulphur burner have been ordered as spares for the new plant. Two new acid tanks providing the necessary additional storage have also been installed.

A New Bamboo Crusher is being erected which we hope will effect economy in operation and lead to improvement in our cooking practice. Previous to this further machines of the kinds mentioned in the previous enquiry were installed as well as others of different kinds.

Other additions and improvements to the Pulp side of our business include the followings:—

A new Bamboo elevator, additional Bamboo godowns, extended siding and Weighbridges, a Wet Pulp machine and modern sand tables to deal with the unbleached pulp.

A new experimental stainless steel digester has recently been installed. This unit has enabled us to carry out experiments on a semi-commercial scale which would have been impossible with our existing large capacity digesters.

We have also erected a new general and research laboratory for co-ordinating chemical control in the Mill with new developments.

In addition to the above the Power Plant extensions given in answer to Question 24 and those to the Water Supply Plant given in answer to Question 38 have been mainly necessary as a result of our Pulp Plant Extensions.

In addition to the above we have had in view the following possible additions in connection with our Pulp Plant:—

- (1) Equipment to enable us to adopt the hot acid system with pre-circulation in our cooking process.
- (2) Equipment to enable us to use forced circulation in our cooking process.
- (3) A 2-stage Pulp Bleaching Plant.
- (4) An Electrolytic Chlorine Plant.

These four additions were provisionally decided upon as a result of investigations made by our Mill Manager in North America in 1936. He found that improved qualities of Stainless Steel have made possible the wide use of hot acid and forced circulation systems in Canada and the United States. He also found that 2-stage bleaching appeared to be the most up-to-date system in general use, and that bleaching in the first stage was usually effected by the use of chlorine, and that bleaching powder was used only in the second stage. Since chlorine was not available in India and it was found that the cost of importing this gas in cylinders would be prohibitive, the adoption of this bleaching process would have necessitated our installing our own plant for the manufacture of chlorine.

With regard to the Hot Acid and Forced Circulation equipment, it was eventually decided to postpone a decision in view of the fact that a similar Mill was at that time under construction in Trinidad in which it was proposed to incorporate the equipment necessary for these methods. We should explain that while these systems have been proved successful in the case of wood cooked with a lime base, they have not been applied on a practical scale in the cooking of bamboo with a magnesia base. It was therefore considered wise to wait until the results obtained in the Trinidad Mill were available. If successful, they could then be incorporated in our Mill, but if for any reason they were found to be of little or no benefit we would in this way avoid having incurred unnecessary capital expenditure. The Mill in Trinidad has now commenced operation but it has only been working a short time and the data available is insufficient to enable us to come to any conclusion. Our intention, however, still is that if and when data from Trinidad justifies such a step, we will order the necessary equipment for our Mill.

With regard to the bleaching equipment, we are considering alternative methods, namely whether continuous or stage by stage bleaching is desirable. The question is, moreover, inter-dependent with the availability of chlorine. Our requirements of chlorine would require such a small plant as to be hardly an economic unit, and owing to the difficulty of storage, the stand-by plant necessary would add considerably to the initial cost. We accordingly postponed our decision on learning that there was a possibility of a Company being floated in Bengal to manufacture chlorine and caustic soda. We are now glad to say that this Company has been formed and hopes to commence manufacture in 1939. We believe they will be able to supply us with chlorine at or below the equivalent of the price we are now paying for Bleaching Powder, but it will still be open to us to instal our own plant later if it is to our advantage to do so.

(e) *Cost of New Plant.*—The expenditure on the above additions already made has amounted to Rs. 75,000 for Buildings, and Rs. 4,86,700 for Machinery, a total of Rs. 5,61,700, apart from the cost of additions to Power and Water Supply Plant. The total cost of the latter, most of which was directly due to the Pulp Plant extensions, was Rs. 4,40,800. Our total expenditure in connection with our Pulp Plant Extensions has therefore been approximately Rs. 10 lacs, while the estimated cost in 1936 for the four main additions then under consideration amounted to a further Rs. 8 lacs.

(f) *Provision for increase in Bamboo Supplies.*—Despite the increase in our consumption of bamboo from 5,700 tons in 1931-32 to 10,700 tons in 1936-37 we have not found it necessary to make any special provision to meet our increased demands of this material. In 1931 we advised the Board that there would be no difficulty in meeting all our requirements of bamboo from Assam alone and, at the same time, indicated that if supplies from other areas could be economically used an even wider field would be opened out. Since that time we have carried out an intensive programme of touring in the Provinces of Bihar and Orissa and Bengal and we are now in a position to state that in each of these Provinces there is ample bamboo to meet all our possible requirements for many years to come. Our investigations in these Provinces have been carried out, not from any fear that

supplies from Assam might possibly be exhausted but, in an endeavour to obtain the material at cheaper rates from areas nearer our Mills. In the past Railway freights over long leads have tended to assist in keeping up the price of bamboo but to-day this factor no longer exists owing to our ability to obtain supplies from areas considerably nearer the Mills than the areas of Assam.

(g) *Reduction in Cost of Bamboo.*—In the case of Assam we have reduced the cost of bamboo from Rs. 42 per ton in 1931-32 to Rs. 29 per ton in 1936-37 while in Bihar and Orissa the price has been reduced from Rs. 26 per ton in 1931-32 to Rs. 19 per ton in 1936-37. We have been operating for three seasons only in Bengal and prices have varied between Rs. 18-8 and Rs. 14-8. The lowest rate quoted for Bamboo delivered to our Mill has been Rs. 13-8. In the case of Assam a moisture allowance of 10 per cent. has to be added to the prices given.

(h) *Coal Consumption.*—We hope to reduce our coal consumption for pulp to 1 ton per ton bamboo consumed. This can be attained by obtaining better digester loading, and the modified form of cooking referred to later whereby the ratio of the volume of acid to bamboo is reduced, should make a further contribution. An additional decrease would also be effected by the introduction of the hot acid system already mentioned.

(i) *Chemical Consumption.*—We hope to be able to reduce our Chemical consumption to:—

2 cwt. Sulphur per ton dry Bamboo.

1.65 cwt. Magnesia per ton dry Bamboo.

2.47 cwt. Bleach per ton Bleached Paper.

Our development programme has been based on attaining three main objects—

- (1) The utilisation of the cheapest possible raw material.
- (2) The preparation of the best possible pulp from the point of view of colour, bleachability, strength and regularity.
- (3) The production of this quality with minimum cost in chemicals, coal and time.

From the point of view of cost the result which would give us the quickest and greatest return was the possibility of utilising the cheaper local bamboo. At the time of the previous inquiry we had only two digesters and could produce less than half the pulp we required for our machines. The first step was naturally the extension of our pulp producing equipment. The plant purchased has already been detailed, and the new Digesters were ready to start at the end of 1934.

A long series of cooks have been run off particularly during the past year in an attempt to obtain improved strength and chemical economy even with some sacrifice of bleaching. While the first two were secured to a certain extent the sacrifice in colour and increased cost of bleaching more than counterbalanced any benefit obtained and we have now made a further modification which promises much better yield, chemical economy, and better bleachability than any previous efforts. At the same time it gives better strength.

The basis of our process is the preparation of an acid in combination with a fairly high percentage of base. In the ordinary sulphite process as applied to wood a small proportion of base is combined with the highest possible proportion of sulphur dioxide in solution, i.e., with a liquor containing a high percentage of free  $\text{SO}_2$ . This is necessary as the material to be removed to isolate the cellulose is largely lignin which at moderately high temperatures forms a soluble addition product with  $\text{SO}_2$  and goes into solution.

In grass treatment on the other hand the usual method of treatment is by means of an alkali as the impurity to be removed from this substance is largely pectin which is acidic in re-action and forms a soluble product with alkali bases.

Bamboo is intermediate between the two in chemical composition although it belongs to the "grass" family, and contains approximately equal proportions of pectins and lignins. The object of our process is to deal with these two products in one direct overhead process and for this we use an "acid" which contains only a relatively small proportion of free  $\text{SO}_2$ . The free  $\text{SO}_2$  does the initial resolution, the base combines with the pectins to form a soluble salt, while the  $\text{SO}_2$  is in turn liberated to attack and combine with further lignin. These compounds remain in solution and the object of our present series of experiments is to find the optimum quantities of each. The method now being adopted promises to give a reduction in the quantity of  $\text{SO}_2$  passed to the atmosphere. At the same time the low acidity of the liquor being used should be less destructive on the cellulose and give a stronger pulp, and by lowering the temperatures we have also rendered less drastic the action on the cellulose although this has lengthened the cooking time.

The cooks with the increased base have also less tendency to "char" than our previous cooks with less base and higher free  $\text{SO}_2$ . This is a valuable asset as it renders cooking more flexible and renders the pulp less liable to rapid deterioration at the end point should the blow be held up for any reason.

A further advantage of this modified cooking is that it enables us to increase the loading of the digesters as the volume of acid per unit weight of bamboo has been reduced by 13 per cent. and the loading being slightly increased makes a combined reduction of over 16 per cent. in the ratio of acid to Bamboo in the cook.

As a result of the above we are confident that the consumption of chemicals can be materially reduced. The consumption of sulphur is still much too high owing to the fact that we have not been able to introduce any sulphur recovery system and have not been able up to a very short time ago to reduce the sulphur in any other way. We have continuously tried to do so but have always been forced back to the higher consumption to obtain satisfactory results.

This line of procedure was indicated as the result of a series of experimental cooks and the methods which were successful on an experimental scale have been transferred to the large scale digesters with apparent success.

Up till six months ago we had no experimental digester and all cooking alterations had to be done on a mill scale and if our experiment was not successful, it resulted in increased mill difficulties, upsets and increased costs or the equivalent reduced selling price for our product. As mill operations had to be maintained this work of necessity progressed very slowly and frequently had to be entirely held up. We have now installed an experimental digester which holds  $\frac{1}{4}$  ton of bamboo and is completely equipped with the latest modifications for sulphite cooking, and in addition we have built a research laboratory which is very completely equipped and contains all necessary pulp evaluation plant. This has undoubtedly greatly increased our ability to investigate pulp and paper problems and enable us to progress on the right lines without upsetting Mill programmes.

Magnesia as previously pointed out is not likely to be materially affected. The indication of our experiments has been that a slight increase in magnesia might be necessary but that this would be more than justified by the greater economies effected in other directions.

Quite apart from any other consideration we hope that the improved crushing which should result from the starting up of the new crusher will give us further chemical economy by permitting more rapid penetration and quicker cooking.

The present bleach consumption is undoubtedly much too high and has been maintained particularly during the last 12 months at a high figure in an attempt by slightly undercooking to get other improvements at the expense of bleach. The objects particularly aimed at in this connection were

a reduction in chemical cost and an improvement in yield, and while the chemical saving has to some extent been achieved the additional bleaching cost has been too high in relation to any possible economy in other chemicals. Our present line of work definitely shows the promise of reduced sulphur consumption combined with a reduced bleach consumption and if we can get this particularly in conjunction with an improved yield the question of magnesia consumption becomes definitely less important.

(j) *Quality of Paper.*—The possibility of still further improving the quality of paper produced is undoubted. There is no doubt whatever that bamboo produces cellulose of excellent colour, and that the fibre has great original strength. Although much progress has been made since 1931 we are not satisfied with the present strength of our paper but are sure that it is only a question of time before we can produce Bamboo Pulp which will be capable of being used alone for any normal quality of paper. It can be quite safely stated that Bamboo Pulp is a first class paper making fibre.

12. In our evidence at the 1931 Inquiry we stated that the Foreign Pulp imported by us had been of two kinds, namely, Easy Bleaching Sulphite Wood Pulp and Strong Bleachable Sulphite Wood Pulp. We have continued to import these qualities since 1931 from Norway, Sweden, Finland and North America and the quantities purchased each year are shown in the statement (Form VIII) attached. The cost of these purchases is also given in this statement in the manner required by the Board. All pulp is purchased by us c.i.f. Calcutta.

13. We still require a small proportion of wood pulp for special qualities. This can be greatly reduced below present consumption, which is used to maintain output apart from the actual quantity necessary for quality. The minimum quantity required varies from month to month but for the next 3 or 4 years we would put this at an average of 60 tons per month and certainly not more than 100 tons per month.

The papers which require an admixture of wood pulp are our supplies to Government of India, Bank Paper, Azure Laid and Account Book Papers, and special makings of light weight where high strength is required.

We hope, however, to gradually reduce this minimum quantity of imported wood pulp and eventually eliminate it entirely.

14. The following papers are manufactured without the admixture of imported pulp. Very often at present these papers do contain a percentage of imported pulp not because it is necessary on account of quality but to maintain production owing to our own pulp supply not being yet fully adequate.

- (1) White and Coloured Printings.
- (2) Cream Laid.
- (3) Tinted Writings.
- (4) Duplicator (Bazar quality).
- (5) Superior and Common Badamies.
- (6) Pulp Boards.
- (7) Antique Wove and Laid.

These papers are quite comparable with the normal quality of imported papers of the same class.

15. Variations in the price of wood pulp result mainly from fluctuations of supply and demand in world markets.

Chemical wood pulp is used chiefly in the manufacture of paper and artificial silk, and the demand for commodities of this kind, which form part of the daily expenditure of individuals, will necessarily fluctuate sharply in accordance with general world prosperity or otherwise. A sudden increase in demand for these commodities may temporarily outrun production capacity and cause an abrupt rise in pulp prices, while a sudden fall in demand may cause rapid accumulation of pulp stocks and a sharp decline in pulp

prices. We therefore regard the price of wood pulp as liable to wide and sudden fluctuation coincident with the rise or decline in world prosperity.

We have received from a leading Swedish Pulp Broker the following mean figures for the price of Easy Bleaching Sulphite Pulp on a c.i.f. Calcutta basis for the years 1913-35 inclusive, and for certain months in 1936 and 1937. These are as under:—

	£	s.	d.		£	s.	d.
1913 . . . . .	11	3	9	1927 . . . . .	14	2	6
1914 . . . . .	10	18	9	1928 . . . . .	13	2	6
1915 . . . . .	12	17	6	1929 . . . . .	13	11	3
1916 . . . . .	15	18	9	1930 . . . . .	14	1	3
1917 . . . . .	20	16	3	1931 . . . . .	10	17	6
1918 . . . . .	20	10	0	1932 . . . . .	10	0	0
1919 . . . . .	30	7	6	1933 . . . . .	10	10	0
1920 . . . . .	36	0	0	1934 . . . . .	9	10	0
1921 . . . . .	16	0	0	1935 . . . . .	8	18	9
1922 . . . . .	19	0	0	1936 January . . . . .	9	0	0
1923 . . . . .	14	0	0	1936 June . . . . .	9	10	0
1924 . . . . .	14	0	0	1936 December . . . . .	13	0	0
1925 . . . . .	14	15	0	1937 March . . . . .	16	10	0
1926 . . . . .	15	0	0	1937 July . . . . .	19	5	0

Prices have since declined and in November we were offered Scandinavian Easy Bleaching Sulphite Pulp for 1939 delivery at £17 10s. c.i.f.

The average price for 1913-14 was £11, for the post war years 1921-30 it was £14 15s. and during the years of depression 1931-35 it was £10.

The violent fluctuations which took place in 1920-21, 1922-23, 1930-31, and between June 1936 and July 1937, illustrate how difficult it is to forecast future prices, but we believe that the fair selling price of Easy Bleaching Sulphite Pulp, based on present cost plus reasonable profit, would probably be between £14 10s. and £15 10s. per ton c.i.f. Calcutta, i.e., between the average for the post war years 1921-30, and the average price for the 23 years 1913-35 inclusive. At the same time the experience of the last two years alone shows a variation as wide as from £9 to £19.

The Tariff Board arrived at the conclusion, in 1931, that it was reasonable to anticipate a shortage and consequent rise in the price of wood for pulp manufacture but that there was not sufficient evidence to justify an attempt to say within what period this was likely to materialise. We are not aware of any change in circumstances which necessitates any reconsideration of their conclusion, except in so far as the following statistics indicate that the period, whatever it may be, within which shortage may be expected to become apparent is likely to be shorter than would have appeared probable seven years ago.

Year.	World wood pulp production.
	Short tons.
1931 . . . . .	16,700,000
1932 . . . . .	15,700,000
1933 . . . . .	17,500,000
1934 . . . . .	19,600,000
1935 . . . . .	20,800,000
1936 . . . . .	23,200,000



Since writing the above, however, we have received the following from a gentleman in England in close touch with the Pulp Market. About £1 would have to be added to the figures to make them comparable with ours but even so it is clear how widely prices differ on this most difficult question.

"It is impossible to predict with confidence the trend of Pulp prices, but I give you for what they are worth, my ideas, and trust they may be of some service to you.

"The current slump in America has caused most marked falling off in Wood Pulp prices, and with the very large increase of pulp production in the Southern States this would indicate that prices will immediately fall by a very substantial amount.

"As far it is known to me, a fair economic selling price for pulp delivered to this country might be about £11 or £12 per ton. Given normal world conditions I personally think this will be approximately the ruling price for some time ahead."

Another view, from a leading London firm of Pulp Brokers is that the market will stabilize around £14 to £15 on a c.i.f. Calcutta basis.

16. Our plant has been specially designed for the treatment of bamboo and we have had no occasion to use other indigenous materials. We are, therefore, unable to express any opinion regarding this subject.

17. As desired we have completed Form IV in the manner required by the Board.

The figures for 1936-37 are the latest available for a complete year. In the case of Sulphur and Magnesite, however, we have taken out figures for the period of six months ended 30th September, 1937, and the consumption per ton Bamboo has been reduced to 2.23 cwt. and 1.596 cwt. per ton respectively. Taking the yield from Bamboo to finished paper as 42 per cent., these figures represent 5.31 cwt. and 3.80 cwt. respectively per ton paper.

18. There has been little change in the availability of our materials in India but generally speaking there has been an improvement in quality and price compared with imported materials.

Since the last Inquiry we have continued to purchase the following materials exclusively in India:—

Magnesite.

China Clay.

In regard to Alum, at the last Inquiry we advised the Board that the local manufacturers were uncertain concerning future deliveries and in consequence we had been compelled to purchase this material from abroad. Subsequently, however, our local suppliers made arrangements by which it has been possible for us to obtain locally the whole of our requirements of Alum.

Supplies of the above have been obtainable at prices which compare favourably with imported prices, and price for price the quality is satisfactory.

Rosin of excellent quality is obtainable locally and since its price generally compares favourably with foreign prices, we have been able to purchase Indian Rosin almost exclusively. We have however bought foreign Rosin on one or two occasions when we considered the extra price asked for Indian Rosin was to our disadvantage.

The following auxiliary materials are still unobtainable in India and in consequence are imported from abroad:—

Sulphur.

Bleaching Powder.

The remaining raw materials used in our process consist of:—

Soda.

Starch.

Glue.

Dyes and sundries.

These items are purchased locally, but we believe they are all imported products which are not manufactured in India.

19. The only auxiliary material which is capable of being recovered on practical considerations is the Sulphur Dioxide relieved from the digesters.

The recovery is not so important with us as in the normal sulphite process as applied to wood, as the quantity capable of being recovered is smaller due to the lower free  $\text{SO}_2$  in our "acid". This possible recovery is further reduced owing to the modified cooking now being carried on as in the new application the free  $\text{SO}_2$  is reduced to little more than half the previous figure. Some recovery is possible but to be practicable it would require to be a method simple in operation and inexpensive in cost to justify installation under present circumstances. It is possible that the results in the Trinidad Mill will in due course throw further light on this question.

20. In 1931, we advised the Board that it was impossible for us to give actual figures of the labour force employed in collecting primary materials and this position still holds good to-day. However, on the same basis as was taken in 1931, i.e., that the purchase of 9 tons of bamboo is equivalent to providing work for 2 men throughout the season, the labour employed in collecting our requirements since 1931-32 has been approximately as follows:—

	Men.
1931-32 . . . . .	999
1932-33 . . . . .	1,357
1933-34 . . . . .	2,232
1934-35 . . . . .	3,101
1935-36 . . . . .	2,258
1936-37 . . . . .	1,986

21. The total Indian labour force employed in our Mill since 1931-32 is given below:—

Year.	Men employed.
1931-32 . . . . .	710
1932-33 . . . . .	680
1933-34 . . . . .	690
1934-35 . . . . .	690
1935-36 . . . . .	730
1936-37 . . . . .	800
	(approximately).

These figures are averages for the year, and the actual number fluctuates to some extent in accordance with requirements, particularly the quantity of Bamboo purchased.

For the year 1936-37 the labour force was constituted approximately as follows:—

Chargemen in responsible positions (i.e. in charge of beaters, machines, etc.) . . . . .	35
Mistries and trained men . . . . .	300
Boys and Apprentices . . . . .	45
Coolies . . . . .	390
Clerical staff . . . . .	30
	<hr/>
	800

The total wages paid for Mill labour was as follows:—

	Rs.
1931-32 . . . . .	2,11,727
1932-33 . . . . .	2,07,709
1933-34 . . . . .	2,13,731
1934-35 . . . . .	2,14,562
1935-36 . . . . .	2,29,277
1936-37 . . . . .	2,47,677
	<hr/>
	13,24,683

22. Since 1931-32 we have replaced one European Head Office salesman by an Indian salesman who has in fact been in entire charge of sales for the past nine months.

On the death of our late Forest Manager two years ago we substituted an Indian Forest Manager in his place.

We have also been able to replace one of our two European Machinemen with an Indian who served his apprenticeship in our Mill.

On the Engineering side the extension to our plant have necessitated an increase in staff. At the time of the last Inquiry we employed one European Chief Engineer and one Anglo-Indian Assistant Engineer. The European Engineer is still with us but he now has two assistants one of whom is European and one Indian.

The extension of our pulp plant and general growth of the Mill has made it impossible for our Manager, who also formerly combined the position with that of Chief Chemist, to retain the same personal direction of chemical control. We therefore considered it necessary to engage a separate qualified Chemist with two Assistants. We have accordingly appointed three senior grade Indian Chemists in addition to the junior Chemists previously employed.

Of the two apprentices mentioned in our evidence in 1931, one left us of his own accord, after completion of his apprenticeship, to better his prospects, and we believe subsequently found employment with one of the projected new mills. The other is still with us and is the machineman who has replaced one of our Europeans.

Since the last enquiry we have taken 15 senior grade apprentices of whom 5 are still with us although two of them are still on probation. Two of these apprentices will complete their apprenticeship this year and we have every hope of finding suitable vacancies for them when the time comes.

Of those who left, one left us after three years at his own request to complete his training abroad. Another was removed by his guardian on our suggestion as his health was not strong and our Mill Doctor advised us that if he continued his health might permanently suffer. Another was obliged to leave owing to lung trouble.

Of the remainder, four found the work uncongenial and left after a few months, while three failed to show sufficient promise and we did not feel justified in retaining them beyond a few months.

Since the last enquiry we have built special quarters for senior grade apprentices and their status and living conditions have been based generally on those adopted in the case of senior grade apprentices at Jamalpur which the East Indian Railway kindly permitted us to visit for the purpose. We were also kindly permitted to visit the Government Ordnance Factory at Ishapore and received from the Tata Iron & Steel Co., Ltd., particulars of their apprenticeship scheme, and we were also able to base our own scheme on these to some extent.

Apart from the practical instruction which we are able to give at the Mill we have been able to arrange with the Forest Research Institute at

Dehra Dun to give courses of theoretical and laboratory instruction to apprentices and junior staff. The Officer-in-charge of the Paper Pulp Section has kindly taken great personal interest in organising and making possible these courses of instruction.

In addition when we have found that any of our apprentices would benefit by so doing we have arranged for them to attend courses of instruction, at our expense, at the Calcutta Technical School, who have also kindly taken great trouble in selecting suitable courses of instruction.

In addition to the senior apprentices referred to above we have instituted a form of junior apprenticeship to provide our Mill with skilled labour of a more intelligent and educated type and who will have grown up with the Company from the very beginning. It is our intention that these men will eventually correspond more or less to the senior foremen class in English Factory.

23. Since the last Tariff Board Inquiry no additions have been made to our cooly lines other than minor improvements of a general nature. We have recently built four houses of modern design for the Indian machine mistries and three houses in European style for senior Indian members of the staff. The three houses under construction referred to in our evidence at the last Inquiry were completed and have been occupied for some time. We have also constructed new quarters for our senior apprentices as already mentioned. We give below details of the quarters available for the different classes of labour.

The three houses in European style for our senior Indian Assistants each comprise 3 living rooms, verandah, 2 bath-rooms, kitchen and store room. The apprentice's quarters consist of 8 bedrooms, 1 common room, 1 dining room, kitchen and pantry, and 2 bathrooms. These rooms are constructed in a single line building with a wide verandah running its full length. The quarters are fully furnished by the Company, each Apprentice having his own room, provided with a bed, an almirah, chest of drawers, chair, writing desk, table fan, etc. The Company also provide the requisite servants for these quarters. A tennis court for the benefit of our Indian staff is under construction and will be ready in the near future.

For the senior Indian clerical and Mill staff we have supplied some houses with 5 rooms in each and some houses with 4 rooms in each. These houses are all self-contained and possess their own central court yards.

The cooly lines consist of 72 pucca rooms and 62 kutcha rooms and in addition we have 10 kutcha rooms for Mill sweepers and 12 servants quarters.

We have under consideration a further building scheme for the more adequate housing of our employees, and the land has been levelled and drained in readiness.

The water supply for our labour has been further improved and is supplied from a tube well thus ensuring absolute purity. We have also provided additional water taps in the cooly lines and in the Mill compound.

We have recently completed plans for the installation of up-to-date sanitary latrines and a complete activated sludge plant for the Mill and Cooly lines, and this scheme would be now complete if sanction had not been delayed by the Municipality.

The dispensary and isolation room referred to by us at the last Inquiry continues to render valuable services to such of our staff who may require treatment. A qualified doctor with a compounder and dresser to assist him give free medical attention to all our employees, and serious cases are taken into the Imambarah Hospital free in return for an annual contribution from the Company. Our almost complete immunity from serious epidemic disease is, we think, sufficient evidence of the care taken to protect the health of our workers.

A Provident Fund scheme was recently instituted in the Mill for the benefit of all Indian employees and, although the fund was only started on 1st October 1937, we already have 496 members out of a total of 837 employees. We enclose a copy of the rules of this Fund which we think may be of interest to the Board.

At the time of the last enquiry, the land on which our Indian staff quarters are situated was badly in need of improved drainage. Although we felt and still feel that the fault lay with the failure of the Municipality to provide and maintain adequate Municipal drainage, we found ultimately that it was necessary to do the work ourselves. The question was complicated by the fact that if, in installing any internal system of drainage, we also dealt with any drainage from Municipal land, the whole of our private drainage system would be liable to Municipal interference at some future date. If on the other hand we arranged to discharge our drainage into the Municipal drainage scheme, it was quite certain that the inadequacy of the latter would render the whole scheme useless. To overcome both difficulties, it was necessary for us to instal a double drainage scheme at our own expense by which drainage from the Municipal roads which intersect our property would be discharged into the Municipal drains and to handle our own drainage under an entirely separate scheme lying entirely within our property and discharging direct into the river. The expenditure on this scheme was considerable and took time but it has made a very great difference to the living conditions of our labour.

24. We installed in the early part of 1937 a double pass out turbine manufactured by Messrs. Fraser & Chalmers. This turbine is operated by steam at 220 lbs., pressure 650° F. total temperature and is capable of generating a maximum of 1875 K.W. This machine is designed to pass out steam for process at 105 lbs., and 25 lbs., gauge pressure. The former—H. P. steam is used for process steam for digestors and for driving the machine engines. The L. P. pass out is used to make up steam for the machine drying cylinders should the supply from the engines at any time prove inadequate, or should we replace the machine engines by an electric motor drive.

Unfortunately a short time after this turbine was put in operation we had an accident which resulted in one of the power wheels of the turbine rotor being stripped of blading and two diaphragms were damaged. The wheel was turned down and the two diaphragms removed to allow of the turbine continuing in operation. This is now running quite satisfactorily although naturally not at its full designed efficiency. The spare wheel and diaphragms are now in transit and will be fitted on the machine as soon as they arrive.

We are, for the above reasons, unable to give any data as to the results which will be obtained from this machine. All the auxiliary units for this turbine are in duplicate, i.e., oil coolers, circulating pumps, extraction pumps, etc., to protect us as far as possible from any interruption in running. We have also the 1100 K.W. pressure turbo alternator which was previously our only source of power, as a stand-by set.

Our switchboard has been extended and an automatic voltage regulator incorporated.

We have also installed an extra watertube boiler of 25,000 lbs., steam capacity per hour. This unit is by Messrs. Babcock & Wilcox and generates steam at 220 lbs., pressure 650° F. final temperature and is fitted with automatic stokers, superheated and integral economiser.

An induced draft fan was also installed to give more flexibility to our steam raising units.

A further watertube boiler of the same capacity as the above has been ordered and will shortly be installed. This will complete our steam requirements for the moment and will permit us to run normally with two boilers.

on range with one off for cleaning and repair. This will give us the opportunity, which we have not hitherto had, of adequate time for cleaning and maintenance.

Our demand for power has increased from 700 K.W. in 1931 to an average of 924 in 1936-37 and 960 K.W. in the first 9 months of 1937-38. The jump in the last 9 months is to be attributed to the general additions made to the Plant including the installation of a new motor generator throwing the whole of this load on to the turbine whereas previously the night lighting load was taken by an auxiliary steam engine. A further increase is due to the larger auxiliary units on the new turbine which automatically increases the load although we obtain more than compensating advantages.

The cost of power is difficult to gauge accurately as such a large proportion of our steam is taken for process work. With the new turbine we should get better economy than formerly but for reasons already stated we cannot give any useful figures. As to our actual power cost for 1936-37 if we take our coal consumption in 1931 as proportionately increased for the increased power consumption, ( $500 \times 924 / 700 = 660$  tons); and include all turbine running and maintenance labour, and 50 per cent. of the boiler running and maintenance labour, we are making a generous allowance for the cost of electric energy. Supervision figures may be taken as in 1931 since there is no reason for any increase in this figure. Coal rates during the year 1936-37 varied from Rs. 5-15-8 to Rs. 6-7-8, the difference being largely due to varying freight rates from different collieries. We can therefore take our previous figure of Rs. 6-4 as an average rate.

This gives the following total monthly cost:—

	Rs.
Coal 660 tons at Rs. 6-4 . . . . .	4,125
Operating and maintenance labour—Turbine . . . . .	445
Operating and maintenance labour—Boiler at 50. per cent. . . . .	556
Supervision . . . . .	800
Stores and lubrication (399) say . . . . .	400
<b>Total . . . . .</b>	<b>6,326</b>

The average power consumption was 924 K.W. per hour and this for a 28 day month =  $24 \times 28 \times 924 = 620,928$  K.W. hours which at a total generating cost exclusive of capital charges Rs. 6,326 = 163 annas per K.W. hour.

Our production during the year under reference was 6,424 tons of finished paper, an average of 535 tons per month which represents a power consumption of 1160 K.Ws. per ton of finished paper.

We have reason to believe, however, that our K.W. meter was reading approximately 75 K.Ws. too high which would increase our cost figures by approximately 8 per cent. and reduce the K.W. hours per ton of paper by the same proportion.

Our increased load per ton of paper has been largely due to the extra pulp plant installed.

25. Combination of customs figures for imports and of the Director General of Commercial Intelligence's figure for the production of Indian Mills gives the following consumption and production figures for the year 1936-37. The figures in brackets alongside represent the corresponding figures for 1930-31.

## (1) Indian production of paper—

	Tons.	Tons.
(a) protected . . . . .	43,000	35,000
(b) unprotected . . . . .	5,000	4,000
	<hr/> 48,000	<hr/> 39,000

## (2) Total Indian demand—

	Tons.	Tons.
(a) protected . . . . .	55,000	49,000
(b) unprotected . . . . .	1,53,000	1,05,000
(including old newspapers) . . . . .	<hr/> 2,08,000	<hr/> 1,54,000

The Board is, however, aware that a number of new Mills are under construction and that certain old Mills which were not operating in 1936-37 have now started work. We believe that the result will be to increase India's capacity for production of paper by at least 20,000 tons but the Board will no doubt be able to form a more accurate estimate in the course of their enquiry. If, as we believe, the bulk of this extra production will consist of the protected classes of paper it will be seen that after satisfying the present Indian demand there will be a substantial surplus.

(i) (a) We do not see any present likelihood of developing a separate market for pulp in India or abroad, nor of the establishment of separate Pulp Mills.

So far as the possibilities of developing a market for Indian made pulp in India are concerned, we have no knowledge of the manufacture of artificial silk and we do not therefore know whether the establishment of an Artificial Silk Industry would be economically possible, nor can we say whether the bamboo pulp at present manufactured in India would be suitable for this industry. As, however, the special grades of good pulp used for artificial silk in other countries are manufactured by the sulphite process, which is generally similar to our own, it may well be that similar pulp could be manufactured from bamboo. We accordingly suggest that this is a possible outlet which might be referred to Government experts for investigation.

So far as the use of wood pulp for manufacture of paper in India is concerned the available market is at present limited by the consumption of the protected classes of paper, of which we have given particulars elsewhere in our evidence. We ourselves only have experience of the use of Indian Pulp for the manufacture of these classes of paper, and it is impossible for us to express any opinion as to the possibility of using Indian made pulp for the manufacture of kraft, newsprint, etc., as we have made no investigations in this direction. We believe however that experiments have been conducted by the Government Research Institute at Dehra Dun and if these indicate the probability of success, the consumption of such papers in India would indicate the extent to which the demand for Indian made pulp might increase.

Apart from this, however, the demand for Indian made pulp for the manufacture of paper in India may be expected to increase along with the consumption of paper which is very small compared with other countries, and must increase with the spread of education and the general development of the country.

(i) (b) With regard to the possibilities of developing an export market for Indian made pulp, we would refer the Board to our answer to question No. 15. It will be seen that since the world Pulp market is subject to wide fluctuations, the development of an export market would at present be a matter of considerable risk. Our own cost figures show that at the

present level of wood pulp prices the export of bamboo pulp might be commercially possible. Equally, however, they show that so recently as two years ago the export of such pulp would have been quite impossible. Moreover, it would be necessary to adjust ex-Mill prices for Indian pulp for freight and f.o.b. charges before comparing them with c.i.f. quotations for imported pulp. We are therefore of opinion that the time is not yet ripe for considering the export of Indian made pulp.

(ii) In the absence of any demand for wood pulp for the manufacture of artificial silk in India, or for the export of Indian made pulp, we see no necessity for the establishment of Pulp Mills as distinct from combined Pulp and Paper Mills. So long as the demand for pulp is confined to the manufacture of paper in India we believe that the lines along which the Industry is at present developing, namely in the form of Paper Mills, each manufacturing its own pulp requirements, is well suited to the circumstances.

(iii) We regret we are unable to express any opinion since, as already stated, we have made no investigation of this possibility.

27. (a) The effect of the protective duty on wood pulp on the Paper Industry in India has been to encourage the substitution of indigenous pulp for the foreign wood pulp previously imported. In our case the consumption of wood pulp has fallen from 4,536 tons in 1930-31 to 1,909 tons in 1936-37 although our output of paper in the latter year was 246 tons higher than in 1930-31. Similarly the customs returns show that the total quantity of wood pulp imported during the year 1936-37 was 11,047 tons as compared with 22,718 tons in the year 1930-31, although the production of paper in India in the same period increased from 39,587 tons (Tariff Board Report 1931) to 48,531 tons (Department of Commercial Intelligence). Assuming a yield of 86 per cent. from air dry pulp to paper the quantity of Air Dry Pulp manufactured in India has therefore increased from approximately 23,000 tons in 1930-31 to 45,000 tons in 1936-37. It has in fact been doubled. In our own case the reduction in wood pulp consumption has been made good entirely by our increased production of bamboo pulp, and we believe that this is substantially true of the Industry as a whole.

So far as the economic aspect is concerned the result in our case has been entirely beneficial inasmuch as the encouragement to increase production of bamboo pulp justified the necessary capital expenditure, with the result that we are now producing bamboo pulp, as has been shown elsewhere, at a cost which compares favourably with what we believe to be the probable trend of wood pulp prices during the next few years.

(b) So far as we are aware the only other Industry which might be directly affected by the duty would be the Artificial Silk Industry. This Industry does not at present exist in India and we have not heard of any proposals to establish it. Even if such proposals have been or may in future be made, we have stated elsewhere our suggestion that the question of whether indigenous pulp might not be equally suitable for the purpose is a matter for investigation.

The Industries which are indirectly affected are, we believe, confined to those directly affected by the import duty on paper, and have presumably been affected to the extent that the general level of price of protected classes of paper has been Rs. 17 per ton (less than 4 per cent. of the fair selling price recommended by the Tariff Board in 1931) higher than it would otherwise have been since in arriving at their recommendation this was the amount included by the Tariff Board to compensate Paper Mills for the consequent increase in the cost of their raw materials.

28. The bulk of our production consists of White Printing and Cream Laid and we accordingly give below an indication of the imported prices for these qualities each year from 1931-32 to 1936-37.

It must, however, be realised that each of these kinds includes many grades of quality and price and too much reliance should not be placed on isolated quotations.



## WHITE PRINTING.

	Price per ton c.i.f. Calcutta.	At $\frac{1}{2}$ Exchange per lb.	Duty.	Landed cost adding $\frac{1}{2}$ pie per lb. for clearing.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1931-32 . . .	19 7 6	0 1 10-14	0 1 3	0 3 1-64
1932-33 . . .	20 0 0	0 1 10-88	0 1 3	0 3 2-36
1933-34 . . .	19 10 0	0 1 10-28	0 1 3	0 3 1-78
1934-35 . . .	19 10 0	0 1 10-28	0 1 3	0 3 1-78
1935-36 . . .	16 15 0	0 1 7-14	0 1 3	0 2 10-64
1936-37 . . .	18 7 6	0 1 9-00	0 1 3	0 3 0-50

The figures from 1931-32 to 1934-35 have been taken from the information supplied to the Tariff Board in 1935 in connection with the Classification of Papers enquiry in August 1935. The figures for 1935-36 are those supplied to the Department of Commerce, Simla, in connection with the surcharge Enquiry of 1936.

## CREAM LAID.

	Price per ton c.i.f. Calcutta.	At $\frac{1}{2}$ Exchange per lb.	Duty.	Landed cost adding $\frac{1}{2}$ pie per lb. for clearing.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1931-32 . . .	20 10 0	0 1 11-43	0 1 3	0 3 2-98
1932-33 . . .	21 5 0	0 2 0-29	0 1 3	0 3 3-79
1933-34 . . .	20 10 0	0 1 11-43	0 1 3	0 3 2-93
1934-35 . . .	20 15 0	0 1 11-71	0 1 3	0 3 3-21
1935-36 . . .	18 7 6	0 1 9-00	0 1 3	0 3 0-50
1936-37 . . .	20 7 6	0 1 11-27	0 1 3	0 3 2-77

29. We propose answering this question by separating those markets in which imported papers would normally be obtained through Calcutta from those markets in which imported papers are chiefly obtained through ports other than Calcutta.

In the case of imported papers obtained from Calcutta, we give below details of freights to selected markets for such papers and as a comparison the freights to the same stations on our papers.

Station.	Miles from Calcutta..	Freight from Naihati on I.P.P. paper.		Freight from Calcutta on imported paper.	
		Rate per maund per mile. (Small lots).	Rate per maund per mile. (Wagon loads).	Rate per maund per mile. (Small lots).	Rate per maund per mile. (Wagon loads).
Patna . . .	338	0-33	0-27	0-45	0-45
Benares . . .	429	0-30	0-24	0-44	0-44
Allahabad . . .	512	0-28	0-23	0-44	0-44
Lucknow . . .	616	0-26	0-21	0-44	0-44
Cawnpore . . .	631	0-25	0-21	0-44	0-44
Agra . . .	789	0-23	0-19	0-43	0-39
Delhi . . .	902	0-21	0-18	0-38	0-34
Amritsar . . .	1,143	0-24	0-21	0-38	0-35
Lahore . . .	1,176	0-25	0-22	0-38	0-35
Rawalpindi . . .	1,355	0-27	0-24	0-39	0-35
Peshawar . . .	1,463	0-28	0-25	0-39	0-36

With regard to imported papers obtained through ports other than Calcutta we give below details of freights to certain markets and also the freights to the same stations on our papers.

Imported paper.	Distance Miles.	I. P. P. paper.	Distance Miles.	Wagon freight from Port. Pies per maund per mile.	Wagon freight from Naihati. Pies per maund per mile.	
Bombay to Delhi	842	Naihati to Delhi.	882	Bombay . .	368	0-193
Karachi to Lahore	756	Naihati to Lahore.	1,156	Karachi . .	432	0-229
Karachi to Rawalpindi.	897	Naihati to Rawalpindi.	1,335	Karachi . .	431	0-249
Karachi to Peshawar.	930	Naihati to Peshawar.	1,453	Karachi . .	478	0-258
Bombay to Nagpur.	520	Naihati to Nagpur.	732	Bombay . .	442	0-209
Bombay to Jubbulpore.	616	Naihati to Jubbulpore.	712	Bombay . .	440	0-306
Bombay to Ahmedabad.	308	Naihati to Ahmedabad.	1,312	Bombay . .	444	0-245
Karachi to Ajmere	551	Naihati to Ajmere.	1,008	Karachi . .	466	0-257

30. We regret that we are unable to give the information in the form required by the Board and our reasons for this were fully explained in our last evidence.

Our records are prepared in such a manner as to distinguish between Bleached and Unbleached papers, the latter class including such wrapper as is manufactured for our own consumption and in the statement attached (Form IXA) we show the prices for these papers actually realised by us. The figures shown are after deduction of all discounts and commissions. We submit herewith a range of samples of Papers manufactured in our Mills.

31. We attach a statement (Form X) showing the gross prices realised on the chief products of our Mill during the last six years in Calcutta. Allaha-bad, Delhi, Lahore, Bombay and Madras, which we consider to be the principal markets.

It has been our policy to endeavour to secure a price from our up-country markets which would equal the price obtained in Calcutta after allowing for the difference in freight. In practice, however, it has not always been possible for us to achieve this in all markets, some of the reasons for this being:—

We are sometimes unable to obtain Calcutta prices *plus* freight in the case of up-country markets such as Delhi, the Punjab and Central India due to imports through other ports.

In Bombay, Madras, and the Malabar Coast, we are of course unable to make any addition for freight.

32. Normally the price realised by us for any class of paper lies between the maximum and minimum prices commanded by the corresponding class

of imported paper. The range between the minimum and maximum prices is generally wide and there is also a wide variation in the quality of the papers offered by the Importers so that it is difficult to obtain a fair medium price for comparison with Indian paper. In general, however, we think the conclusion arrived at by previous Tariff Boards is substantially correct namely, that the *ex-Mill* realised price of Indian paper, less duty, is a fair estimate of the corresponding landed price at which foreign papers of the same kind are being imported. In the case of the last few months however this is not true as prices of Indian paper have not been raised as rapidly as foreign prices. In our reply to question No. 34 we have indicated that foreign competition is keenest at those ports which are situated at some distance from our Mills, and it therefore follows that the *ex-Mill* price of our paper at these places tends to be slightly lower than the price of imported paper. This price difference is, however, small. In Calcutta, however, owing no doubt to the proximity of the Mills, our papers command a slightly higher price than those of the Importer.

Where an imported paper is identical with an Indian paper in regard to both quality and price the considerations which might induce a dealer in his choice were fully explained in our last evidence.

33. There is no reason to suppose that present prices for foreign pulp and paper are unremunerative but it is equally certain that until comparatively recently they undoubtedly were.

In 1931 the Tariff Board found that there was a certain amount of evidence that foreign producers were then exporting to India at unremunerative prices. The subsequent further heavy fall in prices for foreign paper and pulp do not, we think, leave any room for doubt that during the years 1934 to 1936 both pulp and paper were exported to India at entirely unremunerative rates. On the other hand we submit that if the world pulp and paper industries could keep alive at all on the prices which have prevailed during the past 10 years then the prices at which they are selling to-day must, notwithstanding an increase in cost of the raw materials, represent an adequate profit.

34. We find that foreign competition is keenest in Bombay, Karachi, Madras, Malabar Coast and Rangoon. In addition there are certain Indian States such as Travancore and Kashmir, which are not subject to the Protective duty and where in consequence it is impossible for Indian paper to compete.

35. In 1931 we advised the Board that there was a difference in price between bamboo paper and paper made from other indigenous materials.

The position to-day, however, is that there is virtually no difference in price between bamboo paper and paper made from other indigenous materials and, for the information of the Board, we would point out that in many markets our paper is sold on level terms with papers made from other indigenous and imported materials by other Mills. There are certain markets however, in which our prices are slightly shaded, this being mainly due to:—

1. We are unable to offer the same range of qualities as the other Mills and, in markets where competition is keen a slightly lower price is a necessary inducement to dealers to purchase our papers.

2. We do not offer the same quantities of retree paper as the other Mills and this again has its reaction on prices.

3. Even after 15 years our paper and trade marks are less firmly established than those of older Mills, and there are still dealers who have been accustomed all their lives to buy the same marks as when they first commenced business and from which they will not depart unless a small inducement in price is offered.

36. We consider that our papers have shown a steady improvement as regards general quality since 1931-32 and would point out that our aim has always been to improve the qualities of paper manufactured by us. The general quality of our production has been improved by reason of increased

experience and general improvements in practice. Our production since 1931-32 has shown a steady increase in Writing Papers of the higher grades while paper of the lower grades such as Badami, etc., shows a decrease.

As desired, we attach a statement (Form IXB) showing details of our supplies to the Central and Provincial Governments, State and other Railways.

Our sales to Provincial Governments and miscellaneous Railways form a very small percentage of our sales to other customers and for this reason we have included these items under one heading. We regret that our method of keeping accounts does not enable us to show separately the prices realised for each class of paper supplied to the Provincial Governments and miscellaneous Railways and the prices given in the attached statement are the average nett delivered prices realised.

37. So far as we know we have not been adversely affected by the application of the existing test for determining News-print from other printing paper which we believe to be the point which the Board have in mind in the first part of their question. So far as we are aware the test adopted for the purpose of distinguishing between Writing and Printing paper is also in the main satisfactory.

With regard to the sizing test we feel, however, that in cases of doubt or difficulty it would make things easier for Customs officials if there was some prescribed scientific test, not for general use, but for cases where difficulty or dispute arise.

38. We have not adopted any new process of manufacture but we have installed new plant, of which we give particulars below under four main heads, i.e., (1) Paper Section, (2) Power Plant, (3) Mill water supply and (4) General.

1. In the Paper section of the Mill we have concentrated on improving our existing plant and with this end in view have completed the following work. The Paper Machine House has been reconstructed and a new roof installed. The effect of these alterations was shown immediately in the improved ventilation and a general lowering of the temperature in the building. The Beater House also has been similarly improved and an additional Umpherston beater added. The Machine Chests have been relined with glazed tiles and the possibility of grit from the chests entering the paper has thus been removed. New cooling rolls have been fitted to No. 1 Machine and the bottom calender roll of the last section of No. 2 Machine has been fitted with cooling water.

A Bewoid Size Plant for the manufacture of our size has been erected in the Chemical House.

In the Finishing House an additional ruling machine with an automatic feed has been installed which is capable of taking a Quad Cap sheet and ruling both sides with two colours at the same time.

2. Since 1931-32 certain additions and improvements have been made to the Power Plant but reference to these has already been made in our reply to question No. 24.

3. In connection with the Mill Water supply we have installed two new Paterson Filter Units together with new pumping units, and a reserve water tank. We have also installed additional pumping units in the main water tank house, which has now been roofed, and erected a new Pumping Station by the riverside. This station contains 3 vertical spindle pumps each of a capacity of 3,000 gallons per minute. Two pumps are normally in operation while the third acts as a spare.

A new Precipitation Tank equipped with chemical mixing gear was constructed near the river bank to deal with water for Mill use. This tank has been a great asset for water treatment particularly during the rains when the water contains a high proportion of very fine matter in suspension.

4. We have made certain modifications of a miscellaneous nature and chief of which are as follows:—

A Rag Breaker and Sinclair Boiler for the treatment of rags has been installed.

Miscellaneous buildings include new offices, carpenters' shop, and various store godowns, and a complete new workshop equipped with up-to-date machine tools capable of effecting all maintenance and ordinary repair work.

None of the plant referred to in this answer has been connected with the adoption of any new process except the Bewoid Size Plant which is of secondary importance.

Additions to our Pulp Plant have already been detailed in answer to Question 11(d).

39. The sums spent by us on extension or alteration of plant since 1931-32 have been as follows:—

	Rs.	A.	₹.
1931-32 . . . . .	93,450	11	6
1932-33 . . . . .	26,508	7	9
1933-34 . . . . .	12,555	1	0
1934-35 . . . . .	7,93,948	7	1
1935-36 . . . . .	92,210	4	0
1936-37 . . . . .	3,07,700	8	5
Total . . . . .	13,26,373	7	9

Of the above total the manner in which the money was spent is as follows:—

	Machinery.			Buildings.		
	Rs.	A.	P.	Rs.	A.	P.
(1) Power Plant . . . . .	2,82,634	12	3	628	11	9
(2) Pulp Plant (Bamboo) . . . . .	4,86,663	6	11	75,036	10	3
(3) Paper Plant . . . . .	73,518	13	3	49,386	8	0
(4) Water Supply . . . . .	1,21,598	6	7	35,952	8	3
(5) Workshop Machinery . . . . .	16,804	5	6	17,607	13	9
(6) Miscellaneous . . . . .	19,277	7	6	70,843	0	6
(7) Staff quarters . . . . .	...			76,420	15	3
Total . . . . .	10,00,497	4	0	3,25,876	3	9

As explained in answer to question 11(e) the bulk of the above expenditure on Power and Water Supply Plant was consequent on our Pulp Plant extensions, which have therefore involved in all an expenditure of about Rs. 10 lacs.

40. We have already dealt with our possible future additions to Pulp Plant. Apart from this we have in mind the possibility of equipping our paper machines with an electric drive, lengthening the machine wires and bringing them up-to-date in other minor directions. We have also in mind the possibility of replacing the beaters, originally installed when the Mill was first built, with improved units of up-to-date design.

We are, however, averse to spending money on the paper side of the Mill, until we have finally decided what alterations should be made on the pulp side, and until we know what the expenditure on these will be.

This is particularly necessary since it is impossible to say how far the quotations obtained in 1936 still hold good.

41. The block value of our property as it stood in our books on 31st March, 1937, is as follows:—

	Rs.	A.	P.	Rs.	A.	P.
(a) Leases and Concessions . . . . .	...					
(b) Permanent Leasehold at Naihati . . . . .	...			1,10,523	10	0
(c) Buildings at Naihati . . . . .	6,06,627	11	3			
Staff Quarters at Naihati . . . . .	1,80,663	6	0			
				7,87,291	1	3
(d) Machinery at Naihati . . . . .	...			17,02,812	12	5
(e) Railway siding at Naihati . . . . .	39,244	10	7			
Furniture at Naihati and Calcutta godown . . . . .	8,972	11	0			
Motor car at Naihati . . . . .	10	0	0			
				48,227	5	7
Grand Total . . . . .				26,48,854	13	3

42. There are several new mills under construction from whom the Board will no doubt obtain figures showing the actual cost of erection and which would be more reliable than any estimated figures. In the circumstances we have not considered it necessary to obtain information regarding the cost of erection of a new Mill. We would, however, mention that since the last Inquiry prices of machinery and materials have definitely risen.

44. (a) The Paid up share Capital ranking for dividend has remained unchanged at Rs. 30,00,000 ordinary shares throughout the period.

(b) The actual amount distributed by way of dividend has been as follows:—

	Rs.
1931-32 . . . . .	...
1932-33 . . . . .	...
1933-34 . . . . .	...
1934-35 . . . . .	1,20,000
1935-36 . . . . .	1,50,000
1936-37 . . . . .	1,80,000

(c) The percentages on the paid up share capital represented by the dividends paid are as follows:—

	Per cent.
1931-32 . . . . .	...
1932-33 . . . . .	...
1933-34 . . . . .	...
1934-35 . . . . .	4
1935-36 . . . . .	5
1936-37 . . . . .	6

45. As requested we enclose four copies of each of our Balance Sheets from 30th September, 1931 to 30th September, 1937 inclusive. [Not printed].

46. We have not raised any debenture or other loans since 1931-32 and there is no amount outstanding for re-payment.

47. We attach Forms V and VI duly completed.

48. We estimate that the Works cost of paper and wet unbleached pulp can in future be reduced to Rs. 284.55 and Rs. 108.0 per ton respectively.

We propose to take the year 1936-37 as one in which manufacturing conditions were normal and when a full output was obtained. If the consumption of bamboo, rags, paper cuttings and china clay is taken to be the same as were actually consumed in that year, and if we further assume that the full theoretical yield given in our answer to question No. 5 were obtained, we can calculate by difference on the actual paper manufactured the quantity of wood pulp which would have been consumed if the full theoretical yield had been obtained on all primary raw materials. In support of these theoretical yields we would draw the attention of the Board to our foot note on Form I.

With regard to subsidiary raw materials, we propose taking the figures given in our answer to Question 11 (i) for Sulphur, Magnesia, Bleach and coal for pulp purposes. For Rosin we have taken a figure of 0.40 cwt. per ton paper to which we have worked in actual practice. Taking coal used in converting pulp to paper, and alum, dyes and other chemicals the same as in 1936-37, deducting 10 per cent. under labour and repairs (for reasons which will be explained later), and keeping supervision and miscellaneous expenditure the same, we obtain a basis of future cost which we consider the lowest on which reliance could safely be placed.

In addition to establishing the quantities of materials to be taken it is necessary in view of the changed prices of raw materials at the present time, to take the figures we expect to have to pay in future. These we have estimated as carefully as possible and the following statement shows our future estimated ex-works cost of manufacture on the above basis without including Managing Agents and Head Office expenses, depreciation, interest, or profit.

Particulars.	Quantity consumed Tons.	Rate per ton. Rs. A.	Amount.	Yield of paper Tons.	Average cost per ton paper made.
Bamboo . . .	10,986.48	18 8	203,250	4,614	31.59
Rags . . .	39.28	...	16,617	88	2.58
Paper Cuttings . . .	70.60				
China Clay . . .	534.53	35 0	18,709	401	2.91
Wood Pulp . . .	1,548.02	255 0	394,745	1,331	61.35
Sulphur . . .	1,098.65	85 0	93,385	...	14.51
Magnesia . . .	906.38	87 0	78,855	...	12.26
Bleaching Powder	772.49	110 0	84,974	...	13.21
Rosin . . .	128.68	300 0	38,607	...	6.00
Alum, Soda, Glue, Dyes, etc. . .	...	...	52,425	...	8.15
<i>Power.</i>					
(a) Coal for Pulp	10,986.48				
(b) Coal for paper	9,980.00				
	20,966.48	8 12	183,457	...	28.51
Labour and repairs	...	...	395,355	...	61.44
Supervision and Miscellaneous . . .	...	..	270,532	...	42.04
			18,30,911	6,434	284.55

If the appropriate figures from the above are taken we obtain the following statement showing our estimated future cost of manufacture of air-dry pulp, and it will be noted that we have included an estimated figure to cover those processes which, although not necessary in a combined Pulp and Paper Mill, would be necessary in order to put the Pulp in a commercially saleable form. In other words we have put our estimated future cost for pulp on a basis which is comparable with commercial pulp prices.

*Estimated future Pulp cost:—*

	Rs.
Bamboo . . . . .	2,03,250
Sulphur . . . . .	93,385
Magnesia . . . . .	78,855
Coal . . . . .	96,127
Wages and Stores . . . . .	88,351
Supervision and Miscellaneous . . . . .	25,640
<b>Total . . . . .</b>	<b>5,85,608</b>

Production=5,371 tons Air Dry.

	Rs.	A.
Cost per ton Air Dry pulp . . . . .	108	0
Add cost of drying, cutting, packing, handling to and from godown, and loading in wagon (esti- mated) . . . . .	20	0
<b>Total per ton Air Dry pulp on comparable com- mercial basis . . . . .</b>	<b>128</b>	<b>0</b>

We have already explained how we have arrived at the quantities and prices of the various raw materials, and our allocation as between paper and pulp for wages, stores, supervision and miscellaneous is the same as was adopted at the last Tariff Board Enquiry, and which has also been used in preparing Forms II and III. In the case of our estimated future costs for both paper and pulp we have, however, allowed for a saving of 10 per cent. on present labour and stores expenditure.

In the case of labour we have demonstrated personally to the Board the relatively large amount of manual labour which has been necessary during the time when our bamboo preparation plant has been undergoing constant change, making it impossible to determine what type of mechanical handling will best deal with our final arrangements for the treatment of bamboo preparatory to the cooking process.

Remembering moreover that a large proportion of this labour comprises three shifts per 24 hours, we do not think we are being unduly optimistic in estimating a reduction of 100 men in our labour force when full use is made of mechanical appliances. Taking the average wage of a man for this purpose as Rs. 20 per month, we arrive at a deduction of approximately 10 per cent. on our total wages cost.

With regard to stores, we have also demonstrated the very heavy wear and tear, and consequently high maintenance costs, to which some of the preparatory plant we have been using is subject. We have also explained our reasons for believing that in future our expenditure on stores and repairs in this section of the Mill alone, amounting to Rs. 1,500 per month in 1936-37, can be reduced by two-thirds. It will also be noted that our total expenditure on stores and repairs throughout the Mill generally has been higher during the last two years than was previously the case. This period has included overhaul work of a general nature which will not be



recurrent, and we consider that there should be no difficulty in reducing our total stores and repair expenditure by this amount.

49. (1) The following figures represent the average value of our stock under the headings required by the Board, for the past three years.

	Rs.
Primary Raw Materials . . . . .	4,11,553
Auxiliary Raw Materials . . . . .	74,651
Coal and Stores . . . . .	1,80,199
Paper . . . . .	3,11,883
Total . . . . .	9,78,286

50. We now have sufficient working capital.

51. (a) *Paper*. We consider that protection should be continued:—

- (1) In the form of a protective duty based on a sliding scale according to the world price of wood pulp.
- (2) At a rate sufficient to ensure for us a selling price of Rs. 2-9½ per lb. *ex-Mill*.
- (3) On the same classes of paper as at present.

At the same time we believe that investigations have been made into the possibility of manufacturing kraft, news-print, and possibly other qualities of paper in India from Indian materials, and we would welcome the extension of protection to any of these classes of paper so far as may be found to be justified. The manufacture of such paper might help to provide an outlet for the production of some of the new Paper Mills under construction, and whose output will, we believe, considerably exceed our estimate of the available demand for the existing protected classes. We would also welcome any such extension of the protective duties, in so far as it might further develop the country's natural resources, and render it less dependent on foreign sources of supply for essential commodities. As, however, we have no experience of the manufacture of papers of classes other than those we are already producing, we are not in a position to say what justification exists for extending protection to other classes.

The grounds on which we base our opinions under (i) and (ii) are as follows:—

(i) *Case for Sliding Scale Duty on Paper.*

In our answer to question No. 15 we pointed out the fluctuations in pulp prices which have taken place in recent years and on which world prices for paper depend. It therefore appears to us that any fixed rate of duty must on the one hand expose manufacturers to the risk of serious losses when world prices for pulp and paper are depressed, and that on the other hand there may be times when the same rate of duty would be excessive. A sliding scale duty therefore appears very desirable since it would tend to keep the landed cost of imported paper, and consequently the selling prices of Indian papers, at a constant level. This would further be a great advantage to consumers of paper since Printers, Publishers, and others would be protected from a sudden increase in price, such as has occurred for instance during the past twelve months, and would be able to estimate in advance with considerable accuracy the cost of their chief material.

It will be remembered that the Tariff Board enquiry in 1931 showed that owing to a fall in foreign wood Pulp and paper prices the prices actually realised by Indian Mills during the first period of Protection fell considerably below the fair selling price which the Board recommended in 1925 and endeavoured to secure by means of a fixed specific Duty. The present Board will note that the same has been true during the second period of Protection. We submit this is in itself a sufficient argument in favour of a sliding scale.

We are aware that the introduction of import duties on a sliding scale would present difficulties from the point of view of the importers, but

suggest that such difficulties could be largely if not entirely met in the following manner.

Our proposal is that the protective duty should be altered by notification on 1st April and 1st October each year, the new rate of duty to be in accordance with the average level of pulp prices during the preceding six months. For this purpose an official index to pulp prices would be necessary, and our London Agents are making enquiries as to the most suitable official or semi-official publication for this purpose. We hope, therefore, to be able to give the Board at an early date, a concrete suggestion for establishing a Pulp Index figure representing the c.i.f. Calcutta price of Scandinavian Easy Bleaching Sulphite Pulp. The index price selected could then be publicly notified at monthly intervals, so that intending importers would have warning, as each six-monthly period progressed, of any likely change in the rate of duty.

We believe that if this method were adopted any inconvenience to importers would be negligible in comparison with the general gain to manufacturers and consumers resulting from the establishment of prices. We may mention moreover that with the recent rapid development of the industry, imports of paper of the protected classes must in our opinion necessarily fall to merely nominal proportions with the possible exception of very high grade papers.

(ii) *Measure of Protection on Paper.*

With regard to the rate of protection we consider that our present level of costs and our estimate of future costs necessitates our obtaining a nett *ex-Mill* average selling price of As. 2-9½ per lb. To arrive at this figure we have added to our estimated future works cost the same allowances for depreciation, Managing Agents commission and Head Office charges, as were recommended by the Tariff Board in 1931, but have made no allowance for interest on working capital since we no longer require this. We have also reduced the margin of profit from 8 per cent., as recommended by the Board in 1931, to 6 per cent., in view of the lower interest levels now prevailing.

The figures are:—

	Rs. Per ton.
Estimated future Works cost . . . . .	285
Managing Agents and Head Office charges . . . . .	11
Depreciation . . . . .	50
Profit . . . . .	48
Total (equal to As. 2-9½ per lb.) . . . . .	394

*Explanation of Suggested Pulp Index figure.*

It will be clear that our proposal under (i) involves the necessity of establishing some connection between world pulp prices and the *ex-Mill* selling price of Indian paper. In this we are helped by the conclusion arrived at by the Tariff Board in 1931 and expressed in paragraph 94 of their report. The Board upheld the decision of the previous Board in 1925 that the actual average *ex-mill* price realised by Indian Mills for protected classes of paper may be regarded as equivalent to the landed cost of corresponding classes of foreign papers. We believe that this conclusion is substantially correct and it therefore directly follows that in asking for a fair selling price of As. 2-9½ per lb. *ex-mill* we are in effect asking that the cost of paper of the protected classes should be brought up to a level of £29 11s. landed. Incidentally this figure emphasises the desirability of a sliding scale of duty, since at the present time the level of imported prices is such that a very small duty would be sufficient and would be more

than adequately provided by the general existing level of revenue duties. So recently as two years ago, however, when paper of the protected classes was entering the country as low as £16 10s., the necessary rate of duty would have been £13 1s. or Rs. 174 per ton, i.e., the full level of the present protective duty inclusive of surcharge.

All that is necessary to complete the relation between world pulp prices and the price of Indian paper is therefore to establish a connection between world pulp prices and the lowest price at which paper of the protected classes may be expected to be offered c.i.f. Indian Ports.

If the current rate of Protective Duty be deducted from our actual realised prices for papers of the protected classes it will be found that our average *ex-mill ex-duty* price for the six years 1931-32 to 1936-37 is As. 1-9-75 per lb. This is equal to Rs. 254 per ton and corresponds to a c.i.f. price of £19 1s. for similar classes of imported paper. During the six years 1930-35 inclusive the average price of Easy Bleaching Sulphite Pulp as shown in our answer to Question 15 was £10 13s. c.i.f. Calcutta. These figures point to a difference of £8 8s. per ton between the c.i.f. price of Easy Bleaching Pulp and that of wood-free papers.

This figure is borne out by the lowest price accepted by the Tariff Board in 1931 for wood-free printing at that time, namely £21, which is £8 10s. 8d. higher than the average price for Easy Bleaching Sulphite Pulp in 1930-31. Later, during the Tariff enquiry of 1935, similar paper was entering India as low as £16 10s. per ton, namely, only £7 11s. 3d. above the lowest c.i.f. price for Sulphite Pulp recorded, but this was when the pulp and paper industries were at their lowest level, and the price which manufacturers would be willing to accept for conversion of pulp to paper would naturally be below normal.

On these grounds we estimate the normal difference between the c.i.f. prices for Easy Bleaching Pulp and the cheaper grades of imported paper of the protected classes as being approximately £8 10s. and on this basis our proposal for a sliding scale Protective Duty is:—

*Proposed sliding Scale for Paper.*

Price of Easy bleaching Sulphite Pulp c.i.f. Calcutta. (Index Figure)	Corresponding c.i.f. price of imported papers of the protected classes.	Rate of Duty (per ton).	Landed cost of imported papers of the protected classes.
£	£	£	Rs.
10	18 10	11 1	147
11	19 10	10 1	134
12	20 10	9 1	121
13	21 10	8 1	107
14	22 10	7 1	94
15	23 10	6 1	81
16	24 10	5 1	67

Over £16 a Revenue Duty of 20 per cent. *ad valorem* would be sufficient.

Thus if the duty was fixed for any period of six months at, say, Rs. 81 and during that period the price of Wood Pulp fell steadily from £15 to £13, averaging £14, then for the following six months the duty would be Rs. 94. Moreover as the six months progressed importers would see the Pulp Index figure published each month and in conducting their business could reasonably anticipate changes in duty. Changes in duty at six-monthly intervals would not, however, be sufficiently great to encourage speculation or materially affect Government Revenue, more particularly as the selling pressure of Indian Mills is likely to stop entirely the import of papers of the present

protected classes save for the very limited quantities of special qualities not made in the country.

(b) *Pulp*.—We submit it is very necessary that the Protective Duty should be continued so far as chemical pulp is concerned. Since the policy of protection has from the first rested on the encouragement of the manufacture of paper from indigenous raw materials, we submit it is essential to guard against the possibility of imported pulp being used in substitution of Indian Pulp whenever it may become temporarily economical to do so. We suggest therefore that a sliding scale duty sufficient to maintain the landed cost of imported Easy Bleaching Sulphite Pulp at Rs. 250 per ton should be imposed the Index figure being the same as that proposed for the Duty on paper.

This scale would be as follows, and could be altered by notification at the same time and in the same manner as the sliding scale duty on paper.

*Proposed sliding Scale for Pulp.*

Pulp Index figure.	Rate of Duty.	Landed cost.
£	£	Rs.
10	8 15	115
11	7 15	101
12	6 15	88
13	5 15	75 Rs. 250
14	4 15	61 = £18 15s.
15	3 15	48

Over £15 a Revenue Duty of 20 per cent. *ad valorem* would be sufficient.

While recommending the above scale of duties on Chemical pulps we would, however, recommend that Kraft and Mechanical Pulp be admitted free of Duty. The Industry is in our opinion threatened with the danger of over-production in the near future, and for this reason we consider it is very desirable that its range of products should, if possible, be extended. Such extension might be secured by the manufacture of Kraft Paper, or of cheap printings containing a percentage of mechanical pulp, but this would only be possible if the necessary pulp was admitted free of Duty. Later, if Kraft or Mechanical Pulp can be successfully manufactured in India the position may change, but even in the early stages the free import of foreign pulps might be of the same service to those new industries as the use of imported chemical pulp was at one stage to the existing Industry.

52. (1) & (2) We claim that our understanding of the problems involved has greatly increased. We have given the Board detailed figures covering the whole of our operations for the period since the last Tariff Board Inquiry, and have explained what has been and is being done with regard to the improvement of our manufacturing practice. The question of the improvement effected is complicated by the fact, as explained elsewhere, that efficiency in one direction has necessarily in some cases been sought at the expense of others, and it is therefore difficult to set forth clearly in a single statement the nett result of the progress made. Instead therefore of repeating in detail the information that we have given elsewhere in our answers to the questionnaire, we would refer the Board particularly to our answers to questions 9, 11 and 48 and to Forms II, III, V, and VI.

(3) We claim that material improvement has been effected in the colour, cleanliness, and strength of our paper since the last enquiry, and if the samples we submitted to the Board in 1931 are still available we would invite a comparison with the samples submitted herewith. Otherwise it is exceedingly difficult to adduce any evidence which will convey to a non-technical board the improvement which has been made. We believe and hope, however, that our claims in regard to improvement of quality will be supported by consumers and others giving evidence before the Board.

53. We are not answering this question as a detailed reply will be given by the Indian Paper Makers Association, who have not yet fully considered the questions involved.

54. Our reply to question No. 51 shows that there would be no objection to the removal of the existing surcharge on the protective duties on paper, but in view of the fact that wood pulp prices are declining we are opposed to the removal of the existing surcharge on the protective pulp duty. So far as the existing surcharge on the revenue duties on paper is concerned, we are not directly affected but see no reason why these should be considered separately or treated differently from revenue duties on, say, machinery and general goods.

55. (a) Assuming that if the existing protective duties were replaced by a revenue duty, the latter would be at the rate of 20 per cent. *ad valorem*, and taking the figures for 1936-37, our working for that year would have been as follows:—

	Rs. Per ton.
Average price realised, <i>ex-mill</i> , As. 2-11-57 . . . . .	415
Less duty . . . . .	175
	<hr/> 240
Add duty at 20 per cent. . . . .	48
Price realisable at revenue duty . . . . .	288
	<hr/>
Total receipts on 6,434 tons . . . . .	18,52,992
Less Works expenditure . . . . .	19,68,736
	<hr/>
Deficit . . . . .	1,15,744
Block as at 31st March, 1936, Rs. 26,43,300	
Depreciation at 6½ per cent. . . . .	1,65,200
Managing Agency and Head Office charges (actual) . . . . .	72,025
	<hr/>
Total deficit . . . . .	3,52,969

(b) The result would be as above except that the duty would be at Rs. 140 per ton instead of Rs. 48, increasing sales proceeds by Rs. 92 per ton or Rs. 5,91,928, and thus converting the deficit of Rs. 3,52,969 into a surplus of Rs. 2,38,959.

We should, however, explain that since 31st March, 1937, fluctuations of price had been so rapid that the selling prices of Indian paper have lagged behind the increase in price of foreign papers, and a calculation on the above basis which would correctly represent the position to-day is impossible. So long, however, as foreign paper prices remain at their present level we believe that replacement of the protective duties by revenue duties, or the effect of removing the existing surcharge, would not materially alter our present position.

#### NOTE REGARDING BONE-DRY AND AIR-DRY FIGURES.

In the case of Bamboo we have throughout used bone-dry figures. In our experience moisture in bamboo varies so greatly that the term "air-dry" cannot serve any useful purpose.

In the case of pulp the term "air-dry" is useful and necessary to describe pulp in its commercial form since the water content cannot in practice be reduced below 10 per cent. We have in most cases given cost figures for Pulp on both the air-dry and the bone-dry basis, but when conversion is necessary this can be done by taking 100 tons air dry as equivalent to 90 tons bone dry pulp.

Prices for foreign wood Pulp relate throughout to air-dry Pulp.

## FORM I—(Qn. 5).

## Consumption of Primary Raw Materials.

Materials.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.	Total consumption during period.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
<i>Bamboo.</i>							
(1) Quantity of material used . . . . .	5,716	5,632-35	5,289-54	7,200-52	10,789-3	10,986-48	45,614-19
(2) Quantity of finished paper which represents .	2,400	2,366	2,222	3,024	4,532	4,614	(19,158)*
(3) Percentage of (2) on the total quantity of paper manufactured.	39-59%	40-31%	38-08%	43-31%	67-94%	71-71%	
<i>Paper Cuttings.</i>							
(1) Quantity of material used . . . . .	93-31	34-6	4-48	77-70	62-64	70-60	343-33
(2) Quantity of finished paper which material represents.	75	27	4	62	50	57	(275)*
(3) Percentage of (2) on the total quantity of paper manufactured.	1-24%	0-46%	0-07%	0-99%	0-75%	0-88%	
<i>Rags.</i>							
(1) Quantity of material used . . . . .	6-10	37-6	30-97	50-52	45-68	39-28	210-15
(2) Quantity of finished paper which material represents.	5	30	25	40	37	31	(168)*
(3) Percentage of (2) on the total quantity of paper manufactured.	0-08%	0-51%	0-42%	0-66%	0-55%	0-48%	

*China Clay.*

(1) Quantity of material used . . . . .	571.2	483.9	634.3	797.01	679.65	534.53	3700.59
(2) Quantity of finished paper which material represents.	428	363	476	598	510	401	(2,776)*
(3) Percentage of (2) on the total quantity of paper manufactured.	7.08%	6.19%	8.17%	9.55%	7.64%	6.23%	
<i>Total Indigenous Materials.</i>							
(1) Quantity of material used . . . . .	6,388.61	6,188.45	5,959.29	8,125.75	11,577.27	11,630.89	49,868.26
(2) Quantity of finished paper which material represents.	2,908	2,786	2,727	3,724	5,129	5,103	(22,377)*
(3) Percentage of (2) on the total quantity of paper manufactured.	47.07%	47.47%	46.74%	59.51%	76.88%	79.30%	
<i>Imported Pulp.</i>							
(1) Quantity of material used . . . . .	3,540.6	3,187.9	3,188	2,791.98	1,941.60	1,909.41	16,570.47
(2) Quantity of finished paper which material represents.	3,045	2,741	2,751	2,401	1,670	1,642	(14,250)*
(3) Percentage of (2) on the total quantity of paper manufactured.	50.17	46.71%	47.15%	38.35	25.04%	25.52%	

\* The combined total of these figures namely 36,627 tons agrees closely with the paper actually made 37,136 tons, thus confirming that the yield figures assumed are substantially correct.

## FORM II—PART I (Qn. 11.)

Total Expenditure Incurred on the Production of Unbleached Pulp.

	1931-32.			1932-33.			1933-34.		
	Totals.	Applicable to Pulp.	% of Total.	Totals.	Applicable to Pulp.	% of Total.	Totals.	Applicable to Pulp.	% of Total.
<b>PRIMARY MATERIALS.</b>									
<i>Bamboo.</i>									
Tons consumed . . . . .	5,716			5,632			5,290		
Average consumption rate . . . . .	41.99			38.79			37.46		
Value consumed 100% . . . . .	2,40,008	2,40,008	48.82	2,18,496	2,18,496	44.74	1,98,143	1,98,143	45.67
<b>AUXILIARY MATERIALS.</b>									
<i>Sulphur.</i>									
Tons consumed . . . . .	711.5			731.0			614.7		
Average consumption rate . . . . .	89.97			111.1			92.91		
Value consumed . . . . .	64,015	64,015	13.02	81,223	81,223	16.63	57,112	57,112	13.16





## FORM II—PART I (Qn. 11)—contd.

Total Expenditure Incurred on the Production of Unbleached Pulp—contd.

	1934-35.			1935-36.			1936-37.		
	Totals.	Applicable to Pulp.	% of Total.	Totals.	Applicable to Pulp.	% of Total.	Totals.	Applicable to Pulp.	% of Total.
<b>PRIMARY MATERIALS.</b>									
<i>Bamboo.</i>									
Tons consumed . . . . .	7,201			10,789			10,986		
Average consumption rate . . . . .	35.25			30.13			26.91		
Value consumed 100% . . . . .	2,53,805	2,53,805	48.22	3,25,030	3,25,030	45.73	2,95,604	2,94,604	41.25
<b>AUXILIARY MATERIALS.</b>									
<i>Sulphur.</i>									
Tons consumed . . . . .	830.7			1,393			1,466.8		
Average consumption rate . . . . .	77.55			70.95			68.83		
Value consumed . . . . .	64,421	64,421	12.24	98,841	98,841	13.91	1,00,964	1,00,964	14.09

*Magnetite.*

Tons consumed . . . . .	672.4			1,100.9	1,09,414	15.40	1,05,162	14.67
Average consumption rate . . . . .	102.93			99.39				
Value consumed . . . . .	69,212	69,212	13.15	1,09,414	1,09,414	15.40	1,05,162	14.67

**POWER AND FUEL.***Coal.*

Tons consumed paper . . . . .	9,924			9,924			9,924	
Tons consumed pulp . . . . .	9,175			12,839			14,917	
Average consumption rate . . . . .	5.516			5.704			6.11	
Value consumed pulp . . . . .	50,614	50,614	9.61	73,234	73,234	10.30	91,143	12.72

**WAGES.**

Crusher House . . . . .	16,552			16,869			21,132	
100% { Acid Plant . . . . .	5,720			5,568			4,728	
{ Digester and Blow Pits . . . . .	8,837			7,869			7,601	
50% Washing Plant . . . . .	4,603			4,458			4,978	
* Boilers . . . . .	13,288			13,965			13,337	
50% Carrying collies . . . . .	19,190			25,448			26,315	
(*Pro. Rate on Coal) . . . . .	67,190	48,388	9.19	74,177	53,136	7.48	78,091	7.97

Carry Forward

6,49,990

90.70

## FORM II—PART II (Qn. 11.)

*Total Expenditure Incurred on the Production of Unbleached Pulp—contd.*

	1931-32.			1932-33.			1933-34.		
	Totals.	Applicable to Pulp.	% of Totals.	Totals.	Applicable to Pulp.	% of Totals.	Totals.	Applicable to Pulp.	% of Totals.
Brought forward . . . . .									
Bamboo . . . . .		2,40,008	48.82		2,18,496	44.74		1,98,143	45.67
Sulphur . . . . .		64,015	13.02		81,223	16.63		57,112	13.16
Magnesite . . . . .		55,913	11.37		53,729	12.02		55,674	12.83
Coal . . . . .		40,325	8.20		41,652	8.53		34,388	7.93
Wages . . . . .		47,442	9.65		44,796	9.17		46,442	10.70
Total Brought forward . . . . .		4,47,703	91.06		4,44,896	91.09		3,91,759	90.29
Stores—									
100% { Crusher House . . . . .	10,559			9,180			7,067		
{ Acid Plant . . . . .	2,901			2,874			3,224		
{ Digester & Blow Pits. . . . .	8,369			8,697			8,399		
% Washing Plant . . . . .	3,774			2,922			3,462		

* Boilers . . . . .	3,851		4,258				4,141
* (Pro. rata on coal) . . . . .	29,454	25,221	27,931	5.13	23,863	4.89	22,002
Supervision . . . . .		9,430		1.92	9,560	1.96	9,620
Miscellaneous—							
Engineering Wages . . . . .	7,490		7,135				12,007
Engineering Stores . . . . .	8,592		9,835				11,073
Miscellaneous Wages. . . . .	25,602		26,412				24,066
Miscellaneous Stores . . . . .	4,613		7,010				5,345
Total 20% . . . . .	46,297	9,253	50,392	1.89	10,078	2.06	10,498
TOTAL . . . . .		4,91,613		100	4,88,397	100	4,33,879
Output of Bone-dry Pulp at 44% yield . . . . .		2,515			2,478		2,328
Output of Air-dry Pulp at 48.89% yield . . . . .		2,794			2,753		2,586

C A

For subsequent bleaching cost please see answer to question 11.

FORM II—PART II (Qn. 11)—*contd.*

*Total Expenditure Incurred on the Production of Unbleached Pulp—concd.*

		1934-35.			1935-36.			1936-37.		
		Totals.	Applicable to Pulp.	% of Totals.	Totals.	Applicable to Pulp.	% of Totals.	Totals.	Applicable to Pulp.	% of Totals.
Brought forward .										
Bamboo .	.		2,53,805	48.22		3,25,030	45.73		2,95,604	41.25
Sulphur .	.		64,421	12.24		98,841	13.91		1,00,964	14.09
Magnesite .	.		69,212	13.15		1,09,414	15.40		1,05,162	14.67
Coal .	.		50,614	9.61		73,234	10.30		91,143	12.72
Wages .	.		48,388	9.19		53,136	7.48		57,117	7.97
Total Brought forward .			4,86,440	92.41		6,59,655	92.82		6,49,990	90.70
Stores—										
{ Crusher House . . . . .		6,709			12,568			18,107		
{ 100% Acid Plant . . . . .		4,377			3,718			4,455		
{ Digester and Blow Pits . . . . .		3,997			6,559			8,626		
{ 50% Washing Plant . . . . .		3,232			2,917			8,697		

* Boilers . . . . .	5,448		7,948			7,518	
* (Pro. rata on coal) . . . . .	23,763	19,316	33,708	28,780	4.05	48,403	41,051
Supervision . . . . .		8,768		9,800	1.38		9,800
Miscellaneous—							
Engineering Wages . . . . .	11,344		11,702			17,074	
Engineering Stores . . . . .	13,726		17,453			15,788	
Miscellaneous Wages . . . . .	24,673		26,706			36,032	
Miscellaneous Stores . . . . .	4,492		6,229			10,307	
Total 20% . . . . .	54,235	10,847	62,080	12,418	1.75	79,201	15,840
TOTAL . . . . .		5,26,371		7,10,653	100		7,16,681
Output of Bone-dry Pulp at 44% yield . . . . .		3,168		4,747			4,834
Output of Air-dry Pulp at 48.89% yield . . . . .		3,520		5,275			5,371

For subsequent bleaching cost please see answer to question 11.

## FORM III—(Qn. 11.)

Cost per ton unbleached bamboo pulp.

	1931-32.				1932-33.				1933-34.			
	Details.	Cost per ton pulp.	% of total cost per ton.		Details.	Cost per ton pulp.	% of total cost per ton.		Details.	Cost per ton pulp.	% of total cost per ton.	
<i>Primary Materials—</i>												
Bamboo—												
Bamboo per ton pulp	2-273	..	..		2-273	..	..		2-273	..	..	
Cost per ton Bamboo	41-99	..	..		38-79	..	..		37-46	..	..	
Cost per ton pulp	95-43	95-43	48-82		88-17	88-17	44-74		85-15	85-15	45-67	
<i>Auxiliary Materials—</i>												
Sulphur—												
Consumption per ton bamboo	2-486	..	..		2-595	..	..		2-324	..	..	
Consumption per ton pulp	5-651	..	..		5-898	..	..		5-232	..	..	
Cost per ton sulphur	89-97	..	..		111-10	..	..		92-91	..	..	
Cost per ton pulp	25-45	25-45	13-02		32-76	32-76	16-63		24-54	24-54	13-16	



<b>Magnesite—</b>										
Consumption per ton bamboo	1-744	..	..	1-869	..	..	..	1-876	..	..
Consumption per ton pulp	3-964	..	..	4-248	..	..	..	4-264	..	..
Cost per ton Magnesite	111-96	..	..	111-60	..	..	..	112-20	..	..
Cost per ton pulp	22-23	22-23	11-37	23-70	23-70	12-02	23-92	23-92	23-92	1-83
<b>Power and fuel—</b>										
Coal per ton pulp	2-531	..	..	2-536	..	..	..	2-634	..	..
Cost per ton coal	6-344	..	..	6-629	..	..	..	5-608	..	..
Cost per ton pulp	16-03	16-03	8-20	16-81	16-81	8-53	14-77	14-77	14-77	7-93
<b>Wages</b>										
Wages	..	18-86	9-65	..	18-07	9-17	..	..	19-95	10-70
Stores	..	10-03	5-13	..	9-63	4-89	..	..	9-45	5-07
Supervision	..	3-75	1-92	..	3-86	1-96	..	..	4-13	2-22
Miscellaneous	..	3-68	1-89	..	4-07	2-06	..	..	4-51	2-42
Total cost per ton bone dry pulp	..	195-46	100	..	197-07	100	..	..	183-42	100
Total cost per ton air dry pulp	..	175-92	..	..	177-36	..	..	..	167-78	..

For subsequent bleaching cost please see answer to question 11.

## FORM III—(Qn. 11)—contd.

Cost per ton unbleached bamboo pulp—contd.

	1934-35.				1935-36.				1936-37.			
	Details.	Cost per ton pulp.	% of total cost per ton.		Details.	Cost per ton pulp.	% of total cost per ton.		Details.	Cost per ton pulp.	% of total cost per ton.	
<i>Primary Materials—</i>												
<i>Bamboo—</i>												
Bamboo per ton pulp	2-273	..	..		2-273	..	..		2-273	..	..	
Cost per ton Bamboo	35-25	..	..		30-13	..	..		26-91	..	..	
Cost per ton pulp	80-12	80-12	48-22		68-49	68-49	45-73		61-17	61-17	41-25	
<i>Auxiliary Materials—</i>												
<i>Sulphur—</i>												
Consumption per ton Bamboo	2-307	..	..		2-58	..	..		2-67	..	..	
Consumption per ton pulp	5-244	..	..		5-864	..	..		6-07	..	..	
Cost per ton sulphur	77-55	..	..		70-95	..	..		68-83	..	..	
Cost per ton pulp	20-334	20-33	12-24		20-80	20-80	13-91		20-88	20-88	14-09	

<b>Magnesite—</b>										
Consumption per ton bamboo . . . . .	1-868	..	..	2-04	..	..	..	2-003	..	..
Consumption per ton pulp . . . . .	4-246	..	..	4-64	..	..	..	4-55	..	..
Cost per ton Magnesite . . . . .	102-93	..	..	99-39	..	..	..	95-59	..	..
Cost per ton pulp . . . . .	21-852	21-85	13-15	23-06	23-06	23-06	15-40	21-75	21-75	14-67
<b>Power and fuel—</b>										
Coal per ton pulp . . . . .	2-896	..	..	2-705	..	..	..	3-087	..	..
Cost per ton coal . . . . .	5-516	..	..	5-704	..	..	..	6-11	..	..
Cost per ton pulp . . . . .	15-974	15-97	9-61	15-429	15-43	10-30	18-86	18-86	18-86	12-72
Wages . . . . .	..	15-27	9-19	..	11-19	7-48	..	..	11-82	7-97
Stores . . . . .	..	6-10	3-67	..	6-07	4-05	..	..	8-49	5-72
Supervision . . . . .	..	3-08	1-86	..	2-06	1-38	..	..	2-03	1-37
Miscellaneous . . . . .	..	3-43	2-06	..	2-62	1-75	..	..	3-28	2-21
Total cost per ton bone dry pulp . . . . .	..	166-15	100	..	149-72	100	..	..	148-28	100
Total cost per ton air dry pulp . . . . .	..	149-54	..	..	134-75	..	..	..	133-45	..

For subsequent bleaching cost please see answer to question 11.

## FORM IV—(Qn. 17.)

## Consumption of Auxiliary Materials.

	1931-32.		1932-33.		1933-34.		1934-35.		1935-36.		1936-37.	
	Tons.	Rs. per ton.	Tons.	Rs. per ton.	Tons.	Rs. per ton.	Tons.	Rs. per ton.	Tons.	Rs. per ton.	Tons.	Rs. per ton.
Pulp-making Material—												
Sulphur—Imported	711.53	89.87	731.05	111.1	614.7	92.91	830.72	77.55	1,393.02	70.95	1,466.77	68.83
Magnesite—Indian	499.41	111.96	526.30	111.6	496.3	112.18	672.40	102.983	1,100.85	99.39	1,100.07	95.59
Bleaching Material—												
Percbloron—Imported	56.00	355.4	..	..	..	..	..	..	..	..	..	..
Bleaching Powder—Imported	722.81	115.5	966.60	113.6	940.2	107.76	1,118.39	102.422	1,197.44	100.26	1,197.40	97.40
Sizing Material—												
Rosin—Indian	121.14	305.2	96.00	311.08	137.3	312.73	..	..	191.68	234.30	192.23	231.36
Rosin—Imported	..	..	..	..	..	..	153.98	279.55	..	..	..	..
Bewoid size—Imported	5.05	297.6	..	..	..	..	..	..	..	..	..	..
Other Auxiliary Materials—												
Sulphate of Alumina—Im- ported.	386.30	76.1	..	..	..	..	..	..	..	..	..	..
Sulphate of Alumina—Indian	..	..	448.66	74.21	439.2	72.18	385.55	70.003	405.69	71.13	331.09	70.00
Total Auxiliary Materials—												
Total tonnage consumed (Indian).	625.60	..	1,070.96	..	1,672.80	..	1,057.95	..	1,698.22	..	1,623.39	..
Total tonnage consumed (Imported).	1,479.64	..	1,697.65	..	1,554.90	..	2,103.04	..	2,590.46	..	2,664.17	..

FORM V—(Qn. 47.)  
Total Expenditure Incurred on the Production of Paper.

	1931-32.				1932-33.				1933-34.			
	Tons	Rs.	Per cent.		Tons.	Rs.	Per cent.		Tons.	Rs.	Per cent.	
<b>Manufacturing Expenses.</b>												
<b>I. Primary Materials—</b>												
Bamboo . . . . .	5,716-00	2,40,008	9.36		5,632-35	2,18,496	9.06		5,289-54	1,98,143	8.82	
Imported Pulp . . . . .	3,540-6	6,21,919	24.26		3,187-9	5,68,632	23.53		3,198-98	6,44,500	27.72	
Paper cuttings and Rags . . . . .	99-41	12,200	0.48		72-2	14,751	0.61		35-45	9,137	0.39	
China Clay . . . . .	571-2	29,588	1.15		488-9	23,116	0.96		634-3	24,751	1.06	
<b>II. Auxiliary Materials—</b>												
Sulphur . . . . .	711-53	64,015	2.50		731-05	81,223	3.37		614-7	57,112	2.46	
Magnesite . . . . .	499-41	55,913	2.18		526-30	58,729	2.44		496-3	55,674	2.39	
Bleach . . . . .	778-81	1,03,461	4.04		906-60	1,09,899	4.56		940-2	1,01,315	4.36	
Other chemicals . . . . .	..	81,548	3.18		..	89,252	3.70		..	91,295	3.93	
III. Mill Labour . . . . .	..	2,11,727	8.26		..	2,07,709	8.61		..	2,13,731	9.19	
IV. Power and Fuel . . . . .	..	1,63,187	4.02		..	1,67,433	4.46		..	90,045	3.87	
V. Current Repairs and Maintenance . . . . .	..	1,84,711	7.21		..	1,78,950	7.42		..	1,68,568	7.25	
VI. Supervision and Establishment . . . . .	..	66,362	2.59		..	84,043	3.49		..	96,937	4.26	
VII. Packing . . . . .	..	73,735	2.88		..	52,391	2.17		..	49,482	2.13	
VIII. Miscellaneous . . . . .	..	37,750	1.47		..	46,650	1.93		..	36,776	1.53	
<b>TOTAL</b> . . . . .	..	18,86,214	73.56		..	18,41,264	76.36		..	18,39,556	79.12	

## FORM V—(Qn. 47)—contd.

## Total Expenditure Incurred on the Production of Paper—contd.

Manufacturing Expenses.	1931-32.			1932-33.			1933-34.		
	Tons.	Rs.	Per cent.	Tons.	Rs.	Per cent.	Tons.	Rs.	Per cent.
Overhead Charges—									
Selling Expenses . . . . .	..	29,941	1.17	..	41,109	1.71	..	26,176	1.13
Insurance . . . . .	..	14,138	0.55	..	16,733	0.69	..	16,386	0.70
Rent, Rates and Taxes . . . . .	..	4,490	0.18	..	4,485	0.19	..	5,068	0.22
Depreciation* . . . . .	..	344,467	13.44	..	3,00,037	12.44	..	2,55,940	10.97
Interest . . . . .	..	1,01,900	3.98	..	47,542	1.97	..	27,621	1.19
Head Office Expenses and Managing Agents Commission.	..	75,925	2.93	..	63,984	2.65	..	59,641	2.57
Freight . . . . .	..	1,06,989	4.17	..	96,180	3.99	..	95,521	4.10
TOTAL	..	6,77,159	26.42	..	5,70,070	23.64	..	4,55,453	20.88
GRAND TOTAL	..	25,63,373	100	..	24,11,334	100	..	23,25,009	100
Total output of paper for the year in tons	5,069.42	..	..	5,567.98	..	..	5,834.13	..	..

\* Depreciation has been taken at 2½ per cent. on Buildings and 5 per cent. on Machinery except in 1931-32 and the first half of 1932-33 when Depreciation on Machinery was taken at 7½ per cent.

FORM V—(Qn. 47)—*contd.*  
*Total Expenditure Incurred on the Production of Paper—contd.*

Manufacturing Expenses.	1934-35.				1935-36.				1936-37.			
	Tons.	Rs.	Per cent.	Tons.	Rs.	Per cent.	Tons.	Rs.	Per cent.			
I. Primary Materials—												
Bamboo . . . . .	7,200-52	2,53,805	10-65	10,789-3	3,25,030	13-06	10,986-5	2,95,604	11-99			
Imported Pulp . . . . .	2,791-98	5,30,128	22-26	1,941-6	3,69,992	14-85	1,909-41	3,59,757	14-59			
Paper cuttings and Rags . . . . .	128-22	22,201	0-93	108-32	18,959	0-76	109-88	16,617	0-67½			
China Clay . . . . .	797-01	27,347	1-15	679-65	21,842	0-88	534-53	15,392	0-62½			
II. Auxiliary Materials—												
Sulphur . . . . .	830-72	64,421	2-70	1,398-02	98,841	3-97	1,466-77	1,00,964	4-09½			
Magnesite . . . . .	672-40	69,212	2-91	1,100-85	1,09,414	4-39	1,100-07	1,05,162	4-26			
Bleach . . . . .	1,118-39	1,14,615	4-81	1,197-44	1,20,053	4-82	1,197-40	1,16,824	4-73½			
Other chemicals . . . . .	..	92,142	3-87	..	1,00,202	4-02	..	96,996	3-93½			
III. Mill Labour . . . . .	..	2,14,562	9-01	..	2,29,277	9-20	..	2,47,677	10-05			
IV. Power and Fuel . . . . .	..	1,05,361	4-42	..	1,29,855	5-21	..	1,51,804	6-16			
V. Current Repairs and Maintenance . . . . .	..	1,74,398	7-32	..	2,13,881	8-57	..	1,91,607	7-77			
VI. Supervision and Establishment . . . . .	..	99,612	4-18	..	99,702	4-00	..	1,01,994	4-14			
VII. Packing . . . . .	..	52,281	2-20	..	45,684	1-83	..	44,205	1-79			
VIII. Miscellaneous . . . . .	..	47,480	1-99	..	49,622	1-99	..	49,157	2-00			
TOTAL	..	18,67,565	78-40	..	19,31,854	77-98	..	19,04,327	77-22			

## FORM V—(Qn. 47)—concl'd.

## Total Expenditure Incurred on the Production of Paper—concl'd.

Manufacturing Expenses.	1934-35.				1935-36.				1936-37.			
	Tons.	Rs.	Per cent.	Tons.	Rs.	Per cent.	Tons.	Rs.	Tons.	Rs.	Per cent.	Per cent.
Overhead Charges—												
Selling Expenses . . . . .	..	20,565	1.12	..	30,217	1.58	..	43,352	..	..	1.76	..
Insurance . . . . .	..	19,629	0.83	..	29,771	1.20	..	27,309	..	..	1.11	..
Rent, Rates and Taxes . . . . .	..	4,680	0.20	..	4,603	0.19	..	5,147	..	..	0.21	..
Depreciation* . . . . .	..	2,55,272	10.71	..	2,93,609	11.79	..	3,02,046	..	..	12.25	..
Interest . . . . .	..	29,645	1.24	..	19,475	0.78	..	834	..	..	0.03	..
Head Office Expenses and Managing Agents Commission. . . . .	..	67,579	2.84	..	66,068	2.34	..	72,025	..	..	2.92	..
Freight . . . . .	..	1,10,958	4.66	..	1,06,465	4.27	..	1,21,584	..	..	4.93	..
TOTAL . . . . .	..	5,14,278	21.60	..	5,48,642	22.02	..	5,61,530	..	..	22.78	..
GRAND TOTAL . . . . .	..	23,81,843	100	..	24,91,152	100	..	24,65,857	..	..	100	..
Total output of paper for the year in tons . . . . .	6,260.55	..	..	6,600.21	..	..	6,434.42	..	..	..	..	..

\* Depreciation has been taken at 2½ per cent. on Buildings and 5 per cent. on Machinery except in 1931-32 and the first half of 1932-33 when Depreciation on Machinery was taken at 7½ per cent.



## FORM VI—(Qn. 47.)

## Works Cost per ton of Finished Paper.

	1931-32.		1932-33.		1933-34.		1934-35.		1935-36.		1936-37.	
	Rs. per ton.	Per cent.	Rs. per ton.	Per cent.	Rs. per ton.	Per cent.	Rs. per ton.	Per cent.	Rs. per ton.	Per cent.	Rs. per ton.	Per cent.
<b>Primary Materials—</b>												
Bamboo . . . . .	39.54	9.36	37.24	9.06	33.96	8.52	40.54	10.65	48.74	13.06	45.94	11.99
Imported Pulp . . . . .	102.47	24.26	96.91	23.58	110.49	27.72	84.66	22.26	55.48	14.85	55.91	14.59
Paper Cuttings and Rags . . . . .	2.02	0.48	2.51	0.61	1.57	0.39	3.55	0.93	2.84	0.76	2.58	0.67
China Clay . . . . .	4.88	1.15	3.94	0.96	4.24	1.08	4.87	1.15	3.28	0.88	2.39	0.62
<b>TOTAL</b> . . . . .	148.91	35.25	140.60	34.21	150.26	37.69	133.14	34.99	110.34	29.55	106.82	27.37
<b>Auxiliary Raw Materials—</b>												
Sulphur . . . . .	10.55	2.50	13.84	3.37	9.79	2.46	10.29	2.70	14.82	3.97	15.69	4.09
Magnesium . . . . .	9.21	2.18	10.01	2.44	9.54	2.39	11.05	2.91	16.40	4.39	16.34	4.26
Bleach . . . . .	17.05	4.04	18.73	4.56	17.67	4.36	18.31	4.81	18.00	4.82	18.13	4.73
Other chemicals . . . . .	13.43	3.18	15.21	3.70	15.65	3.93	14.71	3.87	15.03	4.02	15.08	3.93
Mill labour . . . . .	34.88	8.26	35.40	8.61	36.03	9.19	34.27	9.01	34.38	9.20	38.49	10.05
Power and Fuel . . . . .	17.00	4.02	18.31	4.46	15.43	3.87	16.83	4.42	19.47	5.21	23.59	6.16
Current repairs and maintenance . . . . .	30.43	7.21	30.49	7.42	26.89	7.25	27.86	7.32	31.99	8.57	29.78	7.77
Supervision and Establishment . . . . .	10.94	2.59	14.32	3.49	16.96	4.26	15.91	4.18	14.95	4.09	15.85	4.14
Packing . . . . .	12.15	2.88	8.93	2.17	8.48	2.13	8.35	2.20	6.85	1.83	6.87	1.79
Miscellaneous . . . . .	6.22	1.47	7.03	1.93	6.31	1.59	7.59	1.99	7.44	1.99	7.65	2.00
<b>TOTAL</b> . . . . .	310.77	73.58	312.77	76.36	315.31	79.12	298.31	78.40	289.07	..	294.29	..

FORM VI—(Qn. 47)—contd.  
Works Cost per ton of Finished Paper—contd.

	1931-32.		1932-33.		1933-34.		1934-35.		1935-36.		1936-37.	
	Rs. per ton.	Per cent.	Rs. per ton.	Per cent.	Rs. per ton.	Per cent.	Rs. per ton.	Per cent.	Rs. per ton.	Per cent.	Rs. per ton.	Per cent.
<b>Auxiliary Raw Materials—contd.</b>												
Selling expenses . . .	4.93	1.17	7.03	1.71	4.49	1.13	4.24	1.12	5.89	1.58	6.74	1.76
Insurance . . .	2.33	0.55	2.85	0.69	2.81	0.70	3.13	0.83	4.46	1.20	4.24	1.11
Rents, Rates and Taxes .	0.74	0.18	0.76	0.19	0.87	0.22	0.75	0.20	0.70	0.19	0.80	0.21
Depreciation* . . .	56.76	13.44	51.13	12.44	48.72	10.97	40.74	10.71	44.02	11.79	46.94	12.25
Interest . . .	16.79	3.98	8.10	1.97	8.38	1.19	7.80	1.24	7.33	0.78	7.60	0.03
Head Office expenses and Managing Agents Commission.	12.39	2.93	10.90	2.65	10.22	2.57	10.79	2.84	9.91	2.64	11.19	2.92
<b>TOTAL</b>	93.94	..	80.77	..	70.49	..	67.45	..	72.31	..	77.51	..
<b>GRAND TOTAL</b>	404.71	..	384.54	..	385.80	..	365.76	..	361.93	..	371.80	..

*Note re Interest.*—For 1931-32 and 1932-33 interest actually paid amounted to as much as or more than it would have done on the basis proposed by the Board and the figure has not therefore been changed. For subsequent years Interest at 5 per cent. on the average value of stocks, viz., Rs. 9,78,286 as shown in answer to question 49, i.e., Rs. 48,914 has been taken annually and divided by the actual production for the year.

Freight has been omitted throughout.

\* Depreciation has been taken at 2½ per cent. on Buildings and 5 per cent. on Machinery except in 1931-32 and the first half of 1932-33 when Depreciation on Machinery was taken at 7½ per cent.

## FORM VII—(Qn. 9.)

*Bamboo Costs.*

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
<i>Assam.</i>						
Contractors' average cost per ton for rent and Royalty (Est.).	3 5 4	3 5 4	3 5 4	2 9 6	2 5 5	1 13 6
Contractors' average cost per ton for cutting (Est.).	6 10 8	6 0 0	5 10 8	5 10 8	4 10 8	4 2 8
Contractors' average cost per ton carting and delivery to station yard. (Est.).	4 2 8	3 8 0	3 2 8	3 0 0	2 8 0	2 0 0
Contractors' average cost per ton bundling and despatching (Est.).	8 2 8	7 4 5	7 2 8	7 0 0	7 0 0	6 8 0
Contractors' overhead, establishment, supervision and profit (by difference).	2 10 7	2 8 0	2 6 5	2 0 0	2 0 0	2 0 0
Actual average cost f.o.r. despatching station.	24 15 11	22 9 0	21 11 9	20 4 2	18 8 1	16 8 2
Freight paid per ton (average).	13 2 7	13 8 5	13 2 2	12 5 4	11 15 9	12 0 0
Total average contract price f.o.r. Mill.	38 2 6	36 2 2	34 13 11	32 9 6	30 7 10	28 8 2
Forest Department overhead.	4 3 11	3 0 9	2 4 6	2 0 10	2 8 4	0 11 8
Total all-in delivered cost of Assam Bamboo.	42 6 5	39 2 11	37 2 5	34 10 4	33 0 2	29 3 10.

	1934-35.	1935-36.		1936-37.	
	Cart deliveries.	Rail deliveries.	Cart deliveries.	Rail deliveries.	Cart deliveries.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
<i>Bengal.</i>					
Total all-in delivered cost of Bengal bamboo including Forest Department Overhead.	18 10 7	17 9 6	17 0 2	14 11 8	14 7 8
Average delivered cost . .	..	..	17 4 5	..	14 10 10

## FORM VII—(Qn. 9)—contd.

## Bamboo costs—contd.

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
<i>Bihar and Orissa.</i>						
Contractors' average cost per ton for rent and Royalty (Est.).	5 0 0	5 0 0	5 0 0	4 5 4	2 8 3	2 2 6
Contractors' average cost per ton for cutting (Est.).	3 2 0	3 2 0	3 2 0	3 2 0	3 0 0	2 12 0
Contractors' average cost per ton for carting and delivery to station yard. (Est.).	3 2 0	3 9 0	3 9 0	3 2 0	2 8 0	1 12 0
Contractors' average cost per ton for bundling and despatching (Est.).	2 3 3	2 8 7	2 0 5	2 3 3	2 3 3	1 0 0
Contractors' overhead, establishment, supervision and profit (by difference).	2 0 0	2 0 0	2 0 0	2 0 0	2 0 0	2 0 0
Actual average total cost f.o.r. despatching station.	15 7 3	16 3 7	16 4 5	14 12 7	12 3 6	9 10 6
Freight paid per ton (average).	8 3 3	6 10 1	6 2 8	6 6 6	7 11 1	8 6 8
Total average contract price f.o.r. Mill.	23 10 6	22 13 8	22 7 1	21 3 1	19 14 7	18 1 2
Forest Department overhead.	2 6 6	3 0 5	2 0 2	2 0 10	2 11 10	0 11 5
Total all-in delivered cost of Bihar and Orissa Bamboo.	26 1 0	25 14 1	24 7 3	23 3 11	22 10 5	18 12 7



## FORM VIII—(Qn. 12.)

*Purchases of Strong Bleachable Sulphite Pulp.*

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
Tons Purchased . . . . .	1,190-83	200	1,058-83	554-06	540-05	399-54
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Approximate price f.o.b. Europe	10 9 6	9 17 4	8 9 9	7 0 8	7 6 10	6 19 5
Approximate Freight and Insurance.	1 16 0	1 16 0	1 16 0	1 16 0	1 16 0	1 16 1
Average Contract Price . . . .	12 5 6	11 13 4	10 5 9	8 16 8	9 2 10	8 15 6
London Agents' and Brokers' commission.	0 3 1	0 4 5	0 3 4	0 2 8	0 2 11	0 3 0
Total cost c.i.f. Calcutta . . . .	12 8 7	11 17 9	10 9 1	8 10 4	9 5 9	8 18 6
Average Exchange rate for the year.	1/5-82	1/5-87	1/5-97	1/5-97	1/6-005	1/6-057
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
C.i.f. Calcutta price at the above rate of exchange.	167-39	159-59	139-57	119-72	123-79	118-05
Landing charges . . . . .	2-86	2-88	3-06	3-19	3-16	3-00
Transport Charges to Mill . . . .	2-62	2-32	2-44	2-31	2-29	2-29
Cost (in rupees) per ton delivered Mill (excluding duty).	172-87	164-79	145-07	125-22	129-24	123-94
Duty . . . . .		56-82	56-41	56-25	56-26	56-24
Total cost (in rupees) per ton delivered Mill (including duty).	172-87	221-61	201-48	181-47	185-50	180-1

*Purchases of Easy Bleaching Sulphite Wood Pulp.*

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
Tons Purchased . . . . .	3,163-74	1,031-84	1,727-66	2,009-35	926-60	1,749-08
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Approximate Cost f.o.b. Europe	10 9 1	7 7 2	8 19 7	7 8 4	7 10 3	8 0 7
Approximate Freight and Insurance.	1 16 0	1 16 0	1 16 0	1 16 0	1 16 0	1 16 1

## FORM VIII—(Qn. 12)—contd.

*Purchases of Easy Bleaching Sulphite Wood Pulp—contd.*

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Average Contract Price . . .	12 5 1	9 3 2	10 15 7	9 4 4	9 6 3	9 16 8
London Agents' and Brokers' commission.	0 3 3	0 3 0	0 3 7	0 2 10	0 2 10	0 3 11
Total cost c.i.f. Calcutta . . .	12 8 4	9 6 2	10 19 2	9 7 2	9 9 1	10 0 7
Average Exchange rate for the year.	1/5-79	1/5-93	1/5-97	1/5-97	1/6	1/6-043
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
C.i.f. rupee price at the above rate of exchange.	167-52	124-61	146-30	124-96	126-04	133-41
Landing charges . . . . .	2-91	3-01	3-05	3-25	3-23	2-08
Transport Charges to Mill . . .	2-76	2-49	2-56	2-43	2-34	2-29
Total cost per ton delivered Mill (excluding duty).	173-19	130-11	151-91	130-64	131-61	138-68
Duty . . . . .	1-59	36-34	56-22	56-28	56-64	56-23
Total average cost per ton delivered Mill (including duty).	174-78	166-45	208-13	186-92	188-25	194-91

In addition to the above we have bought 402 tons of special Pulp during the period at various prices.

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**FORM IX-A—(Qn. 30.)**  
**Statement of Average Price Realised by I. P. P. Co., Ltd.**

	AVERAGE NETT DELIVERED PRICE REALISED.				AVERAGE NETT PRICE EX-MILL.			
	Bleached.	Unbleached including wrapper for own use.	Total.	Average freight per lb.	Bleached.	Unbleached including wrapper for own use.	Total.	Equivalent of previous col. Rs. per ton.
	RS. A. P.	RS. A. P.	RS. A. P.		RS. A. P.	RS. A. P.	RS. A. P.	RS.
1931-32	0 3 3-60	0 3 0-04	0 3 3-22	1-45	0 3 2-15	0 2 11-49	0 3 1-77	441
1932-33	0 3 3-51	0 3 1-24	0 3 2-08	1-45	0 3 2-06	0 2 11-79	0 3 1-53	438
1933-34	0 3 1-34	0 2 9-39	0 3 0-94	1-48	0 2 11-86	0 2 7-89	0 2 11-48	413
1934-35	0 3 0-68	0 2 8-58	0 3 0-23	1-48	0 2 11-22	0 2 7-12	0 2 10-77	406
1935-36	0 3 1-24	0 2 2-69	0 3 0-72	1-44	0 2 11-80	0 2 1-25	0 2 11-28	412
1936-37	0 3 1-39	0 2 3-23	0 3 1-06	1-49	0 2 11-90	0 2 1-74	0 2 11-57	415
1937-38 (1st April 1937 to 31st December 1937).	0 3 5-58	0 2 7-17	0 3 3-52	1-83	0 3 1-75	0 2 5-34	0 3 1-69	440

NOTE.—Prior to 1935-36 all semibleached papers supplied to Government were included under unbleached. In 1935 it was decided that this paper being partly bleached should be included under Bleached.

**FORM IX-B—(Qn. 36.) :**  
**Paper Supplied to Central and Provincial Governments.**

	1931-32.		1932-33.		1933-34.		1934-35.		1935-36.		1936-37.	
	Tons.	Price.	Tons.	Price.	Tons.	Price.	Tons.	Price.	Tons.	Price.	Tons.	Price.
<i>Buyers.</i>		Rs. A.		Rs. A.		Rs. A.		Rs. A.		Rs. A.		Rs. A.
	993	3 5-9	1,130	3 7-90	682	3 5-33	983	3 4-38	850	3 4-95	1,180	3 3-18
1. Central Government including State Railways.												
2. Provincial Governments and other Railways.	120	3 8-7	129	3 8-93	108	3 5-99	125	3 4-54	164	3 6-30	250	3 5-05

1. Includes supplies made to the Punjab Government, the East Indian Railway, G. I. P., N. W. R., E. B. R., etc.

2. Including supplies made to Bihar, Madras, Orissa and U. P. Governments and also to the B. & W. R., B. & C. I., Assam Bengal Railway, etc.



## FORM X—(Qn. 31.)

## Gross Selling Prices for Principal Lines in Chief Markets.

Date on which prices in force.	CREAM LAID IN 6 AND 7 LBS. FOOLSCAP SUBSTANCE.							CREAM LAID IN SUBSTANCE 13½ × 14½—10 LBS. AND UPWARDS.						
	CREAM LAID IN 6 AND 7 LBS. FOOLSCAP SUBSTANCE.							CREAM LAID IN SUBSTANCE 13½ × 14½—10 LBS. AND UPWARDS.						
	Calcutta.	Allahabad.	Delhi.	Lahore.	Bombay.	Madras.		Calcutta.	Allahabad.	Delhi.	Lahore.	Bombay.	Madras.	
	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.		Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.
30th June 1931 . . . . .	4 3	4 3½	4 4	4 4½	4 0	4 1		3 9	3 10½	3 11	3 11	3 5	3 8	
31st December 1931 . . . . .	3 10	3 10½	3 10	3 10½	3 10	4 1		3 7	3 8½	3 8	3 8	3 3	3 8	
30th June 1932 . . . . .	3 11½	4 0	3 11½	4 0	4 0½	4 2½		3 7	3 8½	3 8	3 8	3 6	3 8	
31st December 1932 . . . . .	3 10½	3 11	3 10½	3 11	3 11	3 9		3 6	3 7½	3 7	3 7	3 4½	3 6	
30th June 1933 . . . . .	3 10½	3 9	3 8½	3 9	3 10	3 9		3 6	3 7½	3 7	3 7	3 3½	3 6	
31st December 1933 . . . . .	3 8½	3 8	3 8½	3 9	3 9½	3 8		3 5	3 6	3 5½	3 5½	3 2½	3 5	
30th June 1934 . . . . .	3 8½	3 8	3 8½	3 7	3 9½	3 8		3 5	3 6	3 5½	3 5½	3 2½	3 5	
31st December 1934 . . . . .	3 8½	3 8	3 8½	3 6	3 9½	3 8		3 5	3 6	3 5½	3 5½	3 2½	3 5	
30th June 1935 . . . . .	3 8½	3 8	3 8½	3 5	3 10½	3 8		3 5	3 6½	3 6	3 5½	3 3½	3 5	
31st December 1935 . . . . .	3 8½	3 9	3 7½	3 5	3 10½	3 8		3 5	3 7½	3 7	3 5½	3 3½	3 5	
30th June 1936 . . . . .	3 8½	3 9	3 7½	3 6	3 7½	3 8		3 5	3 7½	3 7	3 6½	3 3½	3 5	
31st December 1936 . . . . .	3 8½	3 9	3 7½	3 6	3 7½	3 8		3 5	3 7½	3 7	3 6½	3 3½	3 5	
30th June 1937 . . . . .	4 1	4 3½	4 2	3 11½	4 1½	4 0		3 9	4 0	3 11	3 11	3 7½	3 9	
31st December 1937 . . . . .	4 1	4 3½	4 2	4 2½	4 1½	4 0		3 9	4 0	3 11	3 11	3 9½	3 9	

## FORM X—(Qn. 31)—contd.

## Gross Selling Prices for Principal Lines in Chief Markets—contd.

Date on which prices in force.	WHITE PRINTING IN SUBSTANCE BELOW 18×22—14 LBS.						WHITE PRINTING IN SUBSTANCE 18×22—14 LBS. AND UPWARD.					
	Calcutta.	Allahabad.	Delhi.	Lahore.	Bombay.	Madras.	Calcutta.	Allahabad.	Delhi.	Lahore.	Bombay.	Madras.
	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.
30th June 1931 . . . . .	4 0	4 1	4 1½	4 2	3 6½	3 7	3 9	3 10	3 10½	3 11	3 4½	3 7
31st December 1931 . . . . .	3 10	3 11	3 10½	3 8	3 4½	3 7	3 7	3 8	3 7½	3 8	3 2½	3 7
30th June 1932 . . . . .	3 10	3 11	3 10½	3 8	3 7	3 7	3 7	3 8	3 7½	3 8	3 5½	3 7
31st December 1932 . . . . .	3 9	3 10	3 8½	3 7	3 5½	3 6	3 6	3 7	3 6½	3 7	3 4	3 6
30th June 1933 . . . . .	3 9	3 10	3 8½	3 7	3 4½	3 6	3 6	3 7	3 6½	3 7	3 3	3 6
31st December 1933 . . . . .	3 7	3 7½	3 7	3 5½	3 3½	3 4½	3 5	3 5½	3 5	3 5½	3 2	3 4½
30th June 1934 . . . . .	3 7	3 7½	3 7	3 5½	3 3½	3 4½	3 5	3 5½	3 5	3 5½	3 2	3 4½
31st December 1934 . . . . .	3 7	3 7½	3 7	3 5½	3 3½	3 4½	3 5	3 5½	3 5	3 5½	3 2	3 4½
30th June 1935 . . . . .	3 7	3 8	3 7½	3 6	3 4½	3 4½	3 5	3 6	3 5½	3 6	3 3	3 4½
31st December 1935 . . . . .	3 7	3 9	3 8½	3 6	3 4½	3 4½	3 5	3 7	3 6½	3 6	3 2	3 4½
30th June 1936 . . . . .	3 7	3 9	3 8½	3 8	3 4½	3 4½	3 5	3 7	3 6½	3 7	3 2	3 4½
31st December 1936 . . . . .	3 7	3 9	3 8½	3 8	3 4½	3 4½	3 5	3 7	3 6½	3 7	3 2	3 4½
30th June 1937 . . . . .	4 0	4 3	4 1½	4 2	3 11	3 9½	3 9	4 0	3 10½	3 11	3 8	3 8½
31st December 1937 . . . . .	4 0	4 3	4 1½	4 2	3 11	3 9½	3 9	4 0	3 10½	3 11	3 8	3 8½

(2) *Letter dated the 10th February, 1938.*

As requested at our oral examination on the 8th instant we have pleasure in giving various further information.

1. We confirm that Fullner Tanks are in use on both our Paper machines so that as much as possible of the fibre that would otherwise be lost from the wet end of the machines may be recovered.

2. We enclose a statement of World Pulp statistics taken from the second edition of "World Wood Pulp Statistics" issued by the United States Pulp Producers' Association of New York.

If the Board will kindly return this after reading it we will prepare and submit copies, but meanwhile we believe the Board will be interested in seeing it as soon as possible.

3. As requested by the Board we give below rail and sea freights on paper from our Mill to the principal Indian Ports.

	All rail.		Combined sea and rail.	
	Rs. per ton.	Pies per lb.	Rs. per ton.	Pies per lb.
Bombay	27-3	2-36	20-13	1-78
Madras	25-15	2-16	20-13	1-78
Karachi	*	*	22-10	1-94

\* We have never sent paper by all rail route to Karachi.

4. As requested we enclose four copies of a note prepared by our Mill Manager on two stage and multi-stage bleaching.

5. We also enclose four copies of a statement showing our estimated future Pulp cost as given in answer to question 48 but arranged in the form of Form III.

6. We have also re-arranged and corrected Forms V and VI in the manner requested by the Board, showing interest on working capital but omitting freight, and the necessary alterations have already been made in the forms in the possession of the Board enclosure to written replies [item (1)].

7. We enclose four copies of a note on the allocation of overhead costs between Pulp and Paper.

8. We have written to England for information regarding the freight on Bamboo Pulp from Trinidad to the United Kingdom and as soon as we receive a reply we will pass on any information we obtain to the Board.

#### *World Pulp Production.*

(In short tons of 2,000 lbs.)

	Sulphite.	Other chemicals.	Mechanical.	Total.
1936—Sweden	1,587,312	1,140,880	749,564	3,477,756
1935—Germany	1,247,087	61,949	1,005,628	2,314,664
1936—Finland	1,033,671	428,657	624,011	2,086,339
1936—Norway	485,012	77,161	485,012	1,047,185
1936—U. S. S. R.	300,000	54,166	418,204	772,370
1936—Austria	255,711	24,493	90,488	370,692
1936—Czecho-Slovakia	200,000	53,529	62,831	316,360
	<u>5,108,793</u>	<u>1,840,835</u>	<u>3,435,738</u>	<u>10,385,366</u>

	Sulphite.	Other chemicals.	Mechanical.	Total.
1936—U. S. A. .	1,830,000	2,389,000	1,496,000	5,715,000
1936—Canada .	1,212,400	287,500	3,050,000	4,549,900
1936—Newfoundland	49,355	.....	272,512	321,867
	3,091,755	2,676,500	4,818,512	10,586,767
1935—Japan .	413,802	69,501	342,530	825,833
Other Countries .	.....	.....	.....	1,391,034
<i>Summary.</i>				
Europe . .	5,108,793	1,840,835	3,435,738	10,385,366
America . .	3,091,755	2,676,500	4,818,512	10,586,767
Asia . .	413,802	69,501	342,530	825,833
Other Countries .	.....	.....	.....	1,391,034
Total World Pro- duction . .	8,614,350	4,586,836	8,596,780	23,189,000

## NOTE ON TWO STAGE AND MULTISTAGE BLEACHING.

The old method of bleaching was carried out by adding a solution of bleaching powder to the unbleached pulp in slush form and sufficient bleach was added to bring the colour up to the required standard preferably by one addition or further additions if required and when the required colour was obtained the pulp was washed. The next development was the treatment of pulp in exactly the same manner but instead of treating the pulp in the ordinary concentration of about 6 per cent. it was found that by further increasing the density of the pulp the action was accelerated and certain economies were obtained.

As a result of further research combined with the development of acid resisting steels a multistage system was evolved. The purpose of this multistage bleaching was definitely to effect economies in bleach consumption. When bleach liquor reacts with pulp two separate and distinct re-actions take place (a) certain of the colouring matters becomes soluble and (b) certain of the colouring matters are oxidised to colourless materials. These do not necessarily represent a complete reaction and if the dissolved colouring matter remains in the bleach liquor further oxidation will occur and more bleach will be consumed. If the colouring matter which has been dissolved can be immediately removed from contact with the bleach liquor then the amount of bleaching powder required to bleach a given quantity of pulp can be reduced and this was the line of reasoning which led to the development of multistage bleaching.

The next stage in the development was the substitution of direct chlorination in the first stage instead of using a solution of bleaching powder as first practised. This was rendered practicable by the development in stainless steels as in using direct chlorination in the first stage hydrochloric acid is formed in the pulp suspension.

Usually for ordinary reasonably easy bleaching sulphite pulps two stages only are necessary in the bleaching process but for pulps of lower bleachability the stages can be multiplied. This process can either be carried on as a batch treatment, i.e., batches of 4 or 5 tons of pulp can be treated at a time or a continuous system of treatment can be developed. It is likely that more accurate control and consequently higher economy can be obtained by the batch system of treatment. The usual method of procedure is, in the batch treatment system, to charge a vessel with a predetermined quantity of pulp at a predetermined density. The pulp is kept in circulation and a definite weight of chlorine gas is passed into the circulating mass. The quantity of chlorine so passed is determined by the total bleach demand and approximately 70 per cent. of the chlorine which will be required is added in the first stage. The reaction is almost

instantaneous and as soon as the addition of the chlorine is complete the pulp may either be washed to remove the acid formed or it may be neutralised with lime or soda. Washing is the most satisfactory method particularly in the treatment of high grade pulps especially those required for the artificial silk or a like industry.

If neutralisation is practised a small excess of lime or soda is added and this in turn acts on certain partially oxidised materials still present on the fibre and these go into solution and are removed by a further washing. This treatment again removes partially oxidised material which if not so removed would react with the bleach or chlorine and consume these materials without any actual benefit.

Where the acid is removed by washing it is necessary to give an intermediate treatment with a weak solution of alkali. Usually lime is used for this treatment but in case of Alpha pulps used for the artificial silk and allied industries a weak caustic soda solution is used as this after washing leaves a smaller percentage of mineral residue than the lime treatment.

The pulp is finally bleached usually in a state of fairly high concentration with ordinary hypochloride and after again washing the pulp is completely bleached.

A third stage treatment with calcium hypochloride (bleaching powder) solution is also sometimes added where specially bright shades are required but this is not necessary for normal qualities of bleached sulphite pulps.

#### INDIA PAPER PULP COMPANY, LTD.

*Estimated future Pulp cost as given in answer to question 48 but arranged in the form of Form III.*

	Details.	Cost per ton pulp.	% of Total cost per ton.
Bamboo per ton pulp . . . . .	2.275		
Cost per ton bamboo . . . . .	18/8/-		
Cost per ton pulp . . . . .	42.05	42.05	35.03
<i>Auxiliary materials.</i>			
Sulphur per ton bamboo . . . . .	0.10 tons		
Consumption per ton pulp . . . . .	.2273		
Cost per ton Sulphur . . . . .	85/-		
Cost per ton pulp . . . . .	19.32	19.32	16.09
Magnesite per ton bamboo . . . . .	.0825 tons		
" " " pulp . . . . .	.1875 "		
Cost per ton magnesite . . . . .	87/-		
Cost per ton pulp . . . . .	16.31	16.31	13.59
<i>Power and fuel.</i>			
Coal per ton pulp . . . . .	2.273		
Cost per ton coal . . . . .	8/12/-		
Cost per ton pulp . . . . .	19.89	19.89	16.57
Wages . . . . .		10.63	8.85
Stores . . . . .		6.55	5.46
Supervision . . . . .		2.02	1.63
Miscellaneous . . . . .		3.28	2.73
Total bone dry pulp . . . . .	4,834 tons @	Rs. 120.05 per ton	100.00%
Total air dry . . . . .	5,371 " @	Rs. 108 per ton	..

*Allocation of overhead as between Pulp and Paper.*

In the evidence we submitted to the Board in 1931 (page 82 last line) we estimated that the cost of building a 6,000-ton combined Pulp and Paper Mill was Rs. 49,19,000. In our evidence before the Board in 1924 we estimated the replacement cost of a similar Mill, but of 5,500 tons capacity, as Rs. 44,75,000 (page 518), and of replacing the pulp plant we had at that time as Rs. 25,65,000 (page 508).

Allowing for the difference in capacity the figures for the two years for a combined Pulp and Paper Mill agree so closely as to indicate that capital costs in the two years were very similar.

It therefore follows that the cost of replacing our original Pulp plant in 1931 would have been approximately the same as in 1924, namely Rs. 25,65,000. If to this we add the estimate of Rs. 7,35,000 made in 1931 for the cost of increasing that Pulp plant to a capacity of 6,000 tons (page 82) it would appear that the cost in 1931 for a 6,000 ton Pulp Mill would have been about Rs. 33 lacs, i.e., almost exactly two-thirds of the cost at that time of a combined Pulp and Paper Mill of 6,000 tons capacity.

Although we have not obtained similar estimates on the present occasion, we have no reason to believe that the ratio would be materially altered and since any allocation of overhead between Pulp and Paper in the case of a combined Pulp and Paper Mill must necessarily be arbitrary, we feel that this can best be done by allocating Insurance, Depreciation, Interest, Head Office expenses and Managing Office Agents Commission in proportion to the relative Block values. We have accordingly allocated these on the basis of two-thirds being applicable to Pulp if manufacture had stopped at this stage. Rent, Rates and Taxes would not be affected, and if we allocate our actual figures as given in Form V in this manner, and divide by the output of Air-dry Pulp shown in Form II, Part II, we obtain the following overhead costs per ton Air-dry Pulp for the six years 1931-32 to 1936-37 inclusive:—

Year.	Insurance, rent, rates, taxes, depreciation, *interest, head office and Managing Agents.	Add estimat- ed selling expenses.	Total overhead.
1931-32 . . . . .	129.44	2.50	131.94
1932-33 . . . . .	105.34	2.50	107.84
1933-34 . . . . .	99.92	2.50	102.42
1934-35 . . . . .	75.45	2.50	77.95
1935-36 . . . . .	56.29	2.50	58.79
1936-37 . . . . .	56.85	2.50	59.35

Combining these with the figures shown in Form III and on page 15 of the evidence, we obtain the total cost of Air-dry Bamboo Pulp in each of the six years as follows:—

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
Works cost unbleached air-dry pulp.	175.92	177.36	167.78	149.54	134.75	133.45
Add overhead as above . . . . .	131.94	107.84	102.42	77.95	58.79	59.35
Total cost unbleached air-dry pulp.	307.86	285.20	270.20	227.49	193.54	192.80
Add bleaching cost . . . . .	25.31	26.89	24.68	25.52	22.77	22.69
Total cost bleached air-dry pulp.	333.17	312.09	294.88	253.01	216.31	215.49

\* N.B.—The interest we have taken is as requested by the Board in oral examination.

With regard to future pulp costs we again feel that the best allocation which can be made with regard to the Overhead charges shown on page 67 of our evidence is to take two-thirds which gives the following estimated future all-in cost for Air-dry pulp:—

Estimated future cost unbleached Air-dry wet pulp	108.00
Managing Agents and Head Office charges . . . . .	7.33
Depreciation . . . . .	33.33
Profit . . . . .	32.00
<hr/>	
Total future cost Air-dry unbleached pulp in wet form . . . . .	180.66
Add—Cost of drying, cutting, packing, etc. . . . .	20.00
<hr/>	
Total future cost Air-dry unbleached Pulp in commercial form . . . . .	200.66
Add- Bleaching (actual figure for 1936-37) . . . . .	22.69
<hr/>	
Total estimated future cost of commercial Air-dry Bleached Pulp . . . . .	223.35
<hr/>	

(3) Letter dated the 16th February, 1938.

1. As requested by the Board subsequent to our oral examination, we have pleasure in giving particulars of our consumption of primary raw materials during 1936-37, arranged in the same form as Table XLI on page 70 of the report issued by the Tariff Board in 1931.

Material.	Standard yield.	Tons of material used in 1936-37.	Theoretical yield as paper.
	Per cent.	Tons.	Tons.
Bamboo . . . . .	42	10,986.5	4,614
Rags . . . . .	80	39.3	31
Waste Paper . . . . .	80	70.6	57
Wood Pulp . . . . .	86	1,909.4	1,642
China Clay . . . . .	75	534.5	401
			<hr/>
			6,745
			<hr/>
			6,434
			<hr/>
Loss, the special reasons for which we explained in our reply to question 6 of the Board's questionnaire . . . . .	...	...	311
			<hr/>

2. At the same time as a result of our further discussions with the Board, we would ask to be allowed to withdraw the last paragraph of our reply to question No. 51. We now realise that our proposal to exempt kraft and mechanical pulp from the general duty we have suggested on imported pulp might result in such duty free pulps being used in substitution of indigenous pulp. Since this danger out-weighs the advantages we believed would result from admitting such pulps free of duty, we would ask to be allowed to revise our opinion on this point, and to request that all imported pulp may be subject to the same rate of protective duty.

3. As requested by the Board we are writing to London for further information on which to prepare more detailed suggestions relating to the

practical side of our proposal for sliding scale duties on Pulp and Paper. We will accordingly submit a further note on this question as early as possible, but fear that we may not receive the necessary information in time to do so until towards the end of next month. We trust, however, that this will not be too late for the Board's purpose.

4. We enclose three spare copies of this letter.

(4) *Letter No. 297, dated the 22nd March, 1938, from the Tariff Board to the India Paper Pulp Company, Calcutta.*

I am directed to say that the Tariff Board realises that it may be impossible for you to supply exact information about the cost of manufacture of paper in your Mill and its realised prices for 1937-38 but will be glad to have as early in April next as possible such information on the points as may be available, as compared with 1936-37.

2. The Board will also like to have any later information available as to—
  - (1) the price at which imported paper has been landed in India;
  - (2) the price at which imported pulp, bleached and unbleached has been landed in India;
  - (3) the quantities of imported pulp used by your Mill in 1937-38.

(5) *Letter No. 328, dated the 28th March, 1938, from the Tariff Board to the India Paper Pulp Co., Ltd., Calcutta.*

With reference to your reply to question No. 21 of the Questionnaire, I am directed to request you to furnish the Board with information as to the wages paid by you for different classes of labour—superior, skilled and unskilled for the last 3 years.

(6) *Letter dated the 29th March, 1938, from the India Paper Pulp Co., Ltd., Calcutta.*

As requested in your letter No. 297, dated the 22nd instant, we have pleasure in enclosing a statement, arranged in the same manner as Form VI in the Board's questionnaire, showing the cost of manufacture of paper in our Mill for the period from 1st April to 31st December, 1937. We also have pleasure in giving particulars of the average price realised by us during the period as under:—

Average net delivered price realised per lb.			A. Frt. per lb.			Average net price ex-mill.		
Bleached.	Unbleached including wrapper for own use.	Total.				Bleached.	Unbleached including wrapper for own use.	Total.
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
033-58	027-17	033-52	001-83	031-75	025-34	031-69		440

We are arranging with the Tilaghur Paper Mills and the Bengal Mills Co., Ltd., to submit a joint reply to points (1) and (2) of the second paragraph of your letter under reply.

With regard to the third point in this paragraph, the quantity of wood pulp used in our Mill during the nine months ended 31st December last was 1,517 tons.



## FORM VI.

*Works cost per ton of Finished Paper from 1st April to 31st December, 1937.*

	Rs. per ton.	Per cent.
<i>Primary Materials—</i>		
Bamboo . . . . .	47.96	12.56
Imported Pulp . . . . .	*64.08	16.77
Paper cuttings and rags . . . . .	2.55	0.67
China Clay . . . . .	2.83	0.74
Total . . . . .	117.42	30.74
<i>Auxiliary Materials—</i>		
Sulphur . . . . .	14.68	3.84
Magnesite . . . . .	14.40	3.77
Bleach . . . . .	20.29	5.31
Other materials . . . . .	18.67	4.89
Mill Labour . . . . .	38.12	9.98
Power and Fuel . . . . .	25.04	6.56
Current repairs and Maintenance . . . . .	26.94	7.05
Supervision and Establishment . . . . .	15.60	4.08
Packing . . . . .	6.93	1.81
Miscellaneous . . . . .	7.42	1.94
Total . . . . .	305.51	79.97
<i>Overhead Charges—</i>		
Selling expenses . . . . .	5.67	1.48
Insurance . . . . .	4.40	1.15
Rent, Rates and Taxes . . . . .	1.22	0.32
Depreciation . . . . .	46.06	12.06
Interest . . . . .	7.22	1.89
Head Office Expenses and Managing Agents' Commission . . . . .	11.95	3.13
Total . . . . .	76.52	20.03
GRAND TOTAL . . . . .	382.03	100.00

\* The increased cost per ton under this heading is due to the higher prices paid for wood pulp.

(7) *Joint representation, dated the 29th March, 1938, from the India Paper Pulp Co., Ltd., the Titaghur Paper Mills Co., Ltd., and the Bengal Paper Mills Co., Ltd., Calcutta.*

As promised, we have further carefully considered the practical question arising from our proposals for Protective Duties on a sliding scale, and wish to place before the Board our joint suggestions.

Within two years of the adoption by the Government of India of a policy of discriminating Protection the Tariff Board found itself confronted with two main difficulties. One of these was the difficulty of predicting the future trend of foreign prices, and the other was the impossibility of assisting an industry in circumstances where the price of the protected commodity was not regulated by the price of imports. Both these

difficulties now arise for the first time in connection with the Paper and Pulp Industry, and it is to meet them that we have proposed a Protective Duty on a sliding scale.

The first difficulty was encountered by the Board, in the first enquiry which it undertook, in the case of the Steel Industry. In its report the Board devoted a whole chapter to this question in which it summarised its conclusions and proposals as follows:—

“Industrial conditions have been profoundly disturbed by the war and all forecasts of the course of world prices are likely to be falsified. Long views are impossible, and tariff duties which give reasonable protection when first imposed may in the course of a year or two, prove inadequate or excessive.

“Whatever the reasons for abnormally low prices may be, whether bounties in the country of origin, specially reduced freights, a depreciation in the exchange of a particular country, a rise in the value of the rupee as compared with other currencies, or the sale of steel at unremunerative prices—the effect on the Indian market is precisely the same. It is this effect which has to be dealt with, if the protection given is to be effective.

“When a marked fall occurs in the price of imported steel an immediate remedy may be necessary, and we think the executive Government should have power to apply that remedy at once, for, if the intervention of the Legislature were necessary, much mischief might be done before action was taken.

“The power which we propose should be conferred on the Executive Government in any legislation undertaken to give effect to our proposals may be defined as follows:—

“If the Governor General in Council is satisfied, after such enquiry as he considers necessary, that steel is entering India from abroad at such prices as are likely to render the protection given by this Act ineffective, he may impose such additional duties as in his judgment are required. \* \* \* \* \*

These proposals were adopted by the Government of India and the Legislature and incorporated in the Steel Protection Act of 1924 in the following terms:—

“If the Governor General in Council is satisfied, after such inquiry as he thinks necessary, that articles of any class chargeable with duty under Part VII of the Second Schedule are being imported into British India from any place outside India at such a price as is likely to render ineffective the protection intended to be afforded by such duty to similar articles manufactured in India, he may, by notification in the *Gazette of India*, increase such duty to such extent as he thinks necessary either generally or in respect of such articles when imported from or manufactured in any country or countries specified in the notification.”

The second difficulty first arose in the case of the Cement Industry, where the Tariff Board found that “Protective Duties are effective only in so far as the price of the protected commodity is regulated by the price of imports”.

These difficulties, however, were not peculiar to either this particular period or those particular Industries. Ten years later the Tariff Board found the same difficulty in predicting the future prices of foreign steel and the following extracts from their 1934 Report show how closely their recommendations followed those of the previous Board:—

“The determination of the level at which import prices should be taken in this enquiry for the purpose of estimating the measure of protection is a question which presents unusual difficulties. The unsettled conditions of trade and currency throughout the world make it exceedingly difficult to forecast the future course of steel prices.  
\* \* \* \* \*

"In view of these uncertainties which be set the future course of steel prices we propose to base our recommendations on the average prices which prevailed in the earlier part of 1933. At the same time we propose to make provision of the scheme of protection for adjusting the duties automatically if it is found at some later stage that prices have varied substantially as compared with the prices assumed by us. This appears to be the most prudent course open to us in the circumstances. \* \* \* \*

"In order to maintain the protection granted to the Industry it is essential that the scheme of protection should embody a provision for the variation of the duties if unexpected changes in the conditions of the market render it necessary. The power to vary the duties in such circumstances should be vested in the Governor General in Council to be exercised as occasion arises without a previous enquiry by the Tariff Board and without recourse to legislation. We cannot emphasise too strongly the importance of including a provision on these lines in the scheme of protection. The provision for varying duties by executive action should be applicable equally in the case of a fall and of a rise in prices. Without such a proviso the protection granted to the Industry may be rendered seriously ineffective or the burden placed on the consumer unnecessarily heavy."

Their recommendations were again adopted by Government and the following provision was included in the Steel Protection Act, 1934:—

"If the Governor General in Council is satisfied, after such inquiry as he thinks necessary, that any duty imposed on any articles of Part VII of the Second Schedule has become ineffective or excessive for the purpose of securing the protection intended to be afforded by such duty to a similar article manufactured in India, he may by notification in the *Gazette of India*, increase or reduce such duty to such extent as he thinks necessary either generally or in respect of such article when imported from or manufactured in any country or countries specified in the notification."

As regards the second difficulty, we believe the present Tariff Board are sufficiently aware of its existence to-day as a result of their enquiry into the Sugar Industry.

In the case of the Paper Industry our replies to questions 15 and 25 of the Board's questionnaire show that both difficulties now arise in the case of the Paper and Pulp Industry. The capacity of the various new Mills under construction exceeds our estimate of the available demand by at least 8,000 tons per annum, even assuming that the Industry succeeds in capturing the market for many of the special qualities now imported, while the difficulty of forecasting the trend of future prices is, we think, sufficiently indicated by the attached graph of pulp prices during the past two years, the figures being those given for Easy Bleaching Sulphite Pulp in the World's Paper Trade Review.

We submit that these fluctuations show the impossibility of predicting the future trend of prices, and it follows that any fixed rate of duty must necessarily involve the danger of the Protection afforded becoming inadequate or excessive. Should excessive protection result the experience of the Sugar Industry has shown that there is a real danger of unduly rapid expansion, when the price of the protected commodity may no longer be regulated by the price of imports, in which event as was recognised by a former Tariff Board, the Protective Duty inevitably ceases to be effective.

There is already the possibility of over-production of the present protected classes of paper, with the consequent danger that for a time at least prices may be regulated by internal rather than foreign competition. It would therefore be nothing short of disastrous if protection should be granted on a scale which might prove sufficient to encourage further indiscriminate expansion.

In these circumstances we feel there is a real danger that any fixed rate of protection may ultimately prove not to be in the best interests of the Industry, and it is for this reason that we ask that the Duty may from time to time be increased or reduced to such extent as may be necessary for the purpose of securing that it shall become neither ineffective nor excessive. In making this request we are moreover encouraged by the fact that the principle is not new and has in fact been adopted and acted upon in similar circumstances not only by the Tariff Board, but by the Government of India and the Legislature.

There are two ways in which effect could be given to our proposal, either by revision at stated intervals in a predetermined manner, or by notification of the Governor General at his discretion. The latter was the method adopted in the case of the Steel Industry and we believe it was the intention that observation by Collectors of Customs of the prices at which Steel was being imported should form the basis on which the Governor General would exercise his discretion. This method would serve equally well in theory in the case of the Paper Industry but we believe that from the practical point of view our proposal for regular revision on the basis of a Pulp Index figure is more appropriate.

In the case of paper there are a great number of varieties and there is a wide range in quality and price between papers of any one variety. It would therefore be a matter of considerable difficulty to obtain sufficiently explicit data to follow the procedure adopted in the case of the Steel Industry. Since, however, paper prices inevitably follow pulp prices, and since pulp consists of a limited number of well-defined varieties, the price of any of which at any given time can be determined within reasonable limits, we believe the use of a Pulp Index figure is at the same time simpler and more accurate.

The only objections from the point of view of the Industry are firstly that there is a time-lag, and secondly that as temporary fluctuations in pulp prices, if of sufficiently short duration, may not be reflected in subsequent paper prices, prompt action based on pulp prices might prove premature. We shall, however, endeavour to show later that our actual proposals obviate both these objections.

Before doing so, however, we would refer to possible objections from points of view other than that of the Industry itself, namely the difficulties in which a variable duty might involve importers of paper and possibly the Customs Authorities. We believe we are justified in claiming that an alteration in a specific duty, even at relatively frequent intervals, would cause no difficulty to the Customs. The case of the Importer is, however, different and we admit that a variable duty might constitute real hardship, though we would point out that in the parallel case of the Steel Protection Act, it was evidently held that the major good outweighed the lesser evil. The argument had in fact far greater force in the case of the Steel Industry where imports in 1923-24 had a value of Rs. 1,761 lakhs compared with only 46½ lakhs in the case of protected paper imported in 1936-37.

We have nevertheless two suggestions by which this potential hardship might, we think, be avoided. One alternative is that adequate notice of any change in duty should be given, and the other is that importers should register forward contracts with Collectors of Customs and be permitted to import goods against these registered contracts at the rate of duty prevailing either at the time of import or the time of registration whichever was the lower. Of the two we recommend the former, as, although importers of paper are limited in numbers and registration of contracts would not present undue difficulty, it would cause a certain amount of inconvenience both to importers and to Customs authorities. If, however, adequate notice of any change in duty was given, importers of paper could, without inconvenience to the Customs or themselves, conduct their business with full knowledge of the rate of duty for which they would be liable. We understand moreover that paper of the protected classes is seldom if ever contracted for more than six

months forward and we accordingly suggest that this period would constitute adequate notice.

Such notice would moreover tend to compensate for the time-lag between pulp and paper prices which we estimate to be between six and twelve months. If therefore any change in pulp duty were notified on (say) 1st April on the basis of the average pulp prices during the previous six months, but to take effect from the 1st October following, we should expect the level of prices of imported paper on 1st October to reflect closely the price of pulp during the period on which the duty had been based. Further, by averaging pulp prices over six months temporary fluctuations would have no undue effect.

We believe therefore that in this way the possible objections from the point of view of the Industry to the use of pulp prices as a basis, and the objections of the importer to a variable duty can both be met.

There remains one further aspect and that is the question of what effect our proposals would have on Government Revenues. We admit that previous notice of either a reduction or an increase in the rate of duty might encourage importers to take advantage of the change. In the case of paper of the protected classes, however, the large number of varieties, classes, sizes, and weights necessarily bear a close relation to the actual use to which the paper is to be put. A particular consignment in fact is in very many cases necessarily imported for a particular purpose. This is a point of the greatest importance since it limits the power of the importer to take advantage of an impending change of duty as compared for instance with the importer of a bulk commodity such as cement or sugar. If made at six monthly intervals moreover individual changes in the duty would not be sufficiently great to offer a very material temptation to importers on the one hand, or materially to affect Government revenue on the other. Since in any case the revenue afforded by the protective duty on paper is small, and is likely to be reduced as increased Indian production replaces imported papers, we hope that any possible effect of our proposal on Government revenue will be held to be too small to outweigh its other advantages.

At this stage we should make it clear that our suggestion of six months' notice of change of duty is intended to apply only in the case of paper. The same necessity does not arise, and the same arguments do not apply in the case of pulp. We accordingly suggest that the duty on pulp should be revised on the same dates as those on paper, and on the same basis, but that any change should have immediate effect.

With regard to the actual rates of duty we made individual suggestions in our replies to the Board's questionnaire. Since then at the request of the Board we have jointly drawn up figures which, in our opinion, represent the fair average costs of a typical mill of 6,000 tons capacity, this being the smallest mill which we consider can be taken as constituting an effective economic unit. Our estimate is as follows:—

	Bleached pulp.	Conversion.	Finished paper.
Works Cost	140	140	280
Overhead	75	50	125
Total	215	190	405

On this basis we claim that the fair selling price *ex-mill* for paper should be Rs. 405, and that the duty on paper should be such as will bring the landed cost of imported papers of the protected classes to that figure, i.e., £30-7-6. In the case of pulp, since we consider the use of indigenous pulp should be encouraged, and the import of pulp definitely discouraged, we suggest the duty should be such as to make the landed cost of Bleached Pulp Rs. 240 or £18

Our individual replies to the questionnaire have, we submit, established the fact that the lowest price at which protected classes of paper reach India, are about £9 per ton higher than the mean of the corresponding c.i.f. Calcutta prices for Easy Bleaching and Strong Sulphite Wood Pulp. Our own cost figures show that Bleaching costs per ton air-dry pulp—even in this country—do not exceed Rs. 17-8, or say £1-6 per ton. We are further informed that pulp prices c.i.f. Calcutta are about £1 higher than the corresponding price c.i.f. United Kingdom Ports as quoted in London Trade Journals. It follows that the c.i.f. price of Bleached Pulp will be £2-6 and the lowest c.i.f. price for imported varieties of protected paper £10 above the mean London price for Easy Bleaching and Strong Sulphite pulps.

Since replying to the Board's questionnaire there has been a sharp fall in pulp prices, as shown by the enclosed copies of the World's Paper Trade Review of 3rd December, 7th January, 4th February last and 4th instant. From the latest of these it will be seen that the mean price for Easy Bleaching and Strong Sulphite has already fallen to £12-6 and in these circumstances we do not think the future level can safely be put higher than £11. On this basis the Protective Duty required would be:—

A. For Pulp £18-(11+2-8)=4-14=Rs. 63.

B. For Paper £30-7-6-(11+10)=9-7-6=Rs. 125.

If however, the Index figure rose to £14 an *ad valorem* duty of 20 per cent. would afford sufficient protection in the case of pulp, while in the case of paper a similar duty would be sufficient when the Index figure rose to £17. Taking, for convenience, a change of £1 in the price of Pulp as equivalent to 1 pie per lb. paper, and to Rs. 10 per ton Pulp, we suggest the following as the actual rates of duty applicable:—

Index figure being mean price of easy bleaching and strong sulphite pulp C. I. F. U. K. ports.	Rate of protective duty on pulp.	Rate of protective duty on the protected classes of paper.
£	Rs.	
9	80 per ton.	13 pics per lb.
10	70 " "	12 " " "
11	60 " "	11 " " "
12	50 " "	10 " " "
13	40 " "	9 " " "
14	20% <i>ad valorem</i>	8 " " "
15	Ditto . .	7 " " "
16	Ditto . .	6 " " "
17 and over	Ditto . .	20% <i>ad valorem</i> .

Our suggestion therefore is that the Protective Duties be continued after 31st March, 1939, in accordance with the above scales on the present protected classes of paper, and that the Governor General should be empowered to modify this by notification in the following manner:—

So far as we have been able to ascertain the most reliable published record of Pulp prices is contained in the World's Paper Trade Review, of which, as already mentioned, we enclose copies. We had hoped to find that the London Trade Commissioners of the leading pulp producing countries published official statements regarding the movement of pulp prices as we appreciate that such statements might command greater confidence than the figures quoted in a Trade Journal. We are still enquiring into other possible authorities on which a Pulp Index figure might be based but meanwhile we would suggest that it would not be difficult for the Indian Trade Commissioner in London to check the figures given in the World's Paper Trade Review and advise Government if at any time he thought their figures required any modification.

The Review is published weekly and gives a maximum and minimum figure respectively for Easy Bleaching and Strong Sulphite Pulp and we suggest that the average of these four figures be taken as the weekly Index figure. On 1st April and 1st October each year the average of the weekly Index figures could be calculated for the previous six months up to and including the last available issue, and the Governor General should on those dates be empowered to alter by notification the rates of duty in accordance with such average Index figure, such alteration to have immediate effect in the case of Pulp, and with effect six months later in the case of paper.

In this way we submit that the landed cost of paper would never fall sufficiently below the fair selling price for Indian made papers of the protected classes to render the degree of protection inadequate, nor rise sufficiently above it to encourage undue expansion of the industry to its ultimate disadvantage.

Finally our proposal, by stabilising the price level of the protected classes of paper for a period of years, would be of real benefit to publishers, printers, education authorities, and all other consumers, to all of whom fluctuations in the price of paper is a source of difficulty.

There is one further point to which we would invite the Board's attention, and that is the possibility that if at any time the difference between the prices of Mechanical and Sulphite Pulps became sufficiently great, the industry might be threatened by undue competition from papers of the protected classes containing a proportion of mechanical pulp. We would therefore ask the Board to include in their recommendations that the Governor General should be empowered to modify the scale we have proposed if at any time this is found to be necessary to meet competition from imported papers containing a proportion of mechanical pulp.

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(8) *Letter No. 353, dated the 4th April, 1938, from the Tariff Board, to the India Paper Pulp Co., Ltd., Calcutta.*

With reference to your reply to question No. 14, the Board will feel grateful if you could let us have the following information at an early date:—

No. 1.—The quantity and quality of protected classes of paper actually manufactured entirely from indigenous pulps, *i.e.*, grass and bamboo, without the admixture of imported pulp, during the last five years.

No. 2.—The *ex-mill* realised price of these classes as compared to similar qualities of imported and Indian paper (with admixture of imported pulp).

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(9) *Letter No. 374, dated the 5th/6th April, 1938, from the Tariff Board, to the India Paper Pulp Co., Ltd., Calcutta.*

I am directed to convey to you the thanks of the Tariff Board for the information supplied to it and to request you to be so good as to furnish it with information regarding indigenous and imported pulp used during the year 1937-38. If possible the full year's consumption figures may be given.

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(10) *Letter dated the 6th April, 1938.*

We have received your letter No. 353 of the 4th instant and note the further information required by the Board regarding question No. 14.

With regard to No. (1) we regret that no record of furnish of individual makings is available and we are consequently unable to supply this information.

In regard to No. (2) there is no price distinction between paper made entirely from bamboo and paper containing an admixture of wood pulp.

(11) Letter No. 384, dated the 6th April, 1938, from the Tariff Board, to the India Paper Pulp Co., Ltd., Calcutta.

I am directed to request you to furnish the Board with a detailed reply to question 6 of their questionnaire on the same lines as given by the other paper mills, for pulp and paper, for bamboo, paper cuttings and rags. Your reply may kindly be sent to this office at as early a date as possible.

(12) Letter dated the 11th April, 1938.

We have received your letter No. 384 of the 6th instant, and have pleasure in giving the information, for which you ask, as follows:—

Material.	Quantity required for one ton pulp.	Quantity required for one ton paper.
	Tons.	Tons.
Bamboo . . . . .	2.27	2.38
Rags and Paper Cuttings . . . . .	*	1.25

The total quantity of rags and paper cuttings combined represented only 1.38 per cent. of our output in 1936-37 and we have no means of assessing, on this small proportion, the actual quantity of pulp produced. Even the estimated quantity required to produce one ton of paper is for the same reason an arbitrary one and there is no possible way in which the yield from this material, on so small a scale, could be accurately determined.

We regret we can give no figures for grass, jute or hemp, as we have never used any of these materials.

(13) Letter dated the 11th April, 1938.

With reference to your letter No. 328 of the 28th ultimo, we enclose a statement showing the average wages paid for the different classes of labour during the last three years.

You will observe that the figures shown in this statement vary to some extent from those given to the Board at the 1925 Enquiry *vide* page 474 of Volume I of the Evidence.

Through the passage of time alterations in Works Organisation are inevitable and as a result of various changes in our organisation during the last 14 years some posts have become more and some less responsible. These changes are reflected in the statement attached.

*India Paper Pulp Co., Ltd.*

	Per month.
	Rs. A.
Head Mechanic . . . . .	100 0
Head Shift Mistries . . . . .	70 0 to 40 0
Fitters . . . . .	44 0 to 26 0
Turners and Planers . . . . .	45 0 to 20 0
Moulder . . . . .	60 0
Head Carpenter . . . . .	60 0
Carpenters . . . . .	41 0 to 19 0
Head Electrician . . . . .	60 0
Assistant Electrician . . . . .	55 0 to 32 0



	Per month.
	Rs. A.
Switch board attendants and Motor boys . . . . .	26 0
Pumpmen . . . . .	26 0
Oilers . . . . .	26 0 to
	20 0
Tyndal (Head Fireman) . . . . .	40 0
Firemen . . . . .	30 0
Ash Coolies . . . . .	22 8
Sareng (Khalasi Sirdar) . . . . .	44 0
Assistant Sareng . . . . .	33 8
Khalasies . . . . .	23 8
Masons . . . . .	33 8 to
	27 0
Senior Machinemen . . . . .	79 8
Junior Machinemen . . . . .	51 8
1st Assistant Machinemen . . . . .	30 8 to
	24 8
2nd Assistant Machinemen . . . . .	21 0,
	17 0 &
	22 8
Press Boys . . . . .	16 0
Head Cutter man . . . . .	45 0
Cuttermen . . . . .	34 8
Cutter coolies . . . . .	21 0
Cutter boys . . . . .	20 0 to
	16 0
Head Finisher . . . . .	100 0
Finishing checkers . . . . .	45 0 to
	40 0
Finishers . . . . .	44 8 to
	34 0
Senior Beatermen . . . . .	60 0
Junior Beatermen . . . . .	50 0 to
	45 0
Assistant Beatermen . . . . .	30 0 to
	36 8
Beater coolies . . . . .	25 0 to
	21 0
Chemical House coolies . . . . .	22 12 to
	21 12
Washing Plant coolies . . . . .	27 8 to
	22 8
Digester House fitters . . . . .	34 0
Digester coolies . . . . .	13 0 to
	24 0
Acid Plant men . . . . .	28 0 to
	27 0
Bamboo Crusher Head coolies . . . . .	25 8
Bamboo Crusher and Chipper coolies . . . . .	22 0
Outdoor cooly sirdar . . . . .	40 0
Outdoor Assistant sirdar . . . . .	26 0

	Per month.
	Rs. A.
Outdoor coolies . . . . .	19 8
Durwans Jamadar . . . . .	45 0
Durwans Assistant Jamadar . . . . .	28 0
Durwans . . . . .	22 0
Sweepers Head . . . . .	20 0
Sweepers . . . . .	15 0

(14) *Letter dated the 14th April, 1938.*

With reference to your letter No. 374 of the 5th/6th instant, we have pleasure in giving herewith information required by the Board.

Indigenous pulp consumed  
during 1937-38.

Imported pulp consumed during  
the year 1937-38.

5,913 tons air-dry pulp.

1,819 tons.

These figures relate to our consumption from April, 1937, to March, 1938, both months inclusive.

(15) *Letter dated the 22nd April, 1938.*

We have received your telegram of yesterday's date reading as follows:—

"Kindly wire what proportion of bamboo you purchase from Bengal area."

and in reply we wired you to-day the following:—

"Your telegram, twenty-first bamboo purchased from Bengal represented sixty-six per cent. of total purchase during 1936-37 season."

(16) *Express letter No. 437, dated the 22nd April, 1938, from the Tariff Board, to India Paper Pulp Co., Ltd., Calcutta.*

Reference your note regarding suggested figures representative of a typical Indian Bamboo Pulp and Paper Mill in which the replacement value has been taken at Rs. 800 per ton of paper output. Could you please inform the Board at an early date as to how much of it is for pulp and how much for paper.

(17) *Letter No. 436, dated the 22nd April, 1938, from the Tariff Board, to the India Paper Pulp Co., Ltd., Calcutta.*

Could you please furnish the Board at an early date with the following information:—

- (1) Prices for rags and paper cuttings to be shown separately.
- (2) Present prices of the auxiliary materials used.
- (3) Quantities of the following auxiliary materials consumed per ton of paper:—
  - (1) Alum.
  - (2) Soda.
  - (3) Glue.
  - (4) Dyes, etc.

(18) Letter dated the 27th April, 1938.

We have received your Express letter No. 437, dated the 22nd April, and in reply would refer the Board to the note regarding allocation of overhead as between Pulp and Paper which we submitted to the Board on 10th February last as stated in paragraph 7 of our letter of that date.

In that note we explained in detail our reasons for estimating that the replacement value of a 6,000-ton Indian Bamboo Pulp Mill would be approximately two-thirds of the replacement value of a combined Pulp and Paper Mill of the same capacity. It was on this basis that we calculated the figures required by the Board in answer to question 11 of the questionnaire and which were set out in Form III.

In the joint note which we submitted in conjunction with the Titagur and the Bengal Paper Mills on the 29th ultimo, the allocation of overhead between Pulp and Paper did not conform exactly to the ratio of two-thirds and one-third. In considering the circumstances which might fairly be regarded as representative of a "typical" Mill attention was given to the fact that certain items of overhead cost, notably selling charges and working capital are considerably heavier in the case of paper than in the case of Pulp. Instead therefore of allocating two-thirds of the total overhead figure of Rs. 125, namely Rs. 83 to Pulp, the actual allocation was Rs. 75 only.

We explained to the Board in the discussions we had on this subject that any allocation as between Pulp and Paper costs are necessarily to some extent arbitrary. The same applies to the allocation of replacement values since items such as Power and water plant (to mention only two of the chief ones) are common to both the Pulp and Paper sections of a combined Mill. It is therefore impossible to say what proportions of the replacement value of a combined Mill represent respectively Pulp and Paper plant, and the nearest estimate we can make is to suggest that between a half and two-thirds may be regarded as applicable to Pulp, and between one-third and one-half as applicable to paper.

We trust this estimate will be of assistance to the Board and remain.

(19) Letter dated the 2nd May, 1938.

With reference to your letter No. 436 of the 22nd ultimo, we have pleasure in giving below the information required by the Board.

(1) The present prices of Paper Cuttings and Rags are as follows:—

	Per maund.	
	Rs.	Rs.
White Paper Cuttings (delivered Mill)	5	6
No. 1 quality bleached hosiery cuttings (delivered Mill)	10	12

(2) The present prices of our auxiliary materials delivered our Mills are as follows:—

	Per ton.
	Rs.
Rosin	270
Sulphur	76.14
Bleaching Power	102.22
Magnesite	87
China Clay	29.50
Sulphate of Alumina	70

(3) The quantities of auxiliary materials consumed per ton of paper are approximately:—

(1) Alum	. . . . .	1½ cwt. per ton of paper.
(2) Soda	. . . . .	2 lbs. „ „
(3) Glue	. . . . .	2½ „ „ „
(4) Dyes	. . . . .	2 „ „ „

We have also for acknowledgment your telegram of the 28th ultimo reading as follows:—

“Wire recent landed prices of Auxiliary Raw Materials used in manufacture of paper and c.i.f. price per ton of imported Woodpulp easy and strong unbleached and bleached.”

The first part of this telegram is covered by what we have written above and we have telegraphed you to this effect and answered the second part of your telegram as follows:—

“Your telegram twenty-eighth prices Auxiliary Materials posted to-day stop latest Sulphite Pulp indications easybleach £12-10-0 strong £11-10-0 bleached £15-10-0 all c.i.f. Calcutta.”

We trust this contains all the information you require.



**Evidence of Messrs. A. L. CAMERON, C. A. CARMICHAEL, J. A. J. MCKENZIE, R. J. R. DAVIDSON, H. N. CHOUDHRY and D. P. BHARGAVA, recorded at Calcutta, on Tuesday, 8th February, 1938.**

**B.—ORAL EVIDENCE.**

*President.*—What is your position, Mr. Cameron?

*Mr. Cameron.*—I am a Director in the firm of Managing Agents. Mr. McKenzie is the mill manager, Mr. Carmichael, Mr. Davidson and Mr. Choudhry are in charge of general office work, while Mr. Bhargava is the Chemist.

*President.*—You are also the President of the Indian Papermakers Association?

*Mr. Cameron.*—Yes.

*President.*—Before we go on to details, there is one point I would like to raise. I think you are on the Committee of the Indian Sugar Mills Association and you know the procedure adopted by the Tariff Board with regard to the cost of production. They took a typical representative mill. In the 1931 enquiry that was obviously impossible because there was only one mill that had experience of bamboo as raw material, and that was yourself, and therefore the Board in 1931 took the costs as given by you. The Board are considering the question whether on this occasion it would be possible to take a representative mill and work out what the cost of production of pulp and paper would be in a representative mill. Of course the process of manufacturing pulp is different in different mills, but so far as we can judge the cost of production is not so very much different and possibly it might be feasible to take a representative mill. As regards the cost of conversion I take it the cost ought to be approximately the same in all the mills.

*Mr. Cameron.*—Yes.

*President.*—The real difference lies in the cost of production of pulp.

*Mr. McKenzie.*—Yes.

*President.*—Speaking as President of the Association do you think that is a feasible method of procedure?

*Mr. Cameron.*—I am not conversant with the alkali process and it is very difficult for me to say how far either of the processes may be taken as typical.

*President.*—Of course we have got the cost figures and from publications we gather that, speaking generally, the cost of production of sulphite pulp is rather more than the cost by the soda or sulphate process from wood.

*Mr. Cameron.*—That is so.

*President.*—That does not necessarily apply to bamboo: that is another question. But the fibre produced by the sulphite process is somewhat superior and stronger?

*Mr. McKenzie.*—Not entirely necessarily. It depends on the method adopted. The methods of sulphate factories have improved and they can now produce a very strong clean bleached pulp.

*President.*—Speaking of wood again, is it a fact that the cost of production by the sulphite process is more than that by the sulphate process?

*Mr. McKenzie.*—Normally I should think that is the case.

*President.*—There is that difficulty but it might be feasible to strike a sort of average. After all in the sugar industry where you have carbonitiation and sulphitation process the cost was slightly different.

*Mr. Cameron.*—Without having particulars of the alkali process I cannot give a final opinion. May we take it from what you say that the cost of manufacture is similar in both cases? There isn't a very wide difference?

*President.*—There wouldn't be a wide difference. That brings me to another point—about the disclosure of costs. What are the views of your Association about it?

*Mr. Cameron.*—I think individual members have their own views. I cannot speak for them. I can speak for ourselves: we have no cost figures that we wish to be kept confidential.

*President.*—It might be possible to deal with the matter somewhat like this: take the cost of raw material, the works costs—they vary in what may be called the sulphate mills as the process is not quite the same. Take raw material, works costs and then add overheads which have to be calculated on more or less arbitrary basis to get the price of pulp. That would not perhaps disclose very much?

*Mr. Cameron.*—So far as we are concerned we are quite prepared to put all the figures in whatever form the Board require.

*President.*—That is very satisfactory. We shall see what other mills say about the matter. When we meet the Association on Monday it may be possible to arrive at some conclusion and we might leave that for the present. There is one other general question that I would like to raise. You have given the basis of calculation as regards yield from bamboo, paper cuttings, rags, etc.—bamboo 42 per cent., paper cuttings 80 per cent. and so on. I do not know whether the other mills will accept this basis of calculation as correct.

*Mr. Cameron.*—I cannot say. This much I can say that in the last Tariff Board enquiry I know there was a difference in regard to yield from bamboo according to the process employed. Whether there is that difference to-day I cannot say.

*President.*—You have no objection to publishing these figures?

*Mr. Cameron.*—No.

*President.*—There is one other general question—about the cost of bleached pulp and unbleached pulp. Your practice is to work out the cost for unbleached pulp? Have you any regular costing system?

*Mr. Cameron.*—We have not any detailed costing system for such items as power, fuel, steam and so on throughout the mill. These we adjudicate on an arbitrary basis which we believe to be substantially correct.

*President.*—As far as I can gather at present the Board would like to have the cost of both unbleached and bleached pulp. I take it in the bleaching process the main item of expenditure is the cost of the bleach. The other items are comparatively unimportant.

*Mr. Cameron.*—That is so.

*President.*—It would be possible to arrive at a fairly approximate figure by taking the cost of the bleaching material *plus* some allowance for other items.

*Mr. Cameron.*—Yes. We have given the Board our calculations and we believe that they are substantially correct.

*President.*—Since the last enquiry I observe that you have ceased to be a private company which makes things easier in some way for the Board.

*Mr. Cameron.*—Yes.

*President.*—Your capacity is about 6,600 tons per annum of paper?

*Mr. Cameron.*—Yes.

*President.*—Supposing we took a representative mill, would you say 6,000 tons production make be taken as representative in Indian conditions?

*Mr. Cameron.*—You mean representative economically?

*President.*—You are no doubt aware that there are other mills whose capacity is somewhat larger.

*Mr. Cameron.*—We might perhaps express it this way, that in a mill of Greater size there would be certain economies in overheads, but not sufficiently so to justify us in saying that a 6,000 tons factory is not an economic unit. I think 6,000 tons of paper would correspond to what the Board considered as an economic unit in the sugar enquiry.

*President.*—I think there are two points you would like to be kept confidential?

*Mr. Cameron.*—Yes, Nos. 6 and 43. We do not want to disclose the details of the merits of the two alternative methods.

*President.*—You do not object to the publication of the statement that you are changing from chipping to crushing mill?

*Mr. Cameron.*—No.

*President.*—I take it you have no objection to our making a statement that you have made certain provision for depreciation, Reserve Fund and so on in a general way.

*Mr. Cameron.*—No. Four lines given in the form of a footnote on page 57 may kindly be treated as confidential. There is one other small point which I might mention at this stage. In Form II, Part II, we have inadvertently disclosed the salaries of certain individuals under supervision. It is a mistake on our part. It is really not relevant.

*President.*—I gather from your reply on page 8 that your position about bamboo has been somewhat difficult owing to the accumulation of stocks.

*Mr. Cameron.*—Yes.

*President.*—And the material deteriorated and therefore your losses are more than they should be.

*Mr. Cameron.*—Yes.

*President.*—You have also given us the normal losses.

*Mr. Cameron.*—If I may put it in this way, in giving our figure of 42 per cent., we have given the figure that we have always believed to be possible provided deterioration of stock and unnecessary loss in the manufacture does not take place.

*President.*—I should like just to touch on one other general question as you have mentioned your losses. In the Sugar enquiry we went into the question of losses at every stage of manufacture. One of our questions has been directed to that. Now speaking generally at what stages do losses occur.

*Mr. McKenzie.*—The main loss occurs in the process of conversion of the original bamboo into cellulose where the loss is about 50 per cent. Again converting the pulp from the unbleached to the bleached stage there is a loss due to removal of the impurities. In washing the pulp there is the mechanical loss. Actually on the paper machine there is always a small loss. This is entirely a mechanical loss.

*President.*—Roughly speaking there are four losses, viz., in the conversion of bamboo into Pulp, in the bleaching, in the washing and on the paper machine.

*Mr. McKenzie.*—Yes.

*President.*—There is also the question of loss of chemicals if you don't have a recovery plant.

*Mr. McKenzie.*—Yes.

*President.*—That might be considered another loss.

*Mr. McKenzie.*—Yes. That is a loss in cost. It does not affect the yield in any way.

*President.*—That is rather a different kind of loss.

*Mr. McKenzie.*—Yes.

*Mr. Rahimtoola.*—What would be the percentage?

*Mr. McKenzie.*—We have taken 44 per cent. yield of bone dry unbleached pulp from the original dry bamboo and from the unbleached dry bamboo

pulp to finished Paper we get a further loss of 2 per cent. on the original bamboo. Thus we get a yield of 44 per cent. of dry unbleached pulp, and a yield of 42 per cent. of bleached paper. The bleaching loss is round about 2 per cent. on Pulp and the mechanical loss is almost the same. There are two mechanical losses.

*President.*—To what extent do you think it is possible to reduce these losses?

*Mr. McKenzie.*—The bleaching loss cannot be reduced. The material to be removed is non-cellulose and must either be removed in the course of cooking or by bleaching. The major portion is removed in the digester and the balance of this material is more or less completely removed by the bleaching process. There is also a mechanical loss in washing and concentrating the pulp after bleaching and a further small mechanical loss on the paper machines. I do not think we can get very much below our present figure.

*President.*—According to modern practice there are some mills which have a fibre recovery plant.

*Mr. Cameron.*—We have always had apparatus for recovering fibre that is lost in the machine stage. It goes with the water under the machine through a drain that is taken to a tank and by a process of settling the water is allowed to deposit pulp and from that the pulp is recovered.

*President.*—I don't think you have actually referred to that in your evidence.

*Mr. Cameron.*—We have not mentioned that.

*President.*—I don't think that all mills necessarily have that.

*Mr. Cameron.*—We have on both machines.

*President.*—Turning to your answer to question 8 regarding bamboo supply, you are now utilising what may be described as local supplies to a much greater extent than before.

*Mr. Cameron.*—Yes.

*President.*—My colleague and I had the advantage of having a discussion with the Hon'ble the Minister and the Secretary of the Department concerned about the question of what steps should be taken to promote the cultivation of bamboo. Do you think that there are any possibilities in getting the raiyat to grow bamboo?

*Mr. Cameron.*—I believe the Government of Bengal had enquired into the matter. I understand a Committee was appointed to examine the question. I think it was the Rural Development Committee which made enquiries but we do not know the results of these enquiries.

*President.*—Do you think there is a danger of bamboo being cut out? You and other mills draw on the local supplies heavily.

*Mr. Cameron.*—There has been a tendency. I know that one other mill besides ourselves are doing all we can to prevent that by explaining to the local people the danger of that. There is another point which may be relevant. I understand the Rural Development Committee were advised that if bamboos were planted near houses, it encouraged the spread of malaria, because it was said when the bamboo was cut, water lodged in the hollow and mosquitos bred there. I understand Dr. Ramsay cleared up that point and said that although mosquitos do breed in the stems of bamboos, they are not malarial mosquitos and they are quite harmless.

*President.*—I am not so sure about that. When you and another mill draw on the local area, there is a danger of the supply being reduced and the price being increased.

*Mr. Cameron.*—It is difficult at this stage to say whether there is a real danger or not. We are inclined to think that we will just have to cover a rather wider radius. Perhaps to start with, we have been confining our attention to too small an area and may have to increase the radius to strike an economic balance of what area can supply our requirements.



*President.*—That might increase your pulp cost with the increase in the price of bamboo.

*Mr. Cameron.*—We do anticipate the possibility of slightly higher prices.

*President.*—Is it your opinion that you have probably reached bedrock level in the price of bamboo?

*Mr. Cameron.*—We have gone below the economic level. We have put that at Rs. 18-8 in our estimate of future costs.

*President.*—You do not anticipate any difficulty in getting all the supplies of bamboo you want.

*Mr. Cameron.*—No.

*President.*—As you know we don't go through every question. We only go through those questions which require further elucidation. In answer to question 11, you have given us an interesting description of the process of manufacture. You will recollect that the Board gave a description in the Report of 1931. Do you think that is a fairly accurate description?

*Mr. Cameron.*—It is a very clear and concise description of the process.

*President.*—There is one point in paper manufacture about which I am not very clear and that is the question of the mixing of pulps. At what stage does that take place?

*Mr. McKenzie.*—Just before the process of bleaching. The unbleached bamboo pulp and unbleached wood pulp are mixed together and bleached together.

*President.*—Do you use bleached pulp?

*Mr. McKenzie.*—A very small quantity. We use a special pulp.

*President.*—It may be added at two stages.

*Mr. McKenzie.*—The main pulp is added before bleaching.

*President.*—What about wastepaper?

*Mr. McKenzie.*—Wastepaper may either be broken up and bleached with the pulp or it may be added, after preliminary breaking direct to the beater.

*President.*—Rags?

*Mr. McKenzie.*—Rags are broken first of all and small proportions are added to the beaters for special classes of paper.

*President.*—They come in at the beating stage.

*Mr. McKenzie.*—Yes.

*President.*—It varies according to the subsidiary material.

*Mr. McKenzie.*—Yes.

*President.*—It may be added either before or after bleaching stage.

*Mr. McKenzie.*—Yes.

*President.*—In that way it is a little difficult to get at the cost of unbleached pulp—what you may call mixtures of pulp because they may come in at two different stages either in the pulp manufacturing stage or paper manufacturing stage.

*Mr. McKenzie.*—Yes.

*President.*—I don't think it is very important.

*Mr. McKenzie.*—No, because the material addition is at the bleaching stage. The quantity added after that is not material.

*President.*—In your opinion we may take it that all the material is mixed before the bleaching stage.

*Mr. McKenzie.*—Not entirely but mostly.

*President.*—I see you put your bleaching loss at 3·4 per cent.

*Mr. McKenzie.*—That is combined bleaching and mechanical loss.

*President.*—Bleaching loss is 3·4 per cent.

*Mr. McKenzie.*—That is bleaching and mechanical loss in the bleaching stage.

*President.*—On page 17 you have given 4 improvements which you had in mind at one time or another. I had the advantage of having that explained to me on the spot to some extent, but I am not quite clear about the 2-stage pulp bleaching plant. Could you send a note explaining that in non-technical language?

*Mr. McKenzie.*—Yes.

*President.*—We gather that there is a strong probability of chlorine being manufactured in India shortly.

*Mr. Cameron.*—Yes.

*President.*—We have been in correspondence with the Imperial Chemicals about that and they have actually replied to that effect. You may expect to get a supply in 1939. At present you buy all your bleach, do you?

*Mr. Cameron.*—Yes.

*President.*—On page 18 of your replies you have referred to the interesting experiment now carried on at Trinidad. I wonder whether you could give us a little more information about the Trinidad Mill.

*Mr. Carmichael.*—The first foundation of the Trinidad Mill was laid in May, 1936, and they actually produced pulp in May, 1937. I was over there in October, 1937, and they were not on full production. The mill was designed for an output of 125 tons of pulp a week or about 600 tons a month and they were only doing between 200 and 300 tons a month. It is a very well laid out mill and they have attached to it a bamboo plantation which has been in existence for 15 to 25 years under a scheme which has been thought of for a long time. They bought the land before the War. One of the principal shareholders in the Paper Pulp Company saw the success achieved out here and with the experience we had, they decided to put up a mill on the plantation they already possessed. The plant is very similar to the plant out here but it has this one advantage of forced circulation in the digesters which unfortunately was not working during my visit. It is one of the snags in construction which they have not got over. They will probably have it working in a few months. It differs from the plant of the India Paper Pulp Company in this that they are making only pulp for the market and for that reason they have to concentrate on quality very much more than we have to. The pulp required for the market is not quite the same as in our mill. They are selling the pulp to large markets in England. The pulp turned out by the Trinidad Mill is a speciality pulp. The people in England are extremely pleased with the quality which has been produced but the people in Trinidad say that they can improve on what they are already producing.

*President.*—For what kind of paper is it being used in England?

*Mr. Carmichael.*—For white book paper.

*Mr. McKenzie.*—It is being largely substituted for *Esparto*. *Esparto* grass paper commands a higher price than a woodfree paper.

*President.*—Don't answer this question if it is embarrassing! Would it be possible for you to give us an idea of what their cost of production is.

*Mr. Carmichael.*—It is impossible because the plant is working only spasmodically because they are having boiler trouble.

*Mr. Cameron.*—We telegraphed as soon as we got your questionnaire but they have replied that they had no useful figures at this stage.

*President.*—You are reserving the question of installation of the Hot Acid and Forced Circulation equipment till it is tried out in Trinidad.

*Mr. Cameron.*—Yes.

*President.*—I gather that your present practice, speaking generally, is to cook longer than you used to do at one time.

*Mr. McKenzie.*—That is the position.

*President.*—What is the experience of Trinidad about that?

*Mr. Carmichael.*—They cook in a shorter time but they are using a higher strength of acid.

*President.*—On balance it is cheaper to cook rather longer, is it?

*Mr. McKenzie.*—We get a better and stronger pulp which counter-balances to some extent the extra time.

*President.*—Is it really a question of better materials or reduction of costs?

*Mr. McKenzie.*—It is really a question of bamboo preparation. If we had a better prepared bamboo we could materially reduce our time. The other object of increasing our time was to use a lower cooking temperature to get a better and stronger pulp.

*Mr. Cameron.*—At the time of the last enquiry we were using expensive bamboo. At that time we had not the plant to handle the cheaper varieties which we could get locally and therefore we were concentrating on reducing the chemical cost with expensive bamboo. Since then we have progressed in the direction of using cheaper bamboo and we have therefore concentrated on that in some cases at the expense of other considerations such as cooking time, chemicals, etc., and when we come to the cost section we think we shall be able to show that that policy has justified itself. Now that we are using the cheap kind of bamboo, we shall go back to the reduction of chemicals. We made, in the last enquiry, certain estimates of reductions in sulphur and magnesite which have not been obtained but that is the reason.

*President.*—We may go into that in greater detail when we come to the question of costs.

*Mr. Cameron.*—Yes.

*President.*—In answer to question 12, you say you are importing mainly two classes of pulp. Are they required for different classes of paper?

*Mr. McKenzie.*—The strong bleachable sulphite wood pulp is very largely used in making semi-bleached paper required by the Government of India where high colour is not required. The extra bleach does not matter as we do not bleach to the full colour. This is somewhat cheaper than the easy bleaching pulp.

*President.*—Do you import bleached pulp?

*Mr. McKenzie.*—Very small quantities.

*President.*—Is it for special purposes?

*Mr. McKenzie.*—We want to use it for strength particularly and it is purchased in bleached condition to enable us to add it at a late stage in the beaters.

*President.*—It is really a reserve.

*Mr. McKenzie.*—Yes, for emergencies.

*President.*—In your reply to question 13, you hope to do without imported pulp altogether.

*Mr. McKenzie.*—We certainly hope we shall be able to do without imported pulp.

*President.*—Within what period of time do you think that may be possible?

*Mr. McKenzie.*—That is impossible to say, but I am very hopeful of doing it in the next two or three years.

*President.*—For all classes of paper?

*Mr. McKenzie.*—For all the classes of paper which we make.

*President.*—I see you have given the following classes of paper—Bank paper, Azure laid, Account Book papers and special makings of light weight.

*Mr. McKenzie.*—Yes.

*Mr. Cameron.*—The question whether we can do without imported pulp depends not only on the point dealt with by Mr. McKenzie but also on whether we will be able to manufacture bamboo pulp in a storable form so as to have a reserve.

*President.*—Have you experimented on the keeping of pulp?

*Mr. Cameron.*—No.

*Mr. McKenzie.*—We did make some pulp and kept it in a wet condition for 2 or 3 months without any deterioration, but I don't think it would be safe to keep it in that state for much longer.

*President.*—Have you in mind any idea of making pulp in sheets similar to the quality that is imported?

*Mr. Cameron.*—We had in mind the possibility of making it as wet pulp—50 per cent. pulp and 50 per cent. water. To put it into dry pulp as is done for export purposes would be much more expensive.

*President.*—I gather that part of your imports is due to the fact that you cannot make so much bamboo pulp as you require.

*Mr. Cameron.*—That is so.

*President.*—As regards your reply to question 15, we shall go into the question of artificial silk at Dehra Dun which we shall be visiting shortly. We shall see what they are doing there. I do not know whether I am correct in saying that the sulphite pulp is used for artificial silk.

*Mr. McKenzie.*—Yes.

*President.*—What is the reason for that?

*Mr. McKenzie.*—I cannot tell you the exact reason. One of the essential conditions for artificial silk pulp is a high alpha content and the sulphite pulp gives that.

*President.*—In regard to the question of world supply of pulp, the Board was endeavouring to obtain information from England, America and so on. I gather the situation has been somewhat altered by the use of the Southern States pine. That has increased the visible supply of wood.

*Mr. Cameron.*—So we understand, but I am afraid we have no figures.

*President.*—I gather that the pulp is not as good as the other pulp.

*Mr. McKenzie.*—It is not quite up to the strength, and is a little more costly to manufacture I believe.

*President.*—They are going ahead with the pulp mill in the Southern States to a considerable extent.

*Mr. Cameron.*—So we understand, but we have no figure as to their capacity.

*President.*—What we must do is to get as much information as we can, compare it and try and arrive at the estimate of what the probabilities are. So far we have not met any one who is in a position to guess with any certainty as to what is going to happen about the pulp situation.

*Mr. Cameron.*—I have an extract from the U. S. A. Tariff Commission report published in December last. I think it might interest the Board. I shall send it later on.

*President.*—Any information you can send to us about the latest developments will be useful to the Board.

*Mr. Cameron.*—It shows that America is a very large consumer of pulp indeed. According to the figures we have obtained America is a consumer of 46 per cent. of the world's total pulp production which possibly has an important bearing on the violent price fluctuations since any change in the economic level of America might have a very sharp result on the world price of pulp.

*President.*—Does that article give any information about the supplies which have been cut out?

*Mr. Cameron.*—It says that they have been reduced in the north-east and northern parts of the U. S. A.

*President.*—Let us take question 19. I gather that the Trinidad mill has got a recovery plant.

*Mr. Carmichael.*—Yes.

*President.*—You are rather waiting for the result in Trinidad before you start a recovery plant here? Theoretically I take it it ought to be economical to have a recovery plant.

*Mr. McKenzie.*—It should be.

*President.*—What is the general practice in sulphite mills for instance in America? Can you tell us about that?

*Mr. McKenzie.*—This has changed in the last few years. Previously practically all sulphite cooking was carried on in cold climates and the raw acid coming from the acid plant is quite cold. The excess gases relieved from the digesters, after passing through coolers are absorbed in the cold acid thus raising the free  $\text{SO}_2$  content. This is not possible here as the temperature of the raw acid is already high and attempting to recover in this manner would do more harm than good. There is now in America and elsewhere a system for bringing the hot relief gases and the raw acid from the acid plant into a common closed pressure vessel. This recovers the excess gas and at the same time conserves a certain amount of heat and the hot mixed acid is drawn from this vessel to the digesters as required. Whether or not this would be applicable to our particular process is very doubtful.

*Mr. Cameron.*—The danger of sulphur recovery is that we cannot recover it separately in the form of sulphur but can only put it back in our process along with supplies of new acid. In doing that we may also put into the acid things which will do more harm than the value of the sulphur. We were in touch with our technical adviser in England and he made that point very strongly.

*President.*—In regard to the question of labour I take it the improvements you have in view may mean reduction in your labour force?

*Mr. Cameron.*—It may result in reduction.

*President.*—Specially in the preliminary preparation of the bamboo?

*Mr. Cameron.*—Yes, in the unskilled labour for handling them.

*President.*—On your present capacity would you say you have reached the maximum of your labour force?

*Mr. McKenzie.*—It has reached its highest point at the moment: it is likely to go down.

*President.*—With regard to the question of apprentices, I gather you have now modified your scheme to have two kinds of apprentices—one superior grade and the other lower grade.

*Mr. Cameron.*—Yes.

*President.*—How many of each class have you now got?

*Mr. Cameron.*—There are five superior and 6 or 7 lower grade apprentices.

*Mr. McKenzie.*—Lower grade apprentices are intended to be trained to take up positions as charge mistries and eventually to take charge of departments.

*President.*—What sort of class are they?

*Mr. Cameron.*—The lower grade would never get very far on their book learning but can read and write and have some educational grounding on which they can build on practical experience. Ultimately they will be more useful than the ordinary mistri who is unable to read or write. He can't communicate his ideas on paper which is a great handicap and we want men who can read and write and then acquire practical knowledge, and be able to do a little clerical work.

*President.*—What sort of educational qualifications have the senior apprentices got?

*Mr. Cameron.*—We prescribe the I.Sc. examination which gives a certain basis but find we can only judge really by interview. We take them young, at the age of 18, which is too early to give him very much opportunity of higher educational qualifications.

*President.*—What class do they come from?

*Mr. Cameron.*—We have had apprentices from most provinces: we have had sons of Government servants, mainly subordinate Government officials, a certain number of sons of professional men such as doctors, lawyers and so on. We have had Hindus as well as Mohamedans but of the applicants a large proportion are sons of Government officials.

*President.*—They may be described to come from the lower middle class?

*Mr. McKenzie.*—That would be right I think.

*President.*—How much of your labour is actually housed by you?

*Mr. McKenzie.*—Over 50 per cent. of our labour are local men living in their own houses in the vicinity of the mill.

*President.*—How much more of your labour will be covered by the new houses you are thinking of building?

*Mr. Cameron.*—We have actually space for another 50 rooms at the moment.

*President.*—Would that accommodation house as much of the labour as require housing?

*Mr. Cameron.*—We think so.

*President.*—Others have got their own houses?

*Mr. McKenzie.*—A certain proportion have.

*President.*—I see you have recently instituted a provident fund. What is the general basis of your provident fund?

*Mr. Cameron.*—We contribute an equal to that subscribed by the employees to the central fund and according to the length of service the employee becomes entitled to an increasing share in the central fund. The only new feature we have tried is that in order to guard against an employee borrowing money on the security of his provident fund we give the trustee the option of paying the money in small instalments spread over a fairly reasonable period which we hope will discourage the money-lender from lending money on the security of the provident fund.

*President.*—What interest do you pay on the provident fund?

*Mr. Cameron.*—It is 4 per cent.

*President.*—On the question of the possibility of developing a market for pulp abroad, Trinidad is selling to the United Kingdom. Supposing the production of pulp increased in India beyond the requirements of the mills, do you think you would be able to compete?

*Mr. Cameron.*—It is too early to say anything: we do not know whether the Trinidad mill will be successful financially.

*President.*—It would be interesting if you could give us some idea of the freights to the ports as compared to the freight from Trinidad for considering the question of export.

*Mr. Carmichael.*—We will try to.

*President.*—Generally speaking you have a slight freight advantage over imported paper?

*Mr. Cameron.*—Yes.

*President.*—Not of course in all markets?

*Mr. Cameron.*—Not to the same extent.

*President.*—Do you sell in Madras at all?

*Mr. Cameron.*—Yes.

*President.*—Do you compete in Bombay? The question of competition at the ports is rather important; if you could give us the freights to the important ports it might be of some assistance to the Board.

*Mr. Cameron.*—We will send it to you later.

*President.*—Therefore you are presumably at a freight disadvantage in those places.

*Mr. Cameron.*—As compared with Calcutta we are at a freight disadvantage, but we are much nearer than a foreign mill. In a sense we

really have a freight advantage though not such a marked advantage as we have in Calcutta and up-country markets in northern India.

*President.*—I am not quite clear about that. For instance take Bombay. Is not your freight more than the freight from London to Bombay?

*Mr. Cameron.*—I believe not. The railway freight from our mill is about Rs. 27 a ton to Bombay. The steamer freight is not less than £2, not only is there steamer freight, but there are f.o.b. charges between mill and steamer at the other end.

*President.*—Do you send paper by coastal steamer?

*Mr. Chowdhry.*—Yes, to Bombay and Karachi.

*President.*—The coastal steamer freight will be less.

*Mr. Cameron.*—Rs. 27 a ton by rail. When we send paper by steamer, it will be cheaper.

*President.*—Could you give us a few figures? Speaking generally the competition is most keen at the ports. That is a correct statement.

*Mr. Cameron.*—Yes.

*President.*—What would you say generally about the question of preference in the various markets for imported paper as against Indian produced paper? Has the position altered since 1931?

*Mr. Cameron.*—Only in one respect. We are now selling considerably more paper in Bombay than 7 years ago.

*President.*—It was a rather different point I was thinking of. In 1931 I think the general impression was quality for quality, imported paper was preferred.

*Mr. Chowdhry.*—I think given level prices, Indian paper is just as popular as the imported paper.

*President.*—Is there any preference for Indian paper from the swadeshi point of view?

*Mr. Chowdhry.*—Not much.

*President.*—I ask that because when I was in Rajahmundry which is rather an important paper centre, the people told me that there was a definite preference for Indian paper.

*Mr. Cameron.*—We have never found that.

*President.*—It is very difficult to get exactly the same quality so to speak.

*Mr. Chowdhry.*—Indian made papers are much better known now. They are established in a lot of markets. Of course they do get preference in these markets.

*President.*—Have you increased your percentage of sales to local and Central Governments, Railways and so on?

*Mr. Chowdhry.*—Yes, we have slightly.

*President.*—The percentage of sales to local Governments and Central Governments has slightly gone up?

*Mr. Cameron.*—Yes.

*President.*—What is the percentage which you sell?

*Mr. Cameron.*—Over the period it is about one-sixth. If you like exact figures, we can work them out.

*President.*—Have you any reason to think that any of the Governments are using imported paper. In 1931 there was a good deal of talk about the Madras Government using imported paper.

*Mr. Chowdhry.*—From our mills they are taking more paper than in 1931. That may be in replacement of the imported paper. I think they are using more imported paper than the Central Government.

*President.*—Is there any other Government which you are aware of?

*Mr. Chowdhry.*—Not that I am aware of.

*President.*—With regard to question 42 relating to present day cost, in 1931 the Tariff Board took Rs. 800 a ton as the capitalisation cost. Do you think that it was a fair estimate then?

*Mr. Cameron.*—Yes.

*President.*—Do you think the position has materially changed?

*Mr. Cameron.*—After the last enquiry machinery and construction charges fell. Within the last 18 months they have again risen. We do not know exactly to what extent, but we think that Rs. 800 a ton would be substantially correct.

*President.*—Supposing the Board took a typical mill, the capital required would be Rs. 48 lakhs.

*Mr. Cameron.*—That is for the construction of the mill without the working capital.

*President.*—The practice of the Board is not to include anything for working capital. That is the construction of an up-to-date mill.

*Mr. Cameron.*—Yes.

*President.*—The practice of the Board is to make provision for working capital separately. Perhaps you might remember in the Sugar enquiry we did that.

*Mr. Cameron.*—Yes.

*President.*—According to your answer to question 49, your working capital will be roughly Rs. 10 lakhs.

*Mr. Cameron.*—Yes.

*President.*—What do you think would be a reasonable amount of interest to allow on working capital. In the Sugar enquiry we discussed it at some length.

*Mr. Cameron.*—They will vary with bank rates, one or two per cent. more than the bank rates.

*President.*—Would you put it at one or two per cent. above the bank rate?

*Mr. Cameron.*—Yes. I am sorry there is one point that I missed. The figures on page 63 do not include book debts. Which are given at the head of the next page. Instead of Rs. 10 lakhs, it should be Rs. 12 lakhs.

*President.*—I believe the actual practice of the Board in previous enquiries is not to include book debts. It is arguable that the book debts should be included. If you look up previous enquiries you will see that they took usually the average stocks, though we have asked for the book debts as well.

*Mr. Cameron.*—Yes.

*President.*—In regard to the measure of protection you have made a very interesting suggestion about the sliding scale which, I understand, the other mills are inclined to accept. That is rather a new departure from the Tariff Board's practice.

*Mr. Cameron.*—I believe it is.

*President.*—There are obvious objections to it, chiefly element of uncertainty. As you are aware the ordinary Tariff Board procedure is to take the cost of production and import price. As regards the cost of production we usually take the average cost of production of a representative mill. As regards the import price, it is very difficult in regard to paper, but in many cases the lowest price at which the article could be imported with a reasonable profit has been taken as the standard.

*Mr. Cameron.*—Our difficulty on this occasion is that we do not know what foreign prices are going to be in the future. Fluctuations in the last



two years have been so very great that it will be difficult to predict with any certainty the trend of prices in the future.

*President.*—As you are aware the Board do not take any particular year. If the Board consider that if the prices in a particular year are abnormally low, then they exclude them.

*Mr. Cameron.*—Our difficulty is that the fluctuations have been so very great we cannot make up our minds with any degree of confidence as to the probable mean level.

*President.*—Of course you understand the Board would not take the present price as being typical.

*Mr. Cameron.*—It was that point that put into our minds the possibility of a duty which could be adjusted in accordance with whatever level foreign pulp and paper prices might be stabilised at.

*President.*—I gather that some mills are inclined to accept your suggestion. Perhaps it might be more convenient to discuss it when we meet the Association.

*Mr. Cameron.*—The Association wishes as far as possible to confine its evidence to points on which all members hold the same views. This particular point we have discussed with only the old mills in Calcutta. I have no means of knowing whether the new mills would agree with our proposals. It might be embarrassing as representatives of the Association to discuss that point.

*President.*—Do I gather that all the old mills are inclined to accept?

*Mr. Cameron.*—I understand that the Titaghur and Bengal Mills are making proposals which are more or less identical.

*President.*—We might discuss it on Monday with the old mills and the new mills and get the two points of view put then.

*Mr. Cameron.*—That could be done if we speak as individuals and not as representatives of the association.

*President.*—It is rather a general question and all points of view can then be put forward.

*Mr. Cameron.*—Yes.

*President.*—Possibly also the question of classification of paper might be dealt with when we have all of you together.

*Mr. Cameron.*—Yes.

*President.*—In your reply to question 55 there is one point. I see in making your calculations you have taken the duty at 20 per cent. The revenue duty varies in some cases as high as 30 per cent.

*Mr. Cameron.*—We referred to the schedule in the previous Board's Report which took 20 per cent. We took the same. We can very easily put in figures on different lines.

*President.*—Possibly 25 per cent. might be more correct as an average, but then it would depend on the percentages of various kinds of paper imported, how much is subject to 20 per cent., how much is subject to 30 per cent. and so on.

*Mr. Cameron.*—Yes.

*President.*—Have you been able to apportion the overheads?

*Mr. Cameron.*—I am afraid the figures are not ready yet. We hope to let you have them in a day or two.

*President.*—I take it that your reduction in the cost of manufacture of pulp is mainly due to the reduction in the price of raw material.

*Mr. Cameron.*—Mainly.

*President.*—But the present low prices may not continue.

*Mr. Cameron.*—The figure we have taken in 1936-37 for the cost per ton of bamboo is Rs. 27 because the bamboo used in that year was a mixture of different kinds. We expect in the future to get our bamboo at about Rs. 18. We do expect to go below the figure of Rs. 27.

*President.*—You have given us an estimate of what reductions are possible in reply to another question.

*Mr. Cameron.*—Yes.

*President.*—I was thinking really of that figure. Your consumption of sulphur per ton of bamboo has actually slightly increased.

*Mr. McKenzie.*—Yes, by our trying to use a cheaper type of bamboo.

*President.*—Has there been any particular variation in the price of sulphur?

*Mr. Cameron.*—There was an increase in 1932-33 and it then decreased steadily until recently but recent quotations since 1936-37 show an upward tendency.

*President.*—Does that apply to other chemicals?

*Mr. Cameron.*—To almost all chemicals.

*President.*—Do you think that these prices are likely to stay?

*Mr. Cameron.*—It is very difficult to say. It depends on factors which are entirely outside the control of this country.

*President.*—The price of magnesite has gone down fairly considerably.

*Mr. Cameron.*—Yes. We have recently made a long term contract for our supplies of magnesite. So, in that particular case, we are able to say that the price will not go up.

*President.*—If you have no objection, could you tell us where you get your magnesite from?

*Mr. Cameron.*—From the Magnesite Syndicate, whose property is near Salem in South India.

*President.*—Are they producing a satisfactory article now?

*Mr. McKenzie.*—Yes, quite good material. But they are putting in a new plant which will improve the grinding.

*President.*—Your cost per ton of pulp in respect of power and fuel has gone up. Can you explain briefly the reasons for that?

*Mr. Cameron.*—There is one general point which I would like to explain with regard to power for both pulp and paper. We have been having a certain amount of trouble in our boilers during the last 18 months due to our not being able to lay them off sufficiently for cleaning and overhaul. We now have another boiler under construction. As soon as that is working it will be possible for us to keep the boiler plant at a higher state of efficiency. Our actual figures are higher than they should be.

*President.*—On what page you have given your probable reductions?

*Mr. Cameron.*—On pages 61 and 62.

*President.*—You have given there the total cost.

*Mr. Cameron.*—We showed the details per ton of paper. We then summarised the allocations to pulp.

*President.*—Could you take the trouble to work out a statement per ton of pulp on the basis of question 48?

*Mr. Cameron.*—Yes.

*President.*—In the same form as in Form III?

*Mr. Cameron.*—Yes.

*President.*—You have made very considerable reductions in the cost of wages per ton. Is that owing to the increased production?

*Mr. Cameron.*—Almost entirely. The actual wages figure, as shown in Form II, has increased during the last two years. The saving per ton is due to the increased production.

*President.*—Does that apply to stores also?

*Mr. Cameron.*—Yes, except that in the last year 1936-37 there has been an increase in stores. That is mainly due, as we explained at the mill, to extra stores consumed in the preparatory stage.

*President.*—The reduction under supervision is, I take it, mainly due to increased production.

*Mr. Cameron.*—Yes.

*President.*—What does the item “miscellaneous” include?

*Mr. Cameron.*—That is miscellaneous wages and stores, details of which are given in the second part of Form II.

*President.*—Turning to Form VI—Works cost per ton of finished paper, the cost of bamboo is according to the ratio that you have already given us, I take it.

*Mr. Cameron.*—Yes, it will be spread in this case over the total output of paper whereas previously it was on the bamboo pulp production only.

*President.*—The cost of imported pulp per ton is actually higher than the cost of the bamboo. Is that owing to the price you paid?

*Mr. Cameron.*—In the one case it is pulp. The other figure is bamboo only and not bamboo pulp which will number other items also.

*President.*—I see your price of paper cuttings and rags has slightly gone up since 1931.

*Mr. Cameron.*—I cannot say from memory that the price has gone up, but the quantity has gone up.

*Mr. McKenzie.*—There is very little difference in price.

*President.*—Is it due to the increased quantity?

*Mr. Cameron.*—Yes.

*President.*—In the case of China clay, the cost per ton has been reduced.

*Mr. Cameron.*—Yes.

*President.*—Is it due to the reduction in the price of clay or to the less quantity of clay?

*Mr. Davidson.*—The China clay price has been reduced.

*Mr. McKenzie.*—The total quantity of China clay used is given in Statement V.

*President.*—Under supervision and establishment, the cost per ton has gone up.

*Mr. Cameron.*—Yes.

*President.*—Can you explain that?

*Mr. Cameron.*—Partly that includes expenditure on apprentices and increased laboratory staff. The apprentice staff is included under supervision since they are trained to supervise. The work in the Head Office has increased considerably on the sales side since the last enquiry and a proportion of these charges is the result of that. There is one further item which has put that up. At one stage we found it necessary to engage a head finisher. Previously the work was done by clerks under the supervision of the Manager. When we wished to improve the packing of the paper, the sorting of the sheets and so on, some years ago we found it necessary to engage a highly paid man who was there for three or four years and helped undoubtedly to raise the level of the finished product, not in the manufacturing sense but in the finishing stage, in packing.

*President.*—I see you have made a considerable reduction in the cost of packing.

*Mr. Cameron.*—That was a surprise to ourselves when we saw these figures. When we took them out for the Board and examined them we found that it was due to the decreased cost of packing materials. We are actually using more materials. The packing is more thorough but the prices have declined.

*President.*—The impression I gathered generally by going round the mills was that packing was rather more elaborate.

*Mr. McKenzie.*—Packing has very definitely improved.

*Mr. Cameron.*—I shall give you some figures for packing. In 1932-33 our wrappers cost 2 annas 8 pies per lb. and we used 142 tons. In 1936-37

the price dropped to 1½ annas and although we used more (164 tons) the cost has fallen from Rs. 57,000 to Rs. 44,000. In the same way baling wood prices dropped from Rs. 88 to Rs. 53 so that although we used more—370 tons against 310—the total cost fell from Rs. 37,000 to Rs. 20,000.

*President.*—Part of the increase is owing to increased production so it would not affect the cost per ton.

*Mr. Cameron.*—Yes, but you will see that the price also has fallen in a marked way.

*President.*—Miscellaneous items show an increase.

*Mr. Cameron.*—In the last two years there has been a mistake in the figures. Certain items which have been put under miscellaneous should properly have gone under selling expenses figures and it is really the selling expenses which have increased during the last two years. The figure is just under Rs. 2 per ton. If we may, we will give revised figures for miscellaneous and selling expenses for 1935-36 and 1936-37. It won't affect the total in any way of course.

*President.*—What is the reason for increase in selling expenses?

*Mr. Cameron.*—During the last two years we have opened our own offices in one or two up-country centres which we feel will be justified by results.

*President.*—But the immediate result has been an increase in selling expenses?

*Mr. Cameron.*—Yes.

*President.*—You think the selling expenses will go down?

*Mr. Cameron.*—No, sir. But we look for justification of the expenditure to the result of sales in those markets in years to come.

*President.*—You think it is worth while spending extra money to keep hold of those markets?

*Mr. Cameron.*—Yes. In one of the important markets what happened was that the agent who represented us was not entirely satisfactory. We had nobody in view whom we could put in his place; there was danger of losing ground in that market and we thought it best to open our own office.

*President.*—I take it having your own office is much more expensive than having a representative?

*Mr. Cameron.*—Yes, but you always get reliable information and in the long run the result obtained is more satisfactory.

*President.*—I notice your cost of insurance has gone up?

*Mr. Cameron.*—It went up as a result of the Bihar earthquake. We are now covered against earthquake which we were not previously. We have also taken out certain other classes of insurance and the result is the increase in the cost of Insurance.

*President.*—In regard to depreciation you have taken 2½ per cent. on buildings and 5 per cent. on machinery. That is the present rate?

*Mr. Cameron.*—Yes.

*President.*—In these enquiries one naturally makes a comparison with other firms, without quoting figures. Your depreciation seems rather high per ton?

*Mr. Cameron.*—The income-tax rates in the case of paper mills are 2½ per cent. on buildings and 7½ per cent. on machinery. We have reduced it now to 5 per cent. For a number of years we charged 7½ per cent. but when the block was written down to some extent we reduced it to 5 per cent. The time may come when we may feel that we will be justified in taking it even lower. Of course our mill has a very high block value compared with its outturn in comparison with most of the other mills which are operating: ours is the only mill which was built just after the war at a high level of cost.

*President.*—Let us take interest on working capital. Following the ordinary practice of the Board I think we should allow interest at something above the bank rate on your average stocks for purposes of comparison, though you may not actually do so. Could you, when you are making these alterations, give that figure for the last two years? At present what you put down as interests is negligible but according to the usual practice in these enquiries interest is allowed on stocks.

*Mr. Cameron.*—In Form VI we will make the necessary amendment and let you have it.

*President.*—On your average stock.

*Mr. Cameron.*—Yes.

*President.*—You state what rate you would consider reasonable.

*Mr. Cameron.*—Yes.

*President.*—With regard to Head Office expenses and managing agency commission, at what rate is that calculated?

*Mr. Cameron.*—Office allowance Rs. 1,000 a month and commission of 2 per cent. on sales.

*President.*—I see you have included freight in the costs. According to the practice of the Board. We take *ex-mill* cost. That will have to be omitted.

*Mr. Cameron.*—We will do that in the amended statement. I see I have a note here—in 1936-37 managing agents commission was 2 per cent. on the turnover, but worked out in the last complete year to 8.35 per cent. on net profits.

*President.*—To return to the question of production of unbleached pulp (Form II, Part I) I see you have taken 50 per cent. Washing plant. Is that an arbitrary figure?

*Mr. McKenzie.*—It is more or less arbitrary.

*President.*—Then you say 50 per cent. Carrying coolies.

*Mr. McKenzie.*—Those are outdoor coolies for handling bamboos to the godowns and from godowns to the mills.

*President.*—Where does the other 50 per cent. come in?

*Mr. McKenzie.*—They handle all other stores into the mill godowns and from the godowns to the mill.

*President.*—That again is a rough estimate?

*Mr. McKenzie.*—Yes.

*President.*—On what basis is the allotment of power and fuel made on paper and pulp?

*Mr. Cameron.*—We have done it on the same basis as we adopted in the last enquiry and since our paper output has been kept relatively constant we have allocated the same proportion of coal on the paper side and increased it on the pulp side. We have not got exact figures.

*President.*—Your list of arbitrary items consist of.

*Mr. Cameron.*—Coal, stores and wages; power is arbitrary and the wages in two other sections, *viz.*, washing plant and carrying coolies. Supervision and Miscellaneous are also arbitrary.

*President.*—Overheads must also be arbitrary?

*Mr. Cameron.*—We explained this very fully to the previous Board. We looked up your report the other day and found it was then approved so we have followed the same method.

*President.*—A question has been raised in connection with the protective duty on imported pulp about the price of pulp and whether some classes of pulp should be exempted from the duty and so on. Correct me if I am wrong—as far as I am aware the kinds of pulp manufactured abroad are (a) mechanical, (b) chemical, which may be subdivided into sulphite pulp and sulphate pulp, and (c) pulp manufactured by the soda process.

*Mr. McKenzie.*—You may include that.

*President.*—The sulphate process is substituting the soda process?

*Mr. McKenzie.*—It is being replaced by the sulphate process though there is still a small proportion of soda pulp made.

*President.*—Sulphate is described somewhere as a modification of the soda process.

*Mr. McKenzie.*—You get the same result but by using cheaper materials.

*President.*—What would be the difference in price between the mechanical pulp and the sulphite pulp?

*Mr. McKenzie.*—Mechanical pulp is approximately less than half.

*Mr. Cameron.*—I have some cost figures. These are the figures given in the Report of United States Tariff Commission. They put the cost of sulphite at 39.41 dollars, sulphate at 36.59 dollars and mechanical at 24.67 dollars.

*President.*—They have not given any figures for soda?

*Mr. Cameron.*—No.

*President.*—There is really not very much difference between sulphite and sulphate.

*Mr. Cameron.*—There is a difference of 3 dollars compared with 15 dollars between sulphite and mechanical. How far these are representative, it is very difficult to say.

*Mr. McKenzie.*—Previously about £1 per ton was the normal difference between soda pulp and sulphite pulp.

*President.*—At any rate for purposes of import duty, we can take sulphite and sulphate together, as the difference is so small that it would be hardly worth while to make any difference. I am considering the question of different rates of duty applicable to various kinds of paper.

*Mr. McKenzie.*—Quite.

*President.*—A suggestion has been made to me that mechanical pulp might be let in free. One point occurs to me. I suppose it would not be an unfair statement to make that the recommendation of the Tariff Board to put a duty on pulp has forced the mills to use more indigenous material. I think the mills actually opposed the imposition of the duty.

*Mr. Cameron.*—We asked for it.

*President.*—Some of the mills at any rate did oppose. Supposing the mechanical pulp was exempted from duty, would there be a temptation to use it for other classes of paper?

*Mr. Cameron.*—You mean in the sense that it might reduce the consumption of indigenous pulp.

*Mr. McKenzie.*—There is a distinct danger. It could only be substituted to a limited extent but to that extent there would be a distinct danger.

*President.*—You could mix a certain amount of mechanical pulp in certain classes of paper.

*Mr. McKenzie.*—Yes.

*President.*—There is a danger to that extent.

*Mr. McKenzie.*—Yes.

*President.*—I gather the justification for a differential rate or for possibly exempting mechanical pulp is to introduce new classes of paper manufactured in India. In that case might it not be safer to allow particular classes of pulp imported either free or at a reduced rate of duty for definitely experimental purposes. Would that answer the purpose equally well? The Governor General in Council have powers to exempt particular classes of pulp for definitely experimental purposes.

*Mr. Cameron.*—By licence you mean.

*President.*—If any mill would like to manufacture particular class of paper out of mechanical pulp, that mill might be allowed to import so many tons for that purpose.

*Mr. Cameron.*—That might be a possible solution.

*Mr. Rahimtoola.*—What about kraft pulp? Can that be equally used?

*Mr. McKenzie.*—Up to a relatively short time ago kraft pulp could not be bleached. Now it can be bleached. So there is a distinct danger of unbleached kraft pulp being imported and bleached. There is on the market also semi-bleached, and bleached krafts which might be a danger. Normally kraft is unbleached. The two types which might be imported into this country and used in making protected classes of Paper are semi-bleached and bleached.

*President.*—Is it distinguishable from sulphate pulp? In the book published by the Canadian Government they speak of sulphate or kraft pulp.

*Mr. McKenzie.*—Kraft pulp is produced by the sulphate process. Kraft pulp is simply under cooked sulphate pulp. The essential process is exactly the same as the easy bleaching pulp.

*President.*—If pulp intended for manufacturing kraft paper is given special exemption, then there is a danger that it might be used for certain other purposes more than in the case of mechanical pulp.

*Mr. McKenzie.*—If the exemption was applied only to unbleached kraft, I don't think there is a great danger, but there is that possibility.

*President.*—It could be bleached?

*Mr. McKenzie.*—This pulp is normally unbleached, but it could be bleached and substituted. I expect the quantity which could be used is so small that it would not pay.



### 5. The Titaghur Paper Mills Company, Limited, Calcutta.

#### A.—WRITTEN.

(1) *Letter, No. T. P. M., dated the 3rd February, 1938.*

With reference to your letter No. 22 of the 6th January addressed from Poona, we have pleasure in acknowledging the set of questionnaires and now enclose our replies with two spare copies. Further spare copies will be sent to you in the course of the next few days.

We regret that it was not possible to give as much time as on previous occasions to prepare the necessary information and statistics for the Board.

If our evidence is found to be incomplete, we shall be glad to provide any further figures or explanations which may be required to help the Board in its deliberations.

1. (a) The Titaghur Paper Mills Co., Ltd., is a public limited company and is registered as such.

(b) The company is registered under the Indian Companies Act with rupee capital.

(c) The following statement (Annexure A) gives the particulars required in respect of the proportion of Indian and other shareholders and the percentage of the total capital of the company held by each.

It will be noticed from the particulars given in the statement that the capital of the company has been changed in certain respects since 1931. A new issue of 15,000 2nd Cumulative Preference shares of Rs. 100 each was made on 1st October, 1937. A reorganisation of the capital of the company took place in August 1937, and we enclose a copy of the minutes of the Extraordinary General Meeting of the shareholders at which the relative resolutions were passed.

(d) Of the total directorate of six, three are Indians. Since the last enquiry, one Indian director has resigned, being interested in the flotation of a new paper mill company.

Indians still continue to hold several posts in the superior staffs, both at the mills and in the head office. We deal more fully with this matter in our reply to Question No. 22.

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## ANNEXURE A—(Qn. 1 (c).)

	Indian Shareholders.		Indian Banks, Insurance Cos. & Investment Cos.		Other Shareholders.		Total No. of Share held by		
	No.	Percentage of Total No. of Shareholders.	No.	Percentage of Total No. of Shareholders.	No.	Percentage of Total No. of Shareholders.	Indian Shareholders.	Indian Banks, Insurance Cos. & Investment Companies.	Other Shareholders.
8 per cent. Preference . . . . .	166	52.20	12	3.77	140	44.03	4,357	1,462	5,881
5 per cent. Preference . . . . .	314	78.30	10	2.49	77	19.21	10,323	1,518	3,159
Preferred Ordinary . . . . .	325	67.57	15	3.11	141	29.32	83,310	35,070	56,620
" A " Ordinary . . . . .	325	65.92	15	3.04	153	31.04	83,310	35,070	56,620
" B " Ordinary . . . . .	460	75.04	18	2.94	135	22.02	74,678	10,380	90,092

These particulars have been taken from the Share Registers of the Company as at 30th December, 1937.

ANNEXURE A—(Qn. 1 (c).)—*contd.*

	Par value of holdings of			Total Capital.	Percentage of Total Capital held by		
	Indian Shareholders.	Indian Banks, Insurance Cos. & Investment Companies.	Other Shareholders.		Indian Shareholders.	Indian Banks, Insurance Cos. & Investment Companies.	Other Shareholders.
	Rs.	Rs.	Rs.	Rs.			
8 per cent. Preference . . . . .	4,35,700	1,46,200	5,88,100	11,50,000	37.89	12.71	49.40
5 per cent. Preference . . . . .	10,32,300	1,51,800	3,15,900	15,00,000	68.82	10.12	21.06
Preferred Ordinary . . . . .	2,08,275	87,675	1,41,550	4,37,500	47.61	20.04	32.35
"A" Ordinary . . . . .	4,16,550	1,76,350	2,83,100	8,75,000	47.61	20.04	32.35
"B" Ordinary . . . . .	3,73,390	51,900	4,50,460	8,75,000	42.64	5.93	51.43
	24,66,215	6,12,925	17,59,110	48,38,250	48.91	13.77	37.32

These particulars have been taken from the Share Registers of the Company as at 30th December, 1937.

2. (a) For the manufacture of 21,000 to 22,000 tons of pulp per annum.  
 (b) For the manufacture of 23,000 to 25,000 tons of paper per annum.

		Pulp.	Saleable Paper.
		Tons.	Tons.
3. 1931-32	. . . . .	8,618	19,007
1932-33	. . . . .	8,307	18,822
1933-34	. . . . .	10,650	20,946
1934-35	. . . . .	11,565	21,645
1935-36	. . . . .	13,613	23,463
1936-37	. . . . .	16,947	23,652

At the present time the combined pulp plants of both mills are producing at the rate of approximately 21,500 tons per annum.

4. The accompanying statement (Annexure B) enumerates the chief classes of paper manufactured in our mills during each year since 1931-32 and gives details of the tonnage and percentage of total output represented by each class.

As far as our own mills are concerned, it will be appreciated that we are already manufacturing a very wide range of qualities.



ANNEXURE B—(Qn. 4.)  
Statement of Paper Production (showing Qualities).

—	1931-32.		1932-33.		1933-34.		1934-35.		1935-36.		1936-37.	
	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.
1. Cream Laid and Woves .	4,904	26.28	5,827	30.03	5,745	27.43	6,161	28.47	6,521	27.80	6,209	26.28
2. White Printings .	8,150	42.86	7,995	42.41	8,777	41.90	9,378	43.33	10,320	43.99	10,206	43.19
3. Unbleached Printings .	449	2.36	44	.23	30	.14	66	.30	244	1.04	667	2.78
4. Super Badami .	622	3.27	604	3.21	1,937	9.25	1,481	6.84	1,818	5.62	1,199	5.07
5. Badami .	1,496	7.87	1,532	8.13	1,593	7.60	1,702	7.86	1,847	7.67	1,959	8.28
6. Colour Printings .	790	4.15	636	3.38	385	1.84	425	1.96	782	3.33	752	3.18
7. Browns .	603	3.17	422	2.24	416	1.99	870	1.71	481	1.83	513	2.17
8. Miscellaneous .	1,903	10.01	1,762	9.34	2,063	9.85	2,062	9.53	2,000	8.52	2,137	9.05
9. Wrappers .	6	.03	27	.13	..	..	..	..	..	..	..	..
Total Production .	19,013	100.00	18,849	100.00	20,946	100.00	21,645	100.00	23,463	100.00	23,632	100.00

We believe however there are possibilities of increasing the range of qualities produced in this country, by the manufacture of:—

Poster Paper.

Kraft Paper.

Art Paper.

5. The attached statement (Form No. I) gives the required particulars in regard to the annual consumption of primary raw materials for each year since 1931-32.

From the statistics given it will be noted that an appreciable increase has taken place during the period under review in the percentage of the total paper manufactured obtained from indigenous materials. This percentage has risen from 50.54 in 1931-32 to 78.48 in 1936-37. This is naturally reflected by a corresponding reduction in the percentage of paper produced from imported pulp which figure has been reduced from 41.46 to 21.52 for the same period.

6. From our experience we find that the quantities required are as follows:—

Description of Primary Material.	Quantity required to make one ton of	
	(a) Pulp.	(b) Paper.
	Tons.	Tons.
Grass . . . . .	2.428	2.857
Bamboo . . . . .	2.678	3.151
No. 1 Rags . . . . .	1.13	1.33
No. 2 Rags . . . . .	1.411	1.66
Hemp Ropes . . . . .	1.411	1.66

In each case it is understood that the figures apply to unbleached air-dry pulp and paper.

7. As a direct result of the recent flotation of other pulp and paper mill companies in this country, the consumption of bamboo and grass for pulp manufacture must shortly increase very considerably. As far as we can see, however, we think that an adequate supply of these materials should still be available to meet the probable increased demand.

*Bamboo.*—During recent years we have increased considerably the production of bamboo pulp as will be seen from the statistics in Form I in which we give particulars of the annual consumption of each of the primary raw materials used. In answer to Question No. 8 we give information regarding the actual sources of our supplies of bamboo.

In the course of our evidence to the Tariff Board in 1931, certain figures were given, based on a report issued by the Forest Department in respect of the anticipated output of bamboos available from the Angul forests, for the working of which the company obtained a lease in 1928. Since that date, the further experience, which we have gained in the working of these bamboo forests, has shown that the figures previously indicated in respect of anticipated output were too optimistic. Arrangements have been made, however, for additional areas in the Angul Division to be leased to us so as to supplement the supplies. In addition to these further areas, the company has arranged leases for the extraction of bamboo from two of the Feudatory States under the Eastern States Agency and a lease for extraction of bamboos from a third Feudatory State is at present under consideration.

In addition to our operations in Angul, we have taken steps in conjunction with the Government of Bengal to endeavour to stimulate and encourage the growth and collection of bamboo as an agricultural pursuit which will enable the ryots and villagers all over the province to produce a crop

which can be sold for cash. We have distributed circulars in English and Bengali through our own contractors and through the Government of Bengal officials, stating the best methods of cutting bamboos to ensure a constant crop. Although we are to-day consuming nearly 40,000 tons of bamboos per annum, we are convinced that the supply available is sufficient for our own requirements, and we believe that the supply from Bengal itself can be developed to much greater proportions.

We would reiterate the statement made by us on the occasion of the previous Tariff Board enquiry to the effect that undoubtedly numerous other bamboo areas exist, capable of yielding large quantities of bamboo. We feel, however, that it is impossible for us to endeavour to give an estimate of the total quantities of bamboos likely to be available from such other areas.

Bamboo pulp now constitutes the largest part of our general furnish, and we consider that we now have definitely proved that bamboo pulp is an excellent pulp and suitable for manufacture in all the general classes of paper which we at present produce.

*Grass.*—It will be recalled that in answer to the Tariff Board questionnaire in 1931, reference was made to the reduction which had taken place in the quantity of grass available from the Sahibgunge area, and it was then reported that the matter was being investigated and that a scheme for the reconditioning of the areas by which the yield would be improved, was under consideration. We are now able to report that the scheme for reconditioning then introduced, has proved successful in that the output of grass from the Sahibgunge area has shown a regular increase year by year since the introduction of the scheme, and that now we are able to obtain the bulk of our supplies of sabai grass from this area. In the season 1936-37 we actually received nearly 320,000 maunds while, for the season now current, 1937-38, it is anticipated that the output will be no less than that of the previous year, although the crop has been adversely affected by shortage in rainfall. It is expected that ultimately we shall be able to obtain at least 400,000 maunds from the Sahibgunge area. During the period from 1931-32 purchases of grass have been made from Western Circle forests of the United Provinces and other areas to complete our total requirements, but with the increase which has taken place in the quantity available from Sahibgunge area, the purchases from other sources have been correspondingly reduced.

The other mills in the United Provinces and the Punjab directly interested in the supply of sabai grass from areas in these provinces will no doubt provide figures for supplies which they expect to be able to obtain.

As we stated on the occasion of the previous enquiry, we find sabai grass an excellent raw material for the manufacture of all our regular qualities of paper and at No. 1 Mill, Titaghur, the furnish of indigenous pulps, excluding the relatively small quantity of rags, ropes, etc., has been for some time on the average of approximately 50 per cent. grass and 50 per cent. bamboo.

*Rags, Ropes, Waste Paper, etc.*—We still use limited quantities of these subsidiary raw materials and hold to our previous opinion that, as regards rags and waste papers, the limit on the east side of India has been reached, both as regards quantity of supplies and the cost.

There has in fact been an increase in the demand for these subsidiary raw materials as a result of which prices have increased to some extent and it has, been necessary further for us to develop supplies from more distant markets to obtain such quantities as we have required.

8. (1) *Bamboo.*—(a) Since 1931-32, whilst we have developed the supplies of bamboos from the Angul Forest Division, Orissa, and increased quantities have been available therefrom, we have also endeavoured to build up a regular source of supply of bamboo from areas in Bengal.

(b) There has been no material alteration in the methods of collection and transport in regard to bamboos from the Angul Division, but with the extension of our operations in that district and with the opening up of bamboo working in certain of the Feudatory States, a considerable proportion of the total output is now transported to stations on the Talcher Branch Railway line and railed direct to the mills, floating being thus eliminated.

The bamboos from the areas in Bengal are purchased through contractors at prices delivered into our mill sidings. The contractors have sub-agents at different centres where the bamboos are collected, cut, loaded into wagons and sent to the mills.

(c) There has been no alteration in the terms of concession in respect of bamboos from the Angul Forest Division as detailed in the evidence which we tendered in 1931. In regard to the leases executed in respect of bamboos from the Feudatory States, the rates of royalty agreed upon are as follows:—

	As.
On Salia bamboos . . . . .	6 per 100
On Daba bamboos . . . . .	3 per 100

with the condition that these rates can be increased to As. 12 and As. 6 per 100 bamboos, respectively, after a period of 12 years.

(2) *Grass*.—(a) As shown in our reply to Question No. 7, as a result of the improvement which has taken place in the output of grass from the Sahibgunge area, deliveries to our mills from that area have increased whilst there has been a corresponding reduction in the quantities purchased from United Provinces or other areas.

(b) There has been no change in the methods of collection and transport.

(c) There has been no change in the terms of the concession under which grass from Sahibgunge area has been supplied to our mills.

9. *Bamboo*.—The cost of delivering bamboos from the Angul Division, as worked departmentally by the company, has shown a regular decrease since 1931-32. This reduction has been brought about by the improvement which has taken place in our organization and in our knowledge of the working of these areas, and also to the fact that the increased tonnage obtained has resulted in a reduction in overhead charges. We give below details:—

	Period to June '33.	Period to June '34.	Period to June '35.	Period to June '36.	Period to June '37.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Cutting, Carting,					
Baling . . . . .	19 5 0	10 8 9	7 14 6	6 1 9	5 8 0
Railway Freight . . . . .	6 12 10	7 11 2	7 9 11	7 11 6	8 5 5
Rent and Royalty . . . . .	1 5 3	1 1 4	1 5 10	1 0 0	1 0 0
Other Charges . . . . .	12 3 8	8 11 1	7 5 6	4 12 0	5 14 10
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	39 10 9	28 0 4	24 3 9	19 9 3	20 12 3

Supplies of bamboos have also been purchased from contractors in Bengal and areas situated more closely to the company's mills. The prices for such supplies have varied to some extent according to the distance over which the bamboos have had to be transported but average approximately Rs. 15-8 per ton delivered into the company's mill sidings.

*Grass*.—Since 1931-32 the company has not worked any grass areas departmentally, but all purchases have been made at rates delivered into

the company's mills. The following is a statement of the cost per ton delivered into mill sidings during each of the years under review:—

	Sahibgunge Area.			Contractors.		
	Per ton.			Per ton.		
	Rs.	A.	P.	Rs.	A.	P.
1931-32 . . . . .	37	9	0	41	11	4
1932-33 . . . . .	37	9	0	40	1	3
1933-34 . . . . .	37	9	0	39	3	6
1934-35 . . . . .	37	9	0	38	3	5
1935-36 . . . . .	37	9	0	39	4	4
1936-37 . . . . .	35	13	2	37	9	0

10. This question has been answered by the Indian Paper Makers' Association as follows:—

“ With the exception of coal, in the case of which the mills would welcome the removal of the existing surcharge, the interests represented by this Association do not consider that the present rates of railway freight have caused any special hardship to the paper industry. They would, however, take this opportunity of expressing the hope that the railways will continue to bear in mind the great importance, from the point of view of the development of the industry, of low freight rates on the raw materials consumed by the mills ”.

11. (a) The process of the manufacture of pulp from bamboo at our mills is the Cascade process using Caustic at No. 1 Mill and Sulphate liquor at No. 2 Mill. It is hoped that eventually we may be able to use the Sulphate process at No. 1 Mill also.

(b) Grass is digested by the straight overhead Caustic process.

(c) The only remaining indigenous raw materials used at the mills are rags and hemp ropes which are boiled in suitable digesters in a weak solution of Caustic soda to clean and soften the fibres.

Forms II and III have been completed and are attached.

In regard to the questions specially relating to bamboo, as indicated, we would reply as follows:—

(a) We believe that the Alkali process is distinctly better than the Acid or Sulphite process for the digestion of bamboo. Our reasons for making this statement are:—

1. Because we are of the opinion that the Alkali process yields better and stronger pulp.
2. Because it can be applied to all varieties of bamboo indiscriminately, and
3. Because it permits a reduction in chemical costs in proportion to the increased saving in recovered products.

(b) The capacity of the new bamboo pulp plant at No. 1 Mill is 1,250 tons of raw bamboo per month, equivalent to 6,000 tons of pulp per annum. We may mention here that the buildings in which the pulp plant is housed have been designed so that the new plant can be duplicated if necessary without further alteration.

At No. 2 Mill the present Digester plant has a capacity of 10,000 tons of pulp per annum.

Under present arrangements, therefore, the maximum combined bamboo pulp capacity at both mills amounts to 16,000 tons per annum.



(c) The following statement shows the tonnage of bamboo pulp produced at our mills during each year since 1931-32:—

	Tons,
1931-32 . . . . .	2,595
1932-33 . . . . .	2,822
1933-34 . . . . .	4,302
1934-35 . . . . .	5,790
1935-36 . . . . .	7,406
1936-37 . . . . .	11,500

It will be noted that the highest production was obtained in the year 1936-37, viz., 11,500 tons. This figure is some 4,500 tons below what we have just stated in our reply to the previous question to be the bamboo pulp capacity of both of our mills. The last battery of bamboo digesters at No. 2 Mill, Kankinara, were not in commission until the current year, and this explains the apparent difference between the actual production of bamboo pulp obtained and the figure quoted by us as the capacity of our present plant. We may add that we are now actually producing bamboo pulp at the rate of 16,000 tons per annum.

(d) *Undertaken. No. 2 Mill.*—The new plant which has been installed since 1931-32 at No. 2 Mill consists of the following:—

Two Bamboo Crushing and Chipping machines, designed and manufactured in India:

Screening and Conveying plant storage and charging bins:

Five large Digesters of the Sinclair type but with special modification of design complete with Caustic and Liquor containers and pulp emptying system, each with a capacity of 5 tons of bamboo chips:

Five large Digesters, as above, but each with a capacity of 7 tons bamboo chips:

Pulp Washing plant consisting of a Rotary Vacuum filter, storage towers, etc.:

Four large Reinforced Concrete Bleaching towers with circulating pumps, etc.:

Additional White Straining plant for bleaching bamboo pulp:

The Pulp Distribution system to the Beater House has also been entirely re-arranged in accordance with modern practice.

To assist in dealing with the additional Black liquor from the Bamboo Digester plant arising from the increased production of pulp it was necessary to instal additional Roaster capacity. The latest practice was examined at Home and on the Continent as a result of which a Roaster Smelter unit of modern design was installed which enabled the plant to operate on the full Sodium Sulphate process.

*No. 1 Mill.*—From the results obtained at No. 2 Mill plans were prepared for a complete Bamboo Pulp Making installation for No. 1 Mill to produce 500 tons of pulp per month. Construction was started in April 1934, and the plant went into commission towards the end of 1935.

An additional Black Liquor Evaporator and Roaster were also installed to help to meet the increased output of Black liquor from the Digesters.

In addition to the above items, it was necessary to provide additional steam raising plant and also to make provision for the introduction of purchased electric power. This is dealt with in full detail in our reply to Question No. 24.

To meet the increased demand for Bleach for both mills, and also to produce further Caustic Soda, considerable extensions were made to the Electrolytic Bleach making plant. This included an additional Transformer

and Rotary converter, Electrolytic cells, Evaporator and Salt filter, Liquor Storage tanks, etc.

*Proposed, No. 2 Mill.*—New plant proposed or actually being installed at No. 2 Mill, consists of the following:—

A second Rotary Vacuum filter with additional towers for washing the pulp from the Digesters.

A Rotary Vacuum filter for washing and concentrating the Bleached and Strained pulp.

One Quadruple Effect Evaporator to deal with the additional volume of Black liquor.

Reconstruction on a new site of the Causticising plant including the installation of a second Rotary Vacuum filter for sludge.

The whole of this plant has either reached the mill or is in the course of manufacture.

The Roaster Smelter plant is without an adequate standby and it is now proposed to follow the latest practice and install a smelting furnace which will also overcome the smell problem associated with the operation of the Sulphate process.

*No. 1 Mill.*—At No. 1 Mill the immediate programme includes the installation of a Rotary Vacuum filter for Lime sludge and a general overhaul of the Causticising plant. A duplication of the Bamboo Conveying plant will shortly be undertaken together with the installation of a second Rotary Vacuum filter for unbleached pulp.

(e) The expenditure incurred on modifications to plant directly connected with the production of bamboo pulp since 1931-32 is the following:—

	Lakhs.	
	Rs.	Rs.
<i>No. 1 Mill.</i> —Bamboo pulp plant including Digesters, Crushers, Pulp Washing, Bleaching, and Straining plant, including reconstruction of buildings, additional Roaster, Evaporator, Bamboo godowns, Electrolytic Bleach plant extension . . . . .	12	—
	—	12
<i>No. 2 Mill.</i> —First installation of Crusher, Digesters, Pulp Washing plant, including alterations to buildings . . . . .	6	—
Second installation including Godowns, Crusher, Digesters, Bleaching towers, Soda Recovery plant . . . . .	8	—
	—	14
Total both mills ...	26	—

The total expenditure directly spent on plant for the production of bamboo pulp thus amounts to Rs. 26 lakhs. In addition, at No. 2 Mill, we are now proceeding with increased pulp washing and soda recovery plants, the cost of which is estimated to amount to a further Rs. 5½ lakhs.

It is now proposed to duplicate the Smelting plant by the installation of a Smelter furnace, the cost of which is estimated at approximately Rs. 3 lakhs.

(f) As stated in our reply to Question No. 7 in regard to the availability of primary materials, we are of the opinion that the supplies available should be sufficient to meet the demands of the mills at present operating and those which have been recently floated but are not yet in commission.

(g) It is recognised that the demand for bamboos has already increased over the past few years, and that it is likely further to increase in the near future. As a result of this it will be necessary, no doubt, for mills to go further afield to obtain their total requirements and a consequent rise in the average rate due to the longer distance over which supplies will have to be transported may be expected.

(h) In answer to a similar question on the occasion of the last Tariff Board enquiry, we pointed out that coal consumption was to a certain extent dependent upon the quality of the coal, and that a high class coal would mean a reduction in the quantity consumed per ton of pulp and paper. For this reason we would again prefer to examine the figures of cost per ton of production.

In 1931 when we were in the early stages of the manufacture of pulp from bamboo, the cost of steam for process, the digestion of pulp and the generation of power amounted to Rs. 20.29 per ton of air-dry pulp.

At that time it was realised that with increased production considerable heat economies could be made, and it was stated that we expected to see a reduction of fully 10 per cent. on the cost provided there was no increase in the cost of coal. This statement has been more than justified and from the analyses statement it will be seen that the cost of steam and power has been reduced to Rs. 15.56 per ton of air-dry pulp.

With our special process of digestion, the steam consumption is at a very economical figure, and it is not anticipated that any great saving can be made on this account.

Another factor is the cost of coal which has increased considerably since the beginning of 1937.

(i) The extent to which the cost of chemicals can be reduced in the Alkali process depends on how far the Sulphate process can be used for all the pulp production and how far the present recovery of chemicals can be improved. It may be possible by adopting a full Sulphate process at both mills and by improving the present recovery of chemicals to reduce chemical costs by somewhere in the region of 20 to 25 per cent.

(j) It is our constant endeavour to improve the quality of our bamboo pulp and the paper manufactured therefrom. We claim that since the time of the last enquiry, a very marked improvement has taken place in the quality of paper produced from our bamboo pulp, more especially in regard to cleanliness and strength. With the experience which we have gained in the use of bamboo pulp in our mills during the past seven years, we are now able to confirm the view expressed by us on that occasion of practically all the qualities which we usually manufacture.

We hope that in the course of time as more experience is gained, we shall be able further to improve the quality of our products from this material.

12. The accompanying statement (Annexure C) shows the prices of the several qualities of wood pulp purchased by us during the past six years. As all our purchases of this material are made on a c. and f. basis, we have adjusted the contract prices so as to bring them to a c.i.f. basis in accordance with the footnote to this question.

## ANNEXURE C—(Qn. 12.)

## Imports of Wool Pulp.

Years.	E. B. Sulphite.		Strong Sulphite.		Kraft.		Other Sorts.		Total Tons.	Country of Origin.
	Tons.	Average Price c.i.f.	Tons.	Average Price c.i.f.	Tons.	Average Price c.i.f.	Tons.	Average Price c.i.f.		
1931-32 . .		£ s. d.		£ s. d.		£ s. d.		£ s. d.		Scandinavia. U. S. A. Czecho-Slovakia. Finland. Portugal.
	4,400		2,750				30		7,180	
	800	13 9 1	500	12 3 6	25	9 17 1	50	11 14 9	1,300	
	2,400						50		2,450	
1932-33 . .									25	Scandinavia.
	7,600		3,250		25		130		50	
		12 8 11	3,250	9 19 4			50	12 3 2	11,005	
	4,300								7,600	
1933-34 . .										Scandinavia. Lithuania. U. S. A.
	4,700	9 19 11	2,500		50	8 3 9	150	12 6 4	7,400	
	100		100	9 3 3					200	
	1,050				50		150		1,050	
	5,850		2,600						8,650	

1934-35 .	4,725 2,300	10 2 4	2,300	9 9 1			250	12 19 0	7,275 2,300	Scandinavia. U. S. A.
1935-36 .	5,275 2,450 225	10 6 6	2,100	10 4 10	50	8 15 6			7,425 2,450 225	Scandinavia. U. S. A. Czecho-Slovakia.
	7,950		2,100		50				10,100	
1936-37 .	3,700 1,050	9 13 7	1,800	9 8 10	40	10 2 2	25 20	14 8 7	5,540 1,075 20	Scandinavia. U. S. A. Portugal.
	4,750		1,800		40		45		6,635	

- (c) Calcutta.
- (f) Rs. 2-4-0 per ton.
- (g) Rs. 1-12-0 per ton.

13. The opinion was expressed at the time of the 1931 enquiry to the effect that a quantity of imported pulp would continue to be necessary for certain qualities of paper. Our further experience in working with bamboo pulp in the furnish of our usual qualities has shown us that imported pulp is still required, but that the necessity is now not so great. Since the last enquiry the pulp plants at both mills have been considerably extended so that imported pulp now forms only a small percentage of the fibre furnish used, and compared with the position six years ago, it is required mainly as a make-up to meet the increased paper production. The quantity of paper manufactured from wood pulp, calculated as a percentage of the total paper made, shows a very considerable reduction when compared with the corresponding figures for the years prior to 1931.

Wood pulp is made in many different qualities, and mills abroad choose special qualities of pulp for different types of paper. It may be that further experimental work in connection with the production of bamboo pulp may enable the mills to produce qualities of bamboo pulp with different characteristics, but at present the bamboo pulp mills in this country make only one standard quality. We find that certain qualities, such as antiques for book printings and typewritings and bank papers, still require to be made with a proportion of imported wood pulp in the furnish. One of the characteristics of antique paper is the soft matte surface which is desired by the printing trade, and this is generally obtained by using a brand of Aspen wood pulp which gives the required softness. Similarly, in typewriting and bank papers, it is essential to make a strong handling sheet with an even surface, and to accomplish this it is desirable to use a proportion of Strong Easy Bleaching Sulphite pulp. We expect that in due course further extensions to our pulp plants will be undertaken and that being so, it is estimated that the quantity of imported pulp required at our mills will only be about 8 per cent. to 9 per cent. of the total pulp requirements of the mills.

14. Apart from such special qualities as mentioned in our answer to Question 13, all the other qualities made in our mills can be manufactured satisfactorily without the admixture of imported pulp, *i.e.*, from bamboo and grass at No. 1 Mill, and from bamboo pulp solely at No. 2 Mill.

At No. 1 Mill certain qualities are manufactured entirely from indigenous pulps, *i.e.*, grass and bamboo, notably "Green Label" White Printings, Cream Laid, Conquest Azure Laid and Manilla. The characteristics of these qualities are physical strength and durability. At No. 2 Mill, although at present a portion of wood pulp is sometimes included as the paper production has exceeded the capacity of the pulp plant, practically all our well known qualities including Printings, white and tinted, Super-calendered papers, Imitation Arts, Cream Laid, White Laid, Bonds, Ledgers and Cream Wove papers, Indian Account Book, Ahmedabadi and Drawing Cartridge papers, Duplicators and Typewritings, Casings and Special Wrapping papers, are made from an all-bamboo pulp furnish. We maintain that these qualities compare favourably with imported qualities and this opinion is borne out by the general increase in sales of Indian paper for all purposes.

15. The price of wood pulp must vary according to availability and price of pulp wood on the one hand, and to the demand for wood pulp for different industries on the other. There are naturally several factors which may affect either the one or the other. In considering the fluctuations in prices of this material which have taken place since the date of the last enquiry, an examination of the information given in reply to Question No. 12 will show that from 1931 to 1936 there was more or less a general and regular decline to as low as £9-10-0 per ton for Easy Bleaching pulp. It was

commonly stated when prices of wood pulp reached their lowest level, that overproduction prevailed and that pulp mills were running at a very small margin of profit if at any at all. It is known, for instance, that in Canada, because of the very depressed state of the industry, numerous mills closed down. It seems evident that during those years 1931-36, a more than ample supply of pulp wood was available, and the capacity of the pulp producing industry was in excess of the demand. In the latter part of 1936 a change became apparent in the wood pulp market and prices began to harden, the movement being accelerated, and in a short space of time it resulted in an increase of approximately 100 per cent. in pulp prices for 1937 and 1938. Several factors have been cited as the cause of this rapid rise in pulp prices, and it is possible that all of these factors contributed to a greater or lesser degree in bringing about the rise. The large off-take of wood pulp for the rayon industry, the development of which apparently has increased very rapidly during the past few years, was one reason. Also there can be no doubt that 1937 saw an improvement in trade generally. This resulted in a consequent increase in the consumption of most commodities and a quick rise in prices generally. We are of the opinion that it was the combination of these several factors which brought about the rise in wood pulp prices. We feel, however, that in addition to these factors, the natural tendency for buyers when such conditions prevail, to cover their requirements forward over a longer period than is usual, may also have created a certain artificial demand which further aggravated the position and assisted in raising pulp prices to the high level they reached in 1937.

After carefully considering the variations of pulp prices over the past several years, we are definitely of the opinion that the level reached in the middle of 1937, i.e., in the region of £19 per ton, c.i.f. Calcutta, for Easy Bleaching qualities, is much too high to justify it being stabilized. Recent advices and quotations which we have received all show that a considerable re-action in the price of wood pulp has already taken place, and we have recently been offered Bleachable Sulphite at £13-10-0 per ton, c.i.f. Calcutta. One reason of this re-action is undoubtedly the fact that some portion at least of the capacity for the production of pulp which had been lying dormant for many years has since come back into operation, and has helped to adjust the discrepancy which, for a relatively short time, existed between the demand and the supply.

After full consideration, we think that it is impossible to forecast accurately the probable trend of wood pulp prices over the next few years. During the past six years, wide fluctuations—£9 to £19—have taken place, and it is quite possible that similar variations may take place again. An examination of pulp prices for several years would seem to indicate that a figure in the region of £11 per ton for Easy Bleaching qualities may become a fair level.

The possibility of pulp mills quoting below this level, due to overproduction and competition, is one that cannot be ignored however. It is believed that the recent high prices paid for wood pulp have encouraged the opening of new mills especially in the Southern States of U. S. A. which may eventually lead to overproduction and a consequent slump in prices at some time in the future.

As evidence of the present trend of world pulp prices, we append an extract from the "Swedish Wood Pulp Journal" of as recent a date as 31st December, 1937.

"A sign as to the altered market conditions in America has recently been given by the prices which the manufacturers of Sulphite pulp in U. S. A. and Canada have published as being valid for the first quarter of 1938. The new prices are for Bleached Sulphite 60 doll. and for Unbleached Strong Sulphite 50 doll. per ton, which involves a reduction of 10 and 7 doll., respectively, on the prices which were valid during the last quarter of 1937. It is impossible to judge what effect this drastic reduction in the price of "Domestic pulp" will have on the market for European pulp. One

consideration is that the American mills sell on running contracts with prices fixed quarterly whereas the European exporters sell on the basis of fixed contracts, which are often signed a considerable period before the time of delivery".

We have also received information to the effect that the Sulphate pulp production in U. S. A. by the end of 1938 will be increased by approximately 1,200,000 tons if the new projects are all carried through. The figure is more than 50 per cent. of the total consumption of sulphate pulp in U. S. A. for 1935. It follows that there may soon come a time when overproduction may again prevail for a period and bring Easy Bleaching prices even down to £10 per ton although this figure may be uneconomical for the pulp mills.

16. No special developments in the manufacture of paper from any indigenous fibres, other than bamboo pulp, has been made by our mills apart from the increased manufacture of paper from rag pulp. We believe that our customers agree that the quality of this paper compares favourably with that of imported paper except that our rag papers are engine-sized and not tub-sized.

17. Form IV has been completed and is attached, giving the necessary particulars of the quantities and prices of the different auxiliary materials under the required headings. We give below the quantity of each principal auxiliary material which, according to our usual practice, is required per ton of finished paper:—

Description.	Quantity per Ton of Paper. Tons.
China Clay . . . . .	·0990
Alum . . . . .	·0538
Rosin . . . . .	·0225
Alkali . . . . .	·0008
Lime . . . . .	·3287
Salt . . . . .	·1433
Sulph. Acid . . . . .	·0010
Hyd. Acid . . . . .	·0008
Glue . . . . .	·0001
Sulphur . . . . .	·0032
Sod. Sulphide . . . . .	·0002
Salt Crude Cake . . . . .	·0243
Caustic Soda . . . . .	·0758
Silicate of Soda . . . . .	·0002
Paperino . . . . .	·0003
Bleaching Powder . . . . .	·0040
Casein . . . . .	·0004
Dyes . . . . .	·0014

In certain cases the quantity of auxiliary material, as calculated per ton of finished paper, constitutes so small a fraction as to be negligible, and is not shown.

18. (1) *Re. Availability in India.*—In so far as the supply of China clay is concerned, there has been no change from the position reported by us on the occasion of the last enquiry to the effect that we were not importing any shipments of this material, and were able to obtain our full requirements from local sources of supply.

In 1931 we stated that we had been able to purchase from local suppliers a certain portion of our requirements of Sulphate of Alumina, but that at that time the suppliers had not been in a position to furnish us with our



full requirements of this chemical of a suitable quality. Since 1931, however, further quantities have been available, and this company has been able to purchase its total requirements of Sulphate of Alumina from local manufacturers.

We would confirm that we still experience no difficulty in obtaining our full requirements of acid, rosin, lime and certain other chemicals from local sources. It is necessary to import practically all the dyes used in our mills as these are not produced in India. Sulphur, Sodium Sulphide, Salt Cake, etc., have to be imported.

The company produces Bleaching liquor and Caustic Soda, in its Electrolytic plant at No. 1 Mill, Titaghur. The production of Bleaching liquor from that plant is usually sufficient to meet the mills' requirements, although there have been times where we have found it necessary to purchase certain small quantities of bleach to supplement our own production.

In regard to Caustic Soda, with the increase which has taken place in the production of pulps of indigenous materials, at both of our mills, the requirements of Caustic Soda have exceeded the production of our Electrolytic plant, and consequently certain purchases have been necessary.

(2) *Re. Quality and Price.*—In the ordinary course China clay has been available at prices lower than that at which we could have imported, but the quality of the clay supplied by local firms is not always as consistent and as high as that which is regularly obtainable in the case of the imported clay. On the other hand, whilst we have had occasion from time to time to complain of the quality of clay supplied locally, it is in the ordinary course suitable for use in the papers manufactured by us.

There is usually a small margin in favour of the price of Sulphate of Alumina as purchased in India and the quality is satisfactory.

Prices for rosin usually follow fairly closely to the price of the imported article. The quality is satisfactory.

19. The only auxiliary material recovered at our mills is Soda which is produced in our Soda Recovery plants.

*No. 1 Mill.*—The recovered Caustic is about 48.4 per cent. of the Caustic consumed as against 58.5 per cent. in 1931-32. The percentage figures have undoubtedly fallen and must be improved, but the reason for the present fall is the great increase in pulp production and the consequent increase in the gallonage of Caustic being sent to the recovery plant. The following comparisons are submitted:—

	April-Sept., 1931-32.	Oct.-Dec., 1936-37.
Caustic used in Digester House . . .	Cwts. 3,103	7,334
Caustic returned in spent liquor . . .	„ 2,277	4,698
Caustic returned per cent. of total used .	Per cent. 73.7	64.06
Crude Ash Recovered . . . . .	Cwts. 3,757	6,736
Caustic Soda Content . . . . .	„ 2,163	4,003
Caustic Recovered as Crude Ash per cent. of total used . . . . .	Per cent. 70	54.58
Recovery into Regenerated Caustic . . .	„ 58.59	48.47

From the above it will be seen that although consumption of Caustic in the Digester House more than doubled itself between the periods under review, the actual drop in percentage of the total Caustic recovered as Crude Ash, was less than 16 per cent. On the other hand, the total Crude Ash recovered showed an increase of 84.6 per cent. in 1936-37 compared with 1931-32.

In 1931-32 only the quadruple effect evaporator and two roasters (running alternately) were in commission, and in order to improve recovery the first disc evaporator was successfully brought into the system in March 1933. Apart from ordinary maintenance, no further improvements or renewals

occurred until 1936, when the new triple effect evaporator was put into commission. This has an evaporating capacity of 1,000-1,100 gallons per hour, or about 50 per cent. of the quadruple effect. In July 1937 the new roaster and disc evaporator were started up.

*No. 2 Mill.*—The recovered Caustic at our No. 2 Mill, Kankinara, now amounts to 59 per cent. as against a figure of 57 per cent. during April-September 1931-32, and the following figures are submitted:—

	April-Sept., 1931-32.	Aug. Oct., 1937-38.
Caustic used in Digester House . . .	Cwts. 2,119	7,185
Caustic returned in spent liquor . . .	„ 1,798	5,404
Caustic returned per cent. of total used .	Per cent. 84.85	75.21
Crude Ash Recovered . . . . .	Cwts. 2,352	7,755
Caustic Soda Content . . . . .	„ 1,487	4,903
Caustic Recovered as Crude Ash per cent. of total used . . . . .	Per cent. 70	68.2
Recovery into Regenerated Caustic . . .	„ 56.7	59.14

It will be seen that although the amount of Caustic used in the Digester House has increased by approximately  $3\frac{1}{4}$  times, the percentage recovered has improved. Further improvements in recovery can only be made when we have installed additional evaporating plant and a new smelting furnace system.

Generally speaking, the position regarding our recovery figures is that owing to the rapid increase in our pulp production, the capacity of our recovery plants has been outstripped. Improvements and additions are being designed which will enable us to obtain results in line with modern practice.

20. As stated on the occasion of the last enquiry, it is difficult for us to quote accurate figures in respect of the labour force employed in the extraction and collection of primary materials used by us. This is due to the fact that the greater portion of our supplies of grass and bamboo are obtained from contractors, and we have had to rely on their advices in making our reply to this question. According to the information which we have been able to collect, we give below figures indicating the number of hands engaged in the cutting, extraction and transportation of the raw materials used by us:—

- (a) In respect of grass . . . approximately 9,000/10,000
- (b) In respect of bamboo . . . approximately 10,000/11,000
- (c) In respect of other materials . approximately 1,000/ 2,000

21. The following statement shows the number of hands employed at each of our mills during each year since 1931-32, and gives the corresponding total wages paid:—

	Number of Hands Employed.			Total Wages Paid.
	No. 1 Mill.	No. 2 Mill.	Both Mills.	Rs.
1931-32 . . .	1,440	1,230	2,670	8,85,269
1932-33 . . .	1,355	1,246	2,601	8,80,424
1933-34 . . .	1,411	1,265	2,676	8,98,631
1934-35 . . .	1,577	1,234	2,811	9,25,695
1935-36 . . .	1,730	1,330	3,060	9,88,512
1936-37 . . .	1,801	1,426	3,227	10,06,927

The increase in the number of hands employed during recent years is to a large extent due to the numbers employed in the renovation and reconstruction work.

22. In our reply to a similar question in the 1931 enquiry, we dwelt at some length on the difficulty which we had experienced in obtaining suitable young men for our apprenticeship scheme. We indicated that although quite a larger number (24) had been enrolled under the scheme, less than half of that number (10) had completed their training period. We expressed the opinion however that those apprentices who had persisted in their studies and training were making satisfactory progress and that we anticipated that they would be capable eventually of entering into the superior staff of the company. At that time we had no Indian Assistant Supervisors in the actual papermaking departments, namely, the Machines and Beaters, but we are now pleased to be able to report that since 1931 ten apprentices have been promoted to the Assistant Supervisory grade in these departments. One of them resigned his post shortly after his promotion and, at the present time, nine are still employed by us in this capacity. Although certain reductions have taken place in the European staff since the time of the last enquiry, it cannot be claimed that the promotion of apprentices to the Assistant Supervisory grade have in each and every case resulted in our being able to dispense with the services of European supervisors. On the other hand, with the large increase which has taken place in the production of pulp and paper in our mills during the intervening period, it would have been necessary for us further to augment the number of European Supervisors had we not been able to utilise the services of those apprentices who had completed their training period and who were capable of taking over the more responsible posts. In this way these Indian Assistant Supervisors have actually taken the place of European Assistants.

At the time of the last enquiry, we had two Indians on the Supervisory staff in our Finishing departments, and these two men still continue to act in the same capacity.

In regard to Chemists, the position in 1931 was that we had two Indian Chief Chemists and three Indian Assistant Chemists. Here again, the increase in the pulp production at both of our mills has necessitated an increase in staff and, whilst the two Chief Chemists still continue in the same capacity, the number of Indian Assistant Chemists has been increased to seven.

An increase has taken place in the number of Indians engaged in the Engineering department where we now employ three Assistant Mechanical Engineers as against one in 1931.

Although it must be recognised that the number of Supervisory posts in a paper mill is limited, and it is impossible to go on indefinitely enrolling apprentices, we have, in view of the fact that those who were apprentices in 1931 have now all been promoted to the Assistant supervisory grade, considered it advisable to engage and to train up more young men. At the present time, we have under our Apprenticeship scheme, four more men who have already done periods of service varying from two to four years.

In regard to Doctors, the position remains unchanged and, as in 1931, the medical officer at each mill is an Indian.

Increases have also taken place in the number of Indians engaged on the commercial side of the company's undertaking.

The number of Indian salesmen now in our employment has increased to 11. Of this number, four occupy senior posts, one each in Calcutta, Bombay, Madras and Rangoon. In addition, when we opened up our own branch offices in two upcountry centres recently, an Indian in each case was appointed in charge of the branch.

23. In our reply to this question on the occasion of the last Tariff Board enquiry, we stated that we had a scheme on hand for the building of labour

quarters at our No. 1 Mill, Titaghur. Since that time we have been able to obtain possession of the land necessary for this project, and have already completed the construction of two blocks of houses, each containing 48 rooms. These quarters have been constructed in reinforced concrete, according to the most up-to-date design, and we claim that, from the point of view of hygiene, the quarters in question are superior to the usual type of labour lines. In conjunction with the construction of the labour lines, latrines with flushing systems and connected to the municipal sewerage system have been provided. It is the intention of the company to build further blocks of quarters and space is already available for more sections.

In addition to the arrangements just described for the accommodation of our labour at our No. 1 Mill, Titaghur, we have also been able, since the date of the last enquiry, to make arrangements for the housing of our superior Indian staff. For this purpose we have acquired on a long lease three bungalows (two of them large, each capable of accommodating four house-holds) with a large compound.

Satisfactory housing accommodation for the apprentices at both mills is provided.

In regard to No. 2 Mill, Kankinara, we have still found it impossible to acquire suitable land on which to construct labour quarters, but this is a matter which is receiving our consideration.

Other matters in regard to the welfare of labour, viz., pension schemes, maternity benefits, medical assistance, etc., still continue, as detailed in our replies on the occasion of the last enquiry.

24. (a) *Titaghur No. 1 Mill.*—As reported at the last enquiry the Power plant at Titaghur comprised one 2,500 kw. B.T.H. Turbo-Alternator capable of passing out 35,000 lbs. steam per hour at 30 lbs./square inch gauge pressure, also one 1,500 kw. Turbo-Alternator, which acted as a standby to the larger set. As the demand and thus the load on the station increased, it was considered necessary to provide standby power to carry the load in excess of the output of the 1,500 kw. set, and arrangements were made with the Calcutta Electric Supply Corporation whereby we installed a 2,000 k.v.a. Transformer which was connected to their mains. The necessary control and distribution Switchgear was installed, and purchased power was used in the mill when the larger set was shut down for overhaul.

The Electrical Load from the mill is still increasing and the 2,500 kw. set is now working to its full capacity. In view of the further additions now contemplated, it was considered advisable to instal a large set capable of passing out a greater quantity of low pressure steam. A 5,000 kw. Turbo-Alternator is now being installed, which will comfortably accommodate any load it is possible to visualize in the near future. The two existing sets will act as standby to the new set when it goes into commission.

This extension has necessitated the installation of new and larger Condenser Water Circulating Pipes from the Jetty. To meet the increased demands of steam for power and pulp digestion, it was necessary to instal three additional Boilers and the Steam Raising plant now consists of six Babcock and Wilcox Water Tube Boilers, each having a heating surface of 5,397 square feet and designed for a working pressure of 200 lbs. per square inch and 250° F. superheat. The normal evaporation from each Boiler is 20,000 lbs. per hour.

*Kankinara No. 2 Mill.*—At the time of the last enquiry the Power plant at No. 2 Mill comprised the 600 kw. Turbo-Alternator and the 1,200 I.H.P. Triple Expansion Main Mill Engine. To accommodate the increase in the Electrical Load due to the extension of the Bamboo Pulp and Recovery plants three 1,000 k.v.a Transformers and Switchgear were installed and

connected to the Calcutta Electric Supply Corporation's Mains. Although the cost of purchased power was above the cost of power generated at the mill, it was considered that this arrangement would satisfactorily meet the situation until the proposed steam and power scheme could be developed. This expectation has been realised.

With regard to the Steam Raising plant it was decided to instal two Water Tube Boilers which would be a first step towards the comprehensive steam and power scheme. Plans were prepared and two Water Tube Boilers and a Steel Chimney of John Thompson Manufacture were installed. Each Boiler has an evaporating capacity of 25,000 lbs. steam per hour at 260 lbs. per square inch and 250° F. superheat. The Boilers have been in commission for approximately nine months and to meet present conditions at the main Mill Engine they are temporarily steaming at 160 lbs. pressure with 100° F. Two further Boilers of the same size are now being installed and also a 3,750 kw. Turbo-Alternator. When this set goes into commission, it will take over the load of the whole mill and the main Mill Engine will be completely shut down. The electrification of the mill including the Beater Shafting is now completed and ready for going into service.

(b) *Cost.*—With the increased production of indigenous pulp and a consequent increase in the production of chemicals, the requirements of power and fuel have become appreciably greater when compared with the position when the last enquiry was held in 1931.

On referring to Form VI, it will be seen that the cost of power and fuel for the year ended March 1937 was Rs. 22·356 per ton which, in view of the increased load, compared favourably with the figure shown for the year ended March 1931, viz., Rs. 21·996 per ton.

(c) *Consumption.*—The consumption of coal per ton of paper for the year ended March 1937 was:—

	Tons.
No. 1 Mill . . . . .	4·365
No. 2 Mill . . . . .	3·36

Due to the heavy demand for steam and power for operating the Electrolytic Bleach plant at No. 1 Mill and the increase in indigenous pulp production, the coal consumption per ton of paper produced is hardly comparable with previous figures.

It will be recognised that coal consumption per ton of paper depends to a very large extent upon the relative production of pulp from which the paper is made.

25. This question has been answered by the Indian Paper Makers' Association as follows:—

“Combination of Customs figures for imports for the year ending 1936-37 and of the present output of Indian mills gives the following annual consumption and production figures. The figures in brackets alongside represent the corresponding figures for 1930-31;—

1. Indian production of paper;—

	Tons.	Tons.
(a) Protected . . . . .	48,000	(35,000)
(b) Unprotected . . . . .	5,000	(4,000)
	<hr/> 53,000	<hr/> (39,000)

	Tons.	Tons.
2. Total Indian demand:—		
(a) Protected . . . . .	60,000	(49,000)
(b) Unprotected . . . . .	153,000	(105,000)
	<hr/> 213,000	<hr/> (154,000)

In the figure of the total Indian demand for unprotected paper, the following imports have also been included:—

	Tons.
Old Newspapers . . . . .	54,730
Paste Boards, Strawboards, Mill Boards and Cardboards . . . . .	25,250
Paper Manufactures . . . . .	2,049
Other kinds of paper . . . . .	3,528
	<hr/> 85,557

With regard to the total Indian production, the Board is aware that a number of new mills are under construction. We believe that the result will be to increase India's capacity for production of paper by at least 20,000 tons, but the Board will, no doubt, be able to form a more accurate estimate in the course of their enquiry."

We would add however that the Board will probably receive details of expected production from the new mills which may show that when all the new mills are in operation, there will be an excess production of paper in the usual protected qualities over the present normal demand.

In connection with this question, we have analysed the Customs statistics and give below a statement showing increases and decreases under the chief headings for 1936-37 compared with 1931-32:—

	1931-32. Tons.	1936-37. Tons.	Increase. Tons.	Decrease. Tons.
Packing and Wrapping . . . . .	10,241	18,207	7,960	
Printing Papers Protected . . . . .	5,012	4,538		474
Printing Papers Unprotected . . . . .	25,788	45,024	19,236	
Writing Papers Protected . . . . .	7,383	7,302		81
Writing Papers Unprotected . . . . .	583	223		360

26. (a) *In India.*—With one exception, all the paper mills at present operating in India manufacture the greater part of their own pulp, using raw materials obtainable from areas situated near to their mills. With the one exception, already mentioned, there is, therefore, at the moment no immediate market for bamboo pulp manufactured solely for sale and not for conversion into paper at the mill. Some of the new grass mills, however, may eventually be prepared to take certain quantities of bamboo pulp in substitution of imported wood pulp. Although in Scandinavia and America, and other large pulp producing countries, it is agreed that only very large units can produce pulp economically, a separate pulp mill for supply to

Indian paper mills might well be successful as soon as the Indian demand reaches 10,000 to 12,000 tons of pulp per annum. Bearing in mind the relatively long distances between the mills, such a separate pulp mill would have to be erected on a site chosen carefully so as to be centrally situated for supplies of raw materials at economically low rates, near to cheap coal, line, etc. An additional outlet for bamboo pulp in India might be for the manufacture of artificial silk, the possibilities of which, as far as India is concerned, have not yet been fully explored.

The Board are aware that for some years now we have given a great deal of consideration to the possibility of establishing a separate bamboo pulp mill in Orissa, drawing its supplies from the Angul Division and the various States in the Mahanadi Basin. Our answer to Question No. 7, referring to the availability of bamboo supplies, gives particulars of the progress we have made in increasing bamboo deliveries from these areas. The smallest economic unit, i.e., a mill to produce 10,000 to 12,000 tons of pulp per annum, would require from 25,000 to 30,000 tons of air-dry bamboo delivered annually, and in view of the severe competition to be met from the world-wide production of wood pulp, the mill should be capable of further extension, i.e., to be able eventually to manufacture from 20,000 to 24,000 tons of pulp per annum, in order to reduce overhead costs. We have not yet been able to satisfy ourselves beyond all question that it is possible to depend in the first instance upon receiving supplies of 25,000 to 30,000 tons regularly year by year at economic rates. As our bamboo cutting and extraction operations develop, and we are able to work in other States, we shall eventually be able to get the actual experience which is vitally necessary before deciding on the establishment of a separate pulp mill. There are numerous difficulties associated with deliveries of bamboo, an available supply of labour, rafting during a short floating season, flowering of the crop, etc., which all have to be met and proved by experience before a successful scheme can be drawn up.

(b) *Abroad*.—There would seem to be no possibility of developing an export trade in pulp until the local demand for bamboo pulp has been fully met. The position at present is that if bamboo pulp can be produced cheaper than imported pulp of similar quality, it is much more likely to be more profitable to convert it into paper for consumption in this country than to incur the cost of transporting it to export markets to meet world competition.

*Mechanical Pulp*.—We believe that tests have been carried out within the last year or two at the Paper Pulp Section of the Forest Research Institute, Dehra Dun, to endeavour to assess the possibilities of manufacturing mechanical pulp in India. We understand that while results have been encouraging, they are not yet conclusive, and no reliable information as to adequate supplies of timber is yet available.

If a suitable fibre for mechanical pulp can be found and developed economically in this country, it is obvious that the demand would be so large as to guarantee immediate success for mechanical pulp mills.

27. (a) We think that it will now be generally agreed that the protective duty on wood pulp has undoubtedly stimulated and encouraged the development of the paper industry in India using indigenous pulp made from grass and bamboo.

(b) We do not think that the protective duty on wood pulp has affected the development of any other industry in this country.

When the Tariff Board in 1931 decided to recommend a protective duty on imported wood pulp, it was not realised at that time that the duty would apply to all classes of wood pulp, i.e., not only to the usual qualities of Bleached and Easy Bleaching Sulphite pulps as ordinarily used by the paper mills in India, but also to mechanical wood pulp and kraft pulp. In

the case of mechanical and kraft pulp, it is surely an anomaly that there should be a protective duty on these pulps although paper made from them, or very largely made from them, should escape the protective tariff. We suggest that the Board, in making its recommendations, should investigate this matter and recommend that in future mechanical wood pulp and kraft pulp should be allowed to enter the country free of the specific duty at present imposed.

28. This question has been answered by the Indian Paper Makers' Association as follows:—

“The bulk of production of the mills in the membership of this Association consists of White Printing and Cream Laid and they accordingly give below an indication of the imported prices for these qualities each year from 1931-32 to 1936-37. It must however be realised that each of these kinds includes many grades of quality and price and too much reliance should not be placed on isolated quotations.

*White Printings.*

	Price per ton, o.i.f. Calcutta.	At 1s. 6d. Ex- change per lb.	Duty.	Landed cost adding $\frac{1}{4}$ pie per lb. for clearing.
	£ s. d.			
1931-32 .	19 7 6	1 10-14	1 3	3 1-64
1932-33 .	20 0 0	1 10-86	1 3	3 2-36
1933-34 .	19 10 0	1 10-28	1 3	3 1-78
1934-35 .	19 10 0	1 10-28	1 3	3 1-78
1935-36 .	16 15 0	1 7-14	1 3	2 10-64
1936-37 .	18 7 6	1 9-00	1 3	3 0-50

The figures from 1931-32 to 1934-35 have been taken from the information supplied to the Tariff Board in 1935 in connection with the Classification of Papers enquiry in August 1935. The figures for 1935-36 are those supplied to the Department of Commerce, Simla, in connection with the Surcharge Enquiry of 1936:—

*Cream Laid.*

	Price per ton, o.i.f. Calcutta.	At 1s. 6d. Ex- change per lb.	Duty.	Landed cost adding $\frac{1}{4}$ pie per lb. for clearing.
	£ s. d.			
1931-32 .	20 10 0	1 11-43	1 3	3 2-93
1932-33 .	21 5 0	2 0-29	1 3	3 3-79
1933-34 .	20 10 0	1 11-43	1 3	3 2-93
1934-35 .	20 15 0	1 11-71	1 3	3 3-21
1935-36 .	18 7 6	1 9-00	1 3	3 0-50
1936-37 .	20 7 6	1 11-27	1 3	3 2-77

We have also prepared a statement (Annexure D) which is attached, which gives details in respect of certain qualities not included in the Association's reply.



## ANNEXURE D—(Qn. 28.)

*Prices at which Imported Paper has entered the Country for the past six years, ending March, 1937.*

Quality.	C.I.f. Price Sterling per ton.	Equivalent c.i.f. Price at 1s. 6d. per ton.	Add Clearing and Cartage Charges at Rs. 6-8 per ton.	Add Duty and Surcharges per lb.	Total Cost to Importers Gedowd.	
					per ton.	per lb.
	£ s. d.	Rs. A. P.	Rs. A. P.	A. P.	Rs. A. P.	A. P.
1931-32.						
*White Printing	19 7 6	258 5 4	264 13 4	1 3	430 13 4	3 1-70
†Cream Laid	23 0 0	306 10 8	313 2 8	1 3	488 2 8	3 5-84
White Bank	23 0 0	306 10 8	313 2 8	1 3	488 2 8	3 5-84
Azure Laid	24 17 6	331 10 8	338 2 8	1 3	513 2 8	3 7-00
White Dr. Cartgc.	21 5 0	283 5 4	289 13 4	30 per cent. a.v.	376 12 7	2 8-30
1932-33.						
*White Printing	19 10 0	260 0 0	266 8 0	1 3	441 8 0	3 1-84
Cream Laid	18 15 0	250 0 0	256 8 0	1 3	431 8 0	3 0-99
White Bank	21 0 0	280 0 0	286 8 0	1 3	461 8 0	3 3-56
Azure Laid	21 0 0	280 0 0	286 8 0	1 3	461 8 0	3 3-56
White Cartridge	22 10 0	300 0 0	306 8 0	30 per cent. a.v.	396 7 2	2 10-10
1933-34.						
*White Printing	19 10 0	260 0 0	266 8 0	1 3	441 8 0	3 1-84
Cream Laid	21 0 0	280 0 0	286 8 0	1 3	461 8 0	3 3-56
White Bank	20 0 0	266 10 8	273 2 8	1 3	448 2 8	3 2-41
White Cartridge	21 10 0	286 10 8	293 2 8	30 per cent. a.v.	381 2 0	2 8-07
1934-35.						
*White Printing	19 10 0	260 0 0	266 8 0	1 3	441 8 0	3 1-84
Cream Laid	20 0 0	266 10 8	273 2 8	1 3	448 2 8	3 2-41
White Bank	19 10 0	260 0 0	266 8 0	1 3	441 8 0	3 1-84
White Cartridge	20 15 0	276 10 8	283 2 8	30 per cent. a.v.	368 2 0	2 7-55
1935-36.						
†White Printing	16 15 0	223 5 4	229 13 4	1 3	404 13 4	2 10-70
†Cream Laid	18 7 6	245 0 0	251 8 0	1 3	426 8 0	3 0-56
White Bank	22 5 0	296 10 8	303 2 8	1 3	478 2 8	3 4-08
Azure Laid	22 5 0	296 10 8	303 2 8	1 3	478 2 8	3 4-08
White Cartridge	19 10 0	260 0 0	266 8 0	30 per cent. a.v.	346 7 2	2 5-70

\* Taken from figures supplied to the Tariff Board in 1935 in connection with enquiry on Classification of Paper.

† Taken from figures supplied to the Department of Commerce, Simla, in connection with the Surcharge Enquiry of 1936.

ANNEXURE D—(Qn. 28)—*contd.*

*Prices at which Imported Paper has entered the Country for the past six years, ending March, 1937—contd.*

Quality.	C.i.f. Price sterling per ton.	Equivalent c.i.f. Price at 1s. 6d. per ton.	Add Clearing and Cartage Charges at Rs. 6-8 per ton.	Add Duty and Surcharges per lb.	Total Cost to Importers Godown.	
					per ton.	per lb.
	£ s. d.	Rs. A. P.	Rs. A. P.	A. P.	Rs. A. P.	A. P.
1936-37.						
White Printing .	17 5 0	280 0 0	236 8 0	1 3	411 8 0	2 11-27
Cream Laid . .	18 7 6	245 0 0	251 8 0	1 3	426 8 0	3 0-56
White Bank . .	20 5 0	270 0 0	276 8 0	1 3	451 8 0	3 2-70
Azure Laid . .	20 15 0	276 10 8	283 2 8	1 3	458 2 8	3 8-27
White Cartridge .	19 5 0	256 10 8	263 2 8	80 per cent. a.v.	342 2 0	2 5-32

	Per ton.
	Rs. A. P.
This includes—	
Landing Charges . . . . .	1 4 0
Differential Toll . . . . .	0 12 0
River Dues . . . . .	0 12 0
Surcharge—As. 2 per rupee on River Dues . . . . .	0 1 0
Additional Toll at As. 4 per cent. on total rupee value of the invoice, say, approximately Rs. 300 per ton . . . . .	0 12 0
Clearing Comm. Rs. 3 per invoice . . . . .	0 14 0
Cartage Rs. 2 per ton . . . . .	2 0 0
<b>TOTAL . . . . .</b>	<b>6 7 6</b>

29. We have selected the stations as per attached list as being fairly representative for the purposes required by the Board. In the details of freight given in each case, the port mentioned is the usual port of importation of paper for the particular market. We have included in the statement two additional columns which show the actual cost of freight per ton paid by the importer and that paid by ourselves to each of the several centres selected. (Please see Annexure E.)

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## ANNEXURE E—(Qn. 29.)

Statement of Railway Freights from Sea Ports as compared with Freight Charges from Titaghur.

Imported Paper.	Route.	Distance Miles.	Our Paper.	Distance Miles.	Wagon Freight from Port.		Wagon Freight from Titaghur.	
					Pies per md. per mile.	Total Freight per ton.	Pies per md. per mile.	Total Freight per ton.
1. Bombay to Delhi . . . . .	B.B. & C.I.	842	Titaghur to Delhi . . . . .	894	418	Rs. A. P. 49 15 4	196	Rs. A. P. 24 14 4
Ditto . . . . .	G.I.P.	957						
2. Karachi to Lahore . . . . .	N.W.R.	756	Titaghur to Lahore . . . . .	1,103	430	36 4 4	231	38 3 9
3. Karachi to Rawalpindi . . . . .	N.W.R.	897	Titaghur to Rawalpindi . . . . .	1,347	430	54 10 3	207	39 10 6
4. Karachi to Peshawar . . . . .	N.W.R.	930	Titaghur to Peshawar . . . . .	1,452	428	56 10 0	259	53 9 0
5. Calcutta to Allahabad . . . . .	E.I.R.	512	Titaghur to Allahabad . . . . .	504	439	31 14 11	251	17 14 11
6. Bombay to Nagpur . . . . .	G.I.P.	520	Titaghur to Nagpur . . . . .	744	442	32 10 4	211	22 5 5
7. Bombay to Jubbulpore . . . . .	G.I.P.	616	Titaghur to Jubbulpore . . . . .	724	440	38 7 5	303	31 11 4
8. Bombay to Akola . . . . .	G.I.P.	383	Titaghur to Akola . . . . .	1,151	451	23 4 5	201	32 13 5
9. Bombay to Indore . . . . .	B.B. & C.I., G.I.P.	440	Titaghur to Indore . . . . .	1,074	432	26 15 5	303	46 5 2
10. Bombay to Baroda . . . . .	B.B. & C.I.	240	Titaghur to Baroda . . . . .	1,319	454	15 7 6	237	55 11 1
11. Bombay to Ahmedabad . . . . .	B.B. & C.I.	308	Titaghur to Ahmedabad . . . . .	1,324	444	19 7 1	298	56 1 10
12. Bombay to Secunderabad . . . . .	G.I.P. & N.S.R.	497	Titaghur to Secunderabad . . . . .	1,102	452	31 14 11	287	44 14 6
13. Madras to Secunderabad . . . . .	M. & S.M. & N.S.R.	486	Titaghur to Secunderabad . . . . .	1,102	438	30 3 8	287	44 14 6
14. Karachi to Ajmere . . . . .	N.W.R., J.R. B.B. & C.I.	551	Titaghur to Ajmere . . . . .	1,020	466	36 7 7	262	37 15 2

30. The attached statement (Annexure F) gives the information required. Copies of our general and cover paper sample books showing the qualities manufactured by us are enclosed.

#### ANNEXURE F—(Qn. 30.)

*Nett Prices to Mill after deducting all Selling Charges, Bazar Discounts, Freights and Agency Commissions.*

Quality.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Price per lb.	Price per lb.	Price per lb.	Price per lb.	Price per lb.	Price per lb.
	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.
White Printing—under Demy 14 lbs.	3 4-55	3 3-38	3 2-24	3 3-15	3 1-95	3 2-13
White Printing—Demy 14 lbs. and up.	3 2-03	3 0-93	2 11-18	2 10-13	2 10-13	2 10-95
Cream Laid 13 x 16—6 lbs.	3 0-81	3 6-06	3 3-58	3 2-13	3 2-20	3 2-27
Cream Laid F'Cap 8 lbs. and up	3 2-09	3 0-91	2 10-82	2 10-57	2 11-12	2 11-83
White Bank . . . .	3 8-03	3 8-21	3 4-70	3 3-75	3 3-91	3 1-73
Badami . . . .	2 6-65	2 4-23	2 1-18	2 0-31	2 0-80	2 1-15
Browns . . . .	2 0-93	1 11-81	1 11-06	1 0-31	1 10-13	1 0-75

31. We attach a statement (Annexure G), showing the prices at which, during the past six years, the products of our mills have been sold in up-country centres, as well as average prices realised at Calcutta. The prices given in the statement are those obtained nett ex-mill.

Generally speaking, up-country prices are based on Calcutta prices plus freight. Prices, however, have to be regulated according to competition from seaports, especially in places like Delhi, Lahore and Rawalpindi. In the case of Delhi, dealers place large business for imported paper through Bombay. The same applies to other markets nearer the Bombay side. In case of Lahore and Rawalpindi, business is placed for imported paper through Karachi. Further, in several of the larger cities up-country, there are large printing presses, which are both printers and publishers, and which are able to place large forward contracts with the mills and order, at a time, large quantities of one quality, size and weight, in fairly good substances, enabling the mills to have long runs on the machine.

In Calcutta, the business is divided among numerous smaller printers, and consequently, most orders placed are of a smaller nature, and for numerous qualities.

For the large up-country contracts referred to it is customary to quote special low rates, which are as profitable to the mill as higher prices for shorter runs, which latter necessitate numerous changes on the machine. Business of this description tends to lower the average up-country price. Another factor, which results in a lower average price up-country, is the fact that Calcutta demands a higher quality of paper than that which is generally acceptable in up-country markets. This demand for better quality is not confined to Calcutta only, but applies equally to other large ports, such as Bombay and Madras.

Our up-country sales also includes a large proportion of cheaper qualities, such as Badami. It will be seen, however, that for the year ending March, 1937, the difference between Calcutta and up-country prices is not so marked as in previous years.

#### ANNEXURE G—(Qn. 31.)

The following are the Average Prices obtained for All Qualities in Calcutta and the various Up-country Markets shown, over the past six years.

District.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.
	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.
Calcutta Bazar . . . . .	3 5-40	3 4-03	3 2-21	3 1-77	3 1-73	3 1-63
Delhi . . . . .	3 2-23	2 11-89	2 8-59	2 8-31	2 9-04	2 11-18
Lahore . . . . .	3 0-89	3 0-37	2 10-72	2 10-71	2 10-43	2 11-14
Lucknow . . . . .	3 1-03	2 8-19	2 7-81	2 2-83	2 7-03	2 8-22
Gorakhpur . . . . .	3 1-36	2 11-38	2 6-37	2 5-53	2 6-81	2 8-12
U. P. and Bihar . . . . .	3 4-23	3 2-37	2 10-13	2 8-91	2 11-72	2 11-53
Mofussil Miscellaneous . . . . .	3 2-31	3 0-70	2 6-83	2 10-43	2 10-60	2 10-12

32. Although our prices are fixed in relation to the cost of corresponding qualities of imported paper in the various markets, it is necessary in order to obtain the maximum sales that our average prices should be fixed on a slightly lower basis. Paper from abroad is imported in many different qualities and in different packings from various European countries. Foreign prices also vary from time to time due to the market conditions and the general financial position in each country. Indian prices, therefore, have to be fixed in relation to the lowest prevailing price of imported paper.

33. This question has been answered by the Indian Paper Makers' Association as follows:—

“There is no reason in the opinion of the Association to suppose that present prices for foreign pulp and paper are unremunerative, but it is equally certain that, until comparatively recently, they undoubtedly were.

In 1931 the Tariff Board found that there was a certain amount of evidence that foreign producers were then exporting to India on unremunerative prices. The subsequent further heavy fall in prices for foreign paper and pulp do not, it is thought, leave any room for doubt that during the years 1934 to 1936 both pulp and paper were exported to India at entirely unremunerative rates. On the other hand, the mills submit that if the world pulp and paper industries could keep alive at all on the prices which have prevailed during the past 10 years, then the prices at which they are selling to-day must, notwithstanding an increase in cost of the raw materials, represent an adequate profit”.

34. This question has been answered by the Indian Paper Makers' Association as follows:—

"The experience of the Association is that foreign competition is keenest in Bombay, Karachi, Madras, the Malabar Coast and Rangoon. In addition there are certain Indian States such as Travancore and Kashmir, which are not subject to the Protective duty and where, in consequence, it is impossible for Indian paper to compete."

We have only to add that recently cheap Japanese paper has been delivered, chiefly into Bombay, in increasing quantities. Nearly 1,000 tons, chiefly printings, were imported during 1937.

35. We manufacture paper from grass and bamboo at our No. 1 Mill and bamboo with a small percentage of wood pulp at No. 2 Mill, and our experience shows there is no difference in the Sales price realised for these two qualities.

36. In our opinion there has been a substantial improvement in the quality of our papers since 1931-32, and the experience gained in the continued use of bamboo has enabled us not only further to improve the qualities already being manufactured, but also to introduce new qualities not before made in India.

For quantities supplied to the Central Government, etc., please see Annexures H, I and J.



## ANNEXURE H—(Qn. 36.)

Quantities and Prices at which Paper was supplied to the Railways detailed below.

Railways.	1931-32.				1932-33.				1933-34.			
	Tons.	Value.	Average Rate per lb.	Average Rate per ton.	Tons.	Value.	Average Rate per lb.	Average Rate per ton.	Tons.	Value.	Average Rate per lb.	Average Rate per ton.
		Rs.	A. P.	Rs. A. P.		Rs.	A. P.	Rs. A. P.		Rs.	A. P.	Rs. A. P.
M. & S. M. Ry.	159-25	72,169	3 3	435 2 11	60-25	23,801	2 10	395 0 7	0-17	81	3 5	475 5 4
B. & N. W. Ry.	15-75	7,381	3 4	407 5 10	-40	15,103	2 8	377 9 2	70-5	27,368	2 9½	388 3 2
Roh. & Kum. Ry.	1-25	538	3 1	430 6 5	0-02	11	3 11	550 0 0	0-85	253	2 1½	297 10 4
Ben.-Doors Ry.	..	..	..	..	0-64	244	2 8½	381 4 0	0-87	444	3 8	510 5 6
Darj.-Him. Ry.	1-12	468	3 0	417 13 9	1-24	407	2 10	400 12 10	2-22	994	3 2	447 12 0
Jodh. St. Ry.	1-37	599	3 1½	437 3 8	1-53	741	3 4	463 15 9	16-96	6,299	2 8	371 6 5
H. E. H. Niz. St. Ry.	..	..	..	..	0-81	181	4 2	583 13 7	48-79	15,886	2 4	325 9 7
A. B. Ry.	30-61	14,399	3 4	467 5 7	38-60	18,551	3 5	480 9 6	48-88	19,932	2 11	407 12 ¼
As. Ry. & Trad. Co.	6-69	3,393	3 7½	507 10 0	1-25	636	3 7½	508 12 0	2-79	1,030	2 7½	369 2 9
Burma Rys.	3-35	1,423	3 0	424 12 5	2-90	1,305	3 2½	450 0 0	..	..	..	..
B. B. & C. I. Rys.	0-21	99	3 4	471 6 10	4-69	2,136	3 3	455 7 0	2-97	1,611	3 10½	562 6 9
Gond. St. Ry.	0-57	270	3 4½	473 11 0	3-40	1,409	2 11½	414 6 7	..	..	..	..
Morvi St. Ry.	0-34	157	3 3½	461 12 3	0-81	379	3 4	467 14 5	3-19	1,469	3 3½	460 6 0
B. N. Ry.	63-0	26,726	3 0	424 3 7	15-25	6,194	2 11	406 2 7	6-60	2,384	2 7	361 2 4

The tonnages are not quality by quality.  
Prices are l.o.r. destination.

## ANNEXURE H—(Qn. 36)—contd.

Quantities and Prices at which Paper was supplied to the Railways detailed below—contd.

Railways.	1934-35.						1935-36.						1936-37.					
	Tons.	Value.	Average Rate per lb.	Average Rate per ton.	Rs.	Rs. A. P.	Tons.	Value.	Average Rate per lb.	Average Rate per ton.	Rs.	Rs. A. P.	Tons.	Value.	Average Rate per lb.	Average Rate per ton.		
M. & S. M. Ry.	..	..	..	..	..	..	20.49	8,593	3 0	419 6 0	59.5	24,956	3 0	419 6 10	..	..		
B. & N. W. Ry.	31	10,835	2 6	352 11 10	..	..	78.5	28,484	2 7	362 13 7	8.5	3,638	3 0½	428 0 0	..	..		
Roh. & Kunl. Ry.	..	..	..	..	..	..	1.5	494	2 4	329 5 4	..	..	..	..	..	..		
Ben.-Doon Ry.	0.52	246	3 4½	473 1 3	..	..	1.19	490	2 11	412 6 10	0.81	356	3 4½	472 13 5	..	..		
Darl.-Him. Ry.	1.97	900	3 3	458 13 7	..	..	6.92	2,804	2 11	405 3 2	0.02	10	3 7	500 0 0	..	..		
Jodh. St. Ry.	4.39	1,515	2 5½	345 1 7	..	..	3.55	1,212	2 5	341 6 6	4.09	1,260	2 2	308 1 1	..	..		
H. E. H. Nil. St. Ry.	1.33	552	2 11½	415 0 7	..	..	..	..	..	..	4.94	1,624	2 4	328 12 0	..	..		
A. B. Ry.	64.80	22,854	2 6½	355 6 10	..	..	68.42	24,780	2 7	362 2 0	76.72	28,670	2 8	373 11 2	..	..		
As. Ry. & Trad. Co.	1.59	652	2 11	410 1 0	..	..	4.41	2,010	3 3	455 12 6	0.63	216	2 5	942 13 9	..	..		
Burma Rys.	5.12	2,309	3 3	450 15 7	..	..	12.44	5,803	3 3	451 5 10	15.87	6,512	2 11	410 5 4	..	..		
B. B. & C. I. Rys.	2.24	1,241	3 11½	555 0 3	..	..	1.54	872	4 2	586 3 8	0.06	26	3 1	433 5 4	..	..		
Gond. St. Ry.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Morvi St. Ry.	0.05	30	4 3½	609 0 0	..	..	0.27	117	3 1	433 4	..	..	..	..	..	..		
B. N. Ry.	20.5	8,225	2 5	401 3 6	..	..	58.5	23,366	2 10	399 14 3	7.71	3,395	3 2	440 5 5	..	..		

The tonnages are not quality by quality.  
Prices are L.o.r. destination.



## ANNEXURE I—(Qn. 36.)

*Quantities and Average Prices at which Paper was supplied to the following Governments :—  
The United Provinces, Burma, Bombay, Bihar, Orissa and Madras. These Prices are  
f.o.r. destination.*

Quality.	*1931-32.			1932-33.		
	Tonnage awarded.	Rate per lb.	Rate per ton.	Tonnage awarded.	Rate per lb.	Rate per ton.
		As. P.	Rs. A. P.		As. P.	Rs. A. P.
Azure Laid . . . . .	57.25	4 0	560 0 0	15	4 1½	577 8 0
White Cartridge . . . . .	1	3 5	478 5 4	27	3 8½	510 2 8
Coloured Printing . . . . .	83	3 6	490 0 0	30.75	3 8	513 5 4
White Blotting . . . . .	..	..	..	0	4 6½	635 13 4
Brown Wrapping . . . . .	47	2 3	315 0 0	86	2 2½	300 2 8
Typewriting . . . . .	20	4 5	618 5 4	22½	4 5	618 5 4
Cream Laid . . . . .	..	..	..	8	3 10½	542 8 0
White Printing . . . . .	912.5	3 5	478 5 4	403.75	3 7	501 10 8
Semi-bleached . . . . .	..	..	..	..	..	..
Badami . . . . .	..	..	..	..	..	..
Glazed Buff . . . . .	..	..	..	..	..	..
Buff and Dark Shade Manilla . . . . .	22.25	3 1½	437 8 0	17	3 2½	449 2 8
Cream Wave . . . . .	20.5	3 9	525 0 0	..	..	..
Typewriting Laid . . . . .	..	..	..	..	..	..
Half-bleached Badami . . . . .	..	..	..	128.5	2 9	385 0 0
Unbleached . . . . .	..	..	..	18.75	3 5	478 5 4
Friction Glazed Brown Cartridge . . . . .	15	3 1	481 10 8	13	3 5	478 5 4
White Pulpboard . . . . .	4	3 5	478 5 4	2	3 6½	495 13 4
Unbleached Cartridge . . . . .	..	..	..	15	3 7½	507 8 0
White Dupliator . . . . .	9	4 2	583 5 4	18	4 0	560 0 0

\*For the period 1931-32 the United Provinces Government purchased their requirements through the Central Government and tonnage is therefore included in Annexure.

ANNEXURE I—(Qn. 36)—*contd.*

Quality.	1933-34.			1934-35.		
	Tonnage awarded.	Rate per lb.	Rate per ton.	Tonnage awarded.	Rate per lb.	Rate per ton.
		A. P.	Rs. A. P.		A. P.	Rs. A. P.
Azure Laid . . . .	42.5	3 11	548 5 4	47.75	3 5½	484 2 8
White Cartridge . . . .	27.5	3 6	490 0 0	15	3 4	466 10 8
Coloured Printing . . . .	17.75	3 5½	484 2 8	31.25	3 4	466 10 8
White Blotting . . . .	9	4 4	606 10 8	4.25	4 3	595 0 0
Brown Wrapping . . . .	35	2 0	280 0 0	40	2 0	280 0 0
Typewriting . . . .	25½	4 2	583 5 4	27.25	4 0½	565 13 4
Cream Laid . . . .	3	3 9½	580 13 4	3	3 7	501 10 8
White Printing . . . .	601	3 2½	449 2 8	535.5	3 1½	437 8 0
Semi-bleached . . . .	25	3 4½	472 8 0	..	..	..
Badami . . . .	25	2 10½	402 8 0	30	2 9	385 0 0
Glazed Buff . . . .	542.75	2 0	280 0 0	250	2 0½	285 13 4
Buff and Dark Shade Manilla .	37.75	2 11	408 5 4	39.75	2 8½	379 2 8
Cream Wove . . . .	..	..	..	30	3 7	501 10 8
Typewriting Laid . . . .	..	..	..	..	..	..
Half-bleached Badami . . . .	34.75	2 2	308 5 4	..	..	..
Unbleached . . . .	70	3 2	443 5 4	..	..	..
Friction Glazed Brown Cart- ridge . . . .	12	3 4	466 10 8	12	2 6	350 0 0
White Pulpboard . . . .	3	3 3	455 0 0	..	..	..
Unbleached Cartridge . . . .	20	3 3	455 0 0	20	3 2	443 5 4
White Duplicator . . . .	10.5	3 10	536 10 8	1	3 5	478 5 4

## ANNEXURE I—(Qn. 36)—contd.

Quality.	1935-36.			1936-37.		
	Tonnage awarded.	Rate per lb.	Rate per ton.	Tonnage awarded.	Rate per lb.	Rate per ton.
		A. P.	Rs. A. P.		A. P.	Rs. A. P.
Azure Laid . . . . .	8	3 10	536 10 8	26	3 9½	530 13 4
White Cartridge . . . . .	20	3 4	466 10 8	24	3 3½	400 13 4
Coloured Printing . . . . .	81.75	3 4½	472 8 0	26.17	3 7½	507 8 0
White Blotting . . . . .	..	..	..	..	..	..
Brown Wrapping . . . . .	40	2 0	280 0 0	36	2 0	280 0 0
Typewriting . . . . .	12.25	4 1	571 10 8	16.75	4 0½	568 13 4
Cream Laid . . . . .	3	3 7	501 10 8	2	3 7	501 10 8
White Printing . . . . .	699.5	3 1	481 10 8	767.5	3 1	481 10 8
Semibleached . . . . .	..	..	..	..	..	..
Badami . . . . .	..	..	..	..	..	..
Glazed Buff . . . . .	100	2 1½	297 8 0	140	2 4	326 10 8
Buff and Dark Shade Manilla . . . . .	66.75	2 8½	379 2 8	55	2 8½	379 2 8
Cream Wove . . . . .	27	3 7	501 10 8	19.25	3 4	466 10 8
Typewriting Laid . . . . .	1.5	4 2	583 5 4	1	4 2	583 5 4
Half-bleached Badami . . . . .	104.25	2 2	303 5 4	..	..	..
Unbleached . . . . .	..	..	..	40	3 0½	425 13 4
Friction Glazed Brown Cartridge . . . . .	12	2 8	373 5 4	12	2 8	373 5 4
White Pulpboard . . . . .	3	2 11	408 5 4	3	2 11	408 5 4
Unbleached Cartridge . . . . .	..	..	..	..	..	..
White Duplicator . . . . .	9	3 8½	519 2 8	8	3 9	525 0 0

## ANNEXURE J—(Qn. 30.)

*Quantities and Prices at which sold to the Central Government, including the Bengal, Punjab, N.-W. F. P. and C. P. Governments, and E. I. R., E. B. R., N. W. R. and G. I. P. R.*

Quality.	1931-32.			1932-33.		
	Tonnage awarded.	Rate per lb.	Rate per ton.	Tonnage awarded.	Rate per lb.	Rate per ton.
		A. P.	Rs. A. P.		A. P.	Rs. A. P.
White Printing . . . .	1,300	3 5	478 5 4	1,100	3 6½	495 13 4
Semi-bleached . . . .	600	3 4	466 10 8	500	3 5½	484 2 8
Badami . . . . .	500	2 11	406 5 4	600	3 0½	425 18 4
Azure Laid . . . . .	300	3 11½	554 2 8	..	..	..
Coloured Printing . . . .	326	3 6	490 0 0	250	3 7½	507 8 0
Cream Wove . . . . .	..	..	..	250	3 10½	542 8 0
Buff Manilla . . . . .	320	3 1½	437 8 0	270	3 2	443 5 4
White Waterproof Pulpboard .	7	4 0½	565 13 4	..	..	..
Coloured Manilla . . . .	..	..	..	4	3 5	478 5 4
White Waterproof Manilla .	27	3 6	490 0 0	18	3 7	501 10 8
White Cartridge . . . .	..	..	..	75	3 7½	507 8 0
Half-bleached Cartridge .	40	3 6	490 0 0	20	3 7½	507 8 0
White Duplicate . . . .	..	..	..	..	..	..
Typewriting . . . . .	60	4 3	595 0 0	70	4 4½	612 8 0
Antique Cream Wove Typewriting 75 per cent. Rag .	..	..	..	..	..	..
Antique Cream Wove Typewriting 100 per cent. Rag .	..	..	..	..	..	..
Brown Wrapping . . . .	175	2 3	315 0 0	200	2 3	315 0 0
Friction Glazed Brown Cartridge . . . . .	10	3 1	431 10 8	8	3 5	478 5 4
Cream Laid . . . . .	..	..	..	50	3 10½	542 8 0
Cream Wove Bank . . . .	40	4 2	583 5 4	25	4 3½	600 13 4
S/C. White Printing Softsized .	5	3 8	513 5 4	5	3 8	513 5 4
S/C. White Pulpboard . . .	..	..	..	..	..	..
White Pulpboard . . . .	..	..	..	..	..	..
Coloured Pulpboard . . .	10	3 11	548 5 4	..	..	..
Coloured Waterproof Pulpboard	1	4 2	583 5 4	..	..	..

All the above rates were subject to a discount of 1 per cent. for cash and free delivered Calcutta or L.O.R. Mills.

## ANNEXURE J—(Qn. 36)—contd.

Quantities and Prices at which sold to the Central Government, including the Bengal, Punjab, N.-W. F. P. and C. P. Governments, and E. I. R., E. B. R., N. W. R. and G. I. P. R.—contd.

Quality.	1933-34.			1934-35.		
	Tonnage awarded.	Rate		Tonnage awarded.	Rate	
		per lb.	per ton.		per lb.	per ton.
		A. P.	Rs. A. P.		A. P.	Rs. A. P.
White Printing . . . .	800	3 4½	472 8 0	750	3 2	443 5 4
Semi-bleached . . . .	500	3 8½	460 13 4	650	3 1½	437 8 0
Badami . . . . .	400	2 10½	402 8 0	450	2 9	385 0 0
Azure Laid . . . . .	180	4 0	560 0 0	..	..	..
Coloured Printing . . . .	150	3 6	490 0 0	100	3 3½	460 13 4
Cream Wove . . . . .	150	3 9	525 0 0	100	3 7½	507 8 0
Buff Manilla . . . . .	100	2 10½	402 8 0	110	2 8	378 5 4
White Waterproof Pulpboard .	..	..	..	..	..	..
Coloured Manilla . . . .	4	3 0	420 0 0	6	3 0	420 0 0
White Waterproof Manilla .	20	3 5	478 5 4	13	3 2½	449 2 8
White Cartridge . . . .	50	3 5½	484 2 8	50	3 3	455 0 0
Half-bleached Cartridge . .	..	..	..	..	..	..
White Duplicator . . . .	..	..	..	..	..	..
Typewriting . . . . .	65	4 2	583 5 4	60	4 0	560 0 0
Antique Cream Wove Typewriting 75 per cent. Rag.	..	..	..	10	6 0	840 0 0
Antique Cream Wove Typewriting 100 per cent. Rag.	..	..	..	..	..	..
Brown Wrapping . . . .	170	2 8	315 0 0	155	2 1	291 10 8
Friction Glazed Brown Cartridge.	..	..	..	..	..	..
Cream Laid . . . . .	40	3 9	525 0 0	25	3 7½	507 8 0
Cream Wove Bank . . . .	20	4 1½	577 8 0	20	3 11	548 5 4
S/C. White Printing Soft sized .	4	3 6	490 0 0	..	..	..
S/C. White Pulpboard . . .	..	..	..	..	..	..
White Pulpboard . . . .	..	..	..	..	..	..
Coloured Pulpboard . . .	..	..	..	..	..	..
Coloured Waterproof Pulpboard	..	..	..	..	..	..

All the above rates were subject to a discount of 1 per cent. for cash and free delivered Calcutta or f.o.r. Mills.

## ANNEXURE J—(Qn. 36)—concl.

*Quantities and Prices at which sold to the Central Government, including the Bengal, Punjab, N.-W. F. P. and C. P. Governments, and E. I. R., E. B. R., N. W. R. and G. I. P. R.—concl.*

Quality.	1935-36.			1936-37.		
	Tonnage awarded.	Rate per lb.	Rate per ton.	Tonnage awarded.	Rate per lb.	Rate per ton.
		A. P.	Rs. A. P.		A. P.	Rs. A. P.
White Printing . . . .	1,250	3 2	443 5 4	1,250	3 1	431 10 8
Semi-bleached . . . .	720	3 1½	437 8 0	700	3 0½	425 13 4
Badami . . . . .	550	2 7½	367 8 0	500	2 6	350 0 0
Azure Laid . . . . .	..	..	..	..	..	..
Coloured Printing . . . .	150	3 3½	460 13 4	220	3 3½	460 13 4
Cream Wove . . . . .	120	3 7½	507 8 0	140	3 7½	507 8 0
Buff Manilla . . . . .	100	2 8	373 5 4	180	2 8	373 5 4
White Waterproof Pulpboard .	..	..	..	..	..	..
Coloured Manilla . . . .	6	3 0	420 0 0	25	3 0	420 0 0
White Waterproof Manilla .	5	3 2½	449 2 8	15	3 2½	449 2 8
White Cartridge . . . .	90	3 3	455 0 0	140	3 3	455 0 0
Half-bleached Cartridge .	30	3 3	455 0 0	35	3 3	455 0 0
White Duplicator . . . .	..	..	..	..	..	..
Typewriting . . . . .	65	4 0	560 0 0	70	4 0	560 0 0
Antique Cream Wove Typewriting 75 per cent. Rag.	..	..	..	..	..	..
Antique Cream Wove Typewriting 100 per cent. Rag.	8	7 0	980 0 0	8	7 0	980 0 0
Brown Wrapping . . . .	150	2 1	291 10 8	140	2 1	291 10 8
Friction Glazed Brown Cartridge.	2	2 9	385 0 0	..	..	..
Cream Laid . . . . .	30	3 7½	507 8 0	30	3 7½	507 8 0
Cream Wove Bank . . . .	36	3 11	548 5 4	50	3 11	548 5 4
S/C. White Printing Softsized .	..	..	..	9	3 4	466 10 8
S/C. White Pulpboard . . .	26	3 1½	437 8 0	25	3 1½	437 8 0
White Pulpboard . . . .	25	3 0	420 0 0	25	3 0	420 0 0
Coloured Pulpboard . . .	27	3 4	466 10 8	30	3 4	466 10 8
Coloured Waterproof Pulpboard	..	..	..	..	..	..

All the above rates were subject to a discount of 1 per cent. for cash and free delivered Calcutta or f.o.r. Mills.

37. This question has been answered by the Indian Paper Makers' Association as follows:—

“So far as can be ascertained, the interests on whose behalf these representations are submitted have not been adversely affected by the application of the existing test for distinguishing newsprint from other printing paper—which they believe to be the point which the Board have in mind in the first part of their questions. So far as the mills are aware, the test adopted for the purpose of distinguishing between Writing and Printing paper is also in the main satisfactory.

With regard to the sizing test, however, the mills feel that in cases of doubt or difficulty, it would make things easier for Customs officials if some scientific test could be prescribed, not for general use, but for cases where difficulties or disputes arise.”

38. The programme of mill improvements drawn up before the period 1931-32 has been proceeded with, and considerably extended. The Cascade System of Bamboo Pulp digestion has been introduced at No. 1 Mill and is now the general practice at both our mills. In our opinion, the Cascade system is the best method of producing a consistent and suitable quality of bamboo pulp.

Details of the Bamboo Pulp and Power installations are given in answer to Questions Nos. 11 and 24.

The Bewoid system for the manufacture of Rosin Size was tried out experimentally at No. 1 Mill and then extended to No. 2 Mill. It is now our standard method of preparing Size, is efficient in operation and has resulted in a reduction in Sizing costs.

The quality and finish of a sheet of paper depend largely on accurately ground Paper Machine rolls. In this respect we had been relying on our Roll Grinding machines which were of old design and practically worn out. A Churchill Roll Grinding machine of latest design was purchased and installed at No. 1 Mill. It services the rolls for both mills and has enabled the mills to produce better finish paper and also to increase the tonnage produce.

A considerable number of minor improvements have been made to our Papermaking machines, which have helped their operation and improved the quality and quantity of their production.

A new large Paper Cutter has been installed at No. 1 Mill and a modern Slitter and Reeler at No. 2 Mill, which have contributed to more accurate and improved cutting and reeling.

An Aeldert Paper Shredder and Duster has been installed at No. 2 Mill for treating waste paper, and has been successful in delivering clean paper cuttings, etc., to the mill.

As a direct result of our scheme of Renovations, the production of pulp from indigeneous fibre has increased, and the production of paper has also increased, accompanied by a reduction in works costs. These results have been obtained by definite economies and improvements in manufacture, and, generally speaking, they have fulfilled the expectations entertained.

39. Since 1931-32 there has been no capital expenditure on plant for the manufacture of grass pulp. Therefore all expenditure on account of pulp was entirely in connection with bamboo in accordance with the figures given in answer to Question No. 11 [Item (e)].

The total expenditure at both mills during the period from April 1931 to March 1937 amounted to approximately Rs. 55 lakhs. We therefore have—

	Lakhs. Lakhs.	
	Rs.	Rs.
(a) Expenditure on Plant and Machinery for pulp as per reply to Question No. 11 [Item(e)]	...	26
In regard to steam and power, the total expenditure over the period amounted to:—		
No. 1 Mill . . . . .		4½
No. 2 Mill . . . . .		6½
<b>Total</b>		<b>11</b>
(b) Expenditure on account of paper—		
Total expenditure as above stated . . .	...	55
Expenditure on account of pulp . . .		26
Expenditure on account of power . . .		11
		<b>37</b>
Balance representing the cost of additions and alterations for paper . . . . .	...	18

These figures do not include the cost of the new Papermaking machine. Boilers and Turbo-Alternators which are now being installed. The cost of these items will amount to approximately Rs. 20 lakhs.

The expenditure under (a) due to the special requirements of bamboo pulp was as follows:—

	Lakhs.
	Rs.
(1) Pulp installation at both mills . . . . .	26
(2) Additional boilers, No. 1 Mill. (Cost of two charged to pulp) . . . . .	2½
(3) New boilers, No. 2 Mill. (Half cost charged to pulp) . . . . .	2½
(4) Purchased power supply, No. 2 Mill . . . . .	1½
<b>Total</b>	<b>32</b>

40. The comprehensive programme drawn up for both mills is being strictly adhered to. This included renovating or replacing both pulp and papermaking plants in accordance with the latest practice.

The principal item at No. 2 Mill includes the provision of additional Recovery plant to meet the increased production. This will include the installation of a deodorizing unit to overcome the smell from the Sulphate process.

At No. 1 Mill the Soda Recovery plant has to be extended. The Grass plant has also eventually to be entirely replaced in a new Digester House together with its accessories and dusters. The erection of additional godowns for both grass and bamboo is contemplated; also the extension of the Finishing department and a new building to house the paper cutters. The Chemical House has also to be reconstructed.



An important step has been the decision to install a new Papermaking machine, designed on the most modern lines and incorporating a Sectional Electric drive. This is a first step to the gradual replacement of our old machines at this mill.

The new machine is now in course of erection and will shortly be in commission.

41. The following is a statement of the nett value (after depreciation) of the company's mill property as shown in the books at the 31st March, 1937:—

	Rs.	Rs.
(a) Leases and Concession . . . . .	...	...
(b) & (c) Land and Buildings . . . . .	...	14,30,000
(d) Plant and Machinery . . . . .	...	37,50,000
(e) Other Assets—		
Railway Siding . . . . .	3,000	
Flotilla . . . . .	500	
Motor Cars . . . . .	2,500	
Motor Lorries . . . . .	1,000	
Furniture . . . . .	600	
	<hr/>	7,600
Total . . . . .		<hr/> 51,87,900 <hr/>

42. In 1931 we estimated that it would cost not less than Rs. 1½ crores to replace our two mills at Titaghur and Kankinara on the existing sites.

Since March, 1932, Rs. 52 lakhs have been expended on the mills. While a portion of this sum was used in replacing obsolete plant and reconstructing old buildings, the remainder represents new and additional plant and machinery, and we therefore consider the above figure should be revised as follows:—

	Lakhs.
	Rs.
(1) Buildings, etc. . . . .	50
(2) Machinery and Plant, erected at site . . . . .	125
Total . . . . .	<hr/> 175 <hr/>

43. The following is a statement of the amounts written off for depreciation and transferred to Reserve Funds.

For the Year.	Depreciation.	Reserves.
	Rs.	Rs.
1931-32 . . . . .	5,15,991	20,000
1932-33 . . . . .	5,36,161	70,000
1933-34 . . . . .	5,62,897	2,21,879
1934-35 . . . . .	6,88,121	1,90,000
1935-36 . . . . .	6,50,291	3,01,535
1936-37 . . . . .	6,43,864	2,85,000
Total . . . . .	<hr/> 35,97,325 <hr/>	<hr/> 10,88,414 <hr/>

		Preference.	Ordinary.	Deferred.
44.	1931-32 . .	11,50,000	4,37,500	3,18,455
	1932-33 . .	11,50,000	4,37,500	3,18,455
	1933-34 . .	11,50,000	4,37,500	3,18,455
	1934-35 . .	11,50,000	4,37,500	3,18,455
	1935-36 . .	11,50,000	4,37,500	3,18,455
	1936-37 . .	*19,00,000	4,37,500	3,18,455

\* NOTE.—A new issue of 15,000 five per cent. 2nd Cumulative Preference Shares of Rs. 100 each was made on 1st October, 1936, of which Rs. 50 was paid up on allotment accounting for the increase of Rs. 7,50,000 shown above.

(b) Actual amount distributed as dividends on each class of capital.

		Preference.	Ordinary.	Deferred.
	1931-32 . .	92,000	1,53,125	1,19,420
	1932-33 . .	92,000	1,96,875	1,44,300
	1933-34 . .	92,000	1,96,875	1,59,228
	1934-35 . .	92,000	2,07,812	1,64,203
	1935-36 . .	92,000	2,40,625	1,94,058
	1936-37—			
	On 1st Pref. . .	92,000	2,51,562	2,08,986
	On 2nd Pref. . .	18,750	...	...

(c) Percentage.

		Preference. Per cent.	Ordinary. Per cent.	Deferred.
	1931-32 . .	8	35	37.5
	1932-33 . .	8	45	45.3125
	1933-34 . .	8	45	50.0
	1934-35 . .	8	47½	51.5625
	1935-36 . .	8	62½	60.9375
	1936-37—			
	On 1st Pref. . .	8	65	65.625
	On 2nd Pref. . .	5	...	...

In the financial reconstruction of the company in 1925 the ordinary shares of the company were written down by 75 per cent. of the nominal value and to arrive at a percentage dividend on the old capital of the company the figures shown may be divided by four. The last year's dividend represents 16½ per cent. on the old capital.

45. [Not printed.]

46. No debenture loan has been raised since 1921.

The existing fourth issue of Rs. 25 lakhs was renewed for a further period of ten years from 1st April, 1936, at a reduced rate of interest of 4½ per cent. per annum against 8 per cent. paid up to that date.

47. Forms Nos. V and VI have been completed and are attached.

48. In our reply to Question No. 19, the figures which we have given in respect of the percentage of Recovered Caustic which has been obtained at both of our mills, show that the capacities of our Recovery plants are now very much lower than what is required to deal with the quantity of "black" liquor or Caustic ley arising from the increase which has taken place in pulp production at our mills. In our reply to Question No. 11,

sub-section (d), reference has been made to the new plant which is proposed or is being installed, and this includes an additional Evaporator plant and Roaster Smelter plant for No. 2 Mill. It is our intention as soon as we have proved out the plant which it is proposed to install at No. 2 Mill, to undertake similar alterations in our recovery plant at Titaghur.

As a result of bringing our Recovery and Causticising plants up to the capacity required, we shall be able to effect a very considerable saving in the cost of chemicals as at present Caustic Soda has to be purchased to make up the shortage in recovered soda. We estimate the saving on this account to amount to approximately Rs. 1,50,000 per annum.

We have also referred to the new power plant and boilers which are being installed at No. 2 Mill. Considerable savings are anticipated as a result of the installation of this plant, and in addition to the reduction in the quantity of coal as compared with the consumption at present, the company will be relieved of the necessity of taking power from the Calcutta Electric Supply Corporation as is necessary at present. These savings are estimated at Rs. 1,80,000 per annum.

As compared with the production and costs for the year 1936-37, an increase has already taken place in the quantity of bamboo pulp produced at each mill, and it is expected that the production of pulp from this material will be further increased. This has already resulted in the replacement of wood pulp by bamboo pulp and the total saving on this account which we anticipate being able to obtain when our bamboo pulp production reaches its maximum is Rs. 2,25,000 per annum.

Against these reductions, it is of course necessary to take into account increases which have already taken place and others which may still take place in the cost of certain raw materials, chemicals and coal as compared with the rates prevailing in 1936-37. The price of coal to-day is approximately Rs. 2 per ton higher on the average than the rates at which we contracted for our supplies during the year 1936-37.

Rosin and Caustic Soda have also shown appreciable increases since that time. Although the price of bamboo has not varied to any great extent since 1936-37, we have already expressed the opinion that with the increase which will take place in the requirements of the paper industry for this material, arising from the advent of several new mills, some rise in price must be expected. These several increases in the costs of materials, chemicals and coal must, therefore, be set off against the anticipated savings already detailed.

After taking into account both anticipated savings and increases, we estimate that we should be able to reduce our overall costs by a figure of approximately Rs. 9-8-0 per ton.

49. The following are the average figures in question:—

<i>Stocks (Average Value).</i>	Rs.
Primary Material . . . . .	6,75,000 approx.
Auxiliary Materials (including Machine Furnishings and Coal) . . . . .	2,60,000
Stores . . . . .	2,00,000
Finished Goods . . . . .	7,80,000
<b>Total</b> .	<b>19,15,000</b>
	Rs.
<i>Outstandings in respect of goods sold by arrangement</i> . . . . .	15,00,000

50. An examination of the Company's Balance Sheet as at 31st March, 1937, will show the position of the company's nett floating assets. In

addition to this liquid position, the company has an arrangement with its banker for cash facilities against its stocks to provide additional working capital if and when required.

51. We consider that protection should be continued.

In the evidence which we tendered to the Tariff Board in 1931, we dwelt at considerable length on the various reasons which we put forward in support of our claim for a continuance of protection. These reasons still hold good to-day, and it may suffice to say that although considerable progress has been made in the development of the bamboo pulp industry since the date of the last enquiry, an adequate measure of protection is still necessary if there is to be firmly established in India a permanent pulp and papermaking industry capable of meeting the country's needs in those qualities which her raw materials enable her to produce.

The importance of the pulp and paper industry in relation to the whole industrial system of the country is one which we think is generally recognised. While the Indian pulp and paper industry safeguards the country against exploitation in the event of sharp rises taking place in world prices as has actually been the case in the course of the past year or so, its importance to the country in the event of war is of the greatest. This is a factor which, we submit, cannot be ignored especially at the present time.

*Paper—*

(1) In the past we have favoured a duty at a specific rate. Our reason for so doing has been the simplicity of such a method in regard to assessment and collection. We have however at the same time, recognised certain disadvantages of a specific duty, and have actually had experience of those disadvantages which have arisen from the fluctuations which have taken place in prices of paper since the time of the last enquiry. On this occasion we have had the opportunity to study the reply which has been tendered to this question by the India Paper Pulp Company Limited, and we wish to state that we are in general agreement with the proposal put forward by that company that protection should be in the form of a duty based on a sliding scale according to the world price of wood pulp.

(2) According to the figures submitted by us showing our cost of manufacture for the year 1936-37, and after adjusting that cost to allow for anticipated savings on the one hand and increases in costs of materials, etc., on the other, we consider that the protective duty should be such as to ensure us an average ex-mill selling price of Rs. 2-11 per lb.

(3) We consider that such protection should be given on the same classes of paper as at present with the addition of Drawing Cartridge. At the same time, we realise that in the course of its investigations, the Board may find that there are possibilities of the manufacture of other qualities of which large quantities are consumed in India, *e.g.*, Kraft and Mechanical Newsprint. We ourselves have no experience in the manufacture of these qualities and are unable therefore to offer any evidence. We are naturally in favour of any extension in the qualities protected which may lead to a wider development of the industry in India.

The grounds for the proposals that protection should be on the basis of a sliding scale in relation to world prices of wood pulp, are given fully in the reply of the India Paper Pulp Company Limited, and we wish to associate ourselves with the reasons put forward by that company. We have however certain observations to make. We are of the opinion that Easy Bleaching Sulphite pulp only should not be adopted for the purpose of calculating the basic rate of wood pulp. Easy Bleaching Sulphite is only one of several qualities of pulp which may be used in the manufacture of the general lines of protected qualities of paper, and this being so, variations in the price of Easy Bleaching Sulphite pulp may not always be reflected in direct proportion in the price of protected quality papers. Strong Sulphite pulp is another quality in fairly general use in the manufacture of many lines, and we would suggest that the price of this pulp

also be taken into consideration in calculating the basic rates of wood pulp.

We have indicated that we should require protection to ensure us an average selling price f.o.r. our mills of As. 2-11 per lb. Our calculation in arriving at this figure is as follows:—

	Per ton.
	Rs.
Total manufacturing cost as per Form VI . . .	288.7
<i>Add—</i>	
	Rs.
Insurance . . . . .	2.7
Rent and Taxes . . . . .	1.1
Head Office Expenses and Selling Charges 31.6	
	35.4
<i>Deduct—</i>	
Adjustment necessary on account of savings effected since 1936-37 or anticipated also on account of increase due to rise in certain materials, chemicals, coal, etc., since 1936-37	9.8
	<hr/>
Total	314.3
	<hr/>
<i>Add—</i>	
Depreciation Rs. 1,75,00,000 at 6½ per cent. per annum . . . . .	46.2
Fair return of capital—	
Block . . . . .	1,75,00,000
Working Capital . . . . .	20,00,000
	<hr/>
Total	1,95,00,000
	<hr/>
at 6 per cent. per annum	49.4
	<hr/>
Total	409.9
	<hr/>

The above average price f.o.r. mill—As. 2-11 per lb. and is equivalent to a landed cost of £30-15.

It will be seen that in the above calculation, actual figures of expenses have been taken in connection with certain items and these differ to some extent from the standard figures adopted by the Tariff Board in their calculations in 1931. Depreciation and fair return on Capital have both been calculated on what we consider to be the present day replacement value of our mills. The depreciation has been taken at the overall rate of 6½ per cent. per annum, whilst the return on Capital has been calculated at 6 per cent. per annum.

We have suggested that in calculating the basic figure for the price of wood pulp, both Easy Bleaching Sulphite pulp and Strong Sulphite pulp should be taken into consideration. From the particulars which we have given in Annexure C in reply to Question 12, it will be seen that the average of the rates for these two qualities of pulps over the years 1931-32 to 1936-37 was £10-10s. per ton c.i.f. Calcutta. During the same period the average price realised by us for paper of protected qualities nett ex-Mills was As. 3/1½ per lb., which is equal to a price landed at ports, but excluding duty and surcharge, of £19-9s. It may be assumed, therefore, that over a period of years the average relationship of wood pulp prices to protected quality paper prices is as £10 10s. is to £19 9s., a difference of £8 19s.

Index Figure Average Price of E. B. S. and S. S. Wood pulp, C.I.F. Calcutta.	Corresponding Average Price of Protected Qualities of paper landed at ports (but ex- cluding duty).	Average Price required by Mill.	Rate of Duty required.	
£	£ s.	£ s.	£ s.	Rs.
9	17 19	30 15	12 16	171
10	18 19	30 15	11 16	157
11	19 19	30 15	10 16	144
12	20 19	30 15	9 16	131
13	21 19	30 15	8 16	117
14	22 19	30 15	7 16	104
15	23 19	30 15	6 16	91
16	24 19	30 15	5 16	77
17	25 19	30 15	4 16	64

When the index figure, i.e., the average price of wood pulp exceeds £17 10s., a revenue duty at 20 per cent. on the c.i.f. price of paper would suffice.

*Pulp.*—We think it is undoubted that the duty on wood pulp has encouraged the production of indigenous pulp—especially bamboo pulp and has therefore fulfilled the object of the Tariff Board. That being so, we consider that a duty on wood pulp (excluding Kraft and Mechanical) should be continued. As we have proposed a protective duty on paper based on a sliding scale in relation to imported wood pulp prices, we suggest that a similar method should be adopted in regard to the duty on wood pulp.

We would propose that the same Index figures as we have suggested for the calculation of the duty on paper be used for the purpose of calculating the duty on those qualities of wood pulp which it is decided to protect, and that the duty be such as will maintain the landed cost of wood pulp c.i.f. Calcutta at a figure of Rs. 220 being the equivalent of £16-10 per ton. We suggest this figure of Rs. 220 per ton as being one which is sufficiently high to dissuade mills from using imported wood pulp and to encourage them in developing the production of pulps from indigeneous raw materials.

The following is a statement of the way in which such a proposal of assessing duty on wood pulp would act:—

Pulp Index Figure (same figure as that on which paper duty is to be cal- culated).	Landed cost c.i.f. Calcutta.	Rate of Duty required.	
£	£ s.	£ s.	Rs.
9	16 10	7 10	100
10	16 10	6 10	87
11	16 10	5 10	73
12	16 10	4 10	60
13	16 10	3 10	47

On £14 and over a revenue duty at 20 per cent. *ad valorem* would suffice.

52. (1) (a) *Pulp*.—As will be seen from the figures in Form III we have been successful in reducing the total manufacturing cost of indigenous bleached pulps from Rs. 211·789 per ton in 1931-32, to Rs. 150·5 per ton in 1936-37, which is a reduction of Rs. 61·289 per ton. It is realised that this saving in cost is to some extent due to decreases in the prices of raw materials.

(b) *Paper*.—In 1930-31 the total manufacturing cost of paper amounted to Rs. 360 per ton. As will be seen from Form VI the corresponding figure for 1936-37 is Rs. 288·654 to which, in order to make the figure comparable, must be added Insurance and Rent and Taxes at Rs. 3·805 making the total of Rs. 292·459—an improvement of Rs. 67·541. Part of this improvement is due to the reduction in the cost of indigeneous pulp as shown in the previous paragraph. The reduction on pulp cost, when translated into terms of paper, is equivalent to approximately Rs. 44 per ton of paper. The balance, Rs. 24 per ton, is the result of economies and general improvements on the papermaking side of the mills.

(2) We have already referred in our reply to Question No. 19 to the portion as regards Soda Recovery at both mills. At No. 2 Mill a slight improvement of efficiency was effected, and at both mills a very much larger volume of Caustic ley was dealt with in the existing plants.

(3) In previous replies we have expressed the opinion that the quality of Titaghur paper has improved considerably during the last few years. We are now making a much larger proportion of bleached papers of a higher quality than in previous years, the furnish being mainly from bamboo and grass pulp.

Compared to the use of relatively large quantities of wood pulp in our furnish in the past, the recent manufacture of indigenous pulp on a large scale for high class papers has necessitated much more careful treatment in the pulp washing, bleaching and straining sections of the mills. This has resulted in our obtaining somewhat lower raw material yields. We believe, however, that dealers and consumers generally will now confirm that our papers have reached a high standard and compare favourably with imported qualities of similar types.

53. This question has been answered by the Indian Paper Makers' Association as follows:—

“ The Association has been given to understand by some of its members that it is their intention to manufacture certain classes of paper other than those to which the present protective duty applies. The Association further understands that the mills concerned will furnish the Board with particulars of the grounds on which they claim that such classes are entitled to protection. While the Association has no information on which itself to put forward a case for extending the protective duties to these classes of paper, its members would welcome such extension of the protective duties in order to widen the market in proportion to the growing productive capacity of the industry. The classes of paper referred to are:—

- (a) Kraft wrapping paper, M. G. and Unglazed.
- (b) Newsprint.
- (c) Manilla.
- (d) Drawing cartridge.

Should the mills contemplating manufacture of these classes succeed in establishing their claim to protection, items 44 (1) and 44 (2) would require to be amended in accordance with the recommendations made by the Board and a new item would require to be introduced in the schedule.

Otherwise, generally speaking, the manufacturing interests represented by this Association, are in agreement with the proposed schedule given on page 21 of the Board's report. They find, however, that certain classes of paper are still being imported as a class of wrapping paper and, although being used for the manufacture of Account Books, are paying revenue duty only, thus evading the intentions of the Act. Cases brought to their notice have been imported under the heading of 'Glazed Yellow Casing Paper' and, similarly, there is also a loop-hole for this paper to be imported under the heading of 'Manilla,' if it is glazed on both sides. The mills also think it advisable to add the word 'Wrapping' to the deep blue papers in case writing paper also is brought in under this heading. They therefore suggest that Item 44 (3) should be altered to read as follows:—

‘ Papers including all machine glazed papers, stereo, all coated paper except art paper, all deep blue wrapping papers, all unglazed thin news up to substance 35.5 grams per square meter, except white and buff or badami and glazed white or buff casing or white and buff Manilla paper above substance 26.6 grams per square meter, all sorts not otherwise specified.’

54. In our answer to Question No. 55, we have submitted statements showing the effect on our profits for the year 1936-37 which would have resulted by the removal of the surcharge on the protective duties. From the figures adduced, it will be seen that the removal of the surcharge would have caused a considerable reduction in profits, at the average prices then obtained for the production of our mills. If imported paper prices begin to fall below the average prices realised by Indian mills in 1936-37, then it will become increasingly difficult for the papermaking industry to operate at a reasonable profit. It is realised that owing to the unusually high prices for imported paper prevailing at present, as compared to the general level of paper prices over the last few years, the surcharge could possibly be dispensed with at the present juncture. But it is apparent that the top of the market has been reached and the paper market is already re-acting so that much lower rates must be expected within the



near future. This is borne out by recent cabled offers of wood pulp in which Easy Bleaching qualities are now offered at a reduction of approximately £5 per ton below prices prevailing about six months ago. We therefore submit that it would be wiser to consider the question of the removal of the surcharge simultaneously with the question of the rate at which the protective duty should continue.

55. (a) The following statement shows the effect on the company's finances for the year to 31st March, 1937, had the protective duty and surcharge been replaced by a revenue duty of 20 per cent. This statement has been prepared on exactly the same lines as those shown in Appendix IV of the report of the Indian Tariff Board in 1931:

	Per ton.
	Rs.
Average Price realised 1936-37. As. 2-11-87 per lb. . . . .	418
Less—Duty and Surcharge—Rs. 140 and Rs. 35	175
	<hr/> 243
Add—Duty at 20 per cent. . . . .	48
	<hr/> 291
Price realisable at Revenue Duty . . . . .	291
Total Output 1936-37 . . . . . 23,652 tons	
Total Receipts at Rs. 291 a ton . . . . .	68,82,732
Deduct—Works Expenses 1936-37 . . . . .	69,17,230
	<hr/>
Deficit . . . . .	34,498
	<hr/>

Had the protective duty and surcharge been replaced by a revenue duty of 20 per cent. it will be seen that a small deficit on actual trading would have arisen and the company in addition would have been unable to provide.

	Rs.
Depreciation . . . . .	6,43,864
Interest on Working Capital . . . . .	1,76,861
Head Office Expenses . . . . .	3,49,798
Selling Expenses . . . . .	3,98,107
	<hr/>
Total . . . . .	15,68,630
	<hr/>

(b) Had the surcharge of Rs. 35 per ton only been removed, the effect on the company's finances would have been as shown in the following statement prepared on similar lines to the above:—

	Per ton.
	Rs.
Average price realised as shown in (a) . . .	418
Less—Surcharge . . . . .	35
	<hr/>
Price realisable under Protective Duty without Surcharge . . . . .	383
	<hr/>
Total Output . . . . . 23,652 tons	
Total Receipts at Rs. 383 a ton . . . .	90,58,716
Deduct—Works Expenses 1936-37 . . . .	69,17,230
	<hr/>
Total . . . . .	21,41,486
	<hr/>

	Rs.
Depreciation . . . . .	6,43,864
Interest on Working Capital . . . . .	1,76,861
Head Office Expenses . . . . .	3,49,798
Selling . . . . .	3,98,107
	<hr/>
	15,68,630
Balance which would have been available for social welfare; Pensions, Allocations and Dividends . . . . .	5,72,856

Out of the balance available, and apart from dividends on the ordinary capital of the company, the following liabilities would have to be met:—

	Rs.
(a) Labour Quarters and Welfare Allocation . . . . .	1,20,000
(b) Pension Funds Allocation . . . . .	60,000
(c) 1st Pref. Share Dividends . . . . .	92,000
(d) 2nd Pref. Share Dividends . . . . .	37,500
	<hr/>
Total . . . . .	2,09,500
	<hr/>

It will be noted that in the above figures no sums have been proposed for transfer to Debenture Reserve or General Reserve.

## FORM I—(Qn. 5.)

## Primary Materials.

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<b>Bamboo—</b>						
(1) Quantity of material used . . . .	6,593	7,143	11,070	15,156	19,063	31,424
(2) Quantity of finished paper which material represents.	2,429	2,428	3,856	5,052	5,940	9,973
(3) % of (2) on the total quantity of paper manufactured.	12.78	12.90	18.41	23.34	25.32	42.17
<b>Grass—</b>						
(1) Quantity of material used . . . .	15,135	12,163	13,613	13,667	15,253	13,206
(2) Quantity of finished paper which material represents.	5,297	4,257	4,765	4,783	5,339	4,622
(3) % of (2) on the total quantity of paper manufactured.	27.87	22.62	22.75	22.10	22.76	19.54
<b>Waste Paper and Paper Cuttings—</b>						
(1) Quantity of material used . . . .	1,878	1,817	2,690	2,821	2,608	3,188
(2) Quantity of finished paper which material represents.	1,499	1,363	2,018	2,116	2,024	2,301
(3) % of (2) on the total quantity of paper manufactured.	7.42	7.24	9.63	9.77	8.62	10.11
<b>Other Indigenous Materials—</b>						
(1) Quantity of material used . . . .	3,311	3,161	3,621	2,673	2,628	2,633
(2) Quantity of finished paper which material represents.	1,987	1,897	2,173	1,604	1,577	1,580
(3) % of (2) on the total quantity of paper manufactured.	10.45	10.08	10.38	7.41	6.72	6.68
<b>Total Indigenous Materials—</b>						
(1) Quantity of material used . . . .	26,917	24,284	30,994	31,317	39,642	50,451
(2) Quantity of finished paper which material represents.	11,122	9,946	12,812	13,555	14,880	18,566
(3) % of (2) on the total quantity of paper manufactured.	58.52	62.84	61.17	62.62	63.42	78.50
<b>Imported Pulp—</b>						
(1) Quantity of material used . . . .	9,277	10,444	9,570	9,518	10,096	5,934
(2) Quantity of finished paper which material represents.	7,885	8,877	8,134	8,090	8,582	5,036
(3) % of (2) on the total quantity of paper manufactured.	41.48	47.16	38.83	37.38	36.58	21.50

**FORM II—(Qn. II.)**  
**Total Expenditure Incurred on the Production of Bleached Pulp.**

	1931-32.				1932-33.				1933-34.			
	Quantity.	Value.	Per cent. of Cost.	Quantity.	Value.	Per cent. of Cost.	Quantity.	Value.	Quantity.	Value.	Per cent. of Cost.	
<i>Primary Raw Materials.</i>												
Grass . . . . .	25,135	6,35,896	24.324	12,163	4,82,562	20.786	Tons.	Rs.	Tons.	Rs.	22.176	
Bamboo . . . . .	6,593	2,79,747	10.704	7,143	1,96,054	8.810					9.639	
Rags . . . . .	117	23,895	.914	147	16,188	.728					.940	
Hemp Ropes . . . . .	442	44,601	1.706	530	41,923	1.884					1.557	
<b>Total</b>	22,287	9,83,938	37.648	19,983	7,16,727	32.208					34.312	
<i>Aux. Raw Materials.</i>												
<i>Pulp Making Materials—</i>												
Lime . . . . .	2,754	86,079	8.204	2,672	72,549	8.280					8.297	
Salt . . . . .	835	13,394	.512	841	14,785	.665					.440	
Sulp. Acid . . . . .	29	3,119		24	2,870							
Hyd. Acid . . . . .	14	4,607		14	4,953							
Sulphur . . . . .	12	1,566	.498	28	3,861						.556	
Sodium Sulphide . . . . .	16	2,844		1	190							
Salt Cake . . . . .	..	..		8	199							
Silicate of Soda . . . . .	4	887		1	293							
Caustic Soda . . . . .	517	1,38,816	5.312	192	61,465	2.702					6.015	
<b>Total</b>	4,181	2,51,312	9.616	3,781	1,61,105	7.240					10.308	
Conversion Charges . . . . .	..	42,846	1.640	..	55,671	2.502					2.232	
<b>Total</b>	4,181	2,94,158	11.256	3,781	2,16,776	9.742					12.540	

## Bleaching Materials—

Lime . . . . .	1,390	43,446	1,662	1,793	43,683	2,187	1,641	36,553	1,469
Salt . . . . .	1,550	24,874	-952	1,562	27,458	1,234	1,633	20,317	-817
Bleaching Powder . . . . .	19	1,459	-656	11	1,822	-682	4	679	-626
Conversion Charges . . . . .	2,959	69,776	2,670	3,366	77,963	3,503	3,278	57,549	2,312
Total	..	79,571	3,044	..	1,03,389	4,646	..	1,03,131	4,145
Total Aux. Raw Materials	2,959	1,49,350	5,714	3,366	1,51,352	8,149	3,278	1,60,680	6,457
Total	7,140	4,42,508	16,970	7,147	3,98,128	17,891	8,441	4,72,685	18,997
Power and Fuel . . . . .	..	14,27,446	54,618	..	11,14,855	50,099	..	13,26,404	53,309
Current Repairs and Maintenance . . . . .	..	1,55,934	5,967	..	1,41,510	6,359	..	1,52,721	6,138
Mill Labour . . . . .	..	1,24,771	4,774	..	98,106	4,409	..	1,10,242	4,431
Supervision and Establishment . . . . .	..	37,569	3,733	..	86,772	3,854	..	94,802	3,802
Total	..	19,484	746	..	19,168	861	..	16,650	-670
Total	..	18,23,204	69,838	..	14,59,411	65,582	..	17,00,619	68,350
Overhead Charges—									
Insurance . . . . .	..	36,841	1,410	..	30,107	1,363	..	37,182	1,495
Rent and Taxes . . . . .	..	7,622	-291	..	8,619	-387	..	79,873	-356
Depreciation . . . . .	..	3,03,864	11,627	..	3,21,696	14,456	..	3,37,737	13,574
Interest on Working Capital . . . . .	..	2,37,403	9,084	..	1,88,679	8,479	..	1,71,937	6,911
Head Office Expenses . . . . .	..	1,30,924	5,010	..	1,45,276	6,528	..	1,60,935	6,468
Miscellaneous . . . . .	..	71,023	2,740	..	71,538	3,215	..	70,825	2,846
Total	..	7,88,277	30,162	..	7,65,915	34,418	..	7,87,489	31,650
Grand Total	..	26,13,481	100,000	..	22,25,326	100,000	..	24,88,108	100,000
Total Pulp Tons	..	5,618	..	..	8,307	..	..	10,650	..

FORM II—(Qn. 11)—contd.  
Total Expenditure Incurred on the Production of Bleached Pulp—contd.

	1934-35.				1935-36.				1936-37.			
	Quantity.	Value.	Per cent. of Cost.	Quantity.	Value.	Per cent. of Cost.	Quantity.	Value.	Quantity.	Value.	Per cent. of Cost.	
<i>Primary Raw Materials.</i>												
Grass . . . . .	Tons.	Rs.		Tons.	Rs.		Tons.	Rs.	Tons.	Rs.		
Bamboo . . . . .	13,667	5,22,050	19.432	15,253	5,89,637	19.458	13,246	4,85,983	13,246	4,85,983	14.289	
Rags . . . . .	15,156	2,98,356	11.104	19,063	4,15,063	13.698	31,424	5,85,904	31,424	5,85,904	17.227	
Hemp Ropes . . . . .	145	17,469	.650	62	8,637	.287	134	21,563	134	21,563	.634	
	160	9,286	.346	131	8,124	.268	159	9,603	159	9,603	.282	
Total	29,128	8,47,161	31.532	34,509	10,21,521	33.711	44,923	11,03,053	44,923	11,03,053	32.432	
<i>Aux. Raw Materials.</i>												
<i>Pulp Making Materials—</i>												
Lime . . . . .	4,079	90,896	3.333	4,446	98,898	3.264	5,514	1,10,939	5,514	1,10,939	3.262	
Salt . . . . .	908	13,194	.491	1,063	17,504	.578	1,185	15,590	1,185	15,590	.458	
Sulp. Acid . . . . .	17	2,037		19	2,179		21	2,283	21	2,283		
Hyd. Acid . . . . .	15	5,297		20	7,880		17	5,504	17	5,504		
Sulphur . . . . .	52	4,451	.560	65	5,279	.605	76	7,505	76	7,505	1.637	
Sodium Sulphide . . . . .	4	96		..	..		6	1,028	6	1,028		
Salt Cake . . . . .	..	..		..	..		574	88,249	574	88,249		
Silicate of Soda . . . . .	13	3,156		15	2,980		5	1,111	5	1,111		
Caustic Soda . . . . .	675	1,83,637	6.835	1,122	2,67,164	8.815	1,791	4,03,399	1,791	4,03,399	11.861	
	5,759½	3,02,704	11.269	6,750	4,01,884	13.262	9,189	5,85,608	9,189	5,85,608	17.218	
Conversion Charges . . . . .	..	57,871	2.154	..	68,450	2.259	..	84,237	..	84,237	2.477	
Total	5,759½	3,60,635	13.423	6,750	4,70,334	15.521	9,189	6,69,845	9,189	6,69,845	19.695	

## Bleaching Materials—

Lime . . . . .	1,854	41,314	1,537	72,107	48,871	1,613	2,254	45,350	1,333
Salt . . . . .	1,687	24,502	-912	11,975	32,507	1,073	2,202	28,952	-851
Bleaching Powder . . . . .	113	15,892	-592	26	3,148	-103	84	10,775	-337
Conversion Charges . . . . .	3,654	81,708	3,041	4,198	84,526	2,789	4,550	85,077	2,501
Total	..	1,07,476	4,000	..	1,27,120	4,105	..	1,56,441	4,600
Total Aux. Raw Matls.	3,654	1,89,184	7,041	4,198	2,11,646	6,984	4,550	2,41,518	7,101
	9,4181	5,49,819	20,461	10,948	6,81,980	22,505	13,739	9,11,383	26,796
Total	..	13,96,980	51,906	..	17,03,501	56,216	..	20,14,416	59,228
Power and Fuel . . . . .	..	1,78,937	6,661	..	2,09,640	6,918	..	2,63,712	7,754
Current Repairs and Maintenance . . . . .	..	1,28,039	4,765	..	1,24,493	4,100	..	1,37,070	4,030
Mill Labour . . . . .	..	97,791	3,640	..	98,262	3,242	..	1,13,843	3,332
Supervision and Establishment . . . . .	..	18,975	-705	..	20,065	-683	..	21,992	-647
Total	..	18,30,742	67,767	..	21,55,961	71,148	..	25,50,533	74,991
Overhead Charges—									
Insurance . . . . .	..	31,568	1,175	..	36,416	1,202	..	38,758	1,140
Rent and Taxes . . . . .	..	10,156	-378	..	13,448	-444	..	15,240	-443
Depreciation . . . . .	..	4,12,872	15,367	..	3,90,175	12,876	..	3,86,318	11,359
Interest on Working Capital . . . . .	..	1,69,330	6,302	..	1,70,386	5,623	..	1,06,117	3,120
Head Office Expenses . . . . .	..	1,62,300	6,044	..	1,80,329	5,951	..	2,09,879	6,171
Miscellaneous . . . . .	..	79,706	2,967	..	83,547	2,756	..	94,240	2,771
Total	..	8,66,022	32,233	..	8,74,301	28,832	..	8,50,547	25,009
Grand Total	..	26,86,764	100,000	..	30,30,262	100,000	..	34,01,080	100,000
Total Pulp Tons	..	11,515	..	..	13,613	..	..	16,947	..

FORM III—(Qn. 11.)  
Cost Per Ton of Bleached Pulp

	1931-32.				1932-33.				1933-34.			
	Quantity.	Cost per Ton.	Per cent. of Cost.		Quantity.	Cost per Ton.	Per cent. of Cost.		Quantity.	Cost per Ton.	Per cent. of Cost.	
	Tons.	Rs.		Tons.	Rs.		Tons.		Tons.	Rs.		
<i>Primary Raw Materials.</i>												
Grass . . . . .	7963	73-763	24-324	6462	55-683	20-786	6500	22-176	6500	51-808	22-176	
Bamboo . . . . .	3469	32-461	10-704	3795	23-601	8-810	6285	9-639	6285	22-520	9-639	
Rags . . . . .	0081	2-773	914	0078	1-949	728	0125	940	0125	2-198	940	
Hemp Ropes . . . . .	0283	5-175	1-705	0232	5-047	1-884	0239	1-557	0239	3-637	1-557	
Total	1776	114-172	37-636	10617	80-280	32-208	12149	34-312	12149	80-161	34-312	
<i>Aux. Raw Materials.</i>												
<i>Pulp Making Materials—</i>												
Lime . . . . .	1450	9-083	3-294	1420	8-733	3-260	1759	3-297	1759	7-703	3-297	
Salt . . . . .	0440	1-554	512	0447	1-780	665	0420	440	0420	1-028	440	
Sulph. Acid . . . . .	0015	302		0013	345		0007	148	0007	148		
Hyd. Acid . . . . .	0007	585		0007	598		0007	400	0007	400		
Sulphur . . . . .	0006	182	498	0015	465	553	0018	473	0018	473	556	
Sodium Sulphide . . . . .	0008	330		0001	023		..	..	..	..		
Salt Cake . . . . .	..	..		0004	024		0004	017	0004	017		
Silicate of Soda . . . . .	0002	103		..	028		0004	202	0004	202		
Caustic Soda . . . . .	0272	16-108	5-312	0102	7-400	2-762	0246	6-015	0246	14-051	6-015	
Conversion Charges . . . . .	2200	29-162	9-616	2009	19-394	7-240	2165	10-308	2165	24-082	10-308	
	..	4-972	1-640	..	6-702	2-502	..	2-232	..	5-214	2-232	
Total	2200	34-134	11-256	2009	20-036	9-742	2465	12-540	2465	29-296	12-540	



## Bleaching Materials—

Lime . . . . .	-0731	5-041	1-662	-0952	5-860	2-187	-0783	3-432	1-469
Salt . . . . .	-0815	2-886	-052	-0830	3-306	1-234	-0780	1-908	-817
Bleaching Powder . . . . .	-0010	-189	-056	-0906	-219	-082	-0002	-063	-026
Conversion Charge . . . . .	-1556	8-006	2-670	-1782	9-385	3-503	-1865	5-403	2-812
	..	9-238	3-044	..	13-446	4-646	..	9-684	4-145
Total	-1556	17-329	5-714	-1788	21-831	8-149	-1566	15-087	6-457
Total Aux. Raw Materials	-8756	51-463	16-970	-3797	47-927	17-891	-4030	44-883	18-997
Power and Fuel . . . . .	..	165-635	54-618	..	134-207	50-099	..	124-544	53-309
Current Repairs and Maintenance	..	18-094	5-987	..	17-085	6-859	..	14-340	6-138
Mill Labour . . . . .	..	14-478	4-774	..	11-811	4-409	..	10-852	4-431
Supervision and Establishment	..	11-321	3-733	..	16-325	3-854	..	8-883	3-802
	..	2-281	.746	..	2-307	-861	..	1-563	-870
Total	..	211-789	69-838	..	175-685	65-582	..	159-682	63-350
Overhead Charges—)									
Insurance . . . . .	..	4-275	1-401	..	3-624	1-353	..	3-492	1-495
Rents and Taxes . . . . .	..	-884	-291	..	1-038	-387	..	-833	-356
Depreciation . . . . .	..	35-280	11-627	..	35-726	14-456	..	31-712	13-574
Interest on Working Capital	..	27-547	9-084	..	22-713	8-479	..	16-145	6-911
Head Office Expenses	..	15-192	5-010	..	17-488	6-528	..	15-111	6-488
Miscellaneous . . . . .	..	8-311	2-740	..	8-612	3-215	..	6-650	2-846
Total	..	91-489	30-162	..	92-201	34-418	..	73-943	31-050
Grand Total	..	303-258	100-000	..	267-886	100-000	..	233-625	100-000
Total Pulp Tons	..	8-618	..	..	8,307	..	..	10,650	..

## FORM III—(Qn. 11)—contd.

## Cost Per Ton of Bleached Pulp—contd.

	1934-35.				1935-36.				1936-37.			
	Quantity.	Cost per Ton.	Per cent. of Cost.		Quantity.	Cost per Ton.	Per cent. of Cost.		Quantity.	Cost per Ton.	Per cent. of Cost.	
<i>Primary Raw Materials.</i>												
Grass . . . . .	Tons.	Rs.	19.432	-6501	Tons.	Rs.	19.456	-5583	Tons.	Rs.	14.289	-5583
Bamboo . . . . .	-6314	45.141	11.104	-8262	-8262	30.491	13.698	1.3781	1.3781	34.573	17.227	1.3781
Rags . . . . .	-7145	25.798	-650	-0026	-0026	-638	-287	-0057	-0057	1.272	-634	-0057
Hemp Ropes . . . . .	-0067	1.510	-846	-0056	-0056	-597	-268	-0067	-0067	-587	-282	-0067
	-0074	-803										
Total	1.3600	73.252	31.532	1.4845	75.040	33.711	1.9488	65.088	32.432			
<i>Aux. Raw Materials.</i>												
<i>Pulp Making Materials—</i>												
Lime . . . . .	-1885	7.860	3.383	-1885	7.265	3.264	-2331	6.548	3.262			
Salt . . . . .	-0420	1.140	-491	-0454	1.236	-578	-0501	-920	-458			
Sulph. Acid . . . . .	-0008	-176		-0008	-160		-0010	-135				
Hyd. Acid . . . . .	-0007	-458		-0008	-579		-0007	-325				
Sulphur . . . . .	-0024	-335	-560	-0028	-387	-605	-0032	-443	1.637			
Sodium Sulphide . . . . .	..	-008		..	..		-0002	-900				
Salt Cake . . . . .	..	..		..	..		-0243	2.257				
Sulfate of Soda . . . . .	-0006	-273		-0006	-220		-0002	-086				
Caustic Soda . . . . .	-0312	15.880	6.835	-0478	19.625	8.815	-0757	23.803	11.861			
	-2662	26.180	11.269	-2877	29.522	13.262	-3885	24.555	17.218			
Conversion Charges . . . . .	..	5.004	2.154	..	5.028	2.259	..	4.971	2.477			
Total	-2662	31.184	13.423	-2877	34.550	15.521	-3885	39.526	19.695			

# Leaching Materials—

Lime . . . . .	-0854	3-572	1-537	-0038	3-590	1-613	-0053	2-678	1-333
Salt . . . . .	-0780	2-119	-912	-0841	2-388	1-073	-0031	1-708	-851
Bleaching Powder . . . . .	-0062	1-374	-592	-0012	.231	-103	-0040	-836	-317
Conversion Charge . . . . .	-1888	7-065	3-041	-1789	6-209	2-789	-1924	5-020	2-501
	..	9-293	4-000	..	9-338	4-195	..	9-231	4-600
Total	-1888	16-358	7-041	-1789	15-547	6-984	-1924	14-251	7-101
Total Aux. Raw Materials	-4350	47-542	20-464	-4066	50-097	22-505	-5809	53-777	26-796
Total	..	120-794	51-996	..	925-137	56-216	..	118-865	59-228
Power & Fuel . . . . .	..	15-474	6-481	..	15-400	6-918	..	15-561	7-754
Current Repairs and Maintenance	..	11-071	4-765	..	9-146	4-109	..	8-088	4-030
Mill Labour . . . . .	..	8-456	3-640	..	7-218	3-242	..	6-638	3-322
Supervision and Establishment . . . . .	..	1-640	.705	..	1-474	.663	..	1-298	-647
Total	..	167-435	67-767	..	158-375	71-148	..	150-500	74-991
Overhead Charges—									
Insurance . . . . .	..	2-730	1-175	..	2-675	1-202	..	2-237	1-140
Rents and Taxes . . . . .	..	-878	-378	..	-988	-444	..	-900	-448
Depreciation . . . . .	..	35-700	15-367	..	28-662	12-876	..	22-796	11-359
Interest on Working Capital . . . . .	..	14-942	6-302	..	12-516	5-623	..	6-282	3-120
Head Office Expenses . . . . .	..	14-041	6-044	..	18-247	5-951	..	12-384	6-171
Miscellaneous . . . . .	..	6-892	2-967	..	6-137	2-756	..	5-561	2-771
Total	..	74-883	32-233	..	64-225	28-852	..	50-190	25-009
Grand Total	..	232-318	100-000	..	222-600	100-000	..	200-690	100-000
Total Pulp Tons . . . . .	..	11-565	..	..	13,613	..	..	16,947	..

## FORM IV—(Qn. 17.)

## Auxiliary Materials.

	1931-32.				1932-33.				1933-34.				
	Quantity.	Value.	Cost per Ton of Materials.		Quantity.	Value.	Cost per Ton of Materials.		Quantity.	Value.	Cost per Ton of Materials.		
			Tons.	Rs.			Tons.	Rs.			Tons.	Rs.	
Pulp Making	Indian.												
	Sulp. Acid	.	.	.	29	3,110	107,552	24	2,870	119,583	15	1,580	105,883
	Hyd. Acid	.	.	.	14	4,607	323,071	14	4,953	353,786	15	4,891	328,067
	Sodium Sulphide	.	.	.	16	2,844	177,750	1	190	190,000	..	..	..
	Lime	.	.	.	2,754	86,079	31,256	2,672	72,540	27,152	3,683	82,039	22,275
	Imported.												
	Salt	.	.	.	835	13,394	16,045	841	14,785	17,580	879	10,940	12,444
	Sulphur	.	.	.	12	1,566	130,500	28	3,861	137,893	38	5,041	132,658
	Caustic Soda	.	.	.	517	1,38,816	268,503	192	61,465	320,130	516	1,49,647	290,014
	Silicate of Soda	.	.	.	4	887	221,750	1	233	233,000	9	2,153	239,222
Salt Cake Crude	.	.	.	..	..	..	8	199	24,875	8	182	22,750	
Bleaching	Indian.												
	Lime	.	.	.	1,390	43,446	31,256	1,793	43,683	27,152	1,641	36,553	22,275
	Imported.												
	Bleaching Powder	.	.	.	19	1,459	76,789	11	1,822	165,636	4	679	169,750
	Salt	.	.	.	1,550	24,874	16,045	1,502	27,158	17,580	1,633	20,317	12,444



FORM IV—(Qn. 17)—*contd.*  
*Auxiliary Materials—contd.*

	1934-35.				1935-36.				1936-37.			
	Quantity.	Value.	Cost per Ton of Materials.	Quantity.	Value.	Cost per Ton of Materials.	Quantity.	Value.	Quantity.	Value.	Cost per Ton of Materials.	
	Tons.	Rs.	Rs.	Tons.	Rs.	Rs.	Tons.	Rs.	Tons.	Rs.	Rs.	
<i>Indian.</i>												
Sulp. Acid . . . . .	17	2,037	119,823	19	2,179	114,684	21	2,283	21	2,283	108,714	
Hyd. Acid . . . . .	15	5,297	353,133	20	7,580	394,000	17	5,504	17	5,504	323,765	
Sodium Sulphide . . . . .	4	96	192,000	..	..	..	6	1,028	6	1,028	171,333	
Lime . . . . .	4,079	90,396	22,284	4,446	98,398	22,244	5,514	1,10,939	5,514	1,10,939	20,120	
<i>Imported.</i>												
Salt . . . . .	908	13,194	14,528	1,063	17,504	16,462	1,185	15,390	1,185	15,390	13,152	
Sulphur . . . . .	52	4,451	85,608	65	5,279	81,215	76	7,505	76	7,505	98,750	
Caustic Soda . . . . .	675	1,83,637	272,055	1,122	2,67,164	238,114	1,791	4,03,389	1,791	4,03,389	225,237	
Silicate of Soda . . . . .	13	3,156	242,770	15	2,980	198,667	5	1,111	5	1,111	222,290	
Salt Cake Crude . . . . .	..	..	..	..	..	..	574	38,249	574	38,249	66,611	
<i>Indian.</i>												
Lime . . . . .	1,854	41,314	22,284	2,197	48,871	22,244	2,254	45,350	2,254	45,350	20,120	
<i>Imported.</i>												
Bleaching Powder . . . . .	113	15,892	140,837	26	3,148	121,077	94	10,775	94	10,775	114,627	
Salt . . . . .	1,687	24,502	14,528	1,075	32,507	16,462	2,202	28,952	2,202	28,952	13,152	

Pulp Making

Bleaching



## FORM V—(Qn. 47.)

Total Expenditure incurred on the Production of Paper.

	1931-32.				1932-33.				1933-34.			
	Quantity.	Value.	Per cent.	Quantity.	Value.	Per cent.	Quantity.	Value.	Quantity.	Value.	Per cent.	
	Tons.	Rs.		Tons.	Rs.		Tons.	Rs.	Tons.	Rs.		
<b>Primary Raw Materials—</b>												
Grass . . . . .	15,135	6,55,695	8.108	12,163	4,62,562	6.306	13,613	5,51,751	13,613	5,51,751	7.152	
Bamboo . . . . .	6,593	2,70,747	3.568	7,143	1,96,054	2.673	11,070	2,39,836	11,070	2,39,836	3.109	
Bags . . . . .	117	23,895	.305	147	16,188	.220	262	23,393	262	23,393	.803	
Hemp Ropes . . . . .	442	44,601	.569	530	41,923	.572	500	38,739	500	38,739	.602	
Waste Paper . . . . .	1,878	1,65,628	2.368	1,617	1,53,015	2.086	2,690	2,30,431	2,690	2,30,431	2.967	
<b>Total</b>	24,165	11,49,566	14.918	21,900	8,69,742	11.637	28,135	10,84,150	28,135	10,84,150	14.053	
<b>Purchased Pulp</b>	9,277	10,87,774	21.529	10,444	18,24,174	24.868	9,570	17,45,990	9,570	17,45,990	22.632	
<b>Aux. Raw Materials—</b>												
China Clay . . . . .	2,752	1,40,781	1.795	2,484	1,34,595	1.835	2,859	1,20,084	2,859	1,20,084	1.556	
Alum . . . . .	1,329	1,08,030	1.377	1,279	1,13,563	1.549	927	70,565	927	70,565	.815	
Resin . . . . .	485	1,51,133	1.927	425	1,45,800	1.688	403	1,10,914	403	1,10,914	1.554	
Alkali . . . . .	148	18,319	.236	61	8,861	.121	44	5,574	44	5,574	.072	
Lime . . . . .	4,144	1,29,525	1.652	4,465	1,21,232	1.663	5,324	1,18,592	5,324	1,18,592	1.537	
Salt . . . . .	2,385	38,268	.483	2,403	42,243	.576	2,512	31,257	2,512	31,257	.405	



Sulph. Acid	29	9,119	24	2,870	15	1,680	
Hyd. Acid	14	4,607	14	4,953	15	4,891	
Starch	7	1,328			2	525	
Glue	2	1,704			2	1,788	•182
Sulphur	12	1,506	23	3,861	38	5,041	
Sodium Sulphide	16	2,844	1	190			
Salt Crude Cake			8	199	8	182	
Caustic Soda	517	1,86,816	192	61,465	516	1,49,647	1-940
Silicate of Soda	4	887	1	233	9	2,153	
Paperine	..	..	6	4,233	9	5,429	
Casein	..	..	2	919	12	5,645	
Bleaching Powder	19	1,459	11	1,822	4	679	
Bewold Size	46	21,356	53	17,699	217	75,024	1-786
Pot. Ferro.							
Zinc Chloride							
Bleached Wax							
Dyes	32	43,736	21	42,206	20	49,847	
Total	11,931	8,07,515	11,479	7,07,754	12,936	7,87,388	9-947
Convsn. Charges for Mfg. Bleach and Caustic	..	1,22,417	..	1,59,000	..	1,58,668	2-056
Total Aux. Raw Materials	..	9,29,932	..	8,66,814	..	9,26,051	12-003
Power and Fuel	..	3,69,578	..	2,95,769	..	2,95,914	3-836
Current Reprs. and Mntnce.	..	8,30,054	..	6,30,656	..	7,97,145	10-333
Mill Labour	..	7,96,672	..	7,08,993	..	7,88,868	10-226

FORM V—(Qn. 47)—contd.  
*Total Expenditure incurred on the Production of paper—contd.*

	1931-32.			1932-33.			1933-34.		
	Quantity.	Value.	Per cent.	Quantity.	Value.	Per cent.	Quantity.	Value.	Per cent.
	Tons.	Rs.		Tons.	Rs.		Tons.	Rs.	
Supervision and Estbt. . . . .	..	3,60,771	4.602	..	3,37,356	4.600	..	3,66,833	4.755
Packing . . . . .	..	1,54,601	1.972	..	1,87,043	2.550	..	1,75,915	2.280
Any other items in cost of Manufactures . . . . .	..	47,360	.604	..	46,491	.633	..	45,492	.551
<b>Total</b> . . . . .	..	63,49,308	80.990	..	56,87,038	80.257	..	62,23,378	80.669
Selling Expenses . . . . .	..	2,95,904	3.774	..	2,90,917	3.966	..	2,96,877	3.848
Insurance . . . . .	..	61,402	.783	..	60,178	.684	..	61,970	.803
Rents and Taxes . . . . .	..	42,703	.162	..	14,365	.196	..	14,789	.192
Depreciation . . . . .	..	506,440	6.461	..	5,36,161	7.310	..	6,02,896	7.297
Interest on Workg. Capital . . . . .	..	3,95,671	5.047	..	3,14,465	4.237	..	2,86,562	3.714
Head Office Expenses . . . . .	..	2,18,207	2.783	..	2,42,127	3.300	..	2,65,225	3.477
Miscellaneous . . . . .	..	..	..	..	..	..	..	..	..
<b>Total</b> . . . . .	..	14,90,327	19.010	..	14,46,213	19.743	..	14,91,319	19.331
<b>Grand Total</b> . . . . .	..	78,39,635	100.000	..	73,35,251	100.000	..	77,14,697	100.000
<b>Total Saleable Paper</b> . . . . .	..	19,007	..	..	18,822	..	..	20,946	..

FORM V—(Qn. 47)—contd.  
Total Expenditure incurred on the Production of Paper—contd.

	1934-35.				1935-36.				1936-37.			
	Quantity.		Value.		Per cent.		Quantity.		Value.		Per cent.	
	Tons.	Ra.	Tons.	Ra.	Tons.	Ra.	Tons.	Ra.	Tons.	Ra.	Tons.	Ra.
<b>Primary Raw Materials—</b>												
Grass . . . . .	13,667	5,22,050	6,551	15,253	6,964	5,89,637	6,964	13,206	4,85,983	5,728	13,206	4,85,983
Bamboo . . . . .	15,156	2,98,356	3,744	19,063	4,902	4,15,063	4,902	31,424	5,85,904	6,904	31,424	5,85,904
Rags . . . . .	145	17,469	219	62	108	8,637	108	134	21,563	254	134	21,563
Hemp Ropes . . . . .	160	9,286	117	131	106	8,134	106	159	9,603	113	159	9,603
Waste Paper . . . . .	2,821	2,45,643	3,082	2,868	2,708	2,29,287	2,708	8,188	2,69,185	3,172	8,188	2,69,185
<b>Total</b>	31,949	10,92,804	13,713	37,207	14,773	12,50,808	14,773	48,111	13,72,238	16,171	48,111	13,72,238
<b>Purchased Pulp</b>												
	9,518	17,43,638	21,881	10,096	22,221	18,81,471	22,221	5,984	10,82,270	12,754	5,984	10,82,270
<b>Aux. Raw Materials—</b>												
China Clay . . . . .	2,368	91,167	1,144	2,435	992	83,977	992	2,340	72,961	860	2,340	72,961
Alum . . . . .	1,073	83,095	1,043	1,385	1,247	1,05,618	1,247	1,272	86,622	1,020	1,272	86,622
Roan . . . . .	411	1,31,753	1,658	509	1,805	1,52,807	1,805	532	1,36,914	1,612	532	1,36,914
Alkali . . . . .	15	2,261	928	19	3217	3,217	3217	17	2,274	927	17	2,274
Lime . . . . .	5,933	1,32,210	1,639	6,643	1,745	1,47,769	1,745	7,768	1,56,289	1,842	7,768	1,56,289
Salt . . . . .	2,995	87,696	473	3,038	591	50,011	591	3,387	44,542	525	3,387	44,542

## FORM V—(Qn. 47)—concl'd.

## Total Expenditure incurred on the Production of Paper—concl'd.

	1934-35.			1935-36.			1936-37.		
	Quantity.	Value.	Per cent.	Quantity.	Value.	Per cent.	Quantity.	Value.	Per cent.
	Tons.	Rs.		Tons.	Rs.		Tons.	Rs.	
Sulph. Acid	17	2,037		19	2,173		21	2,283	
Hyd. Acid	15	5,297		20	7,880		17	5,504	
Starch	4	1,095							
Glue	2	1,436	182	2	1,826	203	3	2,287	670
Sulphur	52	4,451		65	5,279		76	7,505	
Sodium Sulphide	1	96					6	1,028	
Salt Crude Cake							574	38,249	
Caustic Soda	675	1,89,637	2,804	1,122	2,67,164	3,155	1,791	4,03,399	4,754
Silicate of Soda	13	3,156		15	2,980		5	1,111	
Paperine	7	5,411		7	6,671		8	5,872	
Casein	8	6,570		10	6,704		11	4,891	
Bleaching Powder	113	15,892	1,118	26	3,148		94	10,775	1,340
Bewoid Size									
Pot. Ferro.									
Zinc Chloride									
Bleached Wax									
Dyes	26	58,032		26	56,497		(-10027)	5	
							(-3500)	106	
							(-2100)	223	
							33	90,665	
Total	13,327½	7,65,312	0.604	15,321	9,03,727	10.673	17,955	10,73,505	12.650
Convsn. Charges for Mfg. Bleach and Caustic	..	1,66,347	2.075	..	1,95,570	2.310	..	2,40,678	2.836

<b>Total Aux. Raw Materials</b>	9,30,659	11,479	..	10,00,997	12,083	..	13,14,183	15,486
Power and Fuel	3,23,573	4,060	..	3,55,112	4,202	..	6,28,750	6,231
Current Reprs. and Mntnce.	8,08,512	10,000	..	7,66,434	9,052	..	11,03,877	13,009
Mill Labour	8,05,677	10,110	..	8,37,972	9,898	..	7,93,009	9,845
Supervision and Estbl.	3,81,299	4,786	..	4,14,427	4,895	..	4,21,150	4,903
Packing	1,51,551	1,000	..	1,56,081	1,843	..	1,39,393	1,645
Any other items in cost of Manufactures	53,704	675	..	57,735	682	..	72,180	850
<b>Total</b>	63,51,417	79,704	..	68,20,037	80,549	..	68,27,240	82,454
<b>Selling Expenses</b>	3,06,830	3,850	..	3,28,938	3,886	..	3,95,107	4,691
Insurance	52,614	680	..	60,094	716	..	64,589	762
Rents and Taxes	16,927	212	..	22,413	266	..	25,401	300
Depreciation	6,88,120	8,636	..	6,50,292	7,680	..	6,43,864	7,587
Interest on Workg. Capital	2,82,216	3,642	..	2,86,977	3,354	..	1,76,801	2,084
Head Office Expenses	2,70,650	3,396	..	3,00,549	3,560	..	3,48,798	4,122
Miscellaneous	..	..	..	..	..	..	..	..
<b>Total</b>	16,17,377	20,286	..	16,46,923	19,451	..	16,58,620	19,646
<b>Grand Total</b>	79,68,794	100,000	..	84,66,960	100,000	..	84,85,860	100,000
<b>Total Saleable Paper</b>	21,645	..	..	23,462	..	..	23,652	..

## FORM VI—(Qn. 47.)

## Works Costs per ton of Finished Paper.

	1931-32.				1932-33.				1933-34.			
	Quantity.	Value.	Per cent.		Quantity.	Value.	Per cent.		Quantity.	Value.	Per cent.	
<b>Primary Raw Mat.—</b>												
	Tons.	Rs.			Tons.	Rs.			Tons.	Rs.		
Grass . . . . .	7963	33-446	8-108		6462	24-575	6-906		6500	26-342	7-152	
Bamboo . . . . .	8469	14-718	3-568		3785	10-416	2-673		5285	11-450	3-109	
Rags . . . . .	0061	1-257	305		0078	8-60	220		0125	1-117	803	
Hemp Ropes . . . . .	0233	2-846	569		0282	2-228	572		0239	1-850	502	
Waste Paper . . . . .	0888	9-766	2-368		0965	8-130	2-086		1284	11-000	2-987	
<b>Total</b> . . . . .	1-2714	61-538	21-529		1-1582	46-209	11-857		1-3483	51-759	14-053	
<b>Purchased Pulp</b> . . . . .	4881	88-797	21-529		5549	96-917	24-868		4569	83-357	23-632	
<b>Aux. Raw Mat.—</b>												
China Clay . . . . .	1448	7-407	1-765		1320	7-151	1-835		1365	5-732	1-556	
Alum . . . . .	0699	5-684	1-377		0679	6-035	1-549		0442	3-869	915	
Rosin . . . . .	0255	7-951	1-927		0226	7-746	1-988		0192	5-725	1-554	
Alkali . . . . .	0078	9-64	236		0032	4-71	121		0021	2-66	072	
Lime . . . . .	2180	6-814	1-652		2372	6-441	1-653		2542	5-662	1-537	
Salt . . . . .	1255	2-014	488		1277	2-244	576		1200	1-492	405	

10	-077	-800
124	1.122	-0

FORM VI—(Qn. 47)—contd.  
Works Costs per ton of Finished Paper—contd.

	1931-32.			1932-33.			1933-34.		
	Quantity.	Value.	Per cent.	Quantity.	Value.	Per cent.	Quantity.	Value.	Per cent.
	Tons.	Rs.		Tons.	Rs.		Tons.	Rs.	
Power and Fuel . . . . .	..	19,444	4.714	..	15,714	4.032	..	14,127	3.886
Current Rep. and Maintn. . . . .	..	43,671	10.589	..	36,694	9.416	..	38,067	10.333
Mill Labour . . . . .	..	42,072	10.200	..	40,856	10.484	..	37,663	10.226
Supervision and Establt. . . . .	..	18,981	4.602	..	17,924	4.600	..	17,513	4.755
Packing . . . . .	..	8,134	1.972	..	9,937	2.550	..	8,399	2.290
Any other Items in Cost of Manufacture . . . . .	..	2,493	.604	..	2,470	.633	..	2,029	.551
<b>Total</b> . . . . .	..	334,050	80.990	..	312,774	80.257	..	297,115	80.689
<b>Overhead Charges—</b>									
Selling Expenses . . . . .	..	15,568	3.774	..	15,456	3.966	..	14,173	3.848
Insurance . . . . .	..	3,231	.783	..	2,666	.684	..	2,959	.803
Rents and Taxes . . . . .	..	.688	.162	..	.763	.196	..	.707	.192
Depreciation . . . . .	..	26,645	6.461	..	23,436	7.310	..	26,873	7.297
Interest on Working Capital . . . . .	..	20,817	5.047	..	16,707	4.287	..	13,681	3.714
Head Office Expenses . . . . .	..	11,481	2.783	..	12,864	3.300	..	12,806	3.477
Miscellaneous . . . . .	..	..	..	..	..	..	..	..	..
<b>Total</b> . . . . .	..	78,410	19.010	..	76,942	19.745	..	71,198	19.331
<b>Grand Total</b> . . . . .	..	412,460	100.000	..	389,716	100.000	..	368,313	100.000
<b>Total Saleable Paper (Tons)</b> . . . . .	..	19,007	..	..	18,822	..	..	20,946	..



FORM VI—(Qn. 47)—contd.  
Works Costs per ton of Finished Paper—contd.

	1934-35.			1935-36.			1936-37.		
	Quantity.	Value.	Per cent.	Quantity.	Value.	Per cent.	Quantity.	Value.	Per cent.
	Tons.	Rs.		Tons.	Rs.		Tons.	Rs.	
<b>Primary Raw Mat.—</b>									
Grass . . . . .	6314	24,118	6.551	6501	25,131	6.964	5538	20,547	5.728
Bamboo . . . . .	7145	13,784	3.744	8262	17,891	4.902	13781	24,772	6.904
Rags . . . . .	0067	807	.219	0026	370	.103	0057	911	.254
Hemp Ropes . . . . .	0074	430	.117	0056	347	.096	0067	408	.113
Waste Paper . . . . .	1303	11,348	3.082	1150	9,773	2.708	1349	11,392	3.172
<b>Total</b>	14908	50,457	13.713	15995	53,312	14.773	20836	58,018	19.171
<b>Purchased Pulp</b>	4397	80,556	21.881	4303	80,192	22.221	2532	45,758	12.764
<b>Aux. Raw Mat.—</b>									
China Clay . . . . .	1094	4,212	1.144	1039	3,579	.992	0990	3,064	.860
Alum . . . . .	0496	3,839	1.043	0682	4,502	1.247	0537	3,662	1.020
Rosin . . . . .	0180	6,087	1.653	0217	6,513	1.805	0225	5,789	1.612
Alkali . . . . .	0007	104	.028	0008	137	.038	0008	96	.027
Lime . . . . .	2740	6,166	1.659	2931	6,298	1.745	3255	6,608	1.842
Salt . . . . .	1199	1,741	.473	1295	2,131	.591	1432	1,883	.555

FORM VI—(Qn. 47)—concl'd.  
Works Costs per ton of Finished Paper—concl'd.

	1934-35.				1935-36.				1936-37.			
	Quantity.	Value.	Per cent.	Quantity.	Value.	Per cent.	Quantity.	Value.	Per cent.			
	Tons.	Rs.		Tons.	Rs.		Tons.	Rs.				
Sulph. Acid	-6008	-094		-0008	-093		-0010	-096				
Hyd. Acid	-0007	-245		-0008	-336		-0007	-233				
Starch	-0002	-050		..	..		..	..				
Glue	-0001	-066	-182	-0001	-078	-203	-0001	-096	-670			
Sulphur	-0024	-206		-0028	-225		-0032	-318				
Sodium Sulph.	..	-004		..	..		-0002	-044				
Salt Crude Cake	..	..		..	..		-0243	1-618				
Caustic Soda	-0312	8-485	2-304	-0476	11-391	3-155	-0757	17-055	4-754			
Silicate of Soda	-0006	-146		-0006	-127		-0002	-047				
Paperine	-0003	-250		-0002	-281		-0003	-248				
Caustic Potash	..	..		..	..		..	..				
Casein	-0004	-304		-0004	-286		-0004	-217				
Bleaching Powder	-0052	-734	1-118	-0012	-134	-897	-0040	-456	1-340			
Zinc Chloride	..	..		..	..		..	-005				
Bewold Size	..	..		..	..		..	..				
Bleached Wax	..	..		..	..		..	-010				
Dyes	-0012	2-482		-0012	2-408		-0014	3-833				
Total	-6157	35-357	9-404	-6531	38-519	10-673	-7592	45-387	12-650			
Convn. Charges for Bleach and Caustic	..	7-539	2-075	..	8-335	2-310	..	10-176	2-836			
Total	..	42-496	11-679	..	46-854	12-983	..	55-563	15-486			

Power and Fuel . . . . .	14-949	4-060	..	15-165	4-202	..	22-356	6-231
Current Rep. and Mntnec. . . . .	40-125	10-900	..	32-667	9-062	..	46-672	13-009
Mill Labour . . . . .	37-222	10-110	..	35-716	9-809	..	33-528	9-845
Supervision and Estabtl. . . . .	17-616	4-786	..	17-664	4-895	..	17-606	4-983
Packing . . . . .	7-002	1-990	..	6-653	1-943	..	5-901	1-645
Any other Items in Cost of Manufacture . . . . .	2-481	675	..	2-461	-682	..	3-052	-850
<b>Total</b>	293-434	79-704	..	280-684	80-549	..	288-664	80-454
<b>Overhead Charges—</b>								
Selling Expenses . . . . .	14-177	3-850	..	14-023	3-896	..	16-832	4-691
Insurance . . . . .	2-431	-660	..	2-506	-716	..	2-731	-762
Rents and Taxes . . . . .	-782	-212	..	-956	-265	..	1-074	-300
Depreciation . . . . .	31-791	8-636	..	-27-716	7-680	..	27-222	7-587
Interest on Working Capital . . . . .	13-038	3-642	..	12-104	3-354	..	7-477	2-084
Head Office Expenses . . . . .	12-504	3-396	..	12-810	3-550	..	14-790	4-122
Miscellaneous . . . . .	..	..	..	..	..	..	..	..
<b>Total</b>	74-723	20-206	..	70-195	19-451	..	70-128	19-546
<b>Grand Total</b>	368-157	100-000	..	360-879	190-000	..	368-780	100-000
<b>Total Saleable Paper (Tons)</b>	21,645	..	..	23,462	..	..	23,662	..

(2). Letter No. T. P. M., dated the 10th February, 1938.

With reference to the evidence which we have tendered in answer to the questionnaire issued by the Board, we wish to supplement our reply to Question No. 22.

We omitted in our reply to make any mention of the Co-operative Credit Societies which were founded at each of our Mills some six years ago and which have been functioning satisfactorily since their inception. The affairs of these Societies are controlled by a Committee of management in each case composed of members of the labour force and clerical staff at the respective mills. Our Cost Accountant is Chairman of both Committees.

The satisfactory progress made by these Societies will be evident from their most recent statement of accounts, copies of which are enclosed herewith. The advantage of being able to obtain temporary financial assistance at a reasonable rate of interest is, we think, now fully appreciated and used to full advantage by our labour force.

As requested by the President of the Board, we are now pleased to enclose in triplicate, statements showing the cost of manufacturing bleached and unbleached grass pulp at No. 1 Mill and also bleached and unbleached bamboo pulp at both No. 1 and No. 2 Mills.

### TITAGHUR PAPER MILLS CO., LTD.

#### No. 1 MILL.

*Cost of Producing Unbleached Bamboo Pulp during the year ending March, 1937.*

	Quantity.	Value.	Cost per ton.	Percentage of Total Cost.
	Cwts.	Rs.	Rs.	
Material . . .	266,976	2,73,627	51.251	31.828
Caustic . . .	56,110	3,38,386	63.380	39.361
Sulphur . . .	990	5,364	1.005	.624
Sodium Sulphide . .	...	...	...	...
<b>Total</b> .	<b>324,076</b>	<b>6,17,377</b>	<b>115.636</b>	<b>71.813</b>
Labour and Supervision	...	17,175	3.217	1.998
Repairs and Maintenance	...	12,755	2.389	1.484
Power and Fuel . .	...	30,906	5.788	3.594
Sundries . . .	...	2,845	.533	.331
<b>Total Mill Cost</b> .	<b>...</b>	<b>6,81,058</b>	<b>127.563</b>	<b>79.220</b>
<b>Overhead Charges—</b>				
Insurance . . .	...	8,140	1.525	.947
Rents and Taxes . .	...	3,203	.600	.373
Depreciation . . .	...	81,139	15.197	9.438
Interest on Working Capital . . .	...	22,289	4.175	2.593
Head Office Expenses .	...	44,079	8.256	5.127
Miscellaneous . . .	...	19,793	3.707	2.302
<b>Total</b> .	<b>...</b>	<b>1,78,643</b>	<b>33.460</b>	<b>20.780</b>
<b>Grand Total</b> .	<b>...</b>	<b>8,59,701</b>	<b>161.023</b>	<b>100.000</b>
<b>Production</b> . . .	<b>(Tons)</b>	<b>5,339</b>		

*Cost of Producing Bleached Bamboo Pulp during the year ending March, 1937.*

	Quantity.	Value.	Cost per ton.	Percentage of Total Cost.
	Tons.	Rs.	Rs.	
Unbleached Pulp . . .	5,339	8,59,701	161·023	82·959
Bleach . . .	...	62,354	11·678	6·016
<b>Total</b> .	<b>5,339</b>	<b>9,22,055</b>	<b>172·701</b>	<b>88·975</b>
Labour and Supervision	...	6,765	1·267	·653
Repairs and Maintenance	...	3,801	·712	·367
Power and Fuel . . .	...	7,114	1·333	·687
Sundries . . .	...	7,245	1·357	·699
<b>Total Mill Cost</b> .	<b>...</b>	<b>9,46,980</b>	<b>177·370</b>	<b>91·381</b>
<i>Overhead Charges—</i>				
Insurance . . .	...	4,070	·762	·393
Rents and Taxes . . .	...	1,602	·300	·154
Depreciation . . .	...	40,569	7·599	3·915
Interest on Working Capital . . .	...	11,144	2·087	1·075
Head Office Expenses . . .	...	22,039	4·128	2·127
Miscellaneous . . .	...	9,897	1·854	·955
<b>Total</b> .	<b>...</b>	<b>89,321</b>	<b>16·730</b>	<b>8·619</b>
<b>Grand Total</b> .	<b>...</b>	<b>10,36,301</b>	<b>194·100</b>	<b>100·000</b>
<b>Production</b>	<b>(Tons)</b>	<b>5,339</b>		

*Cost of Producing Unbleached Grass Pulp during the year ending March, 1937.*

	Quantity.	Value.	Cost per ton.	Percentage of Total Cost.
	Cwts.	Rs.	Rs.	
Materials . . .	249,056	4,85,983	92·921	51·227
Caustic . . .	34,919	2,11,628	40·464	22·308
<b>Total</b> .	<b>283,975</b>	<b>6,97,611</b>	<b>133·385</b>	<b>73·535</b>
Labour and Supervision	...	34,590	6·615	3·647
Repairs and Maintenance	...	9,008	1·723	·950
Power and Fuel . . .	...	30,323	5·798	3·196
Sundries . . .	...	2,137	·409	·226
<b>Total Mill Cost</b> .	<b>...</b>	<b>7,73,669</b>	<b>147·930</b>	<b>81·554</b>

*Cost of Producing Unbleached Grass Pulp during the year ending March, 1937—contd.*

	Quantity.	Value.	Cost per ton.	Percentage of Total Cost.
	Cwts.	Rs.	Rs.	
<i>Overhead Charges—</i>				
Insurance . . .	...	7,974	1·525	·841
Rents and Taxes . . .	...	3,138	·600	·331
Depreciation . . .	...	79,482	15·197	8·378
Interest on Working Capital . . .	...	21,833	4·174	2·301
Head Office Expenses . . .	...	43,180	8·256	4·551
Miscellaneous . . .	...	19,389	3·708	2·044
Total . . .	...	1,74,996	33·460	18·446
Grand Total . . .	...	9,48,665	181·390	100·000
Production . . .	(Tons)	5,230		

*Cost of Producing Bleached Grass Pulp during the year ending March, 1937.*

	Quantity.	Value.	Cost per ton.	Percentage of Total Cost.
	Cwts.	Rs.	Rs.	
Unbleached Pulp . . .	5,230	9,48,665	181·390	83·858
Bleach . . . . . (2,144,879 lbs.)		63,457	12·133	5·609
Total . . .	...	10,12,122	193·523	89·467
Labour and Supervision . . .	...	8,296	1·586	·733
Repairs and Maintenance . . .	...	4,700	·898	·415
Power and Fuel . . .	...	10,523	2·012	·930
Sundries . . .	...	8,145	1·558	·721
Total Mill Cost . . .	...	10,43,786	199·577	92·266
<i>Overhead Charges—</i>				
Insurance . . .	...	3,987	·762	·352
Rents and Taxes . . .	...	1,569	·300	·139
Depreciation . . .	...	39,741	7·599	3·513
Interest on Working Capital . . .	...	10,917	2·088	·965
Head Office Expenses . . .	...	21,589	4·128	1·908
Miscellaneous . . .	...	9,695	1·853	·857
Total . . .	...	87,498	16·730	7·734
Grand Total . . .	...	11,31,284	216·307	100·000
Production . . .	(Tons)	5,230		

## No. 2 MILL.

*Cost of Producing Unbleached Bamboo Pulp during the year ending March, 1937.*

—	Quantity.	Value.	Cost per ton.	Percentage of Total Cost.
	Cwts.	Rs.	Rs.	
Material . . .	308,055·000	3,12,352	50·697	31·756
Caustic . . .	58,229·590	3,50,962	56·964	35·682
Sulphur . . .	487·204	1,807	·293	·184
Sodi. Sulphide . .	3,544·722	32,574	5·287	3·312
Total	370,316·516	6,97,695	113·241	70·934
Labour and Supervision	...	19,469	3·160	1·980
Repairs and Maintenance	...	15,279	2·480	1·553
Power and Fuel . .	...	40,839	6·630	4·153
Sundries . . .	...	4,119	·670	·420
Total Mill Cost	...	7,77,401	126·181	79·040
<i>Overhead Charges—</i>				
Insurance . . .	...	9,393	1·525	·955
Rents and Taxes . .	...	3,697	·600	·376
Depreciation . . .	...	93,634	15·198	9·520
Interest on Working Capital . . .	...	25,721	4·175	2·615
Head Office Expenses .	...	50,866	8·256	5·172
Miscellaneous . . .	...	22,841	3·706	2·322
Total	...	2,06,152	33·460	20·960
Grand Total	...	9,83,553	159·641	100·000
Production . . .	(Tons)	6,161		

*Cost of Producing Bleached Bamboo Pulp during the year ending March, 1937.*

—	Quantity.	Value.	Cost per ton.	Percentage of Total Cost.
	Tons.	Rs.	Rs.	
Unbleached Pulp . .	6,168	9,84,670	159·641	82·282
Bleach . . .	...	79,153	12·833	6·615
Total	6,168	10,63,823	172·474	88·897
Labour and Supervision	...	10,444	1·693	·873
Repairs and Maintenance	...	6,500	1·054	·542
Power and Fuel . .	...	5,424	·880	·454
Sundries . . .	...	7,420	1·203	·620
Total Mill Cost	...	10,93,616	177·304	91·386

*Cost of Producing Bleached Bamboo Pulp during the year ending March, 1937—contd.*

	Quantity.	Value.	Cost per ton.	Percentage of Total Cost.
	Tons.	Rs.	Rs.	
<i>Overhead Charges—</i>				
Insurance . . . . .	...	4,698	762	393
Rents and Taxes . . . . .	...	1,848	300	155
Depreciation . . . . .	...	46,819	7,591	3,913
Interest on Working Capital . . . . .	...	12,861	2,085	1,074
Head Office Expenses . . . . .	...	25,434	4,123	2,125
Miscellaneous . . . . .	...	11,421	1,851	954
<b>Total</b> . . . . .	...	<b>1,03,081</b>	<b>16,712</b>	<b>8,614</b>
<b>Grand Total</b> . . . . .	...	<b>11,96,697</b>	<b>194,016</b>	<b>100,000</b>
<b>Production</b> . . . . .	(Tons)	<b>6,168</b>		

(3) *Comparative Statement of Rail and Steamer Freights of Paper from Calcutta to various Ports submitted by the Titaghur Paper Mills Company, Limited, Calcutta, handed in on the 10th February, 1938.*

Rail freight from Mills.					Steamer freight	Approximate
Destination.	Pies per lb.	Rs. per ton.			per ton of 50 cubic feet.	Cost. Pies per lb.
		Rs.	A.	P.	Rs. A.	
Madras . . .	2-09	24	6	1-6	12 0	1-02
Bombay . . .	2-33	27	2	11-2	12 0	1-02
Karachi . . .	5-93	62	14	11-2	14 0	1-02
Cochin . . .	3-69	43	0	9-6	18 8	1-58
Tuticorin . .	4-47	52	2	4-8	17 0	1-45
Mangalore . .	4-04	47	2	1-6	18 8	1-58
Calicut . . .	4-04	47	2	1-6	18 8	1-58

(4) *Letter No. T. P. M., dated the 17th February 1938.*

At the oral examination of this company held on the 10th instant, and at a meeting which the Board had with representatives of certain mills, we were asked to furnish further information on certain points and are now pleased to reply as follows:—

*Imported Woodpulp.*

With reference to the statement submitted by us, in our written replies, in regard to Question No. 12, we were asked to give in addition to the average c.i.f. price of woodpulp imports the rupee prices delivered at our mills. We now enclose herewith a statement in triplicate giving this information.

*Trend of prices.*

In discussing this subject, the President asked us if we could furnish him with particulars of the trend of woodpulp prices, of different brands, throughout the year 1937, and a statement giving the prices which have prevailed during that year in respect of Easy Bleaching Sulphite, Strong Sulphite, Kraft and Dry Mechanical pulps, is enclosed herewith in triplicate.



In connection with the same subject, we were asked if we could furnish particulars showing the trend of prices of newsprint during the same period. Our record of prices of this quality of paper is not very full, but we would submit the following for the information of the Board:—

	£	s.	d.	
October, 1936 . . . . .	10	12	6	(German).
December, 1936 . . . . .	14	7	6	(Austrian).
July, 1937 . . . . .	18	10	0	(German).
September, 1937 . . . . .	17	7	6	(German).
January, 1938 . . . . .	12	0	0	(German).
February, 1938 . . . . .	11	5	0	(German & Austrian)

#### *Recovery of Chemicals.*

In connection with the percentage of recovery of Caustic Soda obtained by us, we were asked to furnish details of the actual savings which we could effect if the efficiency and capacity of our plants were such as to give us a 75 per cent. recovery. With a 75 per cent. recovery we have calculated that the net savings would be as follows:—

	Per month.
	Rs.
No. 1 Mill . . . . .	8,269.75
No. 2 Mill . . . . .	4,845.00
Total . . . . .	13,114.75
Total saving per annum . . . . .	1,57,377

In our reply to Question No. 48 this saving was taken at the round figure of Rs. 1,50,000.

#### *Protective duty on wood pulp—(Qn. 27).*

In our written reply to the above question, we suggested that the Board should investigate the matter of the protective duty on pulp applying to all qualities of woodpulp including mechanical woodpulp and kraft pulp, and we thought that it might be advisable for the Board to recommend that mechanical woodpulp and kraft pulp should be allowed to enter the country free of the specific duty at present imposed. At our oral evidence, it was pointed out to us that if the duty were to be removed from mechanical woodpulp and kraft pulp, it would be necessary to allow papers made from less than 70 per cent. mechanical woodpulp to be imported paying only the ordinary revenue duty. On reconsideration therefore, we think that in all the circumstances of the case, it would be better to leave the woodpulp duties to operate as they do at present, i.e., to apply the duty to all classes of woodpulp without exception.

#### *Yield from raw materials into finished paper.*

The President asked us to prepare a statement in respect of the year 1936-37 on the same basis as that shewn in Table XLI and included in the report of the Indian Tariff Board, 1931, page 70. That statement in triplicate is now enclosed.

#### *Bleached and Unbleached pulp costs.*

As requested, we are now pleased to enclose three statements in triplicate showing the cost per ton of Bleached and Unbleached bamboo pulp at both mills and Bleached and Unbleached grass pulp at No. 1 Mill for the three years 1934-35, 1935-36 and 1936-37.

## ANNEXURE C—(Qn. 12.)

## Imports of Woodpulp.

Year.	E. B. Sulphite.		Strong Sulphite.		Kraft.		Other Sorts.		Total.	Country of Origin.
	Tons.	Average Price c.i.f.	Tons.	Average Price c.i.f.	Tons.	Average Price c.i.f.	Tons.	Average Price c.i.f.		
1931-32	4,400	£13-0-1 Rs. 239-15-2	2,750	£12-3-6 Rs. 222-14-4	..	£9-17-1 Rs. 191-15-2	30	£11-14-9 Rs. 217-1-0	7,180	Scandinavia.
	800		500		..		..		1,300	U. S. A.
	2,400		..		..		50		2,450	Czecho-Slovakia.
	..		..		25		..		25	Finland.
	..	Rs. 239-15-2	..	Rs. 222-14-4	..	Rs. 191-15-2	50	Rs. 217-1-0	50	Portugal.
Ex. 1s. 6d.	..		..		..		..		..	..
1932-33	7,600	..	3,250	..	25	..	180	..	11,005	..
Ex. 1s. 6d.	4,300	£12-8-11 Rs. 225-6-0	3,250	£9-19-4 Rs. 192-8-7	..	..	50	£12-3-2 Rs. 221-8-11	7,600	Scandinavia.
	..	..	..	..	..	..	..	..	..	..
	4,300		3,250		..		50		7,600	..
1933-34	4,700	£9-19-11 Rs. 193-0-9	2,500	£9-3-3 Rs. 192-8-3	50	£8-3-0 Rs. 160-8-8	150	£12-6-4 Rs. 224-8-0	7,400	Scandinavia.
	100		100		..		..		200	Lithuania.
	1,050		..		..		..		1,050	U. S. A.
	..		..		..		..		..	..
Ex. 1s. 6d.	5,850	..	2,600	..	50	..	180	..	8,650	..

1934-35	4,725	{ £10-2-4	{ 2,300	{ £9-9-1	{ ..	{ ..	{ ..	{ 250	{ £12-10-0	{ 7,275	Scandinavia.
	2,300	Rs. 194-12-1	..	Rs. 185-15-5	..	..	..	..	Rs. 232-5-4	2,300	U. S. A.
Ex. 1s. 6½d.	..	..	..	..	..	..	..	..	..	..	..
	7,025	..	2,300	..	..	..	..	250	..	9,575	
1935-36	5,275	{ £10-6-6	{ 2,100	{ £10-4-10	{ 50	{ ..	{ ..	{ ..	{ ..	{ 7,425	Scandinavia.
	2,450	Rs. 197-8-3	..	Rs. 186-6-7	..	..	..	..	..	2,450	U. S. A.
Ex. 1s. 6½d.	..	..	..	..	..	..	..	..	..	..	Czecho-Slovakia.
	7,950	..	2,100	..	50	..	..	..	..	10,100	
1936-37	3,700	{ £9-13-7	{ 1,800	{ £9-8-10	{ 40	{ ..	{ ..	{ ..	{ £14-8-7	{ 5,540	Scandinavia.
	1,050	Rs. 189-11-2	..	Rs. 186-8-9	..	..	..	..	Rs. 226-2-9	1,075	U. S. A.
Ex. 1s. 6½d.	..	..	..	..	..	..	..	..	..	..	Portugal.
	4,750	..	1,800	..	40	..	..	45	..	6,635	

(c) Port of Importation—Calcutta.

(f) Landing Charge—Rs. 2-4 per ton.

(g) Transport Charges—Rs. 1-12 per ton.

N.B.—The rupees figures are delivered MHI prices.

## Summary of Wood Pulp prices as shown by the Paper Trade Review.

Date.	H. B. Sulphite. c.i.f.c. U. K. East Coast Ports.	Strong Sulphite c.i.f.c. U. K. East Coast Ports.	Kraft c.i.f.c. U. K. East Coast Ports.	Dry Mechanical c.i.f.c. U. K. East Coast Ports.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1st January 1937 . . .	11 0 0	10 0 0	9 0 0	5 0 0
8th January 1937 . . .	11 10 0	10 10 0	9 0 0	5 10 0
15th January 1937 . . .	11 10 0	10 10 0	9 0 0	6 5 0
20th January 1937 . . .	12 5 0	10 15 0	9 10 0	6 5 0
5th February 1937 . . .	12 10 0	11 5 0	11 0 0	6 5 0
10th February 1937 . . .	13 10 0	12 15 0	11 10 0	6 5 0
20th February 1937 . . .	14 0 0	12 15 0	11 10 0	6 5 0
5th March 1937 . . .	15 0 0	14 0 0	13 10 0	7 0 0
2nd April 1937 . . .	15 10 0	14 10 0	13 10 0	7 0 0
16th April 1937 . . .	16 0 0	15 0 0	13 10 0	7 0 0
30th April 1937 . . .	16 10 0	15 0 0	13 10 0	7 0 0
14th May 1937 . . .	17 0 0	16 0 0	13 10 0	7 0 0
28th May 1937 . . .	17 10 0	16 10 0	13 10 0	7 0 0
11th June 1937 . . .	17 10 0	16 10 0	13 10 0	8 17 6
25th June 1937 . . .	17 10 0	16 10 0	13 10 0	8 17 6
17th September 1937 . . .	18 10 0	16 10 0	13 10 0	8 17 6
24th September 1937 . . .	17 10 0	16 10 0	13 10 0	8 17 6
22nd October 1937 . . .	17 10 0	16 10 0	13 10 0	8 17 6
17th December 1937 . . .	16 10 0	16 0 0	13 10 0	8 17 6
31st December 1937 . . .	16 0 0	15 10 0	14 0 0 11 0 0 forward.	8 17 6

Scandinavian.

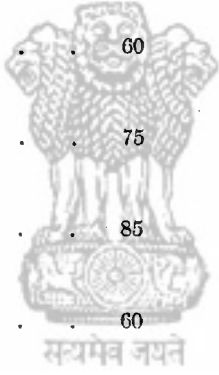
Latest Cabled Advices.	15 0 0	14 5 0	Scandinavian.
	c.i.f. Cal.	c.i.f. Cal.	
	14 10 0	13 10 0	U. S. A.
	c.i.f. Cal.	c.i.f. Cal.	

To Scandinavian c.i.f. U. K. prices add approximately 25s. 0d. to 30s. 0d. for freight, insurances, etc., to give prices c.i.f. Indian ports.

## TITAGHUR PAPER MILLS CO., LTD.

## YIELD STATEMENT.

1936-37.

Materials.	Standard Ratio of Yield.	Air dry Weight of Materials used.	Paper made.
	Per cent.	Tons.	Tons.
Bamboo . . . .	33	31,424	10,370
Grass . . . .	35	13,206	4,622
Rags . . . .	60	134	80
Ropes . . . .	60	159	95
Waste Paper . . . .	75	3,054	2,290
Woodpulp . . . .	85	5,984	5,087
China Clay . . . .	60	2,474	1,485
			
Total Estimated Paper Production . . . .	...	...	24,029
Actual Paper Production . . . .	...	...	23,652
Loss . . . .	...	...	377

NOTE.—Compared to the standard ratios of yield stated by us in 1931, the only alteration is in regard to bamboo which we have taken at 33 per cent., this figure in our opinion being a closer approximation to the actual yield obtainable.

## TITAGHUR PAPER MILLS CO., LTD.

No. 1 MILL.

*Bamboo Pulp.*

	1934-35.		1935-36.		1936-37.	
	Un-bleached.	Bleached.	Un-bleached.	Bleached.	Un-bleached.	Bleached.
	Cost per Ton.	Cost per Ton.	Cost per Ton.	Cost per Ton.	Cost per Ton.	Cost per Ton.
Material . . . . .	Nil.		51-127		51-251	
Caustic . . . . .			74-268		63-380	
Sulphur . . . . .			1-181		1-005	
Unbleached Pulp . . . . .				209-751		177-753
Bleach . . . . .				12-428		11-678
<b>Total</b> . . . . .			126-576	222-179	115-636	189-431
Labour and Supervision . . . . .			4-808	1-144	3-217	1-267
Repairs and Maintenance . . . . .			2-100	1-833	2-389	712
Power and Fuel . . . . .			10-570	1-524	5-788	1-333
Sundries . . . . .			1-476	2-922	533	1-357
<b>Total Mill Cost</b> . . . . .			145-526	229-602	127-563	194-100
<i>Overhead Charges :</i>						
Insurance . . . . .			2-675		2-287	
Rents and Taxes . . . . .			988		900	
Depreciation . . . . .			28-662		22-796	
Interest on Working Capital . . . . .			12-516		6-262	
Head Office Expenses . . . . .			13-247		12-384	
Miscellaneous . . . . .			6-137		5-561	
<b>Total</b> . . . . .			64-225	229-602	50-190	194-100
<b>GRAND TOTAL</b> . . . . .			209-751	229-602	177-753	194-100
<b>PRODUCTION (Tons)</b> . . . . .			939		5,339	

## TITAGHUR PAPER MILLS CO., LTD.

No. 2 MILL.

*Bamboo Pulp.*

	1934-35.		1935-36.		1936-37.	
	Un-bleached	Bleached.	Un-bleached.	Bleached.	Un-bleached.	Bleached.
	Cost per Ton.	Cost per Ton.	Cost per Ton.	Cost per Ton.	Cost per Ton.	Cost per Ton.
Material . . . . .	54-315		51-576		50-697	
Caustic . . . . .	51-783		50-537		56-964	
Sulphur . . . . .	-705		-682		-293	
Sodj. Sulphide . . . . .	-015				5-287	
Unbleached Pulp . . . . .		195-915		179-554		176-353
Bleach . . . . .		12-166		11-495		12-833
<b>Total</b> . . . . .	<b>106-818</b>	<b>208-081</b>	<b>102-745</b>	<b>191-049</b>	<b>113-241</b>	<b>189-186</b>
Labour and Supervision . . . . .	3-330	1-668	2-330	1-456	3-160	1-693
Repairs and Maintenance . . . . .	4-267	1-159	3-663	1-081	2-480	1-054
Power and Fuel . . . . .	5-410	-882	4-998	-413	6-680	-880
Sundries . . . . .	1-207	2-266	1-093	1-832	-670	1-203
<b>Total Mill Cost</b> . . . . .	<b>121-032</b>	<b>213-556</b>	<b>115-329</b>	<b>195-831</b>	<b>126-181</b>	<b>194-016</b>
<i>Overhead Charges :</i>						
Insurance . . . . .	2-730		2-675		2-267	
Rents and Taxes . . . . .	-878		-988		-900	
Depreciation . . . . .	35-700		28-662		22-797	
Interest on Working Capital . . . . .	14-642		12-516		6-262	
Head Office Expenses . . . . .	14-041		13-247		12-385	
Miscellaneous . . . . .	6-892		6-137		5-561	
<b>Total</b> . . . . .	<b>74-883</b>	<b>213-556</b>	<b>64-225</b>	<b>195-831</b>	<b>50-192</b>	<b>194-016</b>
<b>GRAND TOTAL</b> . . . . .	<b>195-915</b>	<b>218-556</b>	<b>179-554</b>	<b>195-831</b>	<b>176-373</b>	<b>194-016</b>
<b>PRODUCTION (Tons)</b> . . . . .	<b>5,790</b>		<b>6,467</b>		<b>6,168</b>	

## HITAGHUR PAPER MILLS CO., LTD.

No. 1 MILL.

Grass Pulp.

	1934-35.		1935-36.		1936-37.	
	Un-bleached.	Bleached.	Un-bleached.	Bleached.	Un-bleached.	Bleached.
	Cost per Ton.	Cost per Ton.	Cost per Ton.	Cost per Ton.	Cost per Ton.	Cost per Ton.
Material . . . . .	101-033		100-438		92-921	
Caustic . . . . .	42-018		43-318		40-464	
Unbleached Pulp . . . . .		239-005		225-823		198-120
Bleach . . . . .		14-242		12-146		12-133
<b>Total . . . . .</b>	<b>143-951</b>	<b>253-247</b>	<b>143-756</b>	<b>237-969</b>	<b>133-385</b>	<b>210-253</b>
Labour and Supervision . . . . .	7-176	0-41	6-094	1-766	6-615	1-586
Repairs and Maintenance . . . . .	3-665	895	2-635	1-374	1-723	898
Power and Fuel . . . . .	7-189	1-120	7-216	2-276	5-798	2-012
Sundries . . . . .	2-141	850	1-897	4-870	409	1-558
<b>Total Mill Cost . . . . .</b>	<b>164-122</b>	<b>256-753</b>	<b>161-598</b>	<b>248-755</b>	<b>147-930</b>	<b>216-307</b>
<b>Overhead Charges :</b>						
Insurance . . . . .	2-730		2-675		2-237	
Rents and Taxes . . . . .	878		088		900	
Depreciation . . . . .	35-700		28-662		22-796	
Interest on Working Capital . . . . .	14-642		12-516		6-232	
Head Office Expenses . . . . .	14-041		13-247		12-384	
Miscellaneous . . . . .	6-892		6-137		5-561	
<b>Total . . . . .</b>	<b>74-883</b>	<b>256-753</b>	<b>64-225</b>	<b>248-755</b>	<b>50-190</b>	<b>216-307</b>
<b>GRAND TOTAL . . . . .</b>	<b>239-005</b>	<b>256-753</b>	<b>225-823</b>	<b>248-755</b>	<b>198-120</b>	<b>216-307</b>
<b>PRODUCTION (Tons)</b>	<b>5,532</b>		<b>6,076</b>		<b>5,230</b>	



(5) Letter No. 220, dated the 18th February, 1938, from the Tariff Board, to the Titaghur Paper Mills Co., Ltd., Calcutta.

With reference to your letter dated the 10th February, 1938, I am directed to request you to be so good as to furnish the Tariff Board with information on the following points:—

- (1) Whether you have any proposal for the improved manufacture of grass pulp in your mill.
- (2) Whether you think that the cost of manufacture of grass pulp can be reduced below the figure for the same already given by you.
- (3) Whether you could give the approximate quantity separately of bamboo and grass pulp upto the end of December, 1937, in continuation of the figures already supplied by you.
- (4) Whether you think that in future the proportion of the grass pulp to bamboo is likely to be reduced.

(6) Letter No. B. 209—38, dated the 21st February, 1938.

With reference to the Statement (Annexure "D") of Imported prices, given by us in reply to Question No. 28, we understand these differ from those submitted by the Importers and the Calcutta Paper Traders Association.

In this connection we would refer you to our reply to Question No. 32, where we had stated that paper from abroad is imported in many qualities and in different packings from various countries, that the prices vary from time to time, due to various reasons, and that in consequence the Indian Mills' prices have to be fixed in relation to the lowest prevailing price of imported paper.

We now enclose herewith various quotations in original, dating from 1931 to 1937, as detailed in the attached list, in support of the prices submitted by us in reply to Question No. 28, by which you will see that some of the prices quoted are even lower than the prices given in our reply.

*List of Quotations enclosed.*

Name of Exporting Firm.	Date of Quotation.	Quality.	Price per ton c.i.f. Indian Port.
			£ s. d.
Herman Schultz, Oslo (Norway)	21st May 1931 . . .	Cream Laid . . .	22 10 0
Johann Heinrich Poppe, Hamburg (Germany).	5th August 1931 . . .	Ditto . . .	23 0 0
Ditto . . .	17th November 1931 . . .	Azure Laid . . .	24 17 6
Ditto . . .	17th June 1931 . . .	White Dr. Cartidge . . .	21 5 0
Ditto . . .	30th November 1932 . . .	White Printing . . .	19 7 6
Ditto . . .	30th November 1932 . . .	Azure Laid . . .	21 0 0
Ditto . . .	30th November 1932 . . .	Cream Laid . . .	18 15 0
A. Johnson & Co. (London), Ltd., London (England).	29th March 1933 . . .	White Bank . . .	21 0 0
H. Reeve Angel & Co., Gothenburg (Sweden).	18th January 1934 . . .	Ditto . . .	20 0 0
Johann Heinrich Poppe, Hamburg (Germany).	8th August 1934 . . .	Ditto . . .	19 10 0
Ditto . . .	8th August 1934 . . .	White Printing . . .	19 10 0

*List of Quotations enclosed—contd.*

Name of Exporting Firm.	Date of Quotation.	Quality.	Price per ton c.i.f. Indian Port.
			£ s. d.
Johann Heinrich Poppe Hamburg (Germany).	27th June 1934 . .	Cream Laid . . .	20 0 0
Ditto . . .	27th June 1934 . .	White Dr. Cartridge . .	20 15 0
Edward Wilkening, Hamburg (Ger- many).	13th June 1935 . .	White Printing . . .	16 15 0
Ditto . . .	5th June 1935 . .	Cream Laid . . .	18 10 0
Ditto . . .	5th June 1935 . .	Azure Laid . . .	22 5 0
H. Reeve Angel & Co., Gothenburg (Sweden).	9th May 1935 . .	White Bank . . .	19 10 0
Ditto . . .	6th June 1935 . .	White Dr. Cartridge . .	19 10 0
K. Paul, Calcutta . . .	1st August 1936 . .	White Printing . . .	15 10 0
L. A. Bund, Bombay . . .	16th July 1936 . .	Cream Laid . . .	17 0 0
John Dickinson & Co., Ltd., London	11th April 1936 . .	Ditto . . .	18 7 6
Edward Wilkening, Hamburg (Ger- many).	18th September 1936	White Printing . . .	16 10 0
Ditto . . .	16th September 1936 .	White Bank . . .	17 10 0
J. Jacobi & Co., Hamburg (Germany)	13th October 1936 . .	Ditto . . .	20 5 0
Ditto . . .	15th September 1936 .	Azure Laid . . .	20 15 0

(7) *Letter No. B. 209—38/146, dated the 23rd February, 1938.*

We have to acknowledge receipt of your letter of the 18th instant—No. 220, in which you ask for further information on certain points, and are pleased to reply as follows:—

1. We have no scheme in hand at present to alter the actual process for the manufacture of pulp from grass at our mill. It is our intention, however, eventually, to replace the present grass digestion plant by a new plant to be erected in another position in the mill. This scheme is one which we are afraid must be postponed until we are able to see what effect the expected internal competition will have on our finances. As the Board is aware, we have under consideration at present the installation of additional soda recovery plants at both mills, and these will receive preference to any scheme for the replacement of our grass digestion plant.

2. In the supplementary replies given in our letter on 17th instant, we stated that with our recovery plants capable of giving us a 75 per cent. recovery of the total caustic used in our mills, we would be able to reduce our total costs by Rs. 1,57,000 per annum. Part of this saving will of course be reflected in a reduction of the cost of grass pulp manufactured. On the other hand, the price of caustic soda which may still require to be purchased will show an increase over the rates which prevailed in 1936-37 and the net saving on grass pulp manufactured is estimated at Rs. 4.5 per ton. In addition, it would be possible no doubt, with the installation of a new modern digester plant to effect certain economies in steam consumption, but as we have already indicated, some considerable time must elapse before we can undertake the installation of this expensive plant.

On the other hand, the proposed increase in railway freights to which we refer later, will result in raising the cost of grass pulp by over Rs. 3.5 per ton.

3. The quantity of unbleached bamboo and grass pulps manufactured at our mills from 1st April to 31st December, 1937, was as follows:—

	Tons.
No. 1 Mill—Bamboo . . . . .	3,644.8
No. 2 Mill— „ . . . . .	6,358.7
	<hr/> 10,003.5 <hr/>
No. 1 Mill—Grass . . . . .	4,027.8

4. It is not our intention to reduce the quantity of grass pulp manufactured in our mills. On the other hand, we anticipate being able to effect a certain increase in the total quantity of bamboo pulp produced so that there will be a certain reduction in the proportion of grass pulp to the total production of indigenous pulps.

We should like to take this opportunity to refer to the reply given by the Indian Paper Makers Association to Question No. 10. In that reply, the Association stated *inter alia* that with the exception of coal, the interests represented by the Association did not consider the present rates of railway freight had caused any special hardship to the Paper Industry. The Association, however, expressed the hope that the railways would continue to bear in mind the great importance, from the point of view of the development of the industry, of low freight rates on the raw materials consumed by the mills. Since that reply was submitted, we have received an intimation from the East Indian Railway that with effect from the 1st of April, 1938, the freight rates on grass traffic to our mills from Sahibgunge and Mirzachowki *via* Naihati, will be increased by As. 1-1 pic per maund and As. 1-2 pies per maund respectively. As the Board is aware from the evidence which we have tendered, we anticipate that we shall obtain practically our full requirements of grass from these areas. The proposed increases in freight rates will therefore result in raising the cost of grass pulp as indicated in our reply to the second question.

We find a certain discrepancy in Form III as originally submitted by us in regard to the quantity in tons of each material used in the production of bleached pulp. We now beg to enclose, in triplicate, that form showing the correct figures. The cost per ton of production and the percentage of the total cost remain unchanged.

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FORM III.  
Cost per ton of Bleached Pulp.

	1931-32.				1932-33.				1933-34.			
	Quantity.	Cost per ton.	Per cent. of Cost.	Quantity.	Cost per ton.	Per cent. of Cost.	Quantity.	Cost per ton.	Quantity.	Cost per ton.	Per cent. of Cost.	
<b>Primary Raw Materials—</b>	Tons.	Rs.		Tons.	Rs.		Tons.	Rs.	Tons.	Rs.		
Grass . . . . .	1-756	73-763	24-824	1-464	55-633	20-786		1-278	1-278	51-808	22-176	
Bamboo . . . . .	-765	32-401	10-704	-860	23-601	8-810		1-039	1-039	22-520	9-039	
Rags . . . . .	-014	2-773	-014	-018	1-949	-728		-025	-025	2-196	-940	
Hemp Ropes . . . . .	-052	5-175	1-706	-064	5-047	1-884		-017	-017	3-637	1-557	
<b>TOTAL</b>	2-587	114-172	37-645	2-406	86-280	32-208		2-389	2-389	80-161	34-312	
<b>Auxiliary Raw Materials—</b>												
<b>Pulp Making Materials—</b>												
Lime . . . . .	-320	9-988	3-204	-321	8-733	3-260		-346	-346	7-703	3-237	
Salt . . . . .	-037	1-554	-512	-101	1-780	-665		-083	-083	1-028	-440	
Sulphuric Acid . . . . .	-003	-362		-003	-345			-002	-002	-148		
Hydraulic Acid . . . . .	-002	-535		-002	-590			-002	-002	-460		
Sulphur . . . . .	-001	-182		-003	-465			-004	-004	-473		
Sodium Sulphide . . . . .	-002	-330	-498	..	-023	-553		..	..	..	-556	
Salt Cake . . . . .	..	..		-001	-024			..	..	-017		
Silicate of Soda . . . . .	..	-103		..	-028			..	..	-202		
Caustic Soda . . . . .	-060	16-108	5-312	-024	7-400	2-762		-048	-048	14-051	6-015	
Conversion Charges . . . . .	-485	29-102	9-616	-455	19-834	7-240		-485	-485	24-082	10-308	
<b>TOTAL</b>	..	4-872	1-040	..	6-792	2-502		..	..	5-214	2-232	
	-486	34-134	111-256	-456	26-036	9-742		-485	-485	29-298	12-040	



FORM III—contd.  
Cost per ton of Bleached Pulp—contd.

	1934-35.				1935-36.				1936-37.			
	Quantity.	Cost per ton.	Per cent. of Cost.	Quantity.	Cost per ton.	Per cent. of Cost.	Quantity.	Cost per ton.	Quantity.	Cost per ton.	Per cent. of Cost.	
<b>Primary Raw Materials—</b>	Tons.	Rs.		Tons.	Rs.		Tons.	Rs.	Tons.	Rs.		
Grass . . . . .	1-182	45-141	19-482	1-120	43-314	19-453	.779	28-676	.779	28-676	14-239	
Bamboo . . . . .	1-310	25-798	11-104	1-400	30-491	13-608	1-854	34-573	1-854	34-573	17-227	
Rags . . . . .	.012	1-510	.650	.005	.638	.287	.408	1-272	.408	1-272	.634	
Hemp Ropes . . . . .	.014	.803	.346	.010	.597	.268	.010	.567	.010	.567	.282	
<b>TOTAL</b>	2-515	79-252	31-532	2-535	75-040	33-711	2-651	65-083	2-651	65-083	32-432	
<b>Auxiliary Raw Materials—</b>												
<b>Pulp Making Materials—</b>												
Line . . . . .	.353	7-860	3-383	.327	7-265	3-264	.325	6-546	.325	6-546	3-262	
Salt . . . . .	.079	1-140	.491	.078	1-286	.578	.070	.920	.070	.920	.458	
Sulphuric Acid . . . . .	.002	.176		.001	.160		.001	.135	.001	.135		
Hydraulic Acid . . . . .	.001	.453		.001	.579		.001	.825	.001	.825		
Sulphur . . . . .	.004	.835		.005	.387		.005	.443	.005	.443		
Sodium Sulphide . . . . .	..	.008	.560	..	..	.805	..	.080	..	.080	1-637	
Salt Cake . . . . .	..	..		..	..		..	.034	..	.034		
Silicate of Soda . . . . .	.001	.273		.001	.220		..	.066	..	.066		
Caustic Soda . . . . .	.065	15-880	6-835	.033	19-625	8-815	.106	23-803	.106	23-803	11-861	
Conversion Charges.	.463	26-180	11-269	.496	29-522	13-262	.542	34-555	.542	34-555	17-218	
<b>TOTAL</b>	..	5-004	2-154	..	5-023	2-259	..	4-971	..	4-971	2-477	
	.493	31-184	13-423	.496	34-550	15-521	.542	39-526	.542	39-526	19-695	

Total Puip . Tons

(8) *Letter No. B. 209—38/150, dated the 4th/5th March, 1938, from the Titaghur Paper Mills Co., Ltd., Calcutta.*

In response to your request of yesterday, we have pleasure in forwarding herewith, in triplicate, a statement showing the tonnage of grass pulp produced by our mills for each year 1931-32 to 1936-37. We trust this is the information which you require.

#### TITAGHUR PAPER MILLS CO., LTD.

The total output of grass pulp for each year since 1931-32:

The following statement shows the tonnage of grass pulp produced at our mills during each year since 1931-32:—

	Tons.
1931-32 . . . . .	5,743
1932-33 . . . . .	5,128
1933-34 . . . . .	5,809
1934-35 . . . . .	5,557
1935-36 . . . . .	6,076
1936-37 . . . . .	5,230

NOTE.—All the above pulp was produced at our No. 1 Mill with the exception of 25 tons during 1934-35 which was produced at No. 2 Mill.

(9) *Letter No. 297, dated the 22nd March, 1938, from the Tariff Board, to the Titaghur Paper Mills Co., Ltd., Calcutta.*

I am directed to say that the Tariff Board realises that it may be impossible for you to supply exact information about the cost of manufacture of paper in your Mill and its realised prices for 1937-38 but will be glad to have as early in April next as possible such information on the points as may be available, as compared with 1936-37.

2. The Board will also like to have any later information available as to—

- (1) the price at which imported paper has been landed in India,
- (2) the price at which imported pulp, bleached and unbleached has been landed in India,
- (3) the quantities of imported pulp used by your Mill in 1937-38.

(10) *Letter No. 303, dated the 22nd March, 1938, from the Tariff Board, to the Titaghur Paper Mills Co., Ltd., Calcutta.*

I am directed to invite a reference to your reply to Question No. 28 of the Board's questionnaire for manufacturers and to request the favour of your early submission of the landed cost of imported paper during 1937-38.

(11) *Letter No. B. 209—38/167, dated the 29th March, 1938.*

We have to acknowledge receipt of your telegram of the 25th instant addressed to Mr. Mellor reading as follows:—

“319 Please wire present over all realised prices *ex-Mill* of three Calcutta Mills as well as most recent prices of Imported Paper of protected class.”

and in reply beg to confirm having wired you as below:—

“Your telegram twenty-fifth overall average realised price *ex-Mill* Titaghur April to December 1937 is annas three pies one stop Bengal year ending December 1937 annas two pies nine point four six stop.



India Paper Pulp April to December, 1937, annas three pies one point six nine stop recent imported paper prices c.i.f. ports White Printing and Cream Laid £22 to £24 Banks £23 to £28 Azure Laid £26 to £28 White Cartridge £22 to £25.

The overall average realised prices have been given us by the Bengal Paper Mill Co., Ltd., and the India Paper Pulp Co., Ltd., in respect of their own sales and you will notice that as regards ourselves and the India Paper Pulp Co., Ltd., the figures are for only nine months. The Bengal Paper Mills Co.'s figures are for the twelve months ending 1937 as this Company closes its accounts at the end of December every year.

We trust that the figures submitted will be of service to the Board.

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(12) *Letter No. B. 209—38/174, dated the 30th March, 1938.*

We have to acknowledge receipt of your two letters dated the 22nd March, Nos. 297 and 303, asking for further information in regard to the enquiry into the Paper and Pulp industries.

We are at present engaged in summarising our costs for the period 1st April, 1937, to 31st December, 1937, and we hope to be able to complete a statement of our cost of manufacture for that period in the course of the next three or four days. We shall then submit a statement made out in the same way as Form No. 6 of our written evidence.

We confirm the figure given in Mr. Mellor's telegram to you, dated the 29th instant in respect of the average net f.o.r. Mill sales price realised by us for the period 1st April to 31st December, 1937, viz., As. 3-1 per lb.

With regard to the further points on which the Board would like to have the latest information available, we are pleased to reply as follows:—

- (1) A statement is enclosed, prepared in the same way as the statement submitted by us in our written evidence in reply to Question No. 28, giving details of the prices at which imported papers have been offered c.i.f. Indian ports during the period April, 1937, to date. In this connection we wish to confirm the particulars given in Mr. Mellor's telegram of the 29th instant in respect of the latest quotations for imported paper of protective qualities.
- (2) The pulp imported by us since 1st April, 1937, has practically all been against contracts concluded before any appreciable rise in price took place and the rates of the pulp so imported do not therefore accurately reflect the rates which have prevailed during the period. At the same time we have made certain purchases since 1st April, 1937, and although these purchases are not yet due for delivery we have summarised them and enclose herewith a statement which shows the average prices for the different qualities of pulp purchased during this period. On the statement we have added certain further quotations recently received.
- (3) When we submit our statement showing the cost of manufacture for the period 1st April to 31st December, 1937, we hope at the same time to be able to advise you the quantity of imported pulp consumed in our mills during the year ending 31st March, 1938.

Your letter No. 303 of the 27th March would appear to duplicate the question asked in paragraph 2, sub-section 1, of your letter No. 297, and as such does not appear to call for any separate reply.

*Woodpulp purchases made from 1st April 1937 to date—Prices are c.i.f. Calcutta and Delivered Mills.*

EASY BLEACHING.				STRONG SULPHITE.				KRAFT.				OTHER SORTS.			
Tons.	Average Price c.i.f.	Price D/D Mill.		Tons.	Average Price c.i.f.	Price D/D Mill.		Tons.	Average Price c.i.f.	Price D/D Mill.		Tons.	Average Price c.i.f.	Price D/D Mill.	
	£ s. d.	Rs. A. P.			£ s. d.	Rs. A. P.			£ s. d.	Rs. A. P.			£ s. d.	Rs. A. P.	
7,230	14 18 2	265 12 0		1,150	19 6 6	817 5 4		300	16 2 0	274 8 10		200	16 2 7	274 15 1	

*Further Quotations received—Prices c.i.f. Calcutta and Delivered Mill.*

Date.	EASY BLEACHING.			STRONG SULPHITE.		KRAFT.		OTHER SORTS.	
	Price c.i.f.	Price D/D Mill.	Rs. A. P.	Price c.i.f.	Price D/D Mill.	Price c.i.f.	Price D/D Mill.	Price c.i.f.	Price D/D Mill.
17th March 1937	£ s. d.		Rs. A. P.	£ s. d.	Rs. A. P.	£ s. d.	Rs. A. P.	£ s. d.	Rs. A. P.
25th March 1937	" "		" "	" "	" "	15 5 11	263 15 1		
14th January 1938	" "	14 0 3	246 13 10	" "	" "	14 10 0	253 10 7		
28th January 1938	" "	16 7 2	277 15 8	" "	" "	" "	" "		
28th January 1938	" "	16 2 0	274 8 10	" "	" "	" "	" "		
28th January 1938	" "	16 2 0	274 8 10	" "	" "	" "	" "		
28th January 1938	" "	" "	" "	15 0 8	264 4 2	" "	" "		
28th January 1938	" "	" "	" "	15 6 8	264 6 2	" "	" "		
17th March 1938	" "	" "	" "	12 2 7	221 14 2	" "	" "		
17th March 1938	" "	12 9 6	236 2 7	" "	" "	" "	" "		

Statement of prices quoted for imported Paper c.i.f. Indian Ports during the period April 1937 to March 1938.

	White Pig. & Cream Ltd.	Per Ton Ex. @ 1s. 6d. Duty 30% of 1 anna 3 pies Clearing 1 pie.	Per lb.	Banks.	Per Ton Ex. @ 1s. 6d. Duty 30% of 1 anna 3 pies Clearing 1 pie.	Per lb.	White Carriage.	Per Ton Ex. @ 1s. 6d. Duty 30% of 1 anna 3 pies Clearing 1 pie.	Per lb.
	£ s. d.	Rs. A. P.	A. P.	£ s. d.	Rs. A. P.	A. P.	£ s. d.	Rs. A. P.	A. P.
<b>1937.</b>									
May	31 0 0	594 2 8	4 2-93	32 10 0	614 2 8	4 4-64	32 10 0	536 2 8	4 2-24
	32 0 0	607 8 0	4 4-07	..	..	..	..	..	..
June	30 10 0	587 8 0	4 2-36	33 0 0	620 13 4	4 5-21	32 10 0	536 2 8	4 2-24
	32 0 0	607 8 0	4 4-07	..	..	..	..	..	..
July	34 10 0	640 13 4	4 6-93	35 0 0	660 13 4	4 8-04	..	..	..
	28 10 0	560 13 4	4 0-07	36 15 0	670 13 4	4 9-50	..	..	..
November	27 10 0	547 8 0	3 10-93	..	..	..	..	..	..
December	27 10 0	547 8 0	3 10-93	30 0 0	580 13 4	4 1-79	..	..	..
<b>1938.</b>									
January	28 0 0	554 2 8	3 11-50	31 5 0	597 8 0	4 3-21	29 10 0	546 2 8	3 10-31
February	28 10 0	560 13 4	4 0-07	27 0 0	540 13 4	3 10-36	27 0 0	512 13 4	3 7-96
	26 0 0	527 8 0	3 9-21	..	..	..	..	..	..
	..	..	..	28 0 0	554 2 8	3 11-50	25 0 0	436 2 8	3 5-67
	..	..	..	28 0 0	554 2 8	3 11-50	26 0 0	499 8 0	3 6-81
March	24 0 0	500 13 4	3 6-93	25 0 0	514 2 8	3 8-07	25 10 0	492 13 4	3 6-24
	24 0 0	500 13 4	3 6-93	25 0 0	514 2 8	3 8-07	22 10 0	452 13 4	3 2-81
	24 5 0	504 2 8	3 7-21	23 0 0	487 8 0	3 5-79	..	..	..
	22 0 0	474 2 8	3 4-64	..	..	..	..	..	..

(13) Letter No. B. 209—38/177, dated the 2nd/4th April, 1938.

We beg to refer you to our letter dated 30th ultimo, No. B. 209—38/174, in which we gave certain further particulars required by you and indicated that we hoped to be able to submit in the course of a few days' time a statement of cost of manufacture for the period 1st April, 1937, to 31st December, 1937. We are now pleased to send you herewith a statement, in triplicate, prepared in the same way as Form No. 6 of our written evidence, giving the cost of manufacture at our Mills for that period.

We wish to make it clear that these costs, of necessity, have had to be estimated in respect of certain items and are not yet subject to final audit. They are, however, in our opinion, fairly accurate, and we do not anticipate any great difference when the final account for the year have been completed and audited.

In reply to Question No. 3, paragraph 2 of your letter No. 297 of the 22nd ultimo, we would advise you that the quantity of imported pulp consumed in our Mills for the year 1st April, 1937, to 31st March, 1938, was approximately 4,240 tons. This figure corresponds with the consumption of 5,984 tons for the preceding year, 1936-37.

*Cost per ton for the nine months ending December, 1937.*

	Cost Per ton.	Percentage of total cost.
	Rs.	
<i>Primary Raw Materials—</i>		
Grass . . . . .	21-564	5-904
Bamboo . . . . .	27-031	7-400
Rags . . . . .	·929	·255
Hemp Ropes . . . . .	·275	·075
Waste Paper . . . . .	13-155	3-602
Total . . . . .	62-954	17-236
Purchased Pulp . . . . .	39-147	10-718
<i>Aux. Raw Materials—</i>		
China Clay . . . . .	3-729	1-021
Alum . . . . .	3-675	1-006
Resin . . . . .	6-789	1-859
Alkali . . . . .	·073	·020
Lime . . . . .	6-985	1-912
Salt . . . . .	1-790	·490
Caustic Soda . . . . .	14-446	3-955
Sundries . . . . .	9-363	2-563
Total . . . . .	46-850	12-826
Conversion Charges for Manufacturing		
Bleach and Caustic . . . . .	11-154	3-054
Total Aux. Raw Materials . . . . .	58-004	15-880

*Cost per ton for the nine months ending December, 1937—contd.*

	Cost per ton.	Percentage of total cost.
	Rs.	
Power and Fuel . . . . .	28·735	7·867
Current Repairs and Maintenance . . . . .	39·388	10·784
Mill Labour . . . . .	36·480	9·987
Supervision and Establishment . . . . .	17·858	4·889
Sundries . . . . .	2·500	·685
Packing . . . . .	6·911	1·892
<b>Total</b> . . . . .	<b>131·872</b>	<b>36·104</b>
Selling Expenses . . . . .	19·681	5·388
Insurance . . . . .	2·584	·707
Rents and Taxes . . . . .	·470	·128
Depreciation . . . . .	26·318	7·205
Interest on Working Capital . . . . .	7·430	2·034
Head Office Expenses . . . . .	16·797	4·600
<b>Grand Total</b> . . . . .	<b>365·257</b>	<b>100·000</b>
<b>Total Saleable Paper made</b> . . . . .	<b>18,165·540 tons.</b>	

(14) *Letter No. 364, dated the 4th April, 1938, from the Tariff Board, to the Titaghur Paper Mills Co., Ltd., Calcutta.*

In continuation of your reply to Question No. 30 of the Board's Questionnaire for paper manufacturers, I am directed to request you to furnish the Board with the average net *ex-Mill* prices per lb. realised by you on total production from 1931-32.

(15) *Letter No. 374, dated the 5th/6th April, 1938, from the Tariff Board, to the Titaghur Paper Mills Co., Ltd., Calcutta.*

I am directed to convey to you the thanks of the Tariff Board for the information supplied to it and to request you to be so good as to furnish it with information regarding indigenous and imported pulp used during the year 1937-38. If possible the full year's consumption figures may be given.

(16) *Letter No. B. 209—38/178, dated the 8th April, 1938.*

We confirm telegrams exchanged as below:—

*Yours*:—"Please wire whether your figures for pulp and paper are on air dry or bone dry basis."

*Ours*:—"Your telegram to-day all our figures pulp and paper and raw materials are on air dry basis."

All our figures in connection with imported and manufactured pulp, finished paper and all our different qualities of raw materials have been calculated on an air dry basis.

(17) *Letter No. B. 209—38/180, dated the 9th April, 1938.*

We have to acknowledge receipt of your letter dated 4th instant, No. 364, in which you refer to our reply to Question No. 30, and request us to furnish the Board with the average net *ex-Mill* price per lb. realised by us on our total production from 1931-32. The undernoted is a statement which shows the over-all net realised price f.o.r. Mills for the six years 1931-32 to 1936-37.

*Over-all net Realised Prices f.o.r. Mills.*

	As. p.
1931-32 . . . . .	3 2-54
1932-33 . . . . .	3 1-46
1933-34 . . . . .	2 11-16
1934-35 . . . . .	2 10-32
1935-36 . . . . .	2 10-64
1936-37 . . . . .	2 10-87

(18) *Letter No. B. 209—38/184, dated the 11th/12th April, 1938.*

We are in receipt of your letter, dated 5th/6th instant, No. 374, in which you ask us to furnish the Board with information regarding the indigenous and imported pulp used by us during the year 1937-38. We note that, if possible, the Board desire consumption figures for the full year.

The following is a note of the quantities of indigenous pulps consumed in our Mills during the period 1st April, 1937, to 31st March, 1938:—

	Tons.
(a) Grass Pulp . . . . .	5,478
(b) Bamboo Pulp . . . . .	13,650
(c) Tailors' cuttings, ropes rags, etc. . . . .	128
Total . . . . .	19,256

With regard to the quantity of imported pulp used by us during the same period, we confirm the figure given in our letter No. B. 209—38/177 of 2nd/4th instant, namely 4,240 tons.

(19) *Express letter No. 437, dated the 22nd April, 1938, from the Tariff Board, to the Titaghur Paper Mills Co., Ltd., Calcutta.*

Reference your note regarding suggested figures representative of a typical Indian Bamboo Pulp and Paper Mill in which the replacement value has been taken at Rs. 800 per ton of paper output. Could you please inform the Board at an early date as to how much of it is for pulp and how much for paper.

(20) *Express letter No. 438, dated the 22nd April, 1938, from the Tariff Board, to the Titaghur Paper Mills Co., Ltd., Calcutta.*

Reference your letter No. B. 209—38/177, dated the 2nd April 1938. Please furnish the Board at an early date with the quantities and present

prices of the materials mentioned in the statement of cost of manufacture of paper.

(21) *Letter No. B. 209—38/187, dated the 22nd April, 1938.*

We acknowledge receipt of your telegram as follows:—

“430 Kindly wire what proportion of Bamboo you purchase from Bengal area ”

to which we have replied as follows:—

“Your telegram yesterday proportion of Bengal bamboo year ending March, 1937, approximately fifty per cent. stop year ending March, 1938, approximately sixty-five per cent ”

and trust that the information supplied is what you require.

(22) *Letter No. B. 209—38/189, dated the 25th April, 1938.*

INDIAN CUSTOMS TARIFF—ASSESSMENT OF CATALOGUES IN BOOK FORM.

We have seen copy of a letter No. G. 6406 of the 20th instant addressed to you by the Caledonian Printing Co., Ltd., Calcutta, in which they point out that, under a recent Customs' Ruling, No. 13 of 1937, catalogues printed abroad are allowed to be imported free of all duty charges. We desire to support the representation which the Caledonian Printing Co. have made in connection with this matter, as we do not consider that it was ever intended that Section 45—1 should apply to catalogues printed abroad and imported in bulk for distribution in this country.

(23) *Letter No. B. 209—38/192, dated the 26th April, 1938.*

We are in receipt of your letter No. 437 of the 22nd instant, in which you refer to the replacement value of a typical Indian Bamboo Pulp and Paper Mill being estimated at Rs. 800 per ton of paper output and asking what the allocation of this figure is for pulp and separately for paper.

In our opinion, for a combined Bamboo pulp and Paper Mill, that is a Mill making approximately 10,000 tons of paper per annum from its own bamboo pulp, the pulp allocation would be about Rs. 450 per ton and the paper allocation Rs. 350 per ton.

(24) *Letter No. B. 209—38/191, dated the 26th April, 1938.*

We received yesterday (25th instant) your Express letter No. 438 of the 22nd instant in which you asked us to furnish the Board with the quantities and present prices of the materials mentioned in the statement in respect of the cost of manufacture of paper, which we submitted under cover of our letter dated the 2nd/4th instant.

We are now pleased to send you herewith in triplicate a statement showing the cost per ton and the quantity per ton of paper made of the raw materials and the principal auxiliary materials as enumerated in our previous statement of cost of manufacture.

## TITAGHUR PAPER MILLS CO., LTD.

STATEMENT SHOWING THE COST PER TON AND QUANTITY OF MATERIALS REQUIRED  
TO PRODUCE ONE TON OF FINISHED PAPER.

April, 1937, to December, 1937.

(Both Mills.)

	Cost per ton of Materials.	Quantity of Materials per ton of paper made.
	Rs.	
<i>Primary Raw Materials—</i>		
Grass . . . . .	38.471	.580
Bamboo . . . . .	18.312	1.478
Rags . . . . .	272.032	.003
Ropes . . . . .	75.682	.004
Waste Paper . . . . .	92.408	.142
Total	28.797	2.187
Purchase of pulp . . . . .	209.960	.186
<i>Auxiliary Raw Materials—</i>		
China Clay . . . . .	36.397	.102
Alum . . . . .	66.967	.005
Rosin . . . . .	303.748	.022
Alkali . . . . .	133.100	...
Lime . . . . .	19.807	.353
Salt . . . . .	12.858	.140
Caustic Soda . . . . .	182.364	.080
Sundries . . . . .	204.430	.045
Total	58.778	.797
Grand Total	46.993	3.170
Paper Production . . . . .	(Tons) 18,166	



(25) *Letter No. B. 209—38/193, dated the 27th April, 1938.*

We confirm telegrams exchanged between us to-day as below:—

*Yours:—*“Reference your telegram twentysecond wire rate per ton delivered Mill other than Bengal bamboo.”

*Our:—*“Your telegram twentysixth cost of bamboo other than local Bengal approximately rupees twentytwo delivered Mills writing.”

You will notice that we have given the cost of bamboos other than supplies obtained from local sources in Bengal as approximately Rs. 22 per ton delivered our Mills. After Bengal supplies, our biggest tonnage of bamboos is drawn from our own areas at Angul and one or two adjoining Indian States. Our forest year does not close till the end of June, 1938, and we are, therefore, not able to give you the exact cost figures, but it is expected that the net cost of the bamboos drawn from all areas other than Bengal will be about Rs. 22 per ton delivered at our Mills.

We trust that this information is sufficient for your purpose.

(26) *Letter No. B. 209—38/194, dated the 29th April, 1938.*

We have to acknowledge receipt of your telegram, dated 28th instant, as under:—

“Wire recent landed prices of auxiliary raw materials used in manufacture of paper and c.i.f. price per ton of imported wood pulp easy and strong unbleached and bleached.”

and confirm our reply to-day as follows:—

“Landed Mill prices per ton auxiliary materials as follows caustic soda rupees two hundred salt twentyone lime nineteen sulphur ninety-nine salt cake seventy bleaching powder one hundred fifteen clay thirty-eight rosin three hundred fortytwo alum sixtyfive wood pulp latest c.i.f. Calcutta prices bleached Sulphite fourteen pound ten to seventeen pound ten Easy Bleaching Sulphite twelve pound ten to thirteen pound Strong Sulphite eleven pound ten to twelve pound.”

In our telegram we have quoted the most recent prices in regard to the principal auxiliary materials and we trust that the information which we have given is what you require.

In respect of Wood Pulp, the prices we have quoted in our telegram are those taken from the Paper Trade Review, dated the 1st April and converted to a c.i.f. Calcutta basis. These prices are the most recent ones which we have received, and we think that they fairly accurately represent the present market. Prices for each grade always vary within certain margins and, whereas you will note that the differences between the maximum and minimum rates quoted for Easy Bleaching Sulphite and Strong Sulphite are relatively small, there is a larger variation in respect of the prices for Bleached Sulphite pulp, in which quality there are many varieties sold at different prices.

**Evidence of Messrs. A. P. BENTHALL, R. W. MELLOR,  
A. S. OFFICER, A. W. WOOD and E. C. GOSS, recorded  
at Calcutta on Thursday, 10th February, 1938.**

**B.—ORAL EVIDENCE.**

*President.*—What is your position in the Company, Mr. Mellor?

*Mr. Mellor.*—I am the Manager of the Company, Mr. Benthall is a Director and a Member of the firm of Managing Agents, Mr. Officer is the Assistant Manager, Mr. Wood, Cost Accountant and Mr. Goss the Sales Manager.

*President.*—I notice you have one Indian Director less than in 1931. That means you have not replaced the Director?

*Mr. Mellor.*—We have one Director less altogether.

*President.*—In regard to question 4, you suggest that three other different classes of paper might be manufactured. I think you have suggested somewhere that white cartridge paper might be protected.

*Mr. Mellor.*—Yes.

*President.*—These three items of paper are classes which you do not manufacture at present?

*Mr. Goss.*—We manufacture white cartridge paper at the present day.

*President.*—Do you manufacture art paper?

*Mr. Mellor.*—We make imitation art but not real art.

*President.*—That question of art paper came up before the Tariff Board and the last Tariff Board suggested protection of all art paper, in the provisional schedule they put forward. You would adhere to that position? Do you wish protection on art paper?

*Mr. Mellor.*—We do not actually ever want any paper to be protected which does not compete against our ordinary qualities and which we are not in a position to make ourselves. But in the case of art paper we do think it can be made in India.

*President.*—Is it possible to distinguish real art from imitation art?

*Mr. Mellor.*—Yes.

*Mr. Goss.*—It is easy to distinguish because real art paper has a coated surface. Art paper originally is ordinary M. F. printing paper and it has a coating on the surface whereas imitation art is a highly finished paper but it has no coating on the surface. It is finished by the supercalendering machine.

*Mr. Mellor.*—Our imitation art is made with a large amount of china clay and other fillers on the machine itself. Real art is paper taken off the machine and then coated by a separate process.

*President.*—I find that real art paper being an expensive paper the revenue duty operates as protective duty.

*Mr. Goss.*—The price of art paper varies very much. There is a mechanical art paper which has come in at a very low price. It replaces our imitation art.

*President.*—Is it classified as writing paper?

*Mr. Goss.*—No. It pays a 25 per cent. *ad valorem* duty.

*President.*—I thought it was paying a protective duty.

*Mr. Goss.*—Real art pays protective duty but the mechanical art containing 70 per cent. mechanical wood pulp now pays the revenue duty.

*President.*—Real art is classified as writing paper?

*Mr. Goss.*—No, as printing paper.

*President.*—It seems rather curious that imitation art should be given a different classification.

*Mr. Goss.*—They are both protected qualities. I think the Tariff Board last time thought that there was a danger that if real art came in at a lower duty then the price would be so low that it would compete with imitation art.

*President.*—The Tariff Board in the Classification of Paper enquiry said "we make no recommendation beyond this that the assessment of this paper on its real value might be considered in order to avoid hardship to the manufacturers". Was nothing done on that recommendation?

*Mr. Mellor.*—I do not think so.

*Mr. Goss.*—Art paper is still classified as protected paper.

*Mr. Rahimtoola.*—The duty was assessed on the tariff value of As. 1-1 per lb. It was unfair to the manufacturers because the importers were paying a lower duty. They ought to have paid Rs. 90 per ton and they were paying Rs. 37 only.

*Mr. Goss.*—It was rectified. It is now paying on an *ad valorem* basis.

*President.*—From that point of view you are better off now?

*Mr. Mellor.*—Yes.

*Mr. Rahimtoola.*—With regard to question 4 is there possibility of manufacturing poster paper, do you think it can be manufactured from bamboo pulp?

*Mr. Mellor.*—We can manufacture poster paper. It is merely a matter of the machine. Poster paper is generally paper which is only finished on one side. It is made on the kind of machine which they have got at Poona, one with a big cylinder. One side of the paper is calendered and the other is rough. It would be quite easy to manufacture it if the demand justifies the erection of a special machine.

*President.*—It is only a question of papermaking machine only.

*Mr. Mellor.*—Yes.

*President.*—What about real art paper?

*Mellor.*—We think that it could be made. They might have, to start with, the climatic difference to contend with. It is now possible to make arrangements to keep an even temperature. There again, it is the question as to whether the demand is going to be big enough to justify the installation of special plant.

*President.*—In regard to kraft paper?

*Mr. Mellor.*—As you know, there is a project to make kraft paper from spruce and pine in Kashmir, and the Forest Research Institute has been carrying out tests for a long time to produce kraft paper from bamboo. They have not published the results yet but I believe they are fairly successful. Whether or not it will compare favourably with finer kraft papers made in Sweden, we do not know but we believe that eventually it will be possible to produce saleable kraft from bamboo.

*President.*—There is no inherent disability in bamboo fibre for the manufacture of kraft paper?

*Mr. Mellor.*—It is the difference in texture of fibres that affects the quality of kraft paper. One fibre may make better kraft paper than another. Then again there is a difference in the process of digestion.

*President.*—In regard to question 6 to what extent has the situation changed since 1931 in regard to your quantities and yields?

*Mr. Mellor.*—If you refer to page 70 of the Tariff Board's Report of 1931, you will see that we gave various standard ratios of yields. We took grass as 35 per cent. Keeping to all these standard yields for all the materials except bamboo, we now find that since 1931, as we have gone on increasing production of bamboo pulp, our yield has come down considerably since 1930-31. Actually to-day our yield from air-dry bamboo to paper

after finishing has come down to about 32 per cent. which we think is the real yield of bamboo pulp from air dry bamboo to paper after finishing. We have come down gradually year by year from 1931-32 until last year we got the figure of 32.74 per cent.

*President.*—Is there any change in grass?

*Mr. Mellor.*—We have taken grass at 35 per cent. all the way through which we think is about right. Actually of course since 1931-32 we have produced a very much greater proportion of bleached papers which must have affected the yield.

*President.*—In regard to rags?

*Mr. Mellor.*—We kept all these at the same level. After all it is only an estimate of yield as we cannot weigh the pulp.

*President.*—It has been suggested to us that in regard to wastepaper 65 might be a more accurate figure.

*Mr. Mellor.*—We take 75 which may be a bit high, but it all depends on the quality of paper used and how it is used.

*President.*—Do you classify your paper as 1, 2, 3 and so on?

*Mr. Mellor.*—We use mixed paper cuttings—

No. 1 . . . . . Whites.

No. 2 . . . . . Whites.

Light letters and various descriptions of that kind. No. 1 mill use practically all whites and colours. No. 2 mill can use slightly inferior qualities.

*President.*—What is your No. 1 Rags?

*Mr. Mellor.*—No. 1 Rags are really what we call better class tailors' cuttings. The others might be coloured rags.

*President.*—That is the usual mill practice in differentiating.

*Mr. Mellor.*—Yes.

*President.*—While on this question we might perhaps deal with the question of losses. At what stages do your losses occur and in what ratios?

*Mr. Mellor.*—From raw bamboo to paper?

*President.*—Yes.

*Mr. Mellor.*—The first loss of course is perhaps in dryage. All raw materials contain a certain percentage of moisture. We have to buy all our materials on a moisture basis. But if the bamboos dry out before we use them, there is a loss there. Then you have a loss of bamboo in the crushing machines. A certain amount of dust is lost there.

*President.*—Your bamboo is dusted.

*Mr. Mellor.*—It is crushed, chipped and blown and dust extracted from it, by a cyclone arrangement.

*President.*—Dusting is done in the cyclone arrangement.

*Mr. Mellor.*—Yes at the top of the mill.

*President.*—Can you put a percentage on the loss in the crushing process?

*Mr. Wood.*—2 per cent. for dust.

*President.*—What is your next stage?

*Mr. Mellor.*—Our next loss is in the digester house where the bamboo is digested. That is a big loss from raw material to unbleached pulp.

*President.*—Can you give a figure for that?

*Mr. Mellor.*—40 per cent. yield. The next loss is in washing and bleaching.

*President.*—What amount of fibre do you recover from the washing?

*Mr. Mellor.*—On the grass side we recover a certain amount of fibre from our small concentrator and on the strainers in the bleaching house

we can recover a certain proportion. But I don't think we have ever recovered much.

*President.*—What will be your percentage of loss in the bleaching stage?

*Mr. Mellor.*—You mean from the unbleached to the bleached.

*President.*—Yes.

*Mr. Mellor.*—From the unbleached stage to the bleached stage, it may be 5 to 6 per cent.

*President.*—In the actual process of manufacture of paper?

*Mr. Mellor.*—Another 5 or 6 per cent.

*Mr. Rahimtoola.*—That means out of 100 per cent. of bamboo, you are able to get only 81.97 paper.

*Mr. Mellor.*—Yes, from air dry bamboo to paper after we have finished the paper in the finishing house.

*Mr. Rahimtoola.*—Is it not rather low?

*Mr. Mellor.*—We think it is correct. There were tests made in 1935 or in 1936 at Dehra Dun where Mr. Bhargava the Chemist carried out tests of all mills bamboo chips which were dusted and cleaned—in a very good condition to be tested. He got yield figures to pulp which we think confirm our figures to paper. He tested bamboo chips from all the three mills. It depends a good deal.....

*President.*—On the type of mill?

*Mr. Mellor.*—On the accuracy of weights. We take our weights from the godown right up to the finishing stage. You might from the theoretical point of view say it is correct to take the yield figures from the actual weight of the material in the digester to the end of the machine before finishing. As a commercial proposition, we think it best to take the weight from the godown and the weight of the paper in the finishing house after finishing so that we know what the raw material we pay for results in actual paper put up in saleable form. That is the basis of our yield.

*President.*—Can you tell us whether any mills in America have a regular costing system of losses at every stage?

*Mr. Mellor.*—I should think in America they must have a very highly organised costing system. All intermediate yields have to be estimated. You cannot weigh different pulps. You have to take the density and work it in that way. Actually in a wood pulp mill I believe they don't ordinarily weigh the wood in the digester as we do. We have to weigh the bamboo carefully and estimate the moisture in order to determine exactly the amount of caustic soda wanted in the digesters. In the huge foreign mills where they are making 1,000 tons of pulp a day they simply take it and load it in the digester without weighing at all. They assume an average figure of cubic capacity and work on that.

*President.*—I am asking these questions because in the Sugar Industry the efficiency of mills is definitely judged by the losses at every stage of manufacture. I wonder how far that is possible in the case of paper.

*Mr. Mellor.*—It is really difficult unless all mills produce the same kind of paper using the same class of materials and adopt the same system of recording all through. There are other materials affected besides bamboo and grass.

*President.*—The proportion of mixed pulp is different in different mills.

*Mr. Mellor.*—We are dealing with so many materials of different qualities. It is difficult to say. It is possible that a certain class of bamboo gives a higher or lower yield than others. Where we are using a mixture, it is very difficult to say.

*President.*—In regard to your losses they certainly strike the Board as somewhat comparatively high.

*Mr. Mellor.*—I may say we have made tests of all bamboo paper manufactured out of 100 per cent. bamboo pulp. As a rule they confirm our yields figures.

*President.*—That is really the only way in which comparisons could be made.

*Mr. Mellor.*—Yes.

*President.*—In regard to your supply of bamboo you are now inclined to draw increasing quantities from your own neighbourhood.

*Mr. Mellor.*—Yes, in Bengal.

*President.*—The Tariff Board had the advantage of a discussion with the Hon'ble the Minister and the Secretary of the department concerned and we raised the point as to the danger of the supply of bamboo in the local areas being cut out, as there is no scientific regeneration.

*Mr. Mellor.*—That is a point to which we have given considerable thought. We don't cut local bamboo ourselves. We buy it through contractors and sub-contractors. Recently we have sent our own Inspector to inspect the areas to find out the extent and the method of cutting. During the last 18 months we have been distributing pamphlets in Bengali and English through the Government Officials and our own staff to try to educate people as to the proper way of cutting: so as to promote regrowth and regeneration. But it is difficult because the contractor is apt to only to look to his own immediate profit and not to the future.

*President.*—As I take it 99 per cent. of the contractors probably would.

*Mr. Mellor.*—In our own areas we obtained a good testimonial from the last Inspector-General of Forests. He thought that our method of cutting which we work in close collaboration with the Forest Department had resulted in regrowth to a much greater extent than elsewhere.

*President.*—What is your rotation period?

*Mr. Mellor.*—4 years.

*President.*—That conforms to the forest practice.

*Mr. Mellor.*—Yes. We work on what they call the selective system.

*President.*—With regard to the average price of bamboo, of course competition in forest areas might become more intensive.

*Mr. Mellor.*—Yes.

*President.*—Do you think that there are any possibilities of reducing the cost of raw bamboo delivered at the mill beyond the present average figure?

*Mr. Mellor.*—I don't think so. On the contrary, it may go up.

*President.*—Not in your local areas, but if you have to go further afield, your cost of transport may go up. Is it your view that you have reached the rock bottom price for bamboo delivered at the mill?

*Mr. Mellor.*—Yes. I don't think we can look forward for any decrease in the cost of bamboos.

*President.*—In every mill there has been a great change in the cost. There is no secret about that.

*Mr. Mellor.*—Quite.

*Mr. Rahimtoola.*—You have stated here that you have been able to persuade villagers to produce bamboo as a crop which can be sold for cash.

*Mr. Mellor.*—Yes.

*Mr. Rahimtoola.*—May I know how far you have succeeded?

*Mr. Mellor.*—In Bengal it is now well known that bamboos can be sold for cash. We have only done it through contractors and sub-contractors.

*Mr. Rahimtoola.*—Can we get the cost of cultivation?

*Mr. Mellor.*—We have never done that because actually it is simply the ordinary village bamboo which has been growing there for generations.

*Mr. Rahimtoola.*—Have you bought any bamboo from raiyats?

*Mr. Mellor.*—We do not buy direct. We buy it through contractors covering all the different areas within 100 miles.

*Mr. Rahimtoola.*—Do you pay any commission?

*Mr. Mellor.*—Our contractors have contracts with us to supply bamboos. In turn they have, I take it, sub-contracts with their own men. The bamboos in Bengal are not in Government Reserved Forests. They are not in one area which one can easily supervise. They are found all over the province.

*Mr. Rahimtoola.*—Can the Provincial Government supply us with costs?

*Mr. Mellor.*—I don't think so.

*President.*—Do you know of any cultivator who grows bamboo as a crop?

*Mr. Mellor.*—I don't think I do unless people are planting bamboo now. I don't think villagers during the last few years have actually planted a crop to be cut.

*President.*—I have never seen a crop grown by an ordinary person.

*Mr. Mellor.*—I believe some of them are considering it now. They are thinking that it is worthwhile to plant bamboo in areas where they cannot grow any other crop.

*President.*—Have you thought of planting yourself?

*Mr. Mellor.*—We have a scheme under consideration.

*President.*—That may give some data about the cost of cultivation. regard to grass, where is Sahebgunge?

*Mr. Mellor.*—Near Bhagalpur.

*President.*—Is it in Bihar?

*Mr. Mellor.*—Yes.

*President.*—In regard to the supply of grass, the Tariff Boards of 1925 and 1931 came to the conclusion that the quantity of grass available was limited and they gave certain figures. As you are aware one mill has been restarted and a new mill is under construction at Saharanpur. Both are using grass. Is that likely to affect your supply?

*Mr. Officer.*—No. We expect that those two mills will obtain their requirements from the forests in the Western Circle of the United Provinces and probably to a certain extent from Nepal.

*President.*—They won't encroach on yours.

*Mr. Officer.*—I don't think they will.

*Mr. Mellor.*—They have gone there to be near the grass. We are near coal.

*President.*—You don't anticipate any difficulty in getting your supply of grass.

*Mr. Mellor.*—No.

*President.*—Do you think that there is any possibility of reducing the cost of grass delivered at the mill?

*Mr. Mellor.*—Not very materially.

*President.*—Of course it has come down very much below the figures anticipated by the previous Tariff Board. I think that they put it at Rs. 50. Now you have come down to Rs. 35-13.

*Mr. Mellor.*—Yes.

*President.*—Do you think that that price is likely to remain constant?

*Mr. Mellor.*—Yes, but it depends on whether we have to get it from any outside areas.

*President.*—You have done a certain amount of work on the Sahebgunge area in order to improve the yield. What does that consist of?

*Mr. Officer.*—The scheme originally was one which would undertake the renovating of the fields in the first instance and then the regular weeding

of them thereafter. Naturally the area which could be renovated in any one year was small to begin with until funds were available and as the output of the fields increased more money became available for reconditioning. The improvement therefore went on in geometric progression until the output eventually increased from 64,000 maunds to 320,000 maunds.

*President.*—For how long have you taken the lease of the Sahibgunge area?

*Mr. Officer.*—It is an arrangement with the Sabai Mahajan Union in Sahibgunge in conjunction with Government.

*President.*—For a definite period?

*Mr. Officer.*—Yes. The present contract expires at the end of the current season.

*President.*—For what period do you usually get your lease?

*Mr. Officer.*—The first arrangement was for 6 years and this new one is for 10 years.

*President.*—Have you entered into a new arrangement?

*Mr. Officer.*—We have, with the Sabai Mahajan Union and they in their turn have to make their arrangements with Paharis.

*Mr. Mellor.*—The scheme is worked in conjunction with the Deputy Commissioner.

*President.*—Do you get any grass from the United Provinces now?

*Mr. Mellor.*—Not this year.

*President.*—If you went back to the United Provinces you might come in competition with the mills in Lucknow and Cawnpore and the Sri Gopal Mills.

*Mr. Mellor.*—Yes, if we found it necessary to do so, which is very unlikely. But ordinarily we do not compete with other mills for raw materials. We ourselves always try to work the areas which are unworked by other companies, in order to avoid unnecessary competition.

*President.*—I notice in regard to grass that if the area was worked departmentally, you could get it cheaper than you could get through contractors. In 1936-37 you got it from the Sahibgunge area at Rs. 35-13-2 and through contractors at Rs. 37-9.

*Mr. Mellor.*—That is due to the increased freight rate. Sahibgunge is our nearest area.

*President.*—The Board has observed that in regard to the general supply of raw material the tendency of all mills has been to give up departmental working in favour of buying through contractors since 1931.

*Mr. Mellor.*—As regards bamboo we think that it is best to operate bamboo forests ourselves because we can pay far more attention to regrowth which is vital for the success of the industry.

*President.*—In general I take it that you are fairly well satisfied about the supply of your raw materials.

*Mr. Mellor.*—Yes.

*Mr. Rahimtoola.*—In the cost of bamboo, I find "other charges—Rs. 5-4" Can we get some details regarding that?

*Mr. Officer.*—Establishment, supervision, travelling expenses for staff going about from one place to another—all these items have been included.

*Mr. Rahimtoola.*—These include overhead?

*Mr. Mellor.*—Yes.

*Mr. Officer.*—Supervision in connection with bamboo working.

*Mr. Rahimtoola.*—Are these arbitrary allocations?

*Mr. Officer.*—No, they are actuals.

*Mr. Rahimtoola.*—I find there is an increase of over a rupee in the period ending June 1937 as compared with the previous year.



*Mr. Officer.*—On the whole it has come down very appreciably.

*Mr. Rahimtoola.*—Is there any additional staff employed?

*Mr. Mellor.*—We might just have begun to exploit other bamboo areas which have not really produced any very big quantities. That would have a tendency to put up overhead temporarily. When the output increases, there will again be a reduction. Unless the tonnage increases, we shall not get any reduction. In that way, in one year there may be slightly more expenses than in another and we should have to average it out.

*President.*—In regard to what may be called subsidiary raw materials, rags, rope, hemp, etc., are the supplies adequate to your needs? Can you get as much as you want?

*Mr. Mellor.*—As regards, hemp ropes and rags we can get quite as much as we want. We could get a bigger supply of white cuttings, i.e., best tailor's cuttings, but it would be a matter of price. Similarly with wastepaper we find there is a good deal of competition for the higher qualities. There is not much competition about the lower quality. We do require larger quantities of white cuttings at economic rates.

*President.*—Do you think that there is likely to be any change in the prices of these subsidiary raw materials?

*Mr. Mellor.*—I think that when the other mills begin to operate, there will be much more competition upcountry for the papers and rags which we are getting to-day from there through our contractors. When the new mills begin to manufacture, they may decide to use these subsidiary materials. Then there will be much more competition and the prices may go up.

*President.*—Is the supply of these things organised?

*Mr. Mellor.*—It is not organised at all as in other countries where you can get quotations for as many as twenty or thirty different qualities of rags. In England they are all cleaned and selected. The waste paper and rag business has not been organised yet in the same way in this country.

*President.*—Do you think that that is a development which is likely to come with increased demand?

*Mr. Mellor.*—It might. With the greater production and consumption of paper, I think that more paper cuttings will be for sale and eventually their sale will be very much better organised than it is to-day.

*President.*—Turning to question 11, I see you contemplate changing over to the sulphate process in your No. 1 mill.

*Mr. Mellor.*—Yes.

*President.*—But not in the immediate future?

*Mr. Mellor.*—Not until we have tried out the new plant in No. 2 mill. When the Roaster Smelter has been satisfactorily tried out in No. 2 mill, we shall then consider the question of installing a similar plant in No. 1 mill. It is associated with smell to some extent.

*President.*—What about that difficulty?

*Mr. Mellor.*—We are going to put up a system which in America is always used for the Sulphate process and which will get rid of most of the smell.

*President.*—You have no idea when you will make the change over?

*Mr. Mellor.*—No.

*President.*—At present I suppose it might be correct to describe your process as modified sulphate soda process, in No. 2 mill.

*Mr. Mellor.*—It is very nearly full.

*President.*—With regard to your coal consumption, the cost per ton has been considerably reduced since 1931.

*Mr. Mellor.*—Yes, until recently.

*President.*—The price of coal has recently increased?

*Mr. Mellor.*—There has been a very considerable increase; it has been even difficult to get coal.

*President.*—Do you think your power fuel costs will be higher in 1937-38 than in 1936-37?

*Mr. Mellor.*—They are up now. We have to pay now about Rs. 2 to Rs. 3 a ton more for our coal than in 1936.

*President.*—What does the difference represent per ton of paper? Can you give us some idea?

*Mr. Mellor.*—It will be about Rs. 10 per ton of paper. We will look up the figures and let you know later on.

*President.*—In regard to your recovery, I gather from the evidence you have put in that at present you are not satisfied with the present percentage of recovery.

*Mr. Mellor.*—That is right.

*President.*—I believe in modern practice the standard is about 80 per cent. at any rate for wood pulp mills.

*Mr. Mellor.*—Yes.

*President.*—Do you think you will be able to work up to that figure with bamboo or with the materials you use?

*Mr. Mellor.*—We should try to but I think we should be quite happy to reach a figure something like 75 per cent.

*President.*—Are there any special difficulties with the raw materials you use that makes it impossible for you to work up to the same percentage as wood pulp?

*Mr. Mellor.*—The treatment of bamboo liquor is new and we have a certain amount of trouble as regards the silica content which undoubtedly has some effect in the recovery plant.

*President.*—In regard to your imported wood pulp, you do not import any bleached pulp?

*Mr. Mellor.*—Hardly ever.

*President.*—It is easy bleaching sulphite and strong sulphite?

*Mr. Mellor.*—Yes.

*President.*—I see you have imported a little kraft pulp. For what purpose was that used particularly?

*Mr. Mellor.*—It was used in No. 2 mill particularly in brown wrapping paper and probably it was also used to give strength to some special quality of paper made at that time.

*President.*—I wonder if you could give us your costs worked out in rupees delivered at mill for wood pulp?

*Mr. Officer.*—We can easily convert that. We will give you our delivered mill cost.

*President.*—Give it for the last three years.

*Mr. Officer.*—Yes.

*President.*—In regard to this question of use of pulp, two or three interesting questions have been raised, first of all the question of the flat rate of protective duty. It has been suggested that there should be different kinds of figures for different kinds of pulp, specially as between unbleached and bleached pulp, and therefore the figure of 45, at present 56.4, may not be altogether suitable. Have you any views on this question? I think the last Tariff Board took a flat rate when considering different qualities of pulp.

*Mr. Mellor.*—That is a point we have not given consideration to. In our suggestion about wood pulp we have suggested a sliding scale.

*President.*—Another point has been raised. The suggestion has been made that in order to encourage the manufacture of other classes of paper, some kinds of pulp might be admitted free of duty or at a preferential

rate, especially in regard to mechanical pulp and kraft pulp. One difficulty that occurs to the Board is that if, for instance, this class of pulp is admitted there might be a danger that mills which at present use indigenous materials might make use of it or even reduce the quantity of indigenous material used.

*Mr. Mellor.*—I should doubt that.

*President.*—With regard to mechanical pulp there would not be so much danger but as regards kraft pulp.....

*Mr. Mellor.*—In any case the ordinary brown kraft pulp is not likely to replace any indigenous pulp.

*President.*—There are two or three types of kraft pulp?

*Mr. Mellor.*—They are selling ordinary kraft pulp—semi-bleached and bleached kraft pulp—and there might be a little danger from bleached kraft.

*Mr. Goss.*—I don't think it can be used for making any protected quality.

*President.*—That is rather an important consideration from the point of view of the Tariff Board. The effect of the imposition of the protective duty has been, if I may put it bluntly, to force mills to use more indigenous pulp and any modification of that policy might lead to a set back in the use of indigenous materials.

*Mr. Mellor.*—I think you would have to consider that by examining quotations for the ordinary semi-bleached kraft and bleached kraft and find which is likely to compete with our indigenous pulp, according to the costs.

*Mr. Rahimtoola.*—It is more likely to be used as a substitute? Do you think it can be recognised by the customs authorities?

*Mr. Mellor.*—Very easily.

*President.*—Supposing mechanical pulp was let in duty free, can that be mixed in small quantities?

*Mr. Mellor.*—I think it might enable mills to compete against cheap imported paper of unprotected qualities, containing a high proportion of mechanical pulp and the time may come for mills to make every quality they can to keep the machines going. I do think that to this extent it would displace indigenous pulp until it is possible to find some form of raw material in India which can produce mechanical pulp at an economic price.

*Mr. Rahimtoola.*—If it is going to be a substitute it would only be for the lower grade unprotected qualities?

*Mr. Mellor.*—Yes.

*President.*—It would not be used in any protected qualities?

*Mr. Mellor.*—No.

*Mr. Rahimtoola.*—Do you know what the prices are at the present moment of mechanical pulp?

*Mr. Mellor.*—In normal times it is about £5 or £6 a ton c.i.f. U.K. ports. I can send you those figures if you like.

*President.*—Yes, especially in regard to kraft pulp.

*Mr. Mellor.*—Yes.

*President.*—The kraft pulp which you imported, what was that?

*Mr. Mellor.*—Unbleached pulp.

*Mr. Rahimtoola.*—What is this price of £14 you have given for other sorts. What pulp is that?

*Mr. Mellor.*—There have been small lots of special qualities which we have bought from time to time for experiment—eucalyptus pulp, aspen pulp and so on. They are very small quantities.

*President.*—Have the figures in the current year increased over the last figure you quote?

*Mr. Mellor.*—For wood pulp?

*President.*—Yes.

*Mr. Mellor.*—Very much. We have had to pay as high as £19 5s., c.i.f.

*President.*—Perhaps when you send the revised statement you might give us what the ranges of prices have been in 1937.

*Mr. Mellor.*—Yes.

*President.*—In regard to the use of imported pulp, in 1931 the position taken up by the mills was that a certain quantity of imported pulp was required for the manufacture of certain qualities which you enumerated and also as a standby and to some extent to supplement pulp manufactured by you. As regards the first point, is there any particular class of paper in which you think imported pulp would always be required?

*Mr. Mellor.*—Until we make further experiments in the treatment of bamboo pulp we shall want a certain quantity, about 8 to 9 per cent. of the total pulp requirement of the mills. I think until we make further experiments, for the next two years we cannot look forward to reducing that percentage. After all we make one type of bamboo pulp; wood pulp is made in many different qualities. Some of the mills in Scandinavia make pulp which is specially suitable for bank papers.

*President.*—To put it in another way, do you think there is any inherent difficulty in adapting bamboo pulp for the manufacture of such standard qualities of paper?

*Mr. Mellor.*—It is substantially as good as any other pulp but we cannot claim that bamboo pulp is as good as all the other different classes of pulp in the world, i.e., that it has got all the qualities which the other varieties have got.

*President.*—As regards the question of having it as a standby, up to date I think it might be said to be true that the mills have not been able to turn out as much pulp as to enable them to meet their requirements for the manufacture of paper, but the time may come when they are in a position to make all the pulp they require for their paper. What are the possibilities of building up a reserve of indigenous pulp?

*Mr. Mellor.*—That will mean some form of drying arrangement which we have not got at present.

*President.*—It has been suggested to us that wet pulp in some form might stand storage for some period?

*Mr. Mellor.*—Not for a very long period.

*President.*—Supposing the position is reached when any mill decides to build up a reserve, would it have to be in the form in which pulp is imported?

*Mr. Mellor.*—We might have to use rotary drying machines or keep it in a moist state but I don't think it is usually good practice to do that.

*President.*—Have you ever considered the approximate cost: supposing at a future date an export trade is developed, what would be the cost of making pulp suitable for export?

*Mr. Mellor.*—In the past we worked out theoretical costs but we have to add to our pulp cost the probable cost of drying, cutting and baling which might be in the neighbourhood of Rs. 15 a ton.

*President.*—We have an estimate of Rs. 20 a ton as the cost of conversion.

*Mr. Mellor.*—Without any overheads?

*President.*—You are no doubt aware that a pulp mill has been started in Trinidad.

*Mr. Mellor.*—We have heard of that.

*President.*—Articles have been published about it and they are actually exporting bamboo pulp to the United Kingdom.

*Mr. Mellor.*—I believe so.

*President.*—Of course it has only recently started. They are still on an experimental stage.

*Mr. Mellor.*—We have heard so.

*President.*—The Board has also got to consider the question of the possibility ultimately of developing the export trade in the next few years.

*Mr. Mellor.*—Yes.

*Mr. Rahimtoola.*—In answer to question 14 you have given the qualities of paper made. Are they made from 100 per cent. bamboo without admixture of wood pulp?

*Mr. Mellor.*—In the ordinary course at No. 1 mills papers are made out of bamboo and grass and mainly out of bamboo at No. 2 mill.

*Mr. Rahimtoola.*—How does the quality compare?

*Mr. Mellor.*—The admixture of grass helps the bulk of the paper.

*Mr. Rahimtoola.*—With regard to the three points, physical strength, durability and quality, I want to know how the quality of paper which is made entirely from bamboo and the paper made with a slight admixture of wood pulp compare?

*Mr. Mellor.*—I don't think we have ever made an all wood-pulp paper and all bamboo paper and then carried out physical tests, but generally speaking with our ordinary beating treatment, the bamboo paper is just as strong as the wood pulp paper.

*Mr. Rahimtoola.*—According to the statement you have made you are making two qualities of paper, one with slight admixture of wood pulp and the other entirely of bamboo.

*Mr. Mellor.*—That depends on the amount of wood pulp you are adding.

*Mr. Rahimtoola.*—Supposing you are adding 8 to 9 per cent.?

*Mr. Mellor.*—If we were to add for instance strong sulphite pulp in small quantities with the same amount of treatment in the beaters, we should probably get a slightly stronger pulp than we would get out of only bamboo. But it must be remembered if we beat bamboo suitably in the beaters, we can make a very strong paper.

*Mr. Rahimtoola.*—Can it be done?

*Mr. Mellor.*—It can be done.

*President.*—With regard to the question of the future trend of prices of wood pulp there is one point on which every one is unanimous including the importers. Every one says that they cannot say. We might leave it at that. Perhaps we might discuss that matter further with the Association on Monday.

*Mr. Mellor.*—Yes.

*President.*—In answer to question 18 regarding auxiliary materials, you are satisfied with the quality of Indian materials.

*Mr. Mellor.*—Yes—generally speaking.

*President.*—In that respect has there been an improvement since 1931?

*Mr. Mellor.*—Great improvement. We have strict specification for raw materials and they are able to keep up.

*President.*—With reference to your reply to question 19, you agree that your present recoveries are not satisfactory.

*Mr. Mellor.*—They are not.

*President.*—Do you expect that as a result of the various improvements you have made or are contemplating, your labour force would be reduced?

*Mr. Mellor.*—They will be reduced to a great extent, as soon as we have finished our renovations.

*President.*—I mean the actual process of manufacture.

*Mr. Mellor.*—Not very much reduction is possible.

*President.*—I take it that it is not likely to increase.

*Mr. Mellor.*—It is not likely to increase per ton of paper produced.

*Mr. Rahimtoola.*—We would like to know the present position with regard to apprentices and their chances of employment. How many apprentices you have got at present?

*Mr. Mellor.*—4 in the apprenticeship stage. We have actually 9 who are now in the grade of Assistant Supervisors. They are actually in the mill, in the beaters and in the machine house as Assistant Supervisors. They have passed their apprenticeship and they are now on the staff.

*Mr. Rahimtoola.*—On higher salaries?

*Mr. Mellor.*—Yes.

*Mr. Rahimtoola.*—Do you take them every year.

*Mr. Mellor.*—We take them as we want them, but actually we have reached at present the position of saturation. We can't go on taking men. We have applications for apprenticeships practically every day from all over the country, but there are relatively speaking only a few posts where we can employ them.

*Mr. Rahimtoola.*—Formerly there was difficulty in getting the right type of men.

*Mr. Mellor.*—There is no difficulty at present. We can get the kind of men we want.

*Mr. Rahimtoola.*—How many have you got at present?

*Mr. Mellor.*—Actually we have 4 apprentices and 9 Assistant Supervisors.

*Mr. Rahimtoola.*—Do you house them?

*Mr. Mellor.*—Generally—Yes. Where we don't house them, we give them a house allowance.

*President.*—During the last enquiry it was suggested that some of the apprentices found the work exacting. Is the work in a paper mill more exacting than in a jute mill?

*Mr. Mellor.*—In a paper mill when the machine is running well, and the beaters are full, the man has not much to do except to watch and supervise. I should think in a jute mill he has much more to do.

*Mr. Rahimtoola.*—What about the heat?

*Mr. Mellor.*—In a paper mill during the hot weather of course it is hot.

*Mr. Rahimtoola.*—Is it not very trying?

*Mr. Mellor.*—In a jute mill also there are departments where the heat is felt.

*Mr. Benthall.*—I would rather be in a paper mill than in a jute mill.

*President.*—You would not say from the point of view of apprentices that work in a paper mill is more exacting than work in a jute mill or any other mill.

*Mr. Mellor.*—No.

*President.*—In regard to the housing of your labour with the additions you are now proposing to make, what proportion of your labour will be housed roughly?

*Mr. Mellor.*—At present there is only a small number. At No. 1 mill we have 1,800 hands and with the present blocks and the existing quarters in our own compound, we probably cannot be housing more than 300 to 400. We are going on of course year by year completing more blocks.

*President.*—In your No. 2 mill you have not been able to do anything?

*Mr. Mellor.*—We have not been able to get suitable land within a reasonable distance from the mill. Most of our labour live in their own villages or nearby. Some of our labour comes from Bally where there was an old paper mill. They still prefer to live there and come across the river.

*President.*—In regard to your pension scheme, could you just give us a rough idea of what the scheme is?

*Mr. Mellor.*—We have two schemes, one for workers and the other for the clerical staff. One of the terms is that no worker under 50 gets a

pension unless he has had an accident or is very ill in which case we may give a special allowance. No pension is payable to any one who has served less than 25 years with the Company and then we grant pensions according to a definite scale of service. A man who has done 25 to 34 years of service gets a quarter of his average salary over the last 5 years. A man who has done 35 to 39 gets three-eighths. If he has served for 40 years and over, he gets half of his average salary. That is the maximum pension. We have a minimum as well as a maximum. The minimum is Rs. 15 and the maximum Rs. 50.

*President.*—Have you people working for 40 years?

*Mr. Mellor.*—Quite a lot. One man has done more and he simply won't go away. The service must be unbroken and we have a lot of people to consider in the next few years. Almost all the employees have been with us for 25 years.

*President.*—Your pension bill is rather mounting up.

*Mr. Mellor.*—Yes.

*President.*—Maternity benefits?

*Mr. Mellor.*—The same as given last time. It is a recognised scale applicable to all the mills. We have sent you to-day along with the forms showing the cost of bleached and unbleached pulp, the accounts and balance sheets of our Co-operative Credit Societies which we have had in operation for several years. They have been most successful and our workmen derive much advantage from them.

*President.*—You have no Co-operative Stores?

*Mr. Mellor.*—We have not got any at present. We have a scheme under consideration. It is really a question of suitable accommodation.

*President.*—In regard to your answer to question 24 regarding power and so on, I see that you have been drawing some supplies from the Calcutta Electric Supply Corporation.

*Mr. Mellor.*—Yes.

*President.*—Do you contemplate using them as a standby generally?

*Mr. Mellor.*—Yes, we always have them on as a standby in the event of a breakdown.

*President.*—I think we will go into the question of power when we get to the cost of manufacture.

*Mr. Mellor.*—Yes.

*President.*—I see you touch on the possibility of artificial silk. Could artificial silk be made from the pulp you prepared by the sulphate process? Could it only be done by the sulphite process?

*Mr. Mellor.*—It is generally made by the sulphite process. I am not sure what experiments have been carried out at Dehra Dun. They were reasonably satisfactory. Anyway they were encouraging.

*President.*—You might have seen in the papers that the Textile Industry are seriously considering the question of manufacturing artificial silk.

*Mr. Mellor.*—Yes.

*President.*—I have already dealt with the question of possibilities of export. I need not touch on that again. In reply to question 27 you say "In the case of mechanical and kraft pulp, it is surely an anomaly that there should be a protective duty on these pulps although paper made from them, or very largely made from them, should escape the protective tariff". The difficulty we feel is that the kraft pulp might be used for other purposes. That does not apply to mechanical pulp.

*Mr. Rahimtoola.*—At present papers with a mechanical pulp furnish of under 70 per cent. are protected.

*Mr. Mellor.*—Yes.

*Mr. Rahimtoola.*—Those papers will be affected if we allow the mechanical pulp to enter the country free of duty.

*Mr. Mellor.*—It would enable us to cheapen our fibre. Those papers containing 70 per cent. mechanical pulp and over are cheaper because the mechanical pulp is cheaper.

*Mr. Rahimtoola.*—If you manufacture those papers which are at present not protected out of mechanical pulp then it will be all right. But if protected papers are to be made out of the material which is supposed to be used in unprotected papers then there might be difficulty.

*President.*—Could mechanical pulp be used in the manufacture of cheap badami?

*Mr. Mellor.*—We could possibly cheapen badami to some extent. Mechanical pulp is not so successful when it is dry as when it is in a wet condition. I don't think that dry mechanical pulp can ever be used here to a very great extent.

*Mr. Rahimtoola.*—The only other effect will be that the paper containing mechanical pulp below 70 per cent. which is now protected will become unprotected. How will that affect you?

*Mr. Mellor.*—I don't see any reason for that.

*Mr. Rahimtoola.*—Because you allow mechanical pulp to come in free of duty. How can you protect papers with mechanical pulp furnish?

*Mr. Mellor.*—We are only going to use very small quantities. We should never be able to use up to 70 per cent. of the fibre content. It is not likely that Indian mills will start using mechanical pulp up to 70 per cent.

*Mr. Rahimtoola.*—There is nothing to prevent that.

*Mr. Mellor.*—There would be nothing to prevent it but we could never be very successful in using mechanical pulp except in a wet condition.

*President.*—You could import wet pulp.

*Mr. Mellor.*—We could.

*Mr. Rahimtoola.*—When you are making your recommendations I want you to consider all the aspects and then put forward a scheme for the Board to consider. That was my point in discussing this question.

*Mr. Mellor.*—Yes.

*President.*—Is the mechanical pulp that is sold by a pulp mill roughly in the same form as the chemical pulp?

*Mr. Mellor.*—It is very often shipped to the United Kingdom in a semi-moist form, but it would not be possible to send it over a long distance because of the cost of freight. We should have to pay freight on 50 per cent. water contained in the wet pulp.

*President.*—What is the reason for the mechanical pulp being not so satisfactory?

*Mr. Mellor.*—It is a weak and short-fibred pulp. The pulp is not pure cellulose.

*President.*—Regarding freights, it would be useful if you could give us freight rates to ports in particular because ports are rather important.

*Mr. Mellor.*—We can give you a statement showing the freights to ports.

*President.*—From the point of view of competition with imported paper, it is of some importance. The competition is usually most severe in ports, speaking generally, is it not?

*Mr. Mellor.*—Yes. I have a statement here showing the freight rates (handed in).

*President.*—How do these figures compare with the freight rates from importing countries?

*Mr. Goss.*—I have not got the latest freights from Europe to the ports mentioned in the statement. It was about 45 shillings per ton. It has gone



up considerably with the increased insurance, war risks and that sort of thing.

*President.*—We can ask the importers about that.

*Mr. Goss.*—We could let you have freight rates from the United Kingdom to various ports from our records.

*President.*—It might be useful to have your figures for comparison with the figures which might be supplied by importers.

*Mr. Goss.*—Yes.

*President.*—Do you send much paper by coastal steamers?

*Mr. Mellor.*—To some ports we send by steamer and to some by rail. To ports like Karachi we always send by steamer.

*Mr. Goss.*—During the monsoon we cannot ship to certain ports like Mangalore, Cochin, etc. In that case we send by rail.

*President.*—Speaking generally, apart from Calcutta you have to cut prices more in the ports than elsewhere.

*Mr. Mellor.*—Yes.

*President.*—That is very definitely your experience.

*Mr. Mellor.*—Yes.

*President.*—With regard to the question of prices, the previous Tariff Board was driven by force of circumstances to take the cost of manufacture as against realised price—the price actually realised by the mill. Admittedly that is not a very satisfactory procedure and that is not the procedure usually adopted by the Tariff Boards. The Tariff Board's usual practice is to take the cost of manufacture, compare it with the landed price of the imported article and then decide what amount of protection is required. The Board will have to consider to what extent it is possible on this occasion to adopt the more usual procedure. Of course, the difficulty is that there are so many qualities of paper which make the comparison difficult. That is the standing difficulty.

*Mr. Mellor.*—The difficulty is to decide to what extent the prices of papers are likely to go down.

*President.*—That is the difficulty in all enquiries. The special difficulty in paper is that there are so many qualities.

*Mr. Mellor.*—We have received a telegram from Madras to-day saying that they have been offered German paper—wood free printings—as low as £18 10s. c.i.f. We are going back to the low figures of 2 or 3 years ago.

*President.*—To what extent do you think that it is possible to adopt the usual procedure of the Board? Suppose we took the landed price of protected papers, say, writings and printings except those containing 70 per cent. and more mechanical pulp.

*Mr. Mellor.*—And then work back to our costs?

*President.*—The usual procedure of the Board is to take the total cost including the profit, compare it with what could be the landed price without duty and then see what amount of protection is required.

*Mr. Mellor.*—It depends of course on what you are going to agree is the fair landed price. You may get very much cheaper prices from the Continent than from the United Kingdom ports. It depends on conditions in those countries.

*President.*—You have to look to the prices from any country.

*Mr. Mellor.*—Quite so.

*President.*—We may discuss that point further with the Association.

*Mr. Mellor.*—Yes.

*President.*—There are cheap Japanese papers coming which have to be taken into account.

*Mr. Mellor.*—One never knows what will come from Japan.

*Mr. Rahimtoola.*—Can you give us recent quotations of Japanese paper?

*Mr. Goss.*—In 1936-37 the price was as low as 3 annas a lb.; that is the landed price. We get a monthly report from Bombay. The Japanese importers show the market value in their Customs invoices. We do not get their actual c.i.f. prices. They declare the market value.

*President.*—Are they wood-free papers?

*Mr. Mellor.*—Yes.

*Mr. Rahimtoola.*—What do you think of the quality of the paper? Is it writing paper?

*Mr. Goss.*—Mostly printings, but both writing and printings come in.

*Mr. Rahimtoola.*—Are the writings sold at the same price?

*Mr. Mellor.*—Yes. It is never possible to see the Japanese invoice price.

*President.*—They adopt the price to what the country can stand.

*Mr. Mellor.*—Yes.

*Mr. Rahimtoola.*—These prices tally with the prices realised by you.

*Mr. Mellor.*—Their cost is very low 1 anna 3 pies is the duty. If you deduct the duty from 3 annas, the balance is 1 anna 9 pies, from which allowances have to be made for freight, insurance, etc.

*Mr. Goss.*—It is duty which has given us protection against that. With the duty, the price of that paper comes to 3 annas a lb.

*Mr. Rahimtoola.*—How much will it work out per ton if you exclude the duty?

*Mr. Mellor.*—Rs. 238 per ton. Freight, insurance, dock charges in Japan—all these have to come off that.

*Mr. Rahimtoola.*—Have you actually seen the quality?

*Mr. Goss.*—I have seen it.

*Mr. Rahimtoola.*—How does it compare with the other imported papers?

*Mr. Goss.*—It does not bulk very well. It has usually got a very high surface. It is of good shade and a nice looking sheet.

*President.*—With reference to your reply to question 35, your experience is that the quality of paper made mainly of bamboo is just as good as any other paper.

*Mr. Mellor.*—Yes.

*President.*—There is no difference.

*Mr. Mellor.*—No.

*President.*—Do you find any prejudice, assuming the qualities are approximately equal, in favour of imported paper as against the Indian paper or *vice versa*.

*Mr. Mellor.*—Not much now-a-days. I should say that the actual paper dealers sometimes like to deal in imported paper because they have a chance of making a greater margin of profit. Generally speaking, actual consumers and printers on the whole like the Indian paper better than or as well as the imported.

*President.*—Is there any preference for Indian papers from the Swadeshi point of view?

*Mr. Mellor.*—In some markets I think there is.

*Mr. Rahimtoola.*—The prices you have given in annexure G in answer to question 31 are *ex-mills*, are they not?

*Mr. Mellor.*—No deduction has been made for selling charges in these prices.

*Mr. Rahimtoola.*—These are net *ex-mill* prices?

*Mr. Mellor.*—Annexure F shows nett selling prices and annexure G does not.

*Mr. Rahimtoola.*—How much has to be deducted from G to compare with F costs?

*Mr. Mellor.*—About one pie.

*Mr. Rahimtoola.*—This average price you have got for 1936-37 in various markets is for all classes of paper?

*Mr. Mellor.*—Yes and those in F are for specified qualities.

*Mr. Rahimtoola.*—With regard to Japanese paper 3 annas is the selling price but what is the c.i.f. price?

*Mr. Mellor.*—These are protected qualities so As. 1-3 operates.

*Mr. Rahimtoola.*—What is the price shown on the invoice on which this duty is charged?

*Mr. Mellor.*—We get these figures from the Customs and the Japanese declare the market value.

*President.*—In the case of the Japanese paper none of it comes under the alternative *ad valorem* duty.

*Mr. Goss.*—It is all protected. No mechanical paper seems to be coming in from Japan.

*President.*—In answer to question 48 you say the savings you expect under chemicals is approximately Rs. 1,50,000 per annum. On what recovery rate do you base your figure?

*Mr. Mellor.*—Actually they are based on that proportion of the quantity of caustic which we happen to buy at present we should be able to displace.

*President.*—Your present recovery is 58; supposing you worked up to 75 per cent.?

*Mr. Mellor.*—We have actually taken the saving that will be effected by displacing the caustic now purchased.

*President.*—Could you work out on a recovery of 75 per cent. what would be the figure?

*Mr. Mellor.*—Yes. As far as we are concerned, that means the purchase of new plant. Not only have we to incur high expenditure on a new smelting furnace at Kankinara but we have eventually got to purchase similar plant for No. 1 mill to give us the adequate efficiency and capacity.

*President.*—Simply take the cost of chemicals in recovery and say what is going to be the difference between 58 and 75 per cent.

*Mr. Mellor.*—We will send you that.

*President.*—In regard to power you estimate your savings at Rs. 1,80,000. On what basis is that figure arrived at?

*Mr. Mellor.*—That is on actual reduced consumption and the saving by not using purchased power, the cost of which is very much higher than our own.

*President.*—You anticipate a saving of Rs. 2,25,000 as a result of replacement of wood pulp by bamboo pulp, or, let us say, a saving of about Rs. 5,50,000 altogether roughly speaking. As against these you say there would be some increase in the price of coal. Of course that rise may be only temporary.

*Mr. Mellor.*—It may be.

*President.*—In regard to chemicals of course again there has been an increase and it is difficult to forecast what the trend of prices will be.

*Mr. Mellor.*—Yes, it is very difficulty to say.

*President.*—It rather strikes me this way: you have something like a definite saving in view of about Rs. 5½ lakhs but your increases are rather problematic and therefore your estimate of the reduction per ton strikes me as somewhat low?

*Mr. Mellor.*—The savings are estimated on the 1936-37 figures, but since then our costs have gone up. If they are taken on to-day's costs, it will not be nearly so high. Our coal has gone up; the coal consumption to-day is about 100,000 tons a year and the price has gone up on the average between Rs. 2 to 3 per ton since 1936-37, so our coal cost has gone up by about Rs. 2 lakhs to Rs. 3 lakhs already.

*President.*—And chemicals?

*Mr. Mellor.*—They have all gone up.

*President.*—It strikes me as a little indefinite. You arrive at a figure of Rs. 9·8 per ton: you give your savings but the increase is a little bit indefinite. We will, however, leave this point for the present and consider it further in connection with your works costs.

*Mr. Mellor.*—Yes.

*President.*—In regard to your stocks you have given the average value.

*Mr. Mellor.*—There is a mistake there. When we say outstandings in respect of goods sold, 'by arrangement', it should read as 'average amount'. That is a clerical error.

*President.*—The actual practice of the Tariff Board is to take as working capital average value of stocks and not outstandings.

*Mr. Mellor.*—Quite so.

*President.*—I think the general question of protection may be taken up with the Association unless you want to raise any other point.

*Mr. Mellor.*—Except that the Association may not agree to all our views.

*President.*—I have only just got your figures for pulp. I think we might take first of all your figures of cost per ton of finished paper (the last statement). In regard to these costs, as I have said before, I trust you have no objection if we were to indicate that some of your costs seems to us to be comparatively high without actually stating the figures?

*Mr. Mellor.*—We have no objection.

*President.*—In regard to raw materials there has been a considerable reduction in 1936-37 under the first general heading.

*Mr. Mellor.*—Yes.

*President.*—Was that mainly due to the reduction in the cost of raw material or efficiency of production?

*Mr. Mellor.*—A good deal mainly due to the fall in the cost.

*President.*—That is mainly on the item of bamboo?

*Mr. Mellor.*—Mainly bamboo. You are taking the total figure Rs. 58·018?

*President.*—Yes, compared with 1931 which is Rs. 61·533.

*Mr. Mellor.*—But we have less purchased pulp.

*President.*—Taking the two together.

*Mr. Mellor.*—Actually we are now making more bamboo paper.

*President.*—In regard to auxiliary raw materials there is an actual increase compared to 1931?

*Mr. Mellor.*—Yes. That is due to the fact that we are manufacturing more indigenous pulp, for which more chemicals are required.

*President.*—On the whole in that period the cost of chemicals had fallen.

*Mr. Mellor.*—Generally speaking there had been a fall but there has been an increase recently.

*President.*—It is very difficult to make a comparison between 1931 and 1936 because of the difference in the raw materials you have been purchasing. It affects most of the items as we go along in regard to chemicals.

*Mr. Mellor.*—Yes.

*President.*—As regards conversion charges and bleaching costs, what is the reason for the increase in that?

*Mr. Mellor.*—That is due to higher production.

*President.*—This is the cost per ton.

*Mr. Mellor.*—We are bleaching more bamboo pulp instead of using easy bleaching wood pulp.

*Mr. Rahimtola.*—Since when you have been using easy bleaching pulp?

*Mr. Mellor.*—We have always used easy bleaching pulp, but to-day we are using very much less than formerly. Therefore we have to bleach far more bamboo pulp. The easy bleaching pulp is the pulp which we generally buy. Other mills buy bleached pulp. It doesn't require as much bleach as grass or bamboo pulp.

*President.*—When do you mix the easy bleaching pulp?

*Mr. Mellor.*—Generally in the beaters or sometimes in the potchers.

*President.*—Do you do the bleaching separately then?

*Mr. Mellor.*—In No. 2 mill we have been doing it separately. It is coming in through the same washing system.

*President.*—Have you any particular system of mixing the different classes of material?

*Mr. Mellor.*—Very often if we are using special rags, we add them in the beater.

*President.*—In regard to power and fuel in 1931-32 the figure was Rs. 19-444 and in the next four years it remained fairly constant at Rs. 14 and Rs. 15 and then there was a sudden jump in 1936-37.

*Mr. Mellor.*—The jump is due to the operation of our bamboo pulp plant at No. 1 mill and the extensions in No. 2 mill.

*President.*—Current repairs and maintenance: I see the figures fluctuated a good deal. It was higher in 1936-37 than in any of the preceding years. Is there any particular reason for that?

*Mr. Mellor.*—Just the amount of work we have been able to do in that one year.

*President.*—Mill labour has steadily decreased. That, I think, is due to the increased production.

*Mr. Mellor.*—Yes.

*President.*—There has not been the same relative decrease under supervision and establishment.

*Mr. Mellor.*—No. We have to have more technical staff.

*President.*—One would have expected that the supervision and establishment would have fallen with increased production.

*Mr. Mellor.*—Actually we have far more supervision than in earlier days. It is necessary in order to make the better paper required by the market. We never had the Assistant Supervisor Grade which we have now. It is slightly more expensive to us to work on 8-hour shifts, for which we must have more men and more shift chemists in the chemical and digester departments. It is to some extent brought about by the supervision of our pulp plant. When we were using imported pulp, we had a much smaller chemical staff.

*President.*—The cost of packing has decreased fairly considerably in the period. I understand that packing on the whole is rather more elaborate than it used to be.

*Mr. Mellor.*—We have always packed our paper very well for the last 8 or 9 years. We adopted modern packing a long time ago. We were the first to use it here, but there has been, I think, a fall in the cost of several materials used in packing.

*President.*—What do 'other items' in the cost of manufacture consists of?

*Mr. Mellor.*—Small items like mill medical staff, stationery, etc.

*President.*—Selling expenses, I observe, have gone up slightly.

*Mr. Mellor.*—Yes, we have to have a sales staff and an organisation all over India and Burma, from Quetta and Pindi in the north to Tuticorin in the south.

*President.*—On the other hand with increased production and increased selling, I rather expect that the ratio of selling expenses must have fallen.

*Mr. Mellor.*—It depends on the amount of advertising and publicity we have to do.

*President.*—To sell more paper is more expensive.

*Mr. Mellor.*—Yes.

*President.*—At what rate do you allow depreciation?

*Mr. Mellor.*—Standard rate.

*President.*—Is it 6½?

*Mr. Mellor.*—5 per cent. for buildings and 7½ per cent. for machinery.

*President.*—Is that the statutory rate?

*Mr. Mellor.*—Yes, for paper mills.

*President.*—Interest on working capital: The figures you have entered are actuals?

*Mr. Mellor.*—Yes.

*President.*—I will return to theoretical figures later, because we have to make one or two remarks on that. Have you any idea whether there is likely to be any material change in your total costs in the current year?

*Mr. Mellor.*—We think that they will be up on these figures due to increase costs of coal and materials.

*Mr. Rahimtoola.*—Head Office expenses include Managing Agents' charges.

*Mr. Mellor.*—Yes.

*Mr. Rahimtoola.*—What is the system in your mill?

*Mr. Mellor.*—An office allowance and a commission on the profits after deducting statutory depreciation.

*Mr. Rahimtoola.*—How much is that?

*Mr. Mellor.*—10 per cent.

*Mr. Rahimtoola.*—What is the allowance?

*Mr. Mellor.*—Rs. 2,000 a month.

*Mr. Rahimtoola.*—What percentage of commission do you pay for the selling expenses if it is done through Agents?

*Mr. Mellor.*—It varies with different markets. An Agent usually gets about 5 per cent. It depends on whether he takes the financial risk. If he takes the financial risk, it is 5 per cent. on an average.

*President.*—I have to mention that your selling expenses are comparatively high.

*Mr. Mellor.*—Yes. We spend a good deal on propaganda and advertising. We cannot help it. We have to.

*Mr. Rahimtoola.*—As there is nothing shown under miscellaneous, these things must come in under this head.

*Mr. Mellor.*—Yes.

*President.*—Where do you give your theoretical costs?

*Mr. Mellor.*—In our answer to question 51.

*President.*—I see you have lumped Head Office and Selling Expenses together.

*Mr. Mellor.*—Yes.

*President.*—It is the total of the two in the other form.

*Mr. Mellor.*—Yes.

*President.*—In your theoretical figures you are taking depreciation at 6½ per cent. Is that an average rate? Strictly speaking you ought to work it so much on machinery and so much on buildings.

*Mr. Mellor.*—We have taken the percentage given by the last Tariff Board.

*President.*—Would it roughly correspond to the statutory rates?

*Mr. Mellor.*—Yes, 7½ per cent. on machinery and 5 per cent. on buildings.

*President.*—Do the Incometax people actually allow you 5 per cent.?

*Mr. Mellor.*—Yes.

*President.*—Our figure per ton is possibly lower.

*Mr. Mellor.*—Yes.

*Mr. Rahimtoola.*—Last time it was Rs. 50 per ton.

*Mr. Mellor.*—Yes.

*President.*—As regards working capital, as I mentioned just now the practice of the Board is to take the average value of stocks and to allow for interest something above the bank rate. Actually you have taken a flat rate of 6 per cent.

*Mr. Mellor.*—Yes.

*President.*—That is not quite in accordance with the usual practice. Supposing I had to borrow money for working capital from the bank, such advances are given at rates one or two per cent. above the bank rate.

*Mr. Mellor.*—Yes.

*President.*—It has been pretty steady for some years.

*Mr. Mellor.*—You must take the average bank rate as 4 or 5 per cent.

*Mr. Rahimtoola.*—The Reserve Bank rate is 3 per cent.

*Mr. Mellor.*—Yes.

*President.*—The Board has been taking a lower rate.

*Mr. Mellor.*—Yes.

*President.*—Take the question of debentures which carry an interest of  $4\frac{1}{2}$  per cent. Your debentures would cover your working capital.

*Mr. Mellor.*—The interest is  $4\frac{1}{2}$  per cent. We thought it was an extremely good time to float our debentures. It is quite likely interest rates may go up to 5 per cent. One per cent. above the bank rate is a fair rate—over 15 or 20 years.

*President.*—Actually the recent Tariff Board has assumed that cheap money is going to continue and has taken a rate lower than that.

*Mr. Mellor.*—What rate were you taking?

*President.*—4 to 5 per cent.; not more than 5 per cent.

*Mr. Mellor.*—When the Bank rate is 4 per cent. we want only 1 per cent. over that.

*President.*—That will make a slight difference in the figure.

*Mr. Mellor.*—Yes.

*President.*—The amount of working capital will be less than Rs. 20 lakhs.

*Mr. Mellor.*—Rs. 19 lakhs and odd.

*President.*—That does not include outstandings.

*Mr. Officer.*—No, we have given the details in reply to question 49.

*Mr. Rahimtoola.*—Last time the Tariff Board took less than Rs. 20 lakhs.

*Mr. Officer.*—The Tariff Board allowed  $7\frac{1}{2}$  per cent. on 6 months' output.

*Mr. Rahimtoola.*—Your output was lower then.

*Mr. Mellor.*—Yes.

*President.*—I don't think at this stage there is much use in discussing the actual amount of protection required especially when we have to try and work out the cost. Might it not be better to defer the matter till we looked into it?

*Mr. Mellor.*—Yes, I agree.

*President.*—There is the question of additional protection which you claim for drawing cartridge. There are different kinds of cartridge paper—offset cartridge, printing cartridge and so on. Can they be easily distinguished?

*Mr. Goss.*—The present basis of weight for drawing cartridge is Demy 24 lbs. and upwards. Anything less than that is considered as printing

paper. Offset cartridge would come in at the protective duty. The chief difference lies in the finish of the paper. Drawing cartridge has a rough surface whereas offset cartridge has a smoother surface.

*President.*—Can the Customs people easily distinguish it? Supposing drawing cartridge is included in the protected class, can the Customs people easily distinguish it from other kinds of cartridge?

*Mr. Goss.*—The other qualities of cartridge are already protected, so if drawing cartridge were made a protected quality it would not matter whether they are able to distinguish it or not. Offset cartridge as a printing paper is already protected.

*President.*—But the effect of the change will be that cartridge of every description will be protected?

*Mr. Goss.*—Yes.

*Mr. Rahimtoola.*—Quite irrespective of the substance?

*Mr. Goss.*—Yes. We want it to be a protected quality. It is manufactured quite largely in this country.

*Mr. Rahimtoola.*—At the time of the last enquiry it was said that certain qualities were not manufactured below certain substances.

*Mr. Goss.*—At the time of the original tariff enquiry it was neither considered as writing or as printing paper.

*Mr. Rahimtoola.*—I am thinking of 1936 Tariff Board. I shall read to you a sentence from that:—"On the basis of the Central Board's ruling it is the Calcutta Custom House practice to assess cartridge paper below 18" x 23"—28 lbs. per 500 sheets or 95 grammes per square metre as printing paper and paper above that substance as drawing cartridge liable to the revenue duty. The paper manufacturers would like that this practice be continued but have agreed to the suggestion that cartridge paper below 85.2 grammes per square metre (decmy 24 lbs.) should be classed as printing paper as no pucca cartridge paper according to them is made below that substance".

*Mr. Goss.*—We accepted that on the basis that drawing cartridge was an unprotected quality.

*President.*—What is the demand for drawing cartridge? Could you possibly meet the demand? I forget whether others are making cartridge paper or not.

*Mr. Mellor.*—I believe that the Bengal Paper Mills are making it also.

*President.*—What is the present import of drawing cartridge?

*Mr. Mellor.*—It is not separately shown. I think the total demand is about 2,000 tons a year.

*President.*—What is your output of drawing cartridge at present?

*Mr. Mellor.*—About 250 tons a year.

*President.*—We have to consider—assuming protection is extended to this class of paper—we have still an open mind on that question—whether the mills could turn out at reasonable proportion of the demand?

*Mr. Goss.*—We can turn out as much as the market wants.

*President.*—Supposing protection is granted to this class of paper, you could increase its output.

*Mr. Mellor.*—Yes. We shall want the output later on.

*President.*—I have only just received your pulp figures and have not had time to look into them. Speaking generally, your allocation of overhead charges and other items must be on an arbitrary basis?

*Mr. Mellor.*—Yes.

*President.*—What sort of basis have you taken?

*Mr. Wood.*—60 per cent. for pulp and 40 per cent. for paper.

*President.*—Does that apply to all the items that are in?



*Mr. Wood.*—Insurance, rents and taxes, depreciation, interest on working capital, head office expenses and miscellaneous.

*President.*—There is one point that strikes me and that is, the difference between the costs of unbleached pulp and bleached pulp seems rather high. We have been informed that as between the two the main expenditure is really the cost of bleaching material and labour and other things are a small item.

*Mr. Wood.*—That is so. The actual cost of bleach is very small. It is only Rs. 11. It is only a question of how you allocate other charges. You can either put them on the unbleached pulp or on the bleached pulp.

*President.*—I suppose the other two mills would not mind my saying that they have taken it on the basis of bleach and a small addition.

*Mr. Wood.*—We have done it in the following ratio—two-thirds to unbleached and one-third to bleached.

*President.*—The gap between the two is nearly Rs. 33. That seems rather high. Of course, in respect of allocation of charges, every one has his own views.

*Mr. Rahimtoola.*—It might be due to the fact that you have taken overheads in both the cases.

*Mr. Wood.*—Yes.

*Mr. Rahimtoola.*—You have taken Rs. 161 which is the cost of unbleached pulp and added the cost for bleached. But in both cases you have got the overheads.

*Mr. Wood.*—The unbleached pulp has a certain proportion of overhead.

*Mr. Mellor.*—We can put all the overhead on the unbleached and add nothing for the bleached pulp.

*President.*—Your figures seem to work out rather high comparatively speaking.

*Mr. Mellor.*—They do. That is due to the recovery.

*President.*—That goes into the cost pulp.

*Mr. Mellor.*—Yes. It purely affects the cost of pulp.

*President.*—When you have got your recovery plant working up to what may be described a reasonable standard of efficiency you ought to make a considerable reduction in the cost.

*Mr. Mellor.*—Yes, on the pulp side.

*President.*—Could you put a figure to it?

*Mr. Wood.*—Rs. 10 to Rs. 12 a ton.

*President.*—In regard to grass pulp, have you made the allocation on the same basis?

*Mr. Wood.*—Yes.

*President.*—In regard to grass the figure is much more on a par with such other information as we have got.

## 6. Bengal Paper Mill Company, Limited, Calcutta.

### A.—WRITTEN EVIDENCE.

(1) *Letter, dated the 4th February, 1938.*

We have the honour to send herewith six copies of our replies to the Questionnaire, together with three bound copies of our half-yearly Balance Sheets\* from 1931-36, and samples of the various qualities of papers we manufacture.

NOTE.—All figures given relative to pulp are on an air-dry basis.

1. (a) The Bengal Paper Mill Co., Ltd., is a Public Registered Company established in 1889.

(b) Registered in India. Rupee capital as follows:—

Ordinary shares, Rs. 9,00,000 of Rs. 25 each.

7 per cent. Cum Preference shares, Rs. 2,00,000 of Rs. 50 each.

7 per cent. A Cum Preference shares, (issued in 1928), Rs. 4,00,000 of Rs. 100 each.

(c) Indian shareholders registered in the Company's share register:—

Ordinary shares, 59 per cent. value Rs. 5,35,150.

7 per cent. Cum Preference shares, 74 per cent. value Rs. 1,48,900.

7 per cent. A Cum Preference shares, 53 per cent. value Rs. 2,14,000.

(d) There are two Indian and three British Directors on the Board of the Company.

Although the principal posts in the superior management of the Company are held by European Assistants who for the most part have had long service with the Company, yet we have at the Mills a number of Indians holding responsible posts and we refer to this point in greater detail in reply to question 22.

With regard to the sales side of the Company's organisation, our Delhi Sales Branch which covers many of the United Provinces markets, Central India and the Rajputana States is in charge of an Indian who has under him a staff of junior salesmen, who periodically tour the districts mentioned above under his direction.

In the South Indian markets we employ one senior and two junior Madras salesmen.

Our Calcutta Bazar sales are conducted through Indian Brokers.

In Bombay our sales are conducted through the Indian Paper Sales Association which employs four Indian salesmen.

In the case of (a) and (b) there has been no change.

(c) The percentage of Indian shareholders has increased as follows:—

	Per cent.
Ordinary Shareholders . . . . .	16
Cum. Preference Shareholders . . . . .	16
"A" Cum Preference Shareholders . . . . .	27½

(d) There is now one more Indian Director on the Board, and one British Director less.

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\* Not printed.

2. As at present equipped the approximate capacity of the Mill for the manufacture of grass and bamboo pulp is 11,000 tons per annum. The maximum capacity for the production of finished paper is 11,500 tons.

3. We have set out below the actual output of the mills for each year since 1931 of Pulp and Paper.

	Pulp Tons.	Paper Tons.
1931 . . . . .	4,057	9,312
1932 . . . . .	5,448	10,706
1933 . . . . .	6,492	10,563
1934 . . . . .	6,623	10,377
1935 . . . . .	9,582	11,097
1936 . . . . .	10,496	11,206

The output of pulp, as shown above, consists of grass, bamboo, hemp, canvas, rags and waste papers.

In the following statement the annual production of grass and bamboo pulp has been separated from pulp made from other indigenous fibrous materials.

	Grass and Bamboo.	Other indigenous materials.
1931 . . . . .	3,424	633
1932 . . . . .	4,633	815
1933 . . . . .	5,660	832
1934 . . . . .	6,050	573
1935 . . . . .	8,492	1,090
1936 . . . . .	9,227	1,269

4. The chief classes of papers manufactured in our Mills are:—

White Printing M/F . . . . .	Blottings.
White Printing S/C . . . . .	Antique Laid and Waves.
Cream Laid and Waves . . . . .	Coloured Printings, M/F and S/C.
Semi-Bleached . . . . .	Banks and Bonds.
Superior Badami . . . . .	Azure Laid and Waves.
Common Badami . . . . .	Brown Wrapping.
White and Buff Cartridge . . . . .	Duplicatings.
White and Tinted Imitation Art . . . . .	Manillas.
S/C A/C Book, White and Buff . . . . .	Pulp Boards.

The average percentage of each of the above qualities manufactured is as follows:—

	Per cent.
White Printing M/F . . . . .	34.90
White Printing S/C . . . . .	1.83
Cream Laid and Waves . . . . .	13.43
Semi-Bleached . . . . .	8.25
Superior Badami . . . . .	1.52
Common Badami . . . . .	14.35
White and Buff Cartridge . . . . .	1.35

	Per cent.
White and Tinted Imitation Art . . . . .	0.90
White and Buff S/C A/C Book . . . . .	4.58
Blottings . . . . .	2.14
Antique Wove and Laid . . . . .	1.14
Coloured Printings, M/F and S/C . . . . .	1.76
Banks and Bonds . . . . .	0.88
Azure Laid and Wove . . . . .	0.75
Brown Wrapping . . . . .	8.51
Duplicatings . . . . .	1.31
Manilla . . . . .	1.75
Pulp Boards . . . . .	0.65

We have taken an average over the three years 1934-36.

Although at present we make a fairly wide range of papers, we consider there are possibilities of developing a market for other qualities and we hope to investigate this matter at an early opportunity.

5. Our Consumption of the Primary Raw Materials has been as follows:—

#### FORM I—(Qn. 5.)

##### Primary Materials.

	1931.	1932.	1933.	1934.	1935.	1936.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<b>Bamboo—</b>						
(1) Quantity of material used	232	307	219	637	5,449	7,016
(2) Quantity of finished paper which material represents.	113	126	88	255	2,180	2,806
(3) Percentage of (2) on the total quantity of paper manufactured.	1.21	1.17	0.83	2.46	19.65	25.04
<b>Grass—</b>						
(1) Quantity of material used	7,337	9,769	11,899	12,408	13,057	13,597
(2) Quantity of finished paper which material represents.	3,132	4,234	5,152	5,260	5,545	5,599
(3) Percentage of (2) on the total quantity of paper manufactured.	33.63	39.55	48.77	50.69	50	49.96
<b>Wastepaper and Paper Cuttings—</b>						
(1) Quantity of material used	1,061	1,431	1,314	872	1,763	2,173
(2) Quantity of finished paper which material represents.	478	623	535	375	749	892
(3) Percentage of (2) on the total quantity of paper manufactured.	5.13	5.82	5.07	3.61	6.75	7.96

## FORM I—(Qn. 5)—contd.

## Primary Materials—contd.

	1931.	1932.	1933.	1934.	1935.	1936.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<b>Other Indigenous Materials—</b>						
(1) Quantity of material used	1,036	1,304	1,418	1,140	1,579	1,524
(2) Quantity of finished paper which material represents.	573	676	756	640	876	855
(3) Percentage of (2) on the total quantity of paper manufactured.	6.15	6.32	7.16	6.17	7.89	7.63
<b>Total Indigenous Materials—</b>						
(1) Quantity of material used	9,716	12,801	14,860	15,057	21,848	24,310
(2) Quantity of finished paper which material represents.	4,296	5,658	6,531	6,530	9,360	10,152
(3) Percentage of (2) on the total quantity of paper manufactured.	46.12	52.86	61.83	62.93	84.29	90.59
<b>Imported Pulp—</b>						
(1) Quantity of material used	5,544	5,562	4,415	4,197	1,894	1,152
(2) Quantity of finished paper which material represents.	5,016	6,048	4,032	3,847	1,746	1,054
(3) Percentage of (2) on the total quantity of paper manufactured.	53.88	47.14	38.17	37.07	15.71	9.41
<b>Total Production of Finished Paper.</b>	<b>9,812</b>	<b>10,706</b>	<b>10,563</b>	<b>10,377</b>	<b>11,006</b>	<b>11,206</b>

In 1937 our consumption of the three primary materials was as follows :—

Grass.	Bamboo.	Imported Pulp.
12,901 tons	10,006 tons.	978 tons.

6. Quantity of Primary Raw Materials required for one ton of Bleached Pulp and one ton of Paper.

	(a)	(b)
	Pulp Tons.	Paper Tons.
Grass . . . . .	2.21	2.43
Bamboo . . . . .	2.27	2.50
Jute . . . . .	1.85	2.00
Hemp . . . . .	1.45	1.54
No. 1 Rags . . . . .	1.35	1.42
No. 1 Rags . . . . .	1.56	1.66
No. 2 Rags . . . . .	1.85	2.00
No. 1 Paper . . . . .	1.45	1.54
No. 5 Paper . . . . .	2.27	2.50

The figures given above set out the quantity of primary raw materials required for one ton of Pulp and one ton of paper.

In the case of the raw materials required for one ton of paper, the losses indicated are the total conversion losses.

7. We consider, as stated to the last Tariff Board, that ample supplies of primary materials such as Bamboo and Grass, also other indigenous materials, are available and that their suitability for the manufacture of paper has already been proved.

8. The only change as regards (a) is that we no longer obtain any supplies of Grass from the Ramnagar Forest.

(b) Since 1931 we have obtained all our requirements of Sabai Grass through Contractors, including supplies from the Singbhum Forest, which area, although leased in our name has been worked on our behalf by Contractors.

(c) The terms of our Singbhum Grass concessions remain much the same as before.

As regards Bamboo, although all our requirements have been obtained through Contractors, we have recently started developing an area of our own in the Hazaribagh District, from which we hope to be able to secure approximately 50 per cent. of our requirements.

9. We give below the average cost per ton, delivered at the Mill, for Bamboo and Sabai Grass for the period 1931 to 1936.

As all our supplies were received from Contractors, we are unable to sub-divide the costs under the headings (a) to (d).

	Bamboo.	Sabai Grass.
	Per ton.	Per ton.
	Rs. A. P.	Rs. A. P.
1931 . . . . .	28 10 0	52 0 1
1932 . . . . .	27 0 0	41 11 8
1933 . . . . .	19 4 2	37 12 6
1934 . . . . .	12 10 7	37 11 6
1935 . . . . .	14 3 4	37 3 0
1936 . . . . .	17 12 0	35 1 0

The prices we have given for Bamboo from 1931 to 1934 represent stocks which we had in 1930-31, and which were written down in our books during the three years 1932 to 1934.

The reduction in our delivered cost of grass to the Mills has been due in no small measure to the fact that areas worked before 1931 departmentally, have since been worked by Contractors, and also to our being able to secure most of our requirements from areas nearer to our Mills.

10. We do not consider the present Railway freights on Coal, Bamboo, Grass and other materials have caused any special hardship to the industry.

11. (a) We have adopted the fractional sulphate process for the manufacture of bamboo pulp. The bamboo is first suitably crushed and then charged into vertical stationary digestors. The actual cooking is divided into two distinct operations; first, the pre-digestion and secondly, the lignin or main digestion. The principal active agents in the liquor for the lignin cook are sodium sulphide and sodium hydroxide. Approximately, the requirement of these mixed salts is 18/19 per cent. on the dry weight of bamboo. The proportions of one to the other vary with the degree of cooking required and the quality of bamboo being treated.

After cooking is complete, the bamboo pulp is discharged into a breaker and is there washed and passed to towers for subsequent bleaching.

(b) Grass pulp is prepared at our Mill in vertical Sinclair digestors by the overhead soda process. The entire cooking is carried out in one operation at a constant pressure with sodium hydroxide only. The pulp, after digestion, is broken up, strained, washed and bleached in potchers and towers.

(c) Rags, including hemp ropes and canvas, are first sorted by women and cut into small pieces. They are then charged into spherical rotary digestors, of which we have 5, and are there boiled in a caustic soda solution at a low pressure. After boiling, the rags are washed and bleached in small washing engines and the resultant pulp is discharged into draining steepers.

Waste papers are sorted by hand and pulped in mechanical rotary pulpers. Heavily coloured waste papers are boiled in the rotary digestors with a very weak solution of caustic soda.

As requested, Forms 2 and 3 are given herewith, duly completed.

(a) We have had no large scale practical experience with any but alkali processes. We feel, therefore, that we cannot offer well supported opinions as to the suitability of any other process for the manufacture of bamboo pulp. The fractional sulphate process which we have adopted has proved entirely satisfactory and suitable to the requirements of our particular mill.

(b) We are at present manufacturing 400 tons of Air-Dry Bamboo Pulp per month, and without increasing the number of digestors, but by making small amendments to our present arrangements, this quantity could be easily increased by a further 50 tons a month if necessary, making possible an annual total of 5,400 tons.

(c) The following is the tabulated statement of bamboo pulp made during the years 1931-36:—

	Bamboo Pulp.
1931 . . . . .	118.44
1932 . . . . .	128.94
1933 . . . . .	91.98
1934 . . . . .	267.54
1935 . . . . .	2,288.58
1936 . . . . .	2,946.72

(d) For the express purpose of manufacturing bamboo pulp, the following additions have been made to our plant during the years under review:—

3 B. and W. 15,000 lbs. steam boilers with auxiliaries.

Additional economisers for these boilers.

4 Stage Electric Boiler Feed Pump.

1 Steam Boiler Feed Pump.

1 Lea Recorder for measuring boiler feed water.

Additional steel storage godown of 65,000 maunds capacity.

Godown for Lime Storage.

Large six-roll Bamboo Crusher complete with gearing and electric motor.

Two rubber band troughed elevators.

Four 7½ ton Bamboo Digestors with necessary piping, pumps and auxiliaries.

Bamboo Breaker complete with extraction pumps.

8 Concrete Bleach Towers with motor driven circulating pumps.

3 Bleach mixers and storage tanks.

2 Full Drum pulp strainers.

1 Auxiliary pulp strainer.

Concrete Sand-tables.

The entire Sulphate Recovery Plant consisting of Liquor tanks, 2 strainers, 3 evaporators, roaster, self-supporting chimney, smelters, 2 dissolvers, 4 steel causticisers, one vacuum lime filter, 3 white liquor tanks with numerous small pumps and the necessary piping.

Two Harland motor driven circulating pumps.

Nearly all the foregoing plant has been housed in new buildings, mostly steel frame type with brick walls and asbestos sheet roofs. The Bamboo Crusher is the exception to this as in that particular case an old building was conveniently converted.

(e) The total expenditure incurred on the above was Rs. 11,21,352-4-3.

(f) We have taken on lease an area of approximately 27 square miles in Bihar and from this we anticipate securing 4/6,000 tons of bamboo per annum. It is relatively near the Mill and the bamboo is of excellent quality. We are also amply covered through contractors for the balance of our requirements of bamboo for the next two years.

(g) Contractors' rates range between Rs. 17 and Rs. 18 per ton for air dry bamboo delivered to the Mill. Supplies from our own area, which is worked departmentally, cost approximately Rs. 17 per ton delivered.

(h) It is unlikely that our coal consumption as represented by steam used for bamboo digestion and sulphate evaporation, will be materially reduced.

(i) There seems no likelihood of a drop in the prime costs of chemicals. In fact, recent tendencies have been towards an increase in the cost of chemicals used for bamboo pulp manufacture.

(j) When our new beating mill is in full operation, we shall expect a considerable improvement in the cleanliness and the general quality of our papers, although this only has an indirect relationship to bamboo, which requires more "Milling" than our present beating mill can devote to it.

During the three years 1931-33 our Bamboo operations were largely of an experimental character, and consequently costs per ton of bleached pulp would be of no comparative value, being unrelated to present day costs. We have therefore confined ourselves to the years 1934, 1935 and 1936.

As there is no sharp line of division between the manufacture of Pulp and Paper, the cost of one is, to a certain extent bound up in the cost of the other. We have endeavoured to meet the wishes of the Board in preparing Statements 2 and 3 but we would like to make it clear that certain of the figures given are estimations based on our experience and should be accepted with this reserve.

12. The quantities of Pulp imported from 1931 to 1936 are as follows:—

(a)		1931.	1932.	1933.	1934.	1935.	1936.
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
E. B. Sulphite . .		3,900	3,713	2,099	1,850	514	592
Bleached Pulp . .		986	1,384	2,316	2,347	1,380	560
Strong Pulp . .		658	465	...	...	...	...
Total (tons) .		5,544	5,562	4,415	4,197	1,894	1,152

(b) Imported from Norway, Sweden, Finland and America.

(c) Imported into Calcutta.



Quality.	C. I. F. price per ton.	Insurance, etc. per ton.	Landing charges, etc. per ton.	Railway freight to Mill per ton.
	£ s. d.	s. d.	Rs.	Rs. A. P.
1931.				
E. B. Pulp . . .	9 2 10	0 9	4	4 10 9
E. B. Pulp . . .	11 5 6	1 0		
Bleached Pulp . . .	11 19 10	0 10		
Bleached Pulp . . .	17 0 0	1 3		
Strong Pulp . . .	10 2 6	1 0		
1932.				
E. B. Pulp . . .	9 1 0	0 9	4	4 10 9
Bleached Pulp . . .	10 17 6	0 11		
Bleached Pulp . . .	18 15 6	1 3		
Strong Pulp . . .	8 12 6	0 9		
1933.				
E. B. Pulp . . .	8 11 9	0 9	4	4 10 9
Bleached Pulp . . .	10 9 8	0 11		
Bleached Pulp . . .	18 10 0	1 4		
1934.				
E. B. Pulp . . .	9 5 3	0 9	4	4 10 9
Bleached Pulp . . .	11 1 0	0 11		
Bleached Pulp . . .	14 16 3	1 1		
1935.				
E. B. Pulp . . .	9 2 6	0 8	4	4 10 9
Bleached Pulp . . .	11 2 9	1 0		
Bleached Pulp . . .	13 12 6	1 2		
1936.				
E. B. Pulp . . .	8 17 6	0 9	4	4 10 9
Bleached Pulp . . .	10 12 6	1 3		
Bleached Pulp . . .	13 4 3	1 2		

13. We anticipate that we shall require between 50 and 100 tons of imported pulp monthly. This quantity will be subject to variations due to fluctuations in trading conditions and to some extent to the internal consumption of such specialities as high class Bank papers, Typewritings, Duplicatings, Blottings and Antiques for which small quantities of Wood Pulp are required.

14. With the exception of Blottings, Banks and Typewritings, our papers are ordinarily manufactured without the admixture of imported pulp. We consider that the latter compare very favourably with similar imported qualities and in respect of tensile strength and bulk are decidedly better.

15. We believe the variations in the price of Wood Pulp are in ratio to the world supply and demand.

It is difficult to estimate the possible trend of Wood Pulp prices during the next few years, these to a large extent depending on supply and demand, although in view of a recent quotation we have received for Bleached Sulphite Pulp of £15 per ton c.i.f. Calcutta, which is £4 per ton under to-day's ruling price, it would seem that the present levels are not likely to be maintained.

16. Except for Badamis, Browns and a few specialities, all our products contain considerable quantities of bamboo. The standard of Badamis and Browns has improved in cleanliness and strength because of our improved facilities for sorting waste papers and rags. Those papers containing grass as a principal part of the furnish, have also improved in cleanliness and colour as a result of our better arrangements for straining and bleaching grass pulp.





FORM IV—(Qn. 17)—contd.  
Auxiliary Material—contd.

	1931.		1932.		1933.		1934.		1935.		1936.	
	Tons.	Price per ton.	Tons.	Price per ton.	Tons.	Price per ton.	Tons.	Price per ton.	Tons.	Price per ton.	Tons.	Price per ton.
<b>Sizing Material—</b>												
<b>(a) Indian—</b>												
Rosin . . . . .	182	301 11 8	170	309 9 5	180	314 7 3	169	306 1 10	188	274 11 1	179	266 14 5
Alum Ferric . . . . .	322	84 13 4	308	88 8 4	388	78 9 5	434	73 8 1	537	69 12 1	580	67 9 5
Gelathine . . . . .	1	1,809 8 0	2	939 10 0	1	700 10 6	1	836 1 0	1	403 2 0	1	1,321 15 6
<b>(b) Imported—</b>												
Caustic Soda . . . . .	18	258 7 8	19	270 6 3	26	266 11 8	28	245 4 3	30	236 1 10	30	203 5 1
Alum Sulphate . . . . .	10	90 6 8	38	82 8 0	33	89 9 0	21	74 9 4	18	75 0 0	15	117 13 0
<b>Auxiliary Materials for other purposes—</b>												
<b>(a) Indian—</b>												
Alum Ferric . . . . .	120	84 13 4	123	88 8 4	174	78 9 5	144	73 8 1	106	69 12 1	151	67 9 5
Lime . . . . .	..	..	..	..	..	..	..	..	..	..	4	18 13 8
<b>(b) Imported—</b>												
Alum Sulphate . . . . .	..	..	..	..	..	..	..	..	..	..	1	117 13 0
Alkali . . . . .	..	..	..	..	..	..	..	..	..	..	3	107 13 0
Sodium Aluminate . . . . .	..	..	..	..	..	..	..	..	..	..	1	725 5 0
Dyes . . . . .	2	4,187 5 2	5	8,650 15 8	8	2,819 9 8	7	2,748 11 8	8	2,801 9 4	9	2,502 7 9
<b>Total Auxiliary Materials—</b>												
(a) Indian . . . . .	2,920	..	3,719	..	4,155	..	4,265	..	5,310	..	5,987	..
(b) Imported . . . . .	1,100	..	1,385	..	1,525	..	1,753	..	2,225	..	2,289	..

The quantity of auxiliary materials required for one ton of paper produced is as follows:—

	Tons.
Caustic Soda . . . . .	·115
Salt Cake . . . . .	·036
Alkali . . . . .	·002
Lime . . . . .	·447
Bleach . . . . .	·113
Rosin . . . . .	·016
Alum . . . . .	·033
China Clay . . . . .	·116
Dyes . . . . .	·001

18. Since 1931, we have discontinued the use of imported China Clay and Aluminoferric, and have obtained our requirements locally. Bleaching Powder, Caustic Soda, Alkali and Dyes have still to be imported, but it is possible the former chemical will, in due course, be obtainable in the Country.

We consider the indigenous auxiliary materials compare favourably in quality and price with the imported articles.

19. Below is statement detailing the recovery of caustic soda and sodium sulphide:—

	Soda Recovery.		Sulphate Recovery.	
	Recovery per centage.	Recovery of Ash.	Recovery per centage.	Recovery of Ash.
	per cent.	Tons.	per cent.	Tons.
1931 .	76·845	1,435	...	...
1932 .	72·235	1,975	...	...
1933 .	68·625	2,267	...	...
1934 .	68·405	2,457	50·345	53
1935 .	68·69	2,427	68·54	699
1936 .	65·425	2,505	79·21	1,023

Our Mill is equipped for the recovery of both Caustic Soda and Sodium Sulphide. The statement above details the percentage of recovery together with the quantity in tons of soda ash and mixed salts recovered annually. The percentage figure is the index of the all-in efficiency of the recovery plant. In normal up-to-date practice, this efficiency figure should be approximately 80 per cent. provided the plant concerned is of ample capacity. An examination of the statement given above indicates, in the case of our Soda Recovery Plant, that its capacity was insufficient, since with the declining efficiency percentage, the total quantity of recovered soda ash increased. Thus it is clear that such wastage as occurred during the years under review was due to the inadequacy of the plant and not its inherent inefficiency. This state of affairs has been remedied and two new evaporators, finishing pan, additional rotary roaster, 2 new recovery hearths complete with necessary pumps, piping and a new steel chimney have been erected and we are now—in 1937-38—able to secure a recovery of 75/80 per cent.

The efficiency of the sulphate recovery is in keeping with results obtained in other pulp making countries.

20. As stated in our reply to Question 8, all our requirements of the primary raw materials have since 1931, been obtained through Contractors. We have therefore no actual knowledge of the labour force employed in the

extraction and collection of these materials. Since, however, our consumption of grass and bamboo has increased so considerably since 1931 we assume that the total labour force engaged has risen proportionately.

21. The average Indian labour employed in our Mills and the wages paid during the past six years are as follows:—

Year.	Labour employed.	Wages paid. Rs.
1931 . . . . .	1,420	3,34,763
1932 . . . . .	1,484	3,45,863
1933 . . . . .	1,546	3,52,345
1934 . . . . .	1,647	3,54,461
1935 . . . . .	1,699	3,71,594
1936 . . . . .	1,601	3,69,905

22. At the time of the last Enquiry, we had in training in paper-making departments two Indian and two Anglo-Indian Apprentices, and in the Engineering and Electrical Workshops there were in all 23 youths under training. Of the four Apprentices in paper-making departments, one Anglo-Indian and one Indian left our employ as being unsuitable for further training. The two remaining Apprentices have completed their indentures and are now holding staff posts as Assistant Beater House Supervisor and Assistant Machine House Supervisor. In addition to the four Apprentices in training in 1931 we have given training to four other paper-making Apprentices. All of them have completed their indentures and two hold staff billets as foremen of the Recovery and Digester Plants. The Recovery Plant was previously in the charge of a covenanted European whose agreement has not been renewed and the digestors would have normally required the supervision of a covenanted European had not a suitable Indian been available. The two remaining Apprentices have recently completed their terms and are at present undergoing specialised intensive training in the Machine House. In the Engineering Department one Apprentice engaged on terms similar to those applicable to paper-making Apprentices has recently left us after three years training and has taken up a well-paid billet in a near-by Works.

At the moment, we have 14 educated young men who are undergoing preliminary training preparatory to receiving articles. Those who display most aptitude and ability will be given apprenticeship agreements. In this way we have fostered among these young men an enthusiasm for their work which has never before been apparent.

We have been greatly encouraged by our success with our apprenticeship scheme and the four Apprentices who now hold staff billets have shown great promise and one of them has acted satisfactorily as Beaterman in charge of the beating mill for a period of six months. Two of our best Apprentices went to Dehra Dun Institute for a specialised instructional course of one month in 1935. Our progress towards Indianisation has been steady and satisfactory. The entire Laboratory research work and control of the Chemical Departments is under the supervision of Indians. Similarly, the Electrical Department, which previously demanded the employment of a covenanted European, is now in the charge of an Indian.

23. With the introduction of 8-hour shifts we felt that a Rest Room for shift workers was a necessity and therefore built a well ventilated house in brick with a steel roof for the convenience of shiftmen.

We have set aside the sum of Rs. 25,000 for the building of additional quarters and a primary school. A further Rs. 10,000 is ear-marked for the purpose of extending Apprentices' Quarters. Plans and Specifications, which are now under consideration, have been prepared. We have already received tenders for the relative work but these will have to be amended in accordance with the revised specifications we have drawn up.

The sum of Rs. 50,000 has been set aside towards a reserve for paying pensions to Indian workers. Charges against this sum will not include the many pensions at present paid out of revenue.

A modern system of septic tanks and latrines has been constructed, and drinking and washing water is available throughout the Mill.

The Mill Dispensary and Hospital has been enlarged and an additional qualified Medical Officer engaged. We propose constructing an even larger hospital with greater space for wards as soon as a convenient site is available. At the same time, we shall build a small isolation ward. The average number of cases treated by our Medical Staff is 3,400 per annum.

The anti-malarial work which has been carried out in co-operation with the Asansol Mines Board of Health has been completely satisfactory and the results are beyond our most optimistic expectations. Malaria, which at one time was such a scourge in the villages surrounding the Mills, has been almost eradicated. We have recently come to an arrangement with the Asansol Mines Board of Health for sharing the expenditure of an up-to-date maternity clinic which is to be established in the vicinity of the Works.

24. Since 1931, we have brought into operation a thoroughly reconditioned 400 K.W. High Speed Engine which is giving 160 kwts. per hour, the exhaust steam being used wholly for process work. Other sources of power remain unchanged and principally consist of an 1,100 K.W. steam turbine and a 1,250 H.P. Horizontal Compound Engine. The load on the turbine has increased from 520 kwts. to 950 kwts. per hour. The load on the main engine has been reduced by 75 H.P. on account of electrification. On the basis that the cost of any steam exhausted by the above turbine and engines which is used for process work is not charged against power, our present cost of electric power is .85 pies per kw. hour against a cost of .96 pies per hour in 1930. The difference is almost entirely due to the increase in pass-out steam from the turbine and the generation of 160 kwts. per hour by the 400 kw. High Speed engine without charge for steam since the exhaust is used entirely for process work. The cost of power from the compound two cylinder condensing engine is 1.2 pies per h.p. which is the same as in 1930. The cost of electrical power per ton of paper at 605/kwt./hour per ton is Rs. 2.11 against a similar cost in 1930 of Rs. 2.2 for 418 kwts. hour per ton. Mechanical power costs Rs. 4.12 for 765 H.P. hour per ton of paper against a similar charge in 1930 of Rs. 4.14 per ton for 786 H.P. hour per ton of paper. The increase in power per ton of paper is due to the decreased use of Wood Pulp with a corresponding increase in the manufacture of pulp from indigenous materials. We append a table which illustrates the relationship between the consumption of coal and the consumption of Wood Pulp when this is displaced by pulp prepared from bamboo and grass:—

Year.	Finished paper.	Woch pulp.	Coal.	Wood pulp per ton paper.	Coal per ton paper.
	Tons.	{ Tons.		Tons.	Tons.
1931 .	9,312	5,544	34,309	.595	3.68
1932 .	10,706	5,562	33,971	.52	3.17
1933 .	10,563	4,415	35,165	.418	3.33
1934 .	10,377	4,197	35,756	.405	3.45
1935 .	11,096	1,894	47,015	.171	4.25
1936 .	11,206	1,152	45,794	.102	4.44

The above includes coal used for all purposes.

In considering the figures given above, allowance has to be made for changes in operating methods made in 1932 and the quality of coal used in 1931. Until 1931-32 our coal supplies were secured locally and were of

relatively inferior quality. The bulk of our supplies in subsequent years were of selected grade quality.

25. The Indian Paper Makers Association compute the figures to be as follows:—

	Tons.	Tons.
1. Indian production of paper—		
(a) protected . . . . .	48,000	35,000
(b) unprotected . . . . .	5,000	4,000
Total . . . . .	53,000	39,000
2. Total Indian demand—		
(a) protected . . . . .	60,000	49,000
(b) unprotected . . . . .	153,000	105,000
Total . . . . .	213,000	154,000

N.B.—The figures in brackets are those given at the time of the 1931 Enquiry.

In the figure of the total Indian demand for unprotected paper, the following imports have also been included:—

	Tons.
Old Newspapers . . . . .	54,730
Paste Boards, Strawboards, Mill Boards and Cardboards . . . . .	25,250
Paper Manufactures . . . . .	2,049
Other kinds of paper . . . . .	3,528
Total . . . . .	85,557

With regard to the total Indian production, the Board is aware that a number of new Mills are under construction. We believe that the result will be to increase India's capacity for the production of paper by at least 20,000 tons, but the Board will, no doubt, be able to form a more accurate estimate in their examination of the members of the Indian Paper Makers Association.

26. The opinion we gave at the last Enquiry regarding the scope for a Pulp Mill in India remains unaltered. There are still Mills in India which make considerable use of imported Wood Pulp and this, we feel, might be displaced if supplies of Bamboo Pulp were available although in the particular case of this Company our Bamboo Pulp Plant is of sufficient capacity to meet all our anticipated demands. The question of making Bamboo Pulp for export is one which is unavoidably linked up with the foreign supply and demand of Wood Pulp. Recently Wood Pulp prices have been such as would make the export of Bamboo Pulp profitable but should they fall to the low level of 1934-35 it is doubtful if Bamboo Pulp would be competitive in foreign markets. There is reason to believe that the steady increase throughout the world of paper consumption and the growing shortage of pulping timber will ultimately create a profitable market for an alternative to Wood Pulp, and Bamboo would appear to be the best raw material for such an alternative.

As we have made no attempts to manufacture mechanical pulp, we are unable to put forward useful or constructive views regarding the possibilities of producing mechanical pulp from indigenous materials.



27. The effect of the protective duty on wood-pulp has been to accelerate the development of bamboo as a paper-making fibre by some of the Mills, thus implementing the intentions of the Bamboo Paper Industry (Protection) Act of 1925.

As far as we know the duty on Wood Pulp has not affected the development of any other industry.

28. The following represent average prices at which imported papers in qualities in which we are mostly interested have entered the country.

Quality.	C.I.F. price.	Price per lb. @ Rs. 1-6.	Duty per lb.	Landed cost per lb. adding $\frac{1}{4}$ pie per lb. for clearing, etc.
	£ s. d.	A. P.	A. P.	A. P.
<i>1931.</i>				
* Wood free White Print- ing M/F . . . .	19 7 6	1 10-14	1 3	3 1-64
Wood free Cream Laid .	20 10 0	1 11-43	1 3	3 2-93
<i>1932.</i>				
* Wood free White Print- ing M/F . . . .	20 0 0	1 10-86	1 3	3 2-36
Wood free Cream Laid .	21 5 0	2 0-29	1 3	3 3-79
<i>1933.</i>				
* Wood free White Print- ing M/F . . . .	19 10 0	1 10-28	1 3	3 1-78
Wood free Cream Laid .	20 10 0	1 11-43	1 3	3 2-93
<i>1934.</i>				
* Wood free White Print- ing M/F . . . .	19 10 0	1 10-28	1 3	3 1-78
Wood free Cream Laid .	20 15 0	1 11-71	1 3	3 3-21
<i>1935.</i>				
Wood free White Print- ing M/F . . . .	18 15 0	1 7-14	1 3	2 10-64
Wood free Cream Laid .	18 7 6	1 9-00	1 3	3 0-50
<i>1936.</i>				
Wood free White Print- ing M/F . . . .	19 15 0	1 10-50	1 3	3 2-00
Wood free Cream Laid .	21 10 0	2 0-50	1 3	3 4-00

\* These figures have been taken from information supplied to the Tariff Board in connection with the Classification of Paper Enquiry in August, 1935.

There have been instances of even lower imported prices than those shown above, particularly in 1936, of which the following are examples:—

Quality.	C.I.F. price per ton.	Per lb. @ 1/6d. Ex.	Duty per lb.	Landed cost including ½ pie per lb. for clearing.
	£ s. d.	s. d.	A. P.	A. P.
Wood free Cream Laid (Dutch) .	18 17 6	1 9.5	1 3	3 1.0
Wood free Cream Laid (German) .	15 17 6	1 6.1	1 3	2 9.6
Wood free Printing M/F (German)	16 15 0	1 7.1	1 3	2 10.6
Wood free Printing S/C (German) .	15 10 0	1 5.7	1 3	2 9.2

29. We give below tables showing the freights paid by us from Raneegunge to selected upcountry markets and the freights paid by importers for despatches to the markets in which we are chiefly interested from the main ports of entry.

*From Raneegunge.*

Station.	Distance. Miles.	Rate per Md. per mile. (Small lots.)	Rate per Md. per mile. (Wagon loads.)
Patna . . . . .	217	0.40	0.32
Benares . . . . .	308	0.35	0.30
Allahabad . . . . .	391	0.32	0.23
Lucknow . . . . .	495	0.30	0.24
Cawnpore . . . . .	510	0.29	0.24
Agra . . . . .	668	0.25	0.21
Delhi . . . . .	781	0.23	0.20
Amritsar . . . . .	1,022	0.26	0.23
Lahore . . . . .	1,055	0.27	0.24
Rawalpindi . . . . .	1,234	0.29	0.26
Peshawar . . . . .	1,342	0.30	0.27

*From Calcutta Port.*

Patna . . . . .	338	0.45	0.45
Benares . . . . .	429	0.44	0.44
Allahabad . . . . .	512	0.44	0.44
Lucknow . . . . .	616	0.44	0.44
Cawnpore . . . . .	631	0.44	0.44
Agra . . . . .	789	0.43	0.39
Delhi . . . . .	902	0.38	0.34
Amritsar . . . . .	1,143	0.38	0.35
Lahore . . . . .	1,176	0.38	0.35
Rawalpindi . . . . .	1,355	0.39	0.35
Peshawar . . . . .	1,463	0.39	0.36

*From Bombay Port.*

Station.	Distance.	Rate per Md. per mile. (Wagon load.)
	Miles.	Pies.
Delhi . . . . .	842	368

*From Karachi Port.*

Lahore . . . . .	756	433
Rawalpindi . . . . .	897	431
Peshawar . . . . .	930	428

30. We give below our approximately correct nett ex-Mill's prices for White Printings and Cream Laid, which were realized during the years 1931 to 1936 from the four main Ports, together with our average nett prices realized each year for the whole of our production.

Quality.	1931.	1932.	1933.	1934.	1935.	1936.
<b>CALCUTTA.</b>						
White Printing . per lb.	As. 3/4-509	3/4-509	3/3-638	3/1-895	3/1-895	3/1-895
Thin . . . per ton.	Rs. 472-0-0	472-0-0	462-7-0	442-1-0	449-1-9	442-1-0
White Printing . per lb.	As. 3/1-894	3/1-894	3/1-023	3/0-152	3/0-152	3/0-152
Thick . . . per ton.	Rs. 442-1-9	442-1-9	431-15-0	421-12-6	421-12-6	421-12-6
Cream Laid . . per lb.	As. 3/4-509	3/5-815	3/4-943	3/3-249	3/3-249	3/3-249
Thin . . . per ton.	Rs. 472-9-9	487-14-0	477-10-9	457-14-6	457-14-6	457-14-6
Cream Laid . . per lb.	As. 3/1-894	3/1-894	3/1-023	3/0-152	3/0-152	3/0-152
Thick . . . per ton.	Rs. 442-1-9	442-1-9	431-15-0	421-12-6	421-12-6	421-12-6
<b>BOMBAY.</b>						
White Printing . per lb.	As. 2/11-139	2/11-139	3/0-487	2/8-898	2/9-875	2/9-875
Thin . . . per ton.	Rs. 400-15-3	409-15-3	425-11-0	383-13-0	394-2-6	394-2-6
White Printing . per lb.	As. 2/9-342	2/9-342	2/11-139	2/7-568	2/8-455	2/8-455
Thick . . . per ton.	Rs. 389-0-0	389-0-0	400-15-3	368-4-9	378-10-3	378-10-3
Cream Laid . . per lb.	As. 3/5-428	3/5-428	3/5-428	3/2-217	3/3-104	3/3-104
Thin . . . per ton.	Rs. 483-5-3	483-5-3	483-5-3	445-13-9	450-3-6	450-3-6
Cream Laid . . per lb.	As. 2/9-792	2/9-792	2/11-588	2/8-012	2/8-898	2/8-898
Thick . . . per ton.	Rs. 394-4-0	394-4-0	415-3-0	373-7-6	383-13-0	383-13-0
<b>RANGOON.</b>						
White Printing . per lb.	As. 3/0-706	3/1-600	2/11-364	2/10-472	2/10-472	2/10-472
Thin . . . per ton.	Rs. 428-3-9	438-10-9	412-9-3	402-2-9	402-2-9	402-2-9
White Printing . per lb.	As. 2/11-365	3/0-260	2/10-025	2/9-130	2/9-180	2/9-180
Thick . . . per ton.	Rs. 412-9-6	423-0-6	396-15-3	386-8-3	386-8-3	386-8-3
Cream Laid . . per lb.	..	..	..	..	..	..
Thin . . . per ton.	..	..	..	..	..	..
Cream Laid . . per lb.	As. 2/11-365	2/11-365	2/11-365	2/8-237	2/8-237	2/8-237
Thick . . . per ton.	Rs. 412-9-6	412-9-6	412-9-6	376-1-6	376-1-6	376-1-6

Quality.	1931.	1932.	1933.	1934.	1935.	1936.
MADRAS.						
White Printing . per lb.	As. 3/0-893	3/0-893	2/11-991	2/10-618	2/10-618	2/10-618
Thin . . . per ton.	Rs. 430-6-9	430-6-9	419-13-3	403-14-0	403-14-0	403-14-0
White Printing . per lb.	As. 3/0-893	3/0-893	2/11-991	2/9-734	2/9-734	2/9-734
Thick . . . per ton.	Rs. 430-6-9	430-6-9	419-13-3	393-8-9	393-8-9	393-8-9
Cream Laid . . per lb.	As. 3/7-662	3/7-662	3/2-698	3/1-796	3/1-796	3/1-796
Thin . . . per ton.	Rs. 509-0-3	509-0-3	451-7-6	440-15-3	440-15-3	440-15-3
Cream Laid . . per lb.	As. 3/1-796	3/1-796	2/11-991	2/11-088	2/11-088	2/11-088
Thick . . . per ton.	Rs. 440-15-3	440-15-3	419-13-3	409-5-9	409-5-9	409-5-9

*Average nett ex-Mill's prices realized on Total production.*

	1931.	1932.	1933.	1934.	1935.	1936.
per lb.	As. 3/0-74	2/11-38	2/9-82	2/8-82	2/8-85	2/8-46
per ton.	Rs. 428-10-5	412-12-6	394-9-3	377-1-8	377-6-0	378-10-6

31. We give below a statement showing the prices at which our products have been sold in the various markets in which we dispose of our production.

	1931 per lb.	1932 per lb.	1933 per lb.	1934 per lb.	1935 per lb.	1936 per lb.
	As. P.	As. P.	As. P.	As. P.	As. P.	As. P.
Central Government and State Railways.	3 1-26	3 2-93	3 2-24	3 0-00	2 11-51	2 10-22
Bombay Government . .	4 3-50	3 8-71	3 9-44	3 7-71	3 7-43	3 7-09
Mysore Government . .	3 0-61	3 0-19	2 8-04	2 8-16	2 8-63	2 8-05
Madras Government . .	..	..	..	..	..	..
Bihar & Orissa Government .	3 2-71	3 3-41	3 3-08	3 1-40	3 0-60	3 0-55
Burma Government . .	3 3-27	3 3-96	3 1-56	3 1-18	2 11-50	2 11-86
U. P. Government . .	Under Central Government.	3 2-37	2 10-71	2 6-78	2 3-40	2 5-94
Calcutta Market . . .	3 0-01	2 9-68	2 9-67	2 8-81	2 8-61	2 9-35
Madras Market . . .	3 1-04	2 10-84	2 9-19	2 7-89	2 7-82	2 8-76
Bombay Market . . .	2 10-30	2 10-98	2 8-01	2 6-00	2 6-66	2 6-28
Rangoon Market . . .	3 1-66	2 11-42	2 9-58	2 6-97	2 7-22	2 8-19
Upcountry Market . .	2 10-75	2 8-53	2 6-42	2 5-51	2 5-80	2 6-54

All prices shown are nett, freight, discounts commission and other charges having been deducted.

As pointed out to the last Tariff Board, it is not possible for the Mills to obtain from all markets the same nett return as they secure from the Markets closer at hand such as Calcutta, Assam, Bihar and Orissa, etc.

While the Mills endeavour as far as possible to obtain from Upcountry Markets, Calcutta prices *plus* the addition of Railway Freights, some shading of prices is at times necessary in Markets such as Delhi and Lahore, which come under the influence of the Bombay and Karachi ports of entry.

Bombay is possibly the largest paper distributing centre in India, and dealers in the Delhi, Central Provinces, Central India and United Provinces areas generally obtain their requirements of imported papers from this Market.

With the keen foreign competition in Bombay and to a certain extent Karachi, and the association of those centres with the upcountry markets, it is the Mills' policy to endeavour to sell their retree output of paper in markets such as Delhi and Lahore. This also has the effect of leaving undisturbed the nearer and more stable markets.

There are numerous presses in the United Provinces and Punjab areas which receive large annual contracts from the Provincial Educational Authorities for school text-books.

These presses are able to offer substantial orders for printing papers in substances of an attractive nature from the Paper Mills' point of view. For this business the Mills generally concede a lower rate than that prevailing for ordinary bazar business.

32. Normally we endeavour to keep our prices in the various markets based as closely as possible on the imported prices for similar qualities. At the same time, there is generally a wide variation in the qualities and prices of imported papers, and we therefore strike a medium when fixing our rates, keeping in mind the desirability of endeavouring to maintain stable conditions in the markets for the protection of dealers.

33. Although we have no conclusive evidence to put forward, we have reason to believe that as in the past the Indian market is not looked upon by manufacturers in Europe as being a particularly remunerative one, on account of the large proportion of thin substances required, and the special packing, make-up and labels called for by dealers.

In times of trade depression in other Paper manufacturing countries, India is, and has been looked upon, as a dumping ground for surplus output.

34. We find competition to be keenest in Bombay, Madras, Karachi and Rangoon.

In certain Indian States, where the full Central Government duty is not levied, the Indian Mills are only able to obtain business at cut rates.

35. There is no difference in the price of our paper made from bamboo as compared with our paper made from other indigenous materials such as sabai grass.

36. It is always our aim to endeavour to improve the quality of the various papers we produce, and we consider that since 1931 our efforts towards this end have met with success.

As desired we give you herewith particulars and prices of each class of paper supplied to the Central and Provincial Governments, and the Railways, during the years 1931 to 1936.

Quality.	1931-32.		1932-33.		1933-34.		1934-35.		1935-36.		1936-37.	
	Tons.	Contract prices.	Tons.	Contract prices.	Tons.	Contract prices.	Tons.	Contract prices.	Tons.	Contract prices.	Tons.	Contract prices.
*CENTRAL GOVERNMENT TONNAGE.												
Cream Laid . . . . .	..	As. P. ..	..	As. P. ..	..	As. P. ..	25	As. P. 3 7½	30	As. P. 3 7½	..	As. P. ..
Cream Wove . . . . .	300	3 9	..	..	..	..	80	3 7½	100	3 7½	100	3 7½
Cream Wove Bank . . . . .	..	..	..	..	..	..	20	3 11	..	..	..	..
White Cartridge . . . . .	300	3 5½	75	3 7½	50	3 5½	50	3 3	40	3 8	..	..
H. B. Cartridge . . . . .	..	..	20	3 7½	25	3 5½	30	3 3	..	..	..	..
White Ptg. . . . .	1,450	3 5	1,300	3 6½	800	3 4½	650	3 2	900	3 2	350	3 1
White Ptg. S/C. . . . .	..	..	..	..	..	..	3	3 4	3	3 4	..	..
Colrd. Ptg. . . . .	..	..	..	..	150	3 6	100	3 3½	100	3 3½	..	..
Semi Bleached . . . . .	800	3 4	650	3 5½	350	3 3½	450	3 1½	400	3 1½	400	3 0½
Badami . . . . .	500	2 11	750	3 0½	500	2 10½	400	2 9	600	2 7½	675	2 6
Blotting . . . . .	100	4 3	100	4 5	90	4 3	90	4 1½	90	4 1½	90	4 1½
Brown . . . . .	175	2 3	300	2 3	200	2 3	200	2 1	220	2 1	200	2 1
Manilla . . . . .	..	..	..	..	150	2 10½	110	2 8	140	2 8	120	2 8
White Pulp Boards . . . . .	60	3 5	40	3 6½	40	3 3	30	3 0	..	..	..	..
White Pulp Boards S/C. . . . .	40	3 6½	35	3 8	25	3 4½	20	3 1½	..	..	..	..
Colrd. Pulp Boards . . . . .	..	..	10	4 1	10	3 6	10	3 4	..	..	..	..
Duplicating . . . . .	..	..	..	..	120	3 2	60	3 6	80	3 6	100	3 6
TOTAL	3,725	..	3,280	..	2,510	..	2,323	..	2,703	..	2,535	..

## BOMBAY GOVERNMENT TONNAGE.

Blotting	14	4 6	12	4 5	..	10	4	10	4	..	..
Brown	..	..	4	2 3	..	..	..	..	..	..	..
Typewriting	..	..	..	..	5	4 2	4	5	4	15	4

## BEHAR GOVERNMENT TONNAGE.

Unbleached	202½	3 4	221	3 4½	150½	3 4	132½	174½	3 2½	219	3 2½
Brown	18	2 6	14	2 4	6	2 3½	9	9	2 2	14	2 2

## UNITED PROVINCES GOVERNMENT TONNAGE.

Cream Wove	7½	4 0	21	3 10	..	..	..	..	..	20	3 7½
White Ptg.	26½	3 8	40	3 5½	35	3 8	75	3 8	3 8	50	3 2½
Colrd. Ptg.	..	..	10	3 7½	..	..	4½	3 5	3 5	4½	3 5
Badami	34	3 2	50	2 10½	..	..	..	..	..	..	..
Brown	18	2 4½	40	2 1½	26	2 2	30	2 2	2 2	70	2 2
Manilla	16	3 3½	25	2 11½	25	2 9	..	..	..	..	..
Duplicating	..	..	2½	3 10	1½	3 7½	2½	3 7½	3 7½	3	3 7½
White Blotting	..	..	..	..	4½	4 3	9	4 3	4 3	8	4 3
Typewriting Cream Laid	..	..	..	..	1½	4 2	..	..	..	..	..
Glazed Buff Printing	..	..	..	..	..	..	150	2 1½	2 1½	140	2 4
Semi Bleached	56	3 7	..	..	..	..	..	..	..	..	..
Cream Laid	1	4 0	..	..	..	..	..	..	..	..	..
<b>TOTAL</b>	159	..	208½	..	93½	..	274	..	..	295½	..

\*N. B.—These tonnage figures include supplies to the Central Bengal, C. P., Punjab, and N.-W. F. P. Governments, also the E. I. E. B., N. W. G. I. P. and B. N. Railways, and the Army.

37. The existing test for the determination of "Printing Paper" appears to be satisfactory, and we cannot claim to have been adversely affected by its application.

We understand that in doubtful cases the matter is referred by the Customs Authorities to their Technical Adviser.

38. Since 1931, we have developed the sulphate process for the digestion of Bamboo. This has entailed making extensive alterations to old buildings, installation of much new plant and the construction of suitable buildings to house it. In our reply to Question 11(d) we have set out the items of additional plant purchased specifically for the production of Bamboo Pulp and the following includes a brief description of such plant together with descriptions of additions we have made to the Mill.

*Bamboo Pulp Plant.*—We have installed a massively constructed crusher designed on data obtained from our original but smaller crusher inspected by the Members of the Board during their visit to the Mills in 1931. This new crusher has a pair of breaking rolls and two pairs of crushing rolls of a patented design, arranged on a descending inclined plane. There is a mechanical feeding device between each pair of rolls. Pressure is applied to the rolls by hydraulic ram. The Crusher is driven through massive reduction gear by a 230 H.P. motor controlled by a Brookhirst starter. The rated output of this machine is  $3\frac{1}{2}$  tons per hour but in practice this quantity can be greatly exceeded. As much as six tons of Bamboo has been crushed in one hour.

In conjunction with this crusher is an elevator for feeding whole bamboos to the first pair of rolls.

The crushed bamboo is conveyed to the digestors by an elevator 203' long which discharges on to a short horizontal conveyor arranged above the charging floor of the digestors.

We have installed four 7½-ton digestors arranged to be filled and discharged by gravity. Our system of digestion has necessitated an apparently complicated arrangement of steam and liquor piping in conjunction with the necessary tanks.

The digestors discharge cooked pulp into a breaker 14' wide × 45' long of sufficient capacity to take the contents of one digester. The Breaker is fitted with a paddle roll and drum washer. Washed pulp is withdrawn from the breaker and passed to the bleaching towers by two motor-driven pumps. We have constructed in concrete five bleaching towers 14' in diameter and 24' high. In addition, there are three towers of similar capacity and construction for storage of bleached bamboo pulp. Each tower is connected to a motor-driven circulating pump. The straining and concentrating arrangements consist of ripple sandtables, two oscillating strainers, one auxiliary flat strainer and a rotary pressure concentrator. The storage towers which contain concentrated pulp are connected to heavily designed motor-driven double acting ram pumps which discharge to individual beaters through a system of copper pipes.

In connection with the pulp concentrator we have designed and installed a closed cycle backwater system, which reduces bleach losses to a minimum. This system is simply an arrangement of pumps, pipes and collecting tanks.

As an adjunct of the Bamboo Pulp Plant we have a complete sulphate recovery plant consisting of two very large cast iron black liquor storage tanks, two gravity liquor filters, three pressure and vacuum evaporating pans, a condenser and air extraction pump, a motor-driven rotary roaster with self-supporting steel chimney 150' high and brick-lined from top to bottom, two soapstone lined smelting chambers with blast nozzles and compressor, two steel dissolving tanks with motor-driven agitator gear, two horizontal and two vertical causticisers with necessary agitator gear, a vacuum sludge washer and filter, three cast iron white liquor storage tanks and necessary motor-driven pumps and piping. All are housed in a well-ventilated series of buildings constructed in steel framework and brick panels with corrugated asbestos roofs and patent ventilators. The circulating



water for this plant is provided by two large motor-driven pumps housed in a separate pumping station complete with three storage tanks.

*Steam Boilers.*—In addition to the pulp-making plant and its immediate auxiliaries we had to provide for the additional steam required for process and power by the installation of three B. and W. steam boilers of 15,000 lbs. capacity complete with necessary economisers. These are housed in an extension we made to our existing boiler house. At the same time, it was necessary to centralize our arrangements for the supply of boiler feed water, therefore a suitable building was constructed to accommodate a new electrically-driven four-stage pump capable of dealing with our entire boiler feed water requirements and as a stand-by, a steam pump with a similar capacity. Water flow meters were included with this alteration. In view of the increased quantity of feed water required, an additional water softener and purifier was necessary, thus a Becco filtering plant was purchased and installed. Whilst much of the additional power required by the Bamboo Pulp Plant was provided by the 1,100 K.W. Turbo-Generator the demand was such as to necessitate the re-conditioning of two High Speed generating sets which were erected in an extension to the Power House on solidly constructed foundations.

With the introduction of large quantities of Bamboo pulp into furnishes, the need for greater beating power was obvious, and therefore we installed two 10-cwt. Umpherston beaters in an extension to the beater house constructed in reinforced concrete. This addition was the forerunner of the remodelling of our entire beater house which is at present in progress and to which we make reference in a later part of the reply to this question.

In addition to the plant required for the manufacture of bamboo pulp we have during the past six years added the following to the Mill:—

*Godowns.*—Two all-steel godowns for the storage of bamboo or grass with a capacity of 50,000 and 65,000 maunds respectively.

One two-storied waste paper and rag picking shed with electric hoists. This building is constructed almost entirely in steel. The grass picking shed has been enlarged and modernised by the placement of a steel roof over a floor area of 6,000 sq. ft. and this provides a well-ventilated addition. Our increased chemical consumption necessitated the provision of another chemical store. This is built with brick walls and steel roof and bins for the storage of clay.

We altered a lean-to building and converted it into a totally enclosed store for lime.

A single-storied paper godown was converted into a two-storied godown by the addition of a concrete floor carried on steel joists and columns.

*Finishing House.*—Additional accommodation for the finishing of paper was provided by the construction of a second storey on an existing single storey building. Special attention was devoted to the lighting and ventilation of this house and the finishing tables were fitted with teak tops and steel frames.

*Waygood-Otis Lift.*—A goods and passenger lift with a large capacity was installed for the conveyance of paper to the second floor of the new finishing house.

*Ruling Machines.*—The orders for ruled papers has been such that our hand-operated machines were found inadequate and they have been replaced by two high speed double side disc ruling machines.

*Guillotines.*—Two new 66" guillotines were installed for the trimming and splitting of paper in reams and these have added much to the neatness of our products.

*Printing Machine.*—The requests of customers for printed slips and labels on reams put great pressure on our Printing Department and another automatic Cap machine was secured to cope with our domestic requirements.

*Engineering Department.*—A new Mechanics Workshop with modern appliances, good lighting and ventilation was built in reinforced concrete, brick

and steel. Our previous workshop was inadequate for a large Mill. At the same time much of the old machinery was thoroughly reconditioned and a new radial drill and overhead crane purchased.

*Carpenters and Electrical Workshops.*—A building in brick with a steel roof was built to house our Carpenters and Electrical Department. A lathe and band saw were installed. As these new buildings all stand together supervision has been simplified and repair work "speeded up with a corresponding reduction in costs.

*Soda Recovery Plant.*—The increasing use of grass rendered the capacity of our soda-evaporating plant inadequate. Two new vacuum-evaporating pans and a pressure finishing pan were added to the existing plant with an additional air pump, drip receiver and auxiliaries. At the same time, the buildings were reconditioned, old hearths dismantled and a new rotary roaster installed with a motor drive. New hearths of modern design, a waste heat boiler and a 100' self-supporting steel chimney were erected. The whole was housed in a steel frame building with corrugated asbestos roof. This addition has considerably increased the efficiency of our recovery plant.

*Paper Machines.*—A seven roll stack of calenders fitted with modern devices and steam nozzles has been added to our No. 3 M/C to the general improvement in the finish of its manufactures.

*Super-Calenders.*—We have installed a ten-roll stack of Super Calenders driven by motors and have a wide speed variation. These calenders are constructed and fitted out in accord with the very latest modern practice. The tonnage of super-calendered papers has well justified the expenditure on this plant.

*Spray Dampers.*—The Super-Calender required the addition to two of our machines of up-to-date spray dampers with necessary filters and pressure pumps.

*Felt Conditioners.*—We have fitted three of our machines with felt conditioners and shortly will instal a fourth conditioner. As anticipated these have reduced machine running costs.

*Reeler.*—We have installed an additional paper reeler which is a duplicate of our original reeler and is electrically driven.

*Reeler, Cutter and Dandy Roll House.*—A large two-bay building with 6,250 sq. ft. floor area was put up with north light roofs to house both reelers and a cutter which had previously stood on the site occupied by the Super-Calender. This building was made sufficiently large to provide a store for our dandy rolls and machine felts and a foreman's office with lavatories and changing rooms.

*Rosin Size Plant.*—A Delthirna Sizing plant embodying up-to-date principles has been installed and we are well satisfied with the results we have obtained.

*Paper Pulper.*—A second and up-to-date motor-driven paper pulper with a capacity of one ton of pulp per hour has been added.

*Water Pumps.*—The expansion of our pulp-making activities called for the provision of extra water supplies and a motor driven pump in a small brick-built pumping station was laid down to meet the increased demand.

*Rest Room.*—This is a well ventilated brick built house with corrugated iron roof detached from the Mill.

*Electrification.*—In recent years the advance in electrification in the Mill has been such as to render our overhead bare cable method of transmission unsuitable, and we have, therefore, substituted underground armoured cables at considerable expense.

*Green Process—Grass.*—At the time of the last enquiry, this section of our plant was driven by the main engine but alterations to the buildings to accommodate the Bamboo Pulp Plant made necessary an alternative drive. The Green Process is now driven by electric motor coupled to the shaft by chain belt.

*White Process—Grass.*—In 1931, we added to this department one more from bleaching tower with the necessary circulating pump and motor, three full drum oscillating strainers and two auxiliary flat strainers complete with pumps and motors.

*Laboratory.*—Our Laboratory has grown considerably during recent years and is now housed in modernised buildings and is fitted out with much additional apparatus enabling us to undertake a wide field of research work.

*Bleach Liquor making Plant.*—The capacity of this has been doubled by the addition of three cast iron mixers and agitator gear.

39. The total expenditure incurred on buildings and plant from 1931 to 1936 is as follows:—

	Rs.	A.	P.
Buildings . . . . .	3,84,998	11	6
Plant . . . . .	13,11,587	2	3

Divided as follows for:—

	Rs.	A.	P.
Paper . . . . .	3,74,065	3	10
Pulp . . . . .	2,01,168	5	8
Bamboo Pulp . . . . .	11,21,352	4	3

During 1937 a further sum of approximately Rs. 1,40,000 has been expended on Bamboo Pulp Plant.

40. *Beating Mill.*—Our programme of extensions and improvements is by no means complete. We are at the moment re-modelling our beating mill. When complete it will consist of 12 Umpherston 10-cwt. beaters of the most modern design driven in pairs by totally enclosed electric motors, in addition to eight Hollanders similarly driven. The floors, supporting columns and beams are to be constructed in re-inforced concrete. The first pair of Umpherston beaters is practically ready for putting into commission and will bring the total number of Umpherston beaters to four. The remaining eight new beaters and motors are either shipped or about to be shipped from England.

*Power Plant.*—The 1,250 H.P. Compound Engine for driving the beating mill and the potchers has given 32 years service and is to be replaced by a 3,500 K.W. Pass-out Turbine which is at present on order from Messrs. Belliss & Morcom. From this Turbine which will drive two E.C.C. tandem generators each of 1,750 kwts. capacity, process steam will be available at two pressures. The delivery of this machine is expected in April or May of this year and foundations as well as the house to accommodate it are at present being prepared. Spray cooling plant for the circulating water is a necessary adjunct as also an extended switchboard and armoured cables to transmit power to the various departments of the Mill.

The potchers, in which the grass pulp is at present prepared, will be driven by electric motors which are on order, when power is available from the new Turbine.

The foregoing replacement is designed to reduce power costs, standardise and modernise our beating mill equipment and reduce labour costs.

*Green Process.*—This is to be further extended by the addition of another full drum oscillating strainer, which is at present on site.

*Machines.*—We are undertaking the partial modernisation of our paper machines. The existing ram stuff pumps are being replaced by modern motor-driven centrifugal pumps delivering through copper pipes to the machine service chests. One new full drum oscillating strainer is to be added to two such existing strainers on No. 3, our largest machine. It is intended ultimately to lengthen this machine when the beating mill alterations are complete.

An up-to-date centrifuge has been ordered for No. 2 machine which normally makes our high class specialities. This is expected at the Mill in April of this year.

*Blacksmiths and Moulding Shops.*—We have constructed a new well-ventilated shop for the Blacksmiths and have on hand the construction of a small cupola for  $\frac{1}{2}$  ton castings.

These additions and modifications are all at present receiving our attention and we have drawn up tentative proposals for the modernisation of the paper-making sections of the Mill. These proposals include making the paper machines up to date, re-roofing the machine houses, installing water purification plant, constructing efficient rag handling apparatus, enlarging clay and size-making plants and the re-designing of our grass preparing plant in accordance with modern principles.

41. The nett Block value of the Company's property on the 31st December, 1936 was as follows:—

	Rs.	A.	P.
Land . . . . .	1,68,158	13	3
Buildings . . . . .	3,10,000	0	0
Machinery . . . . .	6,74,325	10	4
Railway Siding . . . . .	337	2	10
Furniture . . . . .	300	0	0
Motor Car and Lorries . . . . .	1,000	0	0
Total . . . . .	11,54,121	10	5

42. We regret we are not in a position to give even an approximate figure in view of the very much higher prices ruling at present for machinery of all kinds.

43. The amount of Depreciation written off since 1930 is as follows:—

	Buildings.			Machinery.		
	Rs.	A.	P.	Rs.	A.	P.
1931 . . . . .	37,711	1	9	1,28,654	5	5
1932 . . . . .	45,716	2	9	1,29,883	13	9
1933 . . . . .	44,000	0	0	1,32,000	0	0
1934 . . . . .	65,576	3	3	1,70,242	12	5
1935 . . . . .	75,195	3	3	1,72,114	9	5
1936 . . . . .	88,852	11	9	1,52,293	6	5

*Reserve created all from profits.*

1931—

	Rs.
Motor Car and Lorry . . . . .	3,000
River Training . . . . .	12,500
Bamboo Plant . . . . .	40,000
Improvements and Extensions . . . . .	30,000
Investments . . . . .	10,000

1932—

	Rs.
Bamboo Plant . . . . .	1,65,000
River Training . . . . .	5,000

	Rs.
<b>1933—</b>	
Bamboo Plant . . . . .	1,17,000
Improvements and Extensions . . . . .	25,000
River Training . . . . .	7,500

**1934—**  
*Nil.*

	Rs.
<b>1935—</b>	
Bamboo Plant . . . . .	85,000
Improvements and Extensions . . . . .	40,000

	Rs.
<b>1936—</b>	
Bamboo Plant . . . . .	75,000
Debenture Redemption Fund . . . . .	75,000
Indian Workers' Pension . . . . .	25,000
Improvements and Extensions . . . . .	1,00,000

#### 44. Share Capital and Dividends.

	A. Rs.	B. Rs.	C. Per cent.
<b>1931—</b>			
Ordinary Shares . . . . .	9,00,000	1,80,000	20
Cum. Pref. Shares . . . . .	2,00,000	14,000	7
" A " Cum. Pref. Shares . . . . .	4,00,000	28,000	7
<b>1932—</b>			
Ordinary Shares . . . . .	9,00,000	1,80,000	20
Cum. Pref. Shares . . . . .	2,00,000	14,000	7
" A " Cum. Pref. Shares . . . . .	4,00,000	28,000	7
<b>1933—</b>			
Ordinary Shares . . . . .	9,00,000	1,80,000	20
Cum. Pref. Shares . . . . .	2,00,000	14,000	7
" A " Cum. Pref. Shares . . . . .	4,00,000	28,000	7
<b>1934—</b>			
Ordinary Shares . . . . .	9,00,000	1,80,000	20
Cum. Pref. Shares . . . . .	2,00,000	14,000	7
" A " Cum. Pref. Shares . . . . .	4,00,000	28,000	7
<b>1935—</b>			
Ordinary Shares . . . . .	9,00,000	2,25,000	25
Cum. Pref. Shares . . . . .	2,00,000	14,000	7
" A " Cum. Pref. Shares . . . . .	4,00,000	28,000	7
<b>1936—</b>			
Ordinary Shares . . . . .	9,00,000	2,25,000	25
Cum. Pref. Shares . . . . .	2,00,000	14,000	7
" A " Cum. Pref. Shares . . . . .	4,00,000	28,000	7

45. We are sending you three bound copies of our half-yearly balance sheets from 1931 to 1936. [Not printed.]

46. An issue of Debentures for Rs. 6 lakhs bearing interest at the rate of  $4\frac{1}{2}$  per cent. per annum was made on the 7th July, 1937, and remains outstanding. This was in substitution of the 6 per cent. Debenture Loan of Rs. 6 lakhs which was redeemed.

No loan other than the above remains unpaid.

47. The two forms, V and VI, in connection with the total expenditure on paper and the works cost per ton are herewith enclosed. [Not printed].

48. It is anticipated that the coal consumption will be reduced by approximately 500 tons per month when our present electrification scheme is complete. Such saving as this would represent will very largely be offset by the recent rise in the delivered cost of coal. This rise, owing to favourable contracts, will not affect our power costs until 1938. Relatively small reductions in maintenance charges will result from the displacement of the main engine.

Our beater alterations will reduce labour charges in that department. To a large degree the reductions in Works costs which will result from the improved schemes we have in hand will very largely be nullified by the increases in prices of chemicals and stores generally which have occurred during 1937-38. At the moment, there seems no prospect of any reduction in the prime costs of materials and chemicals.

Packing charges alone have recently advanced by approximately Rs. 4 per ton of finished paper.

49. The following are the particulars called for, and have been taken for the year 1936:—

Average value of stock of—

	Rs.
Coal . . . . .	5,000
Materials . . . . .	5,33,653
Machinery, stores, etc. . . . .	2,37,695
Paper stocks . . . . .	2,89,473
Average outstandings . . . . .	7,55,000

50. We have the necessary Working Capital.

51. The progress made by the Industry towards the establishment of Bamboo Pulp as a principal raw material during the past six years has amply justified the assistance given to it by the Bamboo Paper Industry (Protection) Act, 1925. By its aid individual paper-making concerns have been able to devote the vast sums necessary for the installation and erection of Bamboo Pulp Plants and this has been done without imposing the burden of increased prices on paper consumers. During the period under review, our nett average return on all qualities has fallen by 14.3 per cent. In the case of this Company, its prime concern has been to make itself independent of external supplies of raw materials and in doing so has been unable to undertake urgently necessary work towards the modernisation of the paper-making plant, much of which is now almost 50 years old. The Company estimates that it would require at least 5 years to re-model and renovate the paper-making departments so as to make them as efficient as those in up-to-date Mills and such a scheme will inevitably occasion the expenditure of further sums of considerable magnitude which could only be secured if the Industry continues to receive much the same measure of protection as is now given. Thus, we consider that protection should be continued.

As regards the rate of protection, it will be seen from Statement VI that our Works Cost for 1936, which is the last complete financial year for which figures are available, was Rs. 243 per ton. If we add to this, Overhead Charges of Rs. 73 and Profit of Rs. 64 per ton as laid down in pages 89-90

of the 1931 Tariff Board's Report, we arrive at an average nett *ex mills* selling price of Rs. 380 a ton.

As, however, we have the necessary working Capital, the only interest we shall have to meet will be on our issue of 6 lakhs of Debentures, now bearing interest at the reduced rate of 4½ per cent. per annum, and will amount to Rs. 27,000 per annum, which is approximately Rs. 3 per ton of paper. We consider in our particular case, Interest might therefore be reduced from Rs. 12 to Rs. 3 per ton of paper.

This would reduce the Overhead Charges on page 89 of the 1931 Board's Report from Rs. 73 to Rs. 64 per ton, which now makes our figures as follows:—

	Rs.
	Per ton.
Works Cost 1936 . . . . .	243
Overhead Charges . . . . .	64
Profit . . . . .	64
	<hr/>
Total . . . . .	371
	<hr/>

The 1931 Tariff Board, in their report, arrived at a figure of Rs. 464 per ton as being a fair selling price, this being based on a Works Cost of Rs. 327 per ton. It would seem, therefore, on the basis of our present Works Cost of Rs. 243 per ton, and adding overhead charges of Rs. 64 per ton, and a profit of Rs. 64 per ton, we require an average *ex mills* selling price of not less than Rs. 370 per ton.

It is anticipated that our Works cost for 1937 will approximate Rs. 243 a ton, increases in the cost of Chemicals, Stores and Machine clothing having been to a large extent offset by savings effected by the greater use of Bamboo. The Tariff Board will appreciate that our Works cost is naturally affected by the fact that 20/25 per cent. of our output consists of relatively low grade paper which not only reduces our average nett return but also reduces in ratio our Works cost per ton of finished paper.

In view of the present high levels of imported paper prices, occasioned by the increase in Wood Pulp prices, the existing revenue duties would more than meet the case, but we suggest that since the price of Wood Pulp is the deciding factor in the determination of prices of imported paper, and as Wood Pulp values are subject to such wide and frequent variations, a method of paper tariff calculation might be devised which followed the fluctuation of Wood Pulp prices.

A detailed scheme of this nature, is, we believe, being put forward by one of the other Mills in their representations.

Should the Board find this Scheme to be impracticable, we can only suggest a flat rate of duty be granted. As regards the rate of duty, we have already stated that the present revenue duty would suffice, in view of the prevailing high rates of imported papers. It is, however, extremely difficult to forecast the future trend of world paper prices, but as stated by us in reply to another question that we hardly think present Wood Pulp prices are likely to be maintained, we must assume that any fluctuation will be downward. Should imported prices again ultimately reach the low level of 1935-36, we consider we would require a protective duty of not less than one anna per lb. Again, the cost of materials and chemicals during the next few years has to be considered as having a distinct bearing on our future costs of production. We cannot estimate, at this juncture, what the trend of material and chemical prices is likely to be, and the Board will therefore appreciate our hesitancy in endeavouring to specify definitely what protective rate of duty is necessary for the Industry.

We consider, for the reasons stated in the first para of our reply to this question, that protection should be afforded for not less than another five years.

52 (1) (a). At the time of the last Enquiry, our principal indigenous raw material was grass. The processes for the conversion of it into pulp remain fundamentally unchanged. The efficiency of the various departments in which grass is converted to pulp has remained at a high level in spite of the fact that the consumption of grass during the period under review, increased from 7,337 tons to 13,597 tons per annum, which has obviously practically doubled the all-in efficiency of the grass producing units. The drop in the gross efficiency of the Soda Recovery Plant was due simply to its inadequacy and that it was not greater says much for the capabilities of the Plant which only recently has been extended and improved so as to make its capacity more equal to that of the grass digestors.

As at the time of the last Enquiry, our Bamboo Pulp Plant was, as we see it to-day, largely on an experimental basis, it follows that the efficiency then has no comparison with that which is secured to-day with our up-to-date methods and process.

(1) (b). The improved efficiency of the Mill as judged by reduction of paper production costs is largely due to the increase in output of paper from 9,218 tons in 1930 to 11,206 tons in 1936.

(2) As the waste water from all paper-making machines is collected and used in the beating mill and elsewhere and as we still pass the Mill effluent over an efficient save-all machine, the loss of fibre is negligible. Similarly, the closed cycle for dealing with waste water from the pulp concentrator precludes any possibility of either bleach or fibre loss.

For reasons given above there has been some loss of soda which might have been recovered had our Soda Recovery Plant been commensurate with our grass digesting plant.

53. Generally speaking we are in agreement with the proposed schedule given on Page 21 of the Tariff Board's "Classification of Paper for Tariff Purposes", dated 1936, subject to one or two amendments which are being submitted through the Indian Paper Makers Association.

54. As we feel the arguments put forward by us in 1936 in connection with the departmental enquiry into the proposed removal of the paper surcharge can no longer be substantiated in view of conditions having altered materially, we have now no valid reasons to offer against the withdrawal of this surcharge.

In order to foster the use of Indian raw materials, we consider that the present duty and surcharge on imported bleached and easy bleaching wood pulps should be maintained. At the same time, we recommend the admission of kraft and mechanical pulps into the country duty free to enable Mills to extend the range of qualities they at present manufacture.

55. As desired, we append overleaf the following Statements showing:—

(1) The effect of replacing the present Protective Duty of Rs. 175 a ton by a Revenue Duty of 20 per cent. only.

(2) The effect of replacing the present Protective Duty of Rs. 175 a ton by the present Revenue Duty of 25 per cent.

(3) The effect of removing the existing surcharge on both the Protective and Revenue Tariffs.

The Statements have been compiled from the figures of our last complete Financial Year, 1936.



53. (a) 1.

	Tons.	
Protected Output . . . . .	9,800	
Unprotected Output . . . . .	1,406	
	Per ton.	
	Rs. A. P.	
At an average nett realised price of . . .	378 10 6	
<i>Protected Paper.</i>		
	Per ton.	
	Rs. A. P.	Rs.
Price realised . . . . .	378 10 6	
Less Protective Duty . . . . .	175 0 0	
Total . . . . .	203 10 6	
Add Revenue Duty at 20 per cent. . . .	40 11 8	
Realisation on 9,800 tons at . . . . .	244 6 2	23,94,977
<i>Unprotected Paper</i>		
Price realised . . . . .	378 10 6	
Less 5 per cent. Revenue surcharge . . .	18 14 11	
Realisation on 1,406 tons at . . . . .	359 11 7	5,05,772
Total Receipts . . . . .		29,00,749
Deduct works expenditure for 1936 . . .		27,30,177
Total . . . . .		1,70,572
Block as at 31st December, 1936 . . . .		11,54,458
Deduct depreciation at 6½ per cent. . .		72,153
Surplus . . . . .		98,419

This amount does not cover Head Office expenses for 1936, which were Rs. 1,71,204, apart from the claims of Debenture-holders amounting to Rs. 27,000.

55. (a) 2.

	Ton.	
	Rs. A. P.	
Average price realized in 1936 As. 2-8-45 per lb., i.e. . . . .	378 10 6	
Less Protective Duty at Rs. 175 per ton . . . . .	175 0 0	
Total . . . . .	203 10 6	
Add Revenue Duty at 25 per cent. . . . .	50 14 7	
Price realizable at Revenue Duty of 25 per cent. . . . .	254 9 1	
Total output in 1936, 11,206 tons . . . . .		28,52,685 0 0
Total receipts at Rs. 254-9-1 per ton . . . . .		27,30,177 0 0
Deduct works expenditure for 1936 . . . . .		
Surplus . . . . .		1,22,508 0 0
Block as at December 31st, 1936, . . . . .		11,54,458 0 0
Deduct Depreciation at 6½ per cent. . . . .		72,153 0 0
Credit Balance . . . . .		50,355 0 0

In 1936 this Company produced 1,406 tons of paper which did not have the benefit of the Protective Duty. Assuming that on these 1,406 tons the Company would receive the average price without any reduction, the total receipts would be increased by Rs. 1,74,467 giving a balance of Rs. 2,24,822.

Head Office expenses for 1936 were Rs. 1,71,204.

This leaves a balance of Rs. 53,618 to pay Managing Agency and Staff Commissions, Debenture Interest and Income-Tax.

There would be nothing left to pay the Dividend on our Preference Shares, i.e., Rs. 42,000, any Dividend to the Ordinary Shareholders, or to create any reserves.

55. (b) In 1936, we manufactured 9,800 tons of Protected and 1,406 tons of Unprotected paper. The removal of the surcharges would therefore on this basis, taking our nett average realized price for 1936 as Rs. 378-10-6 per ton, result as follows:—

	Rs.
<i>Protected—</i>	
9,800 tons at Rs. 378-10-6 per ton less Rs. 35 per ton . . . . .	33,67,831
<i>Unprotected—</i>	
1,406 tons at Rs. 378-10-6 per ton less 5 per cent. . . . .	5,05,772
Total realizable without surcharge . . . . .	38,73,603
Deduct Works Expenditure for 1936 . . . . .	27,30,177
Total . . . . .	11,43,426
Block at 31st December, 1936 . . . . .	11,54,458
Deduct Depreciation at 6½ per cent. . . . .	72,153
Total . . . . .	10,71,273
Head Office Expenses for 1936 . . . . .	1,71,204
This leaves a balance of . . . . .	9,00,069

Out of this has to be provided Debenture Interest, Income-tax and Managing Agents and Staff Commissions totalling in all approximately Rs. 4 lakhs.

This would leave a balance of approximately Rs. 5 lakhs.

In 1936 the following Dividends were paid and Reserves created.

Dividends . . . . .	2,67,000
Reserves . . . . .	2,75,000
Total . . . . .	5,42,000

(2) *Letter No. BPM/THT, dated the 16th February, 1938.*

We enclose herewith supplementary statements and further information called for during the course of our oral evidence on the 9th instant:—

1. *Confidential note on the other kinds of papers for which there are possibilities for developing a market.*—We have already sent a note direct to the President.

2. *Standard apprentice agreement form\*.*—This is enclosed also a copy of the Form of Service Agreement for apprentices who have completed their training.

3. *If the improvement of soda and sulphate recovery would be 80 per cent. as anticipated what would be the reduction in the cost of production?*—The sulphate recovery percentage for 1936 was 79.21 per cent. and the economy which would have resulted had this figure been 80 per cent. would have been a little less than Rs. 1,500 per annum which on an annual production of 5,000 tons of bamboo pulp is equivalent to approximately As. 5 per ton.

The Soda recovery percentage for 1936 was 64.25 per cent. and had this been increased to 80 per cent. there would have been a gross saving of Rs. 20,037. From this figure a deduction in respect of coal and steam for the evaporation of the additional liquor has to be made. The ratio of heat per ton of ash recovered increases directly with the recovery percentage. Thus the gross saving is reduced to a net saving of Rs. 16,204 which on a pulp production of 6,140 tons is equivalent to Rs. 2.63 per ton.

4. *Cost figures per ton for pulp and paper for 1937.*—We will be able to let you have these figures some time during the month of March as promised.

5. *The main items which make up miscellaneous charges in the works costs—*

Debenture Trustee fees.

Monthly subscription to Anti-malarial scheme.

Balmer Lawrie & Co., Ltd.'s Motor Cart Department for use of Cars.

Electricity Duty.

Telephone Revenue and Trunk Calls.

Ice for Mill.

Trade License.

Medicines for Mill.

Bank Commissions.

Proportionate share of Office Furniture, etc.

Mill Assistants' Medical expenses.

Yearly subscription to the Indian Paper Makers' Association.

Subscription to the Forest Research Institute, Dehra Dun, and donations to various institutions.

There are various other small items which are far too numerous to detail.

6. *Details of freight and commission paid for bamboo.*—Our average railway freight on Bamboo supplies for the year 1936 was Rs. 4-8-6 per ton. We pay no commission on Bamboo supplies.

7. *Variations in the cost of Primary materials—*

*Grass.*—Our average price for Sabai grass for season 1937-38 is Rs. 31-3-6 a ton as compared with Rs. 35-1 a ton for 1936-37.

*Bamboo.*—Our average price for 1937-38 will approximate Rs. 17-8 a ton as against Rs. 17-12 a ton for 1936-37.

As stated to the Board in our oral evidence, we consider that, for the future, prices are more likely to increase rather than decrease.

\* Not printed.

*Hemp*.—The price of this material has increased by Rs. 15 to Rs. 20 a ton during the past six months.

*No. 1 Rags (Tailors Cuttings)*.—Suppliers are asking Rs. 54 a ton more as compared with our last purchases.

*No. 1 Rags (Washed Rags)/No. 2 Rags*.—The prices of these remain much the same as before.

*Waste Papers*.—The prices of these have a tendency to increase, particularly Pure White cuttings.

*Chemicals*.—We have already advised the Board during the course of our oral evidence about the recent increases that have taken place in the prices of certain chemicals such as Bleaching Powder, Caustic Soda, Salt Cake and China Clay.

*Coal*.—This has recently increased from Rs. 4.19 per ton to Rs. 6.2 per ton delivered Mills.

8. *Reduction in coal consumption per ton of finished paper if the whole scheme is complete*.—As stated in our replies to the questionnaire we anticipate that when our electrification scheme is complete there will be a reduction in coal consumption of approximately 500 tons per month which is roughly equal to half a ton of coal per ton of paper. Here again, the recent rise in the price of coal will more than offset the saving which will be made after the new turbine is working.

9. *Works cost present and future*.—We will supply this information at the same time as we reply to Item 4.

*Works cost per ton of Unbleached Grass Pulp (Air Dry) and Bamboo Pulp (Air Dry)*.—We append below the figures asked for by the Board:—

*Works cost per ton of Unbleached Grass Pulp (Air Dry)—*

	Rs.
Grass . . . . .	77.64
Caustic Soda . . . . .	28.81
Lime . . . . .	7.17
Water Purification . . . . .	.53
Power and Fuel . . . . .	5.58
Current Repairs and Maintenance . . . . .	6.28
Labour . . . . .	17.33
Supervision and Establishment . . . . .	2.09
	<hr/>
	145.48

*Works cost per ton of Unbleached Bamboo Pulp (Air Dry)—*

	Rs.
Bamboo . . . . .	40.35
Caustic Soda . . . . .	6.72
Salt Cake . . . . .	10.66
Lime . . . . .	8.84
Water Purification . . . . .	.59
Power and Fuel . . . . .	5.73
Current Repairs and Maintenance . . . . .	6.24
Labour . . . . .	23.80
Supervision and Establishment . . . . .	2.86
	<hr/>
	105.79

As it is extremely difficult to allocate the various charges incurred between the stage of Unbleached and Bleached Pulps, we have deducted the following from our 1936 figures of Works cost per ton of Bleached Grass and Bamboo Pulps:—

Bleach. -

\*Bleach House Labour.

\*Bleach Tower Labour.

\*Potcher House Labour.

The total of these\* items has been deducted from the above Statements in the proportion of  $\frac{2}{3}$  Grass and  $\frac{1}{3}$  Bamboo which is the proportion of Grass and Bamboo Pulps produced in 1936. The other charges remain the same.

*Pulp Yields.*—We enclose herewith note on Pulp Yields a copy of which was handed to the President during the oral examination. The President asked that further copies should be sent to him. We also suggest that the enclosed yield calculation would be of assistance to the Board in addition to the note.

This letter together with the relative papers are sent in quadruplicate.

#### NOTE ON PULP YIELDS.

In order to avoid some of the confusion which occurred in 1931 regarding the yield of raw materials into paper we have throughout our replies given pulp and paper statistics on an air dry basis, that is, 90 per cent. Bone Dry. In our evidence at the previous Enquiry in reply to Question 6 both pulp and paper figures were on a bone dry basis. This was not correct and unfortunately complicated the issue considerably. In the calculation to determine the yield of raw materials into paper there are two straightforward figures which can be accepted as accurate, namely the net quantity of finished paper and the weight of raw materials used. Both are air dry weights or at least as near to being air dry as does not affect the calculation. That the finished paper should be considered air dry is a point on which there may be some divergence of opinion. The fact remains that finished paper is definitely not bone dry since it is common practical knowledge that a sheet of say 12 lbs. Demy will gain a pound in weight within an hour of being taken hot from the machine. Since the last enquiry we have conducted a large number of tests to determine how much hygroscopic moisture above bone dry paper normally contains and we have established that whilst there is a wide difference between the various qualities we make due to such factors as finish, degree of sizing, thickness and the season of the year, yet generally speaking finished paper as sold to customers is rarely more than 90 to 92 per cent. bone dry. So it is clear that in giving our finished paper production figures as bone dry in 1931 we unwittingly made an error.

That the weight of raw materials is also on an air dry basis is generally accepted, Wood Pulp, Grass and Bamboo all being bought on air dry basis. There seems no reason for complicating the issue by the introduction of any but air dry weights into the calculations for the determination of the yield of raw materials into bleached pulp.

As we have mentioned in reply to another question, there is no clear line of demarcation between our pulp and paper making processes and so it is not possible to weigh either grass or bamboo pulp at the conclusion of the bleaching or any other state, in order to ascertain accurately the yield into pulp of either material. Consequently, we have to work back from the weight of finished paper, making allowances for auxiliary materials used, all of which are assumed as having certain fixed yields. For the purposes of our calculations, Bamboo is given a fixed yield of 40 per cent. into A. D. paper and grass alone fluctuates from month to month. It is, therefore, clear that what we term our grass yield is nothing but an index of general efficiency. If it drops appreciably in any one month, then it

indicates to us that somewhere losses are taking place. There are a score of probable spots, but since grass and bamboo form by far the greatest proportion of our raw materials, a marked drop in yield can usually be traced to waste in the preparation departments of one or both of them.

There are certain unavoidable losses which occur during the conversion of bleached pulp into paper and these are severally shared proportionately by all the auxiliary and primary raw materials, but should such losses be reduced by the introduction of efficient save-all plants, then the improvement is reflected only in the grass yield.

That this method of yield determination is open to criticism is obvious. The relevant factors are based on too much assumption to permit a scientific calculation, but it must be borne in mind that many of the assumptions are made as the result of long experience and practice which lends considerable weight to them. It might be argued that some of our fixed yields for auxiliary materials are too low and as a result our grass yield is too high, or that the fixed yield of 40 per cent. into paper on bamboo is too high, making our grass yield too low.

If such was the case it would be reasonable to conclude that the very large increase in the consumption of bamboo would cause a proportionate drop in the yield of grass. There has been some difficulty in maintaining this last at previous high levels but we are reluctant to amend either our method of calculation or the assumed yield of auxiliary materials without more definite assurance of the need, since any alteration would destroy the comparative value of figures obtained in previous years. We have, therefore, submitted to the Board statistics based on our every day mill calculations.

#### NOTE ON YIELDS.

On the assumption that the Grass yield is to us an index figure and as such of greatest value, we have prepared a statement for the years 1931 to 1936 on the lines of Table XII shown in the Tariff Board's Report of 1931 giving fixed yields to all materials as shown there.

It is our opinion that the yields shown in the Table mentioned required slight amendment—only the very best of paper cuttings will yield 75 per cent. and under normal practice wood pulp should yield between 90 and 94 per cent. into paper—so we have prepared an alternative set of figures on the basis of waste papers at 65 per cent. and Wood Pulp at 94 per cent. into finished papers, the yields of other materials remaining as set out in Table XII. In this way our actual production is shown to exceed the theoretical production by 114.28 tons in 1931 and 371.24 tons in 1936. Now it is reasonable to presume that since Grass and Bamboo are subject to a variety of complicated processes which are not applied to Waste Paper, Wood Pulp or China Clay—Rags play such a small part that for this purpose they may be ignored—that any gain is as a result of economies in pulp preparation where the losses in yield are obviously greatest so we have given the benefit of gains shown each year in actual paper over the theoretical production to Grass and Bamboo only, in the strict proportion of one to the other.

**MATERIAL YIELDS.**

*Alternative*

*T.P. M. Method.*

Material.	Yield into Finished Paper.	Material used.	Paper.	Add gain in tons in proportion to Grass and Bamboo.		Amended yield.	Yield into Finished Paper.	Paper.	Add gain in proportion.		Amended yield.
				Add.	Total.				Add.	Total.	
1931.											
Grass	35	7,397	2,567.95	498.38	3,056.33	41.66	35	2,567.95	110.05	2,678.00	36.59
Bamboo	38	282	107.16	18.76	125.92	44.65	38	107.16	4.23	111.39	39.50
Rags	60	7	4.20	..	..	..	60	4.20	..	..	..
Hemp	60	54	32.40	..	..	..	60	32.40	..	..	..
Waste Papers	75	1,061	795.75	..	..	..	65	689.65	..	..	..
Wood Pulp	85	5,544	4,712.40	..	..	..	94	5,211.86	..	..	..
China Clay	60	975	585.00	..	..	..	60	585.00	..	..	..
Total	..	..	8,804.86	..	..	..	..	9,197.72	..	..	..
Actual	..	..	9,312	..	..	..	..	9,312	..	..	..
Production	..	..	507.14	..	..	..	..	114.28	..	..	..
Gain	..	..	..	..	..	..	..	..	..	..	..
1932.											
Grass	35	9,759	3,415.65	572.33	3,987.98	40.86	35	3,415.65	225.76	3,641.41	37.31
Bamboo	38	307	116.66	18.01	134.67	43.87	38	116.66	7.10	123.76	40.31
Rags	60	34	20.40	..	..	..	60	20.40	..	..	..
Hemp	60	30	18.00	..	..	..	60	18.00	..	..	..
Waste Papers	75	1,431	1,073.25	..	..	..	65	930.15	..	..	..
Wood Pulp	85	5,562	4,727.70	..	..	..	94	5,228.28	..	..	..
China Clay	60	1,240	744.00	..	..	..	60	744.00	..	..	..
Total	..	..	10,115.66	..	..	..	..	10,473.14	..	..	..
Actual	..	..	..	..	..	..	..	..	..	..	..
Production	..	..	10,706.00	..	..	..	..	10,706.00	..	..	..
Gain	..	..	590.34	..	..	..	..	232.86	..	..	..





1935.									
Grass	35	13,057	4,569-95	406-84	4,976-29	38-11	35	4,569-95	410-46
Bamboo	38	5,449	2,070-62	169-54	2,240-16	41-11	38	2,070-62	171-28
Rags	60	70	42-00	..	..	..	60	42-00	..
Hemp	60	156	93-60	..	..	..	60	93-60	..
Waste Papers	75	1,783	1,322-25	..	..	..	65	1,145-95	..
Wood Pulp	85	1,894	1,409-90	..	..	..	94	1,780-36	..
China Clay	60	1,353	811-90	..	..	..	60	811-80	..
Total	..	..	10,820-12	..	..	..	..	10,514-28	..
Actual	..	..	11,096	..	..	..	..	11,096	..
Production	..	..	575-38	..	..	..	..	581-72	..
Gain	..	..	..	..	..	..	..	..	..
1936.									
Grass	35	13,697	4,758-95	169-93	4,928-38	38-25	35	4,758-95	244-87
Bamboo	38	7,016	2,666-08	87-69	2,753-77	39-25	38	2,666-08	126-87
Rags	60	79	47-40	..	..	..	60	47-40	..
Hemp	60	146	87-00	..	..	..	60	87-60	..
Waste Papers	75	2,173	1,629-75	..	..	..	65	1,412-45	..
Wood Pulp	85	1,152	979-20	..	..	..	94	1,082-88	..
China Clay	60	1,299	779-40	..	..	..	60	779-40	..
Total	..	..	10,948-38	..	..	..	..	10,894-76	..
Actual	..	..	11,206	..	..	..	..	11,206	..
Production	..	..	257-62	..	..	..	..	671-24	..
Gain	..	..	..	..	..	..	..	..	..
								Average Grass Yield	37-85
								" Bamboo Yield	40-85

(3) *Letter No. 220, dated the 18th February, 1938, from the Tariff Board, to the Bengal Paper Mill Co., Ltd., Calcutta.*

With reference to your letter dated the 4th February, 1938, I am directed to request you to be so good as to furnish the Tariff Board with information on the following points:—

- (1) Whether you have any proposal for the improved manufacture of grass pulp in your mill.
- (2) Whether you think that the cost of manufacture of grass pulp can be reduced below the figure for the same already given by you.
- (3) Whether you could give the approximate quantity separately of bamboo and grass pulp upto the end of December, 1937, in continuation of the figures already supplied by you.
- (4) Whether you think that in future the proportion of the grass pulp to bamboo is likely to be reduced.

An early reply is solicited.

(4) *Letter No. BPM/TIT, dated the 25th February, 1938.*

With reference to your letter No. 220 of the 18th February, 1938, we send herewith a Note in reply to the four supplementary questions regarding the manufacture of Grass Pulp:—

1. *Whether you have any proposal for the improved manufacture of grass pulp in your Mill.*—There are two alterations to our grass pulp making plant which are at present receiving our attention and to which we referred briefly in reply to Question 40 of the main questionnaire.

We propose extending immediately the grass straining plant by the addition of a full drum oscillating strainer which has already arrived at the Mill. The present screening arrangements consist of two such strainers and three auxiliary flat strainers, suitable ripple sandtable and a 3-drum concentrator. This section of our preparation plant has been worked at full pressure for some years past and whilst the additional strainer will rectify such a state of affairs, it obviously cannot be expected to reduce the operation costs of the department. It will, however, add to the ultimate cleanliness of the pulp.

In conjunction with our electrification scheme, the potchers, in which the grass pulp is bleached, will be driven electrically and the relative motors and switchgear are due to leave England very shortly. In this particular case, a saving in power cost is expected and this has already been taken into account in reply to the supplementary questions relating to probable power economies resulting from the installation of the new 3,500 K.W. Turbo Generator.

In addition to these alterations which are at present being undertaken, we have considered a project for "cutting out" the grass pulp from the grass digestors by hydraulic means with the object of speeding up the digestion time cycle and reducing labour charges. As there are certain technical difficulties to be overcome before such a scheme could be made economically practical, we have not included it in the list of proposed alterations although it is one which, we have reason to believe, will be ultimately adopted.

2. *Whether you think that the cost of manufacture of grass pulp can be reduced below the figure for the same already given by you.*—We are reluctant to make any definite forecast regarding the probable future cost of manufacturing grass pulp as there are so many variable factors which must be taken into consideration.

*Grass.*—It is not anticipated that the prime cost of grass will be reduced below present day prices.

*Yield.*—There is no reason to believe that the yield of grass into bleached pulp can be materially increased.

*Production.*—This is a factor which affects to a marked degree the ultimate cost per ton of pulp and to reduce the output of grass pulp would necessarily result in a relative increase in overhead charges. It is not expected that the high grass pulp production of recent years will be maintained, therefore, the ultimate cost of this pulp will be increased, but, on the other hand, as the bamboo pulp production will be increased in the ratio of the decrease in grass production, the cost per ton of bamboo pulp will show a parallel decline.

*Chemicals.*—As has already been indicated to the Board, the cost of all chemicals has risen since 1936 and there is no indication that they will finally settle to prices lower than those ruling in that year.

*Consumption of Chemicals.*—Excepting only Caustic Soda, the consumption of chemicals per ton of pulp manufactured is consistent with general Indian practice and no further substantial economies can be expected.

*Labour.*—No schemes have been adopted which will affect the numbers employed; neither will there be any reduction in rates paid.

We, therefore, arrive at the conclusion that, for the immediate future, eliminating such savings as may be possible by improved soda recovery, which have already been the subject of a supplementary question, there seems not the slightest hope that grass pulp costs will be reduced below the figures already given.

3. *Whether you could give the approximate quantity separately of bamboo and grass pulp up to the end of December, 1937, in continuation of the figures already supplied by you.*—During the year ending December, 1937, the production of bleached grass and bamboo pulp was as follows:—

	Tons.
Bleached Grass Pulp . . . . .	5,496
Bleached Bamboo Pulp . . . . .	4,400

4. *Whether you think that in future the proportion of grass pulp to bamboo is likely to be reduced.*—As will be seen from a comparison of the figures given in the foregoing statement to similar figures given for 1936 in answer to Question 3 of the main questionnaire, the tendency has been towards a steady reduction in the proportion of grass pulp to bamboo pulp. To some extent, the proportion of these pulps to one another depends upon the output of high quality papers. Thus, to secure high bulk and great tensile strength, it is our practice to increase the proportion of grass pulp used for the manufacture of papers demanding these two characteristics. It is difficult, therefore, to forecast accurately the production during any one year of either bamboo or grass pulp and in assuming that for the year 1938 the bamboo pulp production will be increased to a level which will make it approximately the same as the grass pulp production, we presume that the output of high quality papers will permit such an increase.

(5) *Letter No. BPM/THT, dated the 2nd March, 1938.*

With reference to your telephone request of yesterday's date, we append below the particulars called for:—

Quality.	1931.		1932.		1933.	
	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.
Printings . . .	4,488	48.196	5,385	50.298	5,057	47.875
Writings . . .	1,858	19.953	1,841	17.196	1,829	17.315
Badami . . .	1,277	13.713	1,362	12.722	1,418	13.424
Wrappings . . .	1,021	10.964	1,087	10.154	927	8.776
Other sorts . . .	668	7.174	1,031	9.630	1,332	12.610
<b>Total</b> . . .	<b>9,312</b>	<b>100.00</b>	<b>10,706</b>	<b>100.00</b>	<b>10,563</b>	<b>100.00</b>

Quality.	1934.		1935.		1936.	
	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.
Printings . .	5,179	49.908	6,009	54.155	6,205	55.372
Writings . .	1,847	17.799	1,708	15.393	1,605	14.323
Badami . .	1,261	12.152	1,281	11.545	1,492	13.314
Wrappings . .	405	3.903	555	5.002	750	6.693
Other sorts . .	1,685	16.238	1,543	13.905	1,154	10.298
Total . .	10,377	100.00	11,096	100.00	11,206	100.00

(6) *Letter No. 296, dated the 22nd March, 1938, from the Tariff Board, to the Bengal Paper Mill Co., Ltd., Calcutta.*

I am directed to say that the Tariff Board requires figures for as late a date as possible of cost of manufacture of paper and the realised prices of the same and hopes that you will be good enough to send figures for your mill for 1937 under the above heads as early as possible.

(7) *Letter No. BPM/THT, dated the 25th March, 1938.*

With reference to the supplementary evidence called for in the course of our oral examination and also in your letter No. 296 of the 22nd instant, we have to advise as follows:—

*Works cost per ton of Finished Paper for 1937.*—We have now completed these figures and send herewith the necessary statement in quadruplicate. [Not printed.]

You will observe that our 1937 Works Cost very closely approximates that of 1936. Our cost of materials per ton of paper is down due to increased consumption of bamboo and reduced consumption of wood pulp, grass and waste paper, also to the better outturn for the year.

Chemicals per ton of paper are about the same as the 1936 figure.

The total of items 4 to 9, i.e., Power and Fuel, etc., is up in comparison of 1936. This is due to the increased price we had to pay for our coal requirements, while Packing has gone up by over Rs. 4 per ton and is accounted for by the much higher prices paid for our packing and press baling materials.

*Future Works Cost per ton of Paper.*—Our 1937 Works Cost may be taken as approximately representing our Works Cost to-day, except in the case of the item of Power and Fuel. As the Board are aware, the price for our coal requirements has recently increased by Rs. 2 per ton, and this will increase the item of Power and Fuel by approximately Rs. 8 per ton of paper until such time as our 3,500 K.W. Turbo-Generator is running. The expected saving on this account as we have already advised the Board, is half a ton of coal per ton of paper, say Rs. 3.

We come to the conclusion therefore providing we are able in future to secure our primary raw materials at to-day's prices, and that no further increases take place in the prices of Chemicals, Mill Furnishings and Coal, that our future Works Cost will closely approximate Rs. 250 per ton of paper.

*Works Cost per ton of Bleached Bamboo Pulp (Air Dry) for 1937.*—The figure is Rs. 115.6 on an output of 4,202 tons of Bleached Bamboo Pulp which is Rs. 3.42 per ton above our 1936 cost.

Repairs and Maintenance charges show a heavy increase in 1937 as against the previous year due to charges incurred in the replacement of Crusher Rolls which had been worn out. This is a heavy charge which will recur at intervals of a few years, although we have now been able to secure rolls made of a special metal which will naturally add to the normal working life of the rolls.

*Works Cost per ton of Bleached Grass Pulp (Air Dry) for 1937.*—This is Rs. 165.76 on an output of 5,260 tons of Bleached Grass Pulp, being Rs. 5.95 per ton above our 1936 cost.

A drop in the grass yield has resulted in an all-in increase in the cost of Bleached Grass Pulp for the year 1937 as against 1936. Furthermore, during the year the cost of coal increased by As. 12 a ton which accounts for the relatively high power cost. Bleach consumption during the year increased from 11½ to 14 per cent. per ton of pulp. During the year several consignments of bleach were received in a damaged condition resulting in unusual losses of chlorine. The packing and handling of shipments has been the subject to investigation and experiment with a view to ensuring that they arrive in a sound condition.

Labour charges on grass pulp have also increased, largely as a result of increased bonuses on paper production which, although not direct charges on pulp manufacture have been proportionately divided over the department. Three Apprentices completed their indentures towards the end of 1936 and it so happens that their increased salaries are now directly chargeable to pulp production. As the Board will appreciate, management expenses are subject to fluctuation from year to year.

The above output figures of Bleached Bamboo and Grass Pulp differ slightly from those given to you in our letter of the 25th February. The figures given in this letter of 25th February were based on estimates and not on final audited cost figures.

*Average realised prices for 1937.*—These are as follows:—

	Per lb.
	As. P.
Central Government and State Railways . . . . .	2 9.49
Bombay Government . . . . .	3 8.44
Mysore Government . . . . .	2 10.50
Bihar and Orissa Government . . . . .	3 0.25
Burma Government . . . . .	2 9.33
United Provinces Government . . . . .	2 8.03
Calcutta Market . . . . .	3 0.05
Madras Market . . . . .	2 10.03
Bombay Market . . . . .	2 7.46
Rangoon Market . . . . .	2 11.19
Up-country . . . . .	2 8.28

We regret our records do not permit us to give you the price realised for each class of paper from each market and we trust the above particulars will be sufficient.

*P.S.*—The average net *ex-Mill* price realised on our total production for 1937 was As. 2-9-46 pies per lb.

(8) *Letter No. 338, dated the 30th March, 1938, from the Tariff Board, to the Bengal Paper Mill Co., Ltd., Calcutta.*

I am directed to acknowledge receipt of your letter No. BPM/THT, dated the 25th March, 1938, and to say that the Board is grateful for the information contained therein. I am, however, to point out that according to the information of the Board the price of imported paper began to rise from December, 1936, and reached the highest level sometime in the middle of 1937. Even to-day's imported prices are about 1930-31 level. In the last Tariff Board's report it is stated that the average net *ex-Mill* price realised by you for 1930 was 3 annas 1.84 pies per lb. The Board is therefore unable to understand why such a low price as 2 annas 9.4 pies per lb. was realised by you in 1937.

2. The Board would also like to know your realised prices for white printing M. F., and S/C, Cream laid and wove and semi-bleached papers.

(9) *Demi-official letter No. 348, dated the 1st April, 1938, from Mr. F. I. Rahimtoola, Member, Tariff Board, to Mr. A. R. Mellis, Bengal Paper Mill Co., Ltd., Calcutta.*

In reply to Question 6 you have stated that 2.40 tons of bamboo will make a ton of paper and 2.27 tons of bamboo will make a ton of pulp. What I would like to get is, how many tons of bamboo pulp would make a ton of paper and similar information with regard to grass and other indigenous materials. The Board at present have information with regard to wood pulp, namely 1.18 tons of wood pulp would make a ton of paper and I want to have these figures for comparative purposes.

(10) *Demi-official letter No. 351, dated the 2nd April, 1938, from Mr. F. I. Rahimtoola, Member, Tariff Board, to Mr. A. R. Mellis, Bengal Paper Mills Co., Ltd., Calcutta.*

In my letter of yesterday's date, I forgot to mention that I had worked out some figures on the basis of the replies given to our questionnaire. The question has been dealt in replies to Questions Nos. 5 and 6. In reply to Question No. 6, you state that 2.27 tons of bamboo will make one ton of pulp and 2.40 tons of bamboo will make 1 ton of paper. On this basis I find that it works out that 1.10 tons of bamboo pulp are required to make 1 ton of paper. With regard to Question No. 5, I find that according to the figures given 1.09 tons of imported pulp are required to make 1 ton of paper. The other mills have given us 1.16 tons of imported pulp and I would like to know how your calculations have been made. If my basis of calculations is correct, then there is nothing more to be said but if you think that it requires to be altered then I would like you to submit a note on the subject giving me the particulars of all the indigenous materials that are used for the production of paper.

(11) *Letter No. BPM/THIT, dated the 4th April, 1938.*

We are in receipt of your letter No. 338 of the 30th March, 1938, and note the Board are unable to understand why such a low net all over average price of As. 2-9-46 per lb. was realised by us in 1937.

If the Board will kindly refer to the latter part of our reply to Question No. 30 they will find that our net average price realised dropped more or less steadily from 1930 to 1936, the figures for these years being:—

	Per lb.
	As. p.
1930 . . . . .	3 1-84
1931 . . . . .	3 0-74
1932 . . . . .	2 11-38
1933 . . . . .	2 9-82
1934 . . . . .	2 8-32
1935 . . . . .	2 8-35
1936 . . . . .	2 8-46

Our approximate net price realised for White Printings and Cream Laid also dropped due to imported competition.

Although imported prices rose very considerably in 1937 the Indian Mills did not by any means increase their prices in the same proportion which we think was pointed out to the Board in the course of the various Mills' oral evidence.

Further for nearly the whole of 1937 we were working on the 1937-38 Government of India and Provincial Government Contracts our prices for which were no higher than those prevailing for the 1936-37 contracts, i.e., a good proportion of our output did not receive the benefit of the increased rates prevailing in the general market.

Another point is that at the beginning of 1937 we had on our books many orders booked before the increase in prices which orders of course we had to supply.

The figures we have given in reply to Question No. 36 will also show the Board that our prices for the various Government contracts fell very considerably between 1931 and 1936.

Regarding the last paragraph of your letter we are not quite sure what prices the Board want and for what period. As already advised our records do not permit our giving you the net average price realised for each class of paper from each market. Cream Wove and Semi-Bleached papers are only made for the Central and Provincial Governments and we have already given particulars of our contracts with prices for these qualities for the years 1931-32 to 1936-37 in reply to Question No. 36

(12) *Letter No. 374, dated the 5th/6th April, 1938, from the Tariff Board, to the Bengal Paper Mill Co., Ltd., Calcutta.*

I am directed to convey to you the thanks of the Tariff Board for the information supplied to it and to request you to be so good as to furnish it with information regarding indigenous and imported pulp used during the year 1937-38. If possible the full year's consumption figures may be given.

(13) *Letter No. BLM/THT, dated the 6th April, 1938, from Mr. A. R. Mellis, Bengal Paper Mill Co., Ltd., to Mr. F. I. Rahimtoola, Member, Tariff Board.*

I have received your two letters Nos. 348 and 351 of the 1st and 2nd instant on which the following is a note received from Mr. Lowe:—

“With reference to Mr. Rahimtoola's two letters, dated the 1st and 2nd of April, we presume that the figure of 2.40 tons given in both letters is a typographical error as the subsequent deductions are correct and obviously worked out on the basis of 2.50 tons bamboos per ton of paper.

Upon reference to our answer to Question 6, you will note that we state that 2.27 tons of bamboo are required for one ton of bleached bamboo pulp and 2.50 tons of bamboo are required for one ton of paper, therefore, 1.10 tons of bleached bamboo pulp are required for one ton of paper. The difference between the quantity required for a ton of bleached pulp and a ton of paper represents the conversion losses which occur between the stages of bleached pulp and finished paper. It is assumed that if the yield of bamboo into paper is 40 per cent. then the yield into bleached pulp is 44 per cent. The loss in converting bleached pulp, whether bamboo, grass or wood into paper is practically the same in each case. Therefore, if it requires 1.10 tons of Bleached Bamboo Pulp to make one ton of paper then a similar quantity of Bleached Wood Pulp would also be required. In our reply to Question 5, Form 1, it is set out that, in 1936 at any rate, 1.09 tons of Wood Pulp were required to make one ton of paper but the consumption of wood pulp as given in that statement includes a certain quantity of Easy Bleaching Pulp which was bleached at the Mills and therefore subject to greater losses than would be normal with Bleached Pulp, thus the average yield for the combined wood pulp used (1,152 tons in 1936) was slightly less than would have been the case had bleached pulp only been converted into paper.

T. P. M. in reply to Question 6 make a note to the effect that their figures refer to *Unbleached* pulp and paper. Throughout our replies,

our calculations relating to pulp were based on bleached pulp only. In T. P. M.'s reply to Question 5, Form 1, they show for 1936-37 the consumption of wood pulp as 5,984 tons being equal to 5,086 tons of finished paper which we calculate as being equivalent to 1.111 tons of pulp per ton of paper which is comparable with our own statement."

From the concluding sentence of your letter of the 2nd instant Mr. Lowe assumes you would require the amplification and amendment of Form 1, only if our yield calculations for bamboo pulp were to be altered but he states he sees no reason for this.

Regarding the indigenous materials we use I think you will find these are given in our answer to Question 6, viz., Grass, Bamboo, Jute, Hemp, Rags and Waste Paper.

(14) *Letter No. BPM/THT, dated the 8th April, 1938.*

Replying to your letter No. 374 of the 5th/6th April, 1938, the following are the particulars of indigenous and imported primary materials used by us during the year 1937:—

Primary Materials—	Tons.
Grass . . . . .	13,001
Bamboo . . . . .	10,006
Jute . . . . .	44
Hemp . . . . .	180
Rags . . . . .	80
Waste Paper . . . . .	1,722
	<hr/> 25,033
Imported Pulp . . . . .	981

(15) *Letter No. 418, dated the 18th April, 1938, from the Tariff Board, to the Bengal Paper Mill Co., Ltd., Calcutta.*

I am directed to-day that the Board would be glad to know the reason of your using bleached pulp in preference to unbleached pulp when the difference in price between the two qualities is from £2 to £3.

(16) *Letter No. BPM/THT, dated the 18th April, 1938.*

Replying to your letter of the 13th instant No. 418 we have to advise that it is purely a matter of convenience. Bleached Pulp, when its use is necessary, goes straight into the beaters, and leaves our Bleaching Plant free for Bamboo and Grass.

(17) *Express letter No. 438, dated the 22nd April, 1938, from the Tariff Board, to the Bengal Paper Mill Co., Ltd., Calcutta.*

Reference your letter No. BPM/THT, dated the 28th March, 1938. Please furnish the Board at an early date with the quantities and present prices of the materials mentioned in the statement of cost of manufacture of paper.

(18) *Letter No. BPM/THT, dated the 22nd April, 1938.*

We beg to acknowledge receipt of your telegram of the 21st instant reading as follows:—

"431 Kindly wire present purchase price of Bamboo delivered at Mill what proportion you purchase from Bengal area"

and in reply we confirm having wired you this morning as follows:—

"Your telegram 21st. Rs. 17 ton delivered Mill. Proportion from Bengal approximately 50 per cent."



(19) Letter No. BPM/R, dated the 27th April, 1938.

We beg to acknowledge receipt of your telegram of the 26th instant reading as follows:—

“Reference your telegram twenty-second wire rate per ton delivered Mill Bengal Bamboo”

and in reply confirm having wired you to-day as follows:—

“Your telegram twenty-sixth price Rupees seventeen per ton includes Bengal Bamboo”.

(20) Letter No. BPM/THT, dated the 28th April, 1938.

Referring to your Express letter No. 438 of the 22nd instant the figures we gave in the above statement were based on our 1937 Works Cost. The quantities of materials and Chemicals per ton of paper, and the prices of each delivered our Mills, are as follows:—

Materials.	Tons.	Price per ton d/d Mills.
		Rs. A. P.
Grass . . . . .	1.123	32 4 7
Bamboo . . . . .	.864	16 14 9
Wood Pulp . . . . .	.085	214 2 11 (average).
<i>Chemicals A/C Fibre Boiling—</i>		
Caustic Soda . . . . .	.067	172 8 5
Lime . . . . .	.362	19 0 0
Salt Cake . . . . .	.051	107 13 8
<i>A/C Bleaching—</i>		
Bleaching Powder . . . . .	.099	99 13 0
Sulphuric Acid . . . . .	.001	388 0 0
<i>A/C Sizing—</i>		
Rosin . . . . .	.016	316 10 8
Caustic Soda . . . . .	.003	172 8 5
Alum Ferric . . . . .	.051	68 6 4
Gelatine . . . . .	.001	713 0 0
Dyes . . . . .	.001	2,167 0 0 (average).
China Clay . . . . .	.119	33 3 0
Coal . . . . .	4.185	3 13 8
	7.028	

In the course of our oral evidence, we advised the Board regarding increases that had recently taken place in certain of our Chemicals, which will be reflected in our 1938 costs of manufacture, namely:—

Bleaching Powder increased by £1 a ton.

Caustic Soda increased by £2.5 a ton.

Salt Cake increased by 15s. a ton.

China Clay.—This was also increased by Rs. 7-8 a ton towards the end of 1937.

Coal.—As already advised this has recently been increased by Rs. 2 a ton.

In addition to the above, Repairs and Maintenance Charges, and Packing Costs have both increased during the last month or two.

Taking all the above into account, we estimate our Works Cost of Rs. 256.447 per ton for White Paper exclusively would be increased by approximately Rs. 15 making the figure Rs. 271 after taking into account the saving in coal to be effected by the starting up of the new 3,500 K.W. Turbine.

(21) *Letter Not. BPM/TILT, dated the 29th April, 1933.*

We duly received your telegram of the 28th instant reading as follows:—

“463 Wire recent landed prices of Auxiliary raw materials used in manufacture of paper and c.i.f. price per ton of imported wood pulp Easy and Strong Unbleached and Bleached.”

and in reply confirm having wired you to-day giving the required information as follows:—

*Prices per ton of imported auxiliary materials landed Calcutta.*

	Rs.
Caustic Soda . . . . .	199
Salt Cake . . . . .	113
Bleaching Powder . . . . .	115

*Prices per ton of indigenous auxiliary materials delivered Mills.*

	Rs.
Lime . . . . .	19
China Clay . . . . .	39
Rosin . . . . .	329
Alum Ferric . . . . .	68

*Current Quotations imported Wood Pulp.*

Per ton c.i.f. Calcutta.

	£ s.	£ s.
Primo Bleached Sulphite . . . . .	14 10	to 17 10
Easy Bleaching . . . . .	12 10	„ 13 0
Strong . . . . .	11 10	„ 12 0

As regards Wood Pulp prices, these are taken from the World's Paper Trade Review, dated the 1st April, 1933, and we think can be taken as being fairly representative prices.



**Evidence of Mr. A. R. MELLIS, Mr. J. C. LOWE and Mr. T. H. TODD,  
representing the Bengal Paper Mill Coy., Ltd., recorded at  
Calcutta on Wednesday, the 9th February, 1938.**

**B.—ORAL EVIDENCE.**

*President.*—First of all, may we have your names and the positions you hold in the Company for record?

*Mr. Mellis.*—I am a Director nominated by the Managing Agents. Mr. Lowe is the Manager of the Mill and Mr. Todd is the Head of the Paper Mill Department in the office of the Managing Agents.

*President.*—I see you have one more Indian Director and one English Director less than on the previous occasion.

*Mr. Mellis.*—Yes.

*President.*—That is the main change.

*Mr. Mellis.*—Yes.

*President.*—In going through your replies to questions, where your answers are full, we do not waste your time by going through them again. It is only elucidation and additional information that we really look for. In regard to your reply to question 4, has there been any considerable alteration in the classes of paper you manufacture since the last enquiry?

*Mr. Todd.*—We are now making super-calendered printings which we were not producing in 1931. We are also now making white and tinted imitation art and super-calendered account book, white and buff.

*President.*—They are being made only in small quantities. At present I was not asking you so much about the new qualities as about the main classes of paper.

*Mr. Lowe.*—White relative to unbleached and badami? There has been no big change.

*President.*—Has not your proportion of superior badami gone down?

*Mr. Lowe.*—Yes, slightly, but in respect of common badami the proportion has gone up from 11·9 per cent. in 1931 to 14·35 per cent.

*President.*—About the new papers you are manufacturing, super-calendered white printing is quite a small quantity—I mean the proportion.

*Mr. Todd.*—Yes, the percentage figure is small.

*President.*—White and tinted imitation art is smaller still.

*Mr. Todd.*—Yes.

*President.*—White and Buff S/C A/C book is 4·53 per cent.

*Mr. Todd.*—Yes.

*President.*—Any other new line so to speak?

*Mr. Todd.*—No.

*President.*—That is important when we come to the question of the extension of the scope of protection.

*Mr. Lowe.*—Yes.

*President.*—As regards your reply to question 6, is there much alteration in your figures?

*Mr. Lowe.*—The grass yield as shown here is lower. I anticipated such a question and prepared a note on the yields generally and on grass and bamboo particularly (copy handed in).

*President.*—It would, I think, be useful to us if you could supply us with copies of this note.

*Mr. Lowe.*—Yes.

*President.*—Would you mind explaining what is the difference between the different classes of rags and papers you have given?

*Mr. Lowe.*—The first "No. 1 rags" represent new cuttings and the second "No. 1 rags" represent "No. 1 Calcutta rags", which is a low grade rag which has been washed and disinfected and cleaned to some extent.

*President.*—What is No. 2 rags?

*Mr. Lowe.*—That is "No. 2 Calcutta rags".

*President.*—They are both Calcutta rags.

*Mr. Lowe.*—Yes.

*President.*—What is No. 1 paper?

*Mr. Lowe.*—It is "new cuttings" and No. 5 paper is "records".

*President.*—The last Tariff Board drew attention to the fact that in the case of your mills owing to the comparatively high proportion of unbleached paper you manufactured your proportion of losses was hardly comparable with the losses of other mills which made less badami.

*Mr. Lowe.*—The same position exists to-day.

*President.*—Do you accept that as correct?

*Mr. Lowe.*—Yes.

*President.*—The comparison is made on page 70 of the last Tariff Board report. I should like to have your views on this question of the standard ratio of yields given on Table XLII, page 70.

*Mr. Lowe.*—As far as our mill is concerned, we should find it difficult to agree with 75 per cent. yield from waste papers.

*President.*—In which direction? Do you consider it more or less?

*Mr. Lowe.*—I think it is probably not more than 65 per cent. because we use quite a proportion of low grade paper. 75 per cent. would be a fair yield for new cuttings into paper but certainly would not be a fair yield for records which contain quite a large percentage of moisture and dead paper. Then as regards wood pulp too, the standard yield is shown as 85 per cent. We consider in our case, since we use quite a large proportion of bleached pulp, it should be 94 per cent.

*President.*—Presumably this is for unbleached pulp.

*Mr. Lowe.*—It must have been.

*President.*—Would you consider that 85 per cent. is a fair figure for unbleached?

*Mr. Lowe.*—I should think that it is probably low.

*President.*—What about the other items?

*Mr. Lowe.*—All the other items are about standard. As you see, we assume bamboo to have a yield of 40 per cent. into paper.

*President.*—As against 38?

*Mr. Lowe.*—Yes.

*President.*—Rags?

*Mr. Lowe.*—60 per cent. is about right.

*President.*—Rope, hemp?

*Mr. Lowe.*—60 per cent. is correct.

*President.*—Grass is 35 per cent.?

*Mr. Lowe.*—It is rather an arbitrary figure.

*President.*—China clay is 60 per cent.?

*Mr. Lowe.*—Yes.

*President.*—It comes down to this that wood pulp is too low and waste paper too high.

*Mr. Lowe.*—Yes.

*President.*—In regard to the question of losses at different stages, is it possible to give a percentage for each stage?

*Mr. Lowe.*—Before I came down, and since you were at the mill, I conducted a test on bleached wood pulp from the beaters to the finished paper stage and I found that the loss was just over 4 per cent. which is exactly in keeping with our views. We think that the loss from the stage of bleached pulp to the stage of paper is 4 per cent.—that is, the yield of bamboo is 40 per cent. into paper, 44 per cent. into bleached pulp and 46 per cent. into unbleached pulp.

*President.*—We have to deal with the stages in which losses occur. Would you mind giving us your views as to exactly when the losses do occur?

*Mr. Lowe.*—The main loss is between the stage of grass arriving at the mill and its conversion into unbleached pulp. That is to say, the main loss occurs in digestion. Then there is a loss of 2 per cent. in our estimation, from the stage of unbleached pulp to the bleached pulp and there is a loss from the stage of unbleached pulp to finished paper of 4 per cent.

*President.*—And bamboo?

*Mr. Lowe.*—Practically the same.

*President.*—As we touched on the question of loss, I might ask you at this stage what steps you are taking or contemplate taking to reduce losses?

*Mr. Lowe.*—Beyond the installation of machines for the efficient recovery of fibre from our mill effluent we have done nothing. One has to watch where losses occur during the whole process of paper making. For instance, use of excessive caustic soda will of course cause loss during digestion. Similarly use of excessive bleach will cause additional loss during bleaching. One naturally watches those particular points.

*President.*—I notice in the replies of all the mills they have not touched on fibre recovery.

*Mr. Lowe.*—We think that it is an important point in our processes because we have uses for the recovered fibre. We can use it in low grade paper. A mill exclusively devoted to manufacturing all white paper would have to sell that pulp which is recovered.

*President.*—In fact it would not be worthwhile recovering the fibre.

*Mr. Lowe.*—I would not go so far as to say that. It would be easily worthwhile if there were near by a mill which could use the low grade fibre.

*President.*—As regards question 9, which deals with the cost of the raw material, all mills have made very considerable reductions and you, not the least. The question I have been putting to the mills is, owing to the starting of new mills and one thing and another, possibly the cutting out of near by areas, whether it would be possible to keep your costs down to the latest figures for bamboo? Take bamboo first.

*Mr. Lowe.*—In the case of bamboo we have endeavoured to consolidate our position by taking an area near Hazaribagh which will at least ensure most of our requirements for bamboo and we are considering other areas now.

*President.*—Do you see any possibility of reducing the cost of raw bamboo still further?

*Mr. Lowe.*—I think not.

*President.*—On the other hand you do not anticipate any considerable increase owing to the competition from many other mills?

*Mr. Lowe.*—No.

*President.*—With regard to grass?

*Mr. Todd.*—We consider there are ample supplies of grass available, and prices we believe will not increase to any appreciable extent

*President.*—Is there any possibility of a reduction?

*Mr. Todd.*—I should not think so.

*President.*—In both cases your latest figures for 1936 are about the lowest that you are likely to work on as far as you can foresee?

*Mr. Lowe.*—Yes.

*President.*—You are employing the sulphate process. How do you consider sulphate pulp compares with sulphite pulp?

*Mr. Lowe.*—I have only been able to compare it with wood sulphite pulp and I think that bamboo is quite equal to the sulphite wood pulp in most respects. Personally—I am speaking now purely as a papermaker—I prefer working with sulphate bamboo pulp.

*President.*—I am asking this question because later on we have to touch on the question of the cost of different kinds of imported pulp. The question has been newly raised. Correct me if I am wrong, in regard to foreign countries, America for instance, sulphite pulp is rather more expensive than sulphate pulp?

*Mr. Lowe.*—Yes.

*President.*—On the other hand sulphite wood pulp is superior. For instance it can be used for silk fibre and sulphate pulp cannot.

*Mr. Lowe.*—That is correct.

*President.*—What would be the difference in price between imported sulphite and sulphate pulp?

*Mr. Lowe.*—It is rather difficult to get a comparative price to compare with the price of bamboo pulp but the price of sulphate wood pulp is lower than that of sulphite pulp.

*President.*—It has been suggested to us that the difference in price is about £1 a ton.

*Mr. Lowe.*—I should think so. Sulphate pulp is as a general rule used for low grade and strong paper. In our particular process we are able to bleach our bamboo pulp and use it for white paper quite as well as we are able to use sulphite wood pulp.

*President.*—Is that due to the fact that in some way bamboo is superior as a raw material?

*Mr. Lowe.*—It is of different quality because one is wood and the other is a grass.

*President.*—That is the real difficulty. Having touched on the question of pulp we might arrive at a little more detail. In regard to foreign pulp, these are—

- (a) mechanical pulp,
- (b) chemical pulp which may be sub-divided into three or four, and
- (c) soda pulp, sulphite and sulphate.

*Mr. Lowe.*—That is correct and again may be sub-divided into a vast number of qualities. Those are the main headings.

*President.*—As regards kraft pulp, what is the main difference? I am talking of imported wood pulp.

*Mr. Lowe.*—It is a very strong sulphate pulp either bleached or unbleached.

*President.*—In some standard books I find it described as sulphate or kraft.

*Mr. Lowe.*—Yes.

*President.*—Can I describe it as sulphate or kraft?

*Mr. Lowe.*—I think the distinction is purely in the difference in digestion processes. I think in the case of kraft pulp the process is very much longer: the time devoted to digestion would be longer and the treatment less drastic.

*President.*—A suggestion has been made that in order to encourage the manufacture of other classes of paper a differentiation might be made in the import duty with regard to different classes of pulp. But the point that has occurred to us is that, supposing you let in any particular kind of pulp free, is not there some danger that it might supersede indigenous pulp?

*Mr. Lowe.*—I should hardly expect mechanical pulp to supersede bamboo. It could be used perhaps in place of waste paper but it would not be used to any extent. In any case the market can readily detect the presence of any mechanical pulp in paper by the phloroglucine test.

*President.*—A suggestion has been made that some concession might be given to kraft pulp. In that case is there a possibility that it might supersede indigenous pulp?

*Mr. Lowe.*—Yes, there is. It might supersede either bamboo or grass.

*President.*—Apart from making kraft paper it might be used with bamboo or grass?

*Mr. Lowe.*—Yes.

*President.*—As regards coal, question 11, item (H), do you think there is likely to be any reduction in the coal consumption?

*Mr. Lowe.*—There is no likelihood of a reduction in the consumption of coal for the production of steam.

*President.*—What about coal prices?

*Mr. Lowe.*—There has been a definite increase in the last 12 months.

*President.*—In regard to chemicals what is your estimate of the probable trend of prices?

*Mr. Lowe.*—There has been an increase. I have a note here: bleach has increased by a Pound a ton between 1937 and 1938, caustic soda by £2.5 a ton and salt cake by 15s. These are the three chemicals which affect bamboo.

*President.*—In regard to these forms I think we might first of all take the cost per ton of grass pulp and take the latest years' figures. There hasn't been very much variation in the cost of grass?

*Mr. Lowe.*—You mean per ton of bleached grass pulp?

*President.*—Yes. I am now dealing with Form III.

*Mr. Lowe.*—The variation in the cost of grass is Rs. 111 against Rs. 77 and of finished pulp bleached Rs. 210 against Rs. 1577.

*President.*—I was taking the different items (1) is grass, next is caustic soda.

*Mr. Lowe.*—That shows an increase.

*President.* What is the reason for that?

*Mr. Lowe.*—The drop in soda recovery.

*President.*—Lime also shows an increase over 1935-36.

*Mr. Lowe.*—It shows a decrease.

*President.*—I have taken the last two years; there has been an increase over 1935-36.

*Mr. Lowe.*—Yes. That must be due to price variations.

*President.*—Bleaching powder. Of course it would depend entirely on the price at which it is imported.

*Mr. Lowe.*—Yes.

*President.*—If the project about the Indian factory matures, possibly you will be able to get your bleaching powder there.

*Mr. Lowe.*—Yes, provided the price is reasonable.

*President.*—Under power and fuel there has been an increase.

*Mr. Lowe.*—That is due to the increase in the price of coal.

*President.*—In current repairs and maintenance since 1931 there has been a very marked decrease.

*Mr. Lowe.*—Yes. That is an item which fluctuates from year to year in one department or another.

*President.*—Labour has remained fairly constant for the last three or four years though there is a material reduction as compared to earlier years.

*Mr. Lowe.*—Yes. That is of course dependant on the output of pulp. Actually the labour force has remained almost constant but the increased production of bleached pulp has naturally made the figure as given here show a steady decrease from 1931 to 1936.

*President.*—With the introduction of further improvements in machinery and so on is your labour force likely to decrease?

*Mr. Lowe.*—That is the tendency. We have recently installed mechanical furnishing arrangements for our beaters and that in itself will do away with a large number of our employees and almost every innovation is with the object of reducing labour.

*President.*—Probably your labour force is now at its maximum and is likely to go down?

*Mr. Lowe.*—Yes.

*President.*—I see there is an increase under the head of supervision and establishment.

*Mr. Lowe.*—That charge is subject to fluctuations.

*Mr. Mellis.*—At certain stages when the staff includes senior and more experienced men the cost is necessarily high. On their retirement the cost recedes and generally expands again as the replacement staff qualifies for higher pay, whilst there are times when increased staff is called for.

*President.*—With regard to your overheads, you had to put a rather arbitrary figure on the cost of pulp. On what sort of basis have you proceeded?

*Mr. Lowe.*—We have assumed that the whole of the pulp producing plant carries  $\frac{3}{5}$ ths of our overheads and then we have divided that up in the ratio of the output of grass pulp to the output of bamboo pulp.

*President.*—We shall deal with the question of overheads when we come to the question of costs. That will be more satisfactory. This is only an estimate.

*Mr. Lowe.*—Yes.

*President.*—We might pass to bamboo now. I don't quite follow your figure for actual bamboo for 1936 which you have put down as Rs. 40.

*Mr. Lowe.*—In Form II?

*President.*—No, in Form III.

*Mr. Lowe.*—That is on the basis of 2.27 tons per ton of pulp.

*President.*—I am comparing that with previous years. In 1934 it was Rs. 28.80; in 1935 Rs. 32.09 and in 1936 it has gone up to Rs. 40.

*Mr. Todd.*—We had certain stocks in 1930-31 which were written down over the 3 years 1931-33. That accounts for the lower prices during these three years.

*President.*—Would Rs. 40 be a normal figure?

*Mr. Lowe.*—Yes, that is without any adjustments.

*President.*—The other figures are artificial.

*Mr. Lowe.*—Yes. They have been affected by writing down.

*President.*—And Rs. 40 represents the present price of bamboo?



*Mr. Lowe.*—Yes.

*President.*—In answer to question 12 I notice you import quite a good quantity of bleached pulp. Could you give us some explanation why you import so much bleached pulp? It is not the usual practice among mills.

*Mr. Lowe.*—It is easy to use and goes straight through the mill within a few hours. In our particular case the pulp making plant has hitherto been working to capacity making bamboo and grass pulp and the use of bleached wood pulp has relieved some of the strain on the pulp making departments.

*President.*—At what stage is the bleached pulp mixed?

*Mr. Lowe.*—It goes straight into the beaters.

*President.*—In regard to the easy bleaching sulphite and strong pulp, is there any difference about the procedure of mixing?

*Mr. Lowe.*—That enters the potchers where we normally bleach our grass and subsequently it is mixed with grass and bamboo.

*President.*—It is mixed with grass and bamboo?

*Mr. Lowe.*—Yes.

*President.*—What would that be due to?

*Mr. Lowe.*—It is a matter of convenience.

*President.*—It can easily be mixed with bamboo.

*Mr. Lowe.*—Yes.

*President.*—From the point of view of protection there is something to be said for using more unbleached pulp than bleached pulp in India. Do you expect the reduction in the quantity of bleached pulp to continue or do you expect the proportion of bleached to unbleached pulp imported to increase?

*Mr. Lowe.*—It is very difficult to give an estimate, because as we see it at present we shall be using wood pulp only for specialities since we are able to produce sufficient grass and bamboo pulp for our normal requirements. I think ultimately perhaps we shall be using mainly imported bleached wood pulp.

*President.*—Do you contemplate any reduction in the total quantity of imported pulp?

*Mr. Lowe.*—I think that it will be reduced slightly.

*President.*—You are aware that one of the criticisms directed against protection to the Paper Industry was the amount of imported pulp used in the last enquiry.

*Mr. Lowe.*—Yes.

*President.*—Do you foresee any time in which indigenous pulp can completely supersede imported pulp?

*Mr. Lowe.*—Yes, ultimately bamboo pulp and grass pulp together will supersede imported pulp.

*President.*—Is there any particular class of paper which could not be made out of indigenous materials?

*Mr. Lowe.*—When you say any class of paper, you mean any class of paper which we are manufacturing to-day?

*President.*—Yes.

*Mr. Lowe.*—I think the use of wood pulp is valuable in the case of one or two qualities. I don't mean by that it will never be displaced. We are speaking of bamboo pulp as though it is a matured accepted pulp which it is not. We rather feel even to-day that the production of bamboo pulp is in its infancy. It may be a growing child, but still it is in the infant stage. Later on we may be able to devote the necessary time to the technical difficulties which surround the problem of producing various bamboo pulps which will match exactly the many grades of imported wood

pulp. That will be our endeavour. Whether we will succeed or not we do not know.

*President.*—There are a number of classes of paper in which no imported pulp is used at all.

*Mr. Lowe.*—Yes.

*President.*—In answer to question 13 you have specified special classes of paper such as Bank papers, Typewritings, Duplicatings, Blottings and Antiques. These are the five qualities you make in which at present it is essential to use more quantities of wood pulp.

*Mr. Lowe.*—Yes.

*President.*—In the other kinds of paper you don't use wood pulp?

*Mr. Lowe.*—No. We say we shall require about 50 to 100 tons of imported pulp monthly. We shall also require certain stock of wood pulp in the event of our pulp producing plant breaking down and we could use bamboo pulp if it were available. We shall certainly require a small stock of wood pulp at all times.

*President.*—That raises another question. At present mills cannot really make so much grass and bamboo pulp as they require speaking generally.

*Mr. Lowe.*—Yes, that is so.

*President.*—Supposing the time has reached when they can meet their requirements and have a surplus, what do you think of the possibilities of the keeping quality of pulp manufactured as a reserve?

*Mr. Lowe.*—You mean the "keeping" quality of bamboo pulp?

*President.*—Yes.

*Mr. Lowe.*—We shall have to make pulp which would keep just as well as wood pulp. We could do so. I don't think it would present any serious difficulty.

*President.*—In what form would you keep it, supposing you were manufacturing it as a reserve?

*Mr. Lowe.*—It would have to be air dry.

*President.*—More or less in the form of imported wood pulp?

*Mr. Lowe.*—Yes.

*President.*—A suggestion has been made that it might be kept in the form of wet pulp.

*Mr. Lowe.*—Wet pulp could not be kept for long.

*President.*—It might be kept for three or four months.

*Mr. Lowe.*—Yes, but I think during the period it would deteriorate. I should expect it to begin to blacken in 3 or 4 months.

*President.*—In your view if pulp is ever made for what may be called reserve, it has to be more or less in the form in which imported pulp at present reaches India.

*Mr. Lowe.*—Yes.

*President.*—That of course adds to the cost of making pulp.

*Mr. Lowe.*—Yes.

*President.*—What would you put the additional cost at?

*Mr. Lowe.*—I would not like to commit myself to a figure.

*Mr. Rahimtoola.*—Having regard to the progress made by the mills in India, I think one might say that wood pulp was the chief raw material in 1930-31 and to-day it has ceased to be in view of the large quantity of bamboo and grass pulp made in India.

*Mr. Lowe.*—That is so.

*Mr. Rahimtoola.*—So the principal raw materials in India are bamboo and grass and not wood pulp.

*Mr. Lowe.*—That is so.

*Mr. Rahimtoola.*—I am talking of your particular case. Though the production of your bamboo pulp is about 3,000 tons as against the total of 9,200 tons, you say you require about 50 to 100 tons of wood pulp per month.

*Mr. Lowe.*—In 1937 our consumption of wood pulp was less than 1,000 tons.

*Mr. Todd.*—It was 978 tons.

*President.*—I believe your financial year is calendar year?

*Mr. Lowe.*—Yes.

*President.*—I wonder if it would be possible to give us not all the figures but some figures for 1937.

*Mr. Lowe.*—Our accounts are not audited till about the middle of March. After that it will be possible to give you figures.

*President.*—It would be useful for purposes of comparison if you could give us figures.

*Mr. Todd.*—Would the Board let us know what figures they want?

*President.*—We shall let you know. In the case of other mills their year ends on the 31st March and it would be impossible for us to get those figures. I think you are the only mill whose financial year ends on the 31st December.

*Mr. Rahimtoola.*—From your experience do I understand you to say that it has passed the experimental stage?

*Mr. Lowe.*—No. I say while it is a growing child, it is still an infant. We really have had only three years intensive work with bamboo. I am quite sure that during the next 10 or 15 years large developments will be made not only in the production of bamboo, but in the cheapening of the ultimate cost of bamboo pulp. That will be the tendency.

*Mr. Rahimtoola.*—My point is different. It is with regard to your answer to question 14 that the classes of paper now made from bamboo have increased considerably. You say barring blottings, Banks and Type-writings, the rest can be made without the admixture of imported pulp.

*Mr. Lowe.*—Yes.

*Mr. Rahimtoola.*—Therefore I say that bamboo has been successful in producing large varieties of papers in India.

*Mr. Lowe.*—Yes.

*Mr. Rahimtoola.*—Therefore it can be said safely that bamboo pulp has ceased to be in the experimental stage. Papers made out of bamboo are able to compete with the imported papers.

*Mr. Lowe.*—I don't agree that we have reached finality.

*Mr. Rahimtoola.*—I am saying that bamboo has proved to be a suitable raw material for the manufacture of paper.

*Mr. Lowe.*—That is so.

*Mr. Rahimtoola.*—So it can be said it is no longer on an experimental basis.

*Mr. Lowe.*—Quite.

*Mr. Rahimtoola.*—It may be that it will take time for the bamboo pulp to take the place of wood pulp as a substitute.

*Mr. Lowe.*—Yes, as a substitute for the many varieties of wood pulp.

*President.*—Perhaps you are aware that a bamboo pulp mill is put up at Trinidad. I believe some other bamboo pulp mills are contemplated in other parts of the world. I have heard Siam mentioned.

*Mr. Todd.*—And Burma too.

*President.*—I believe the pulp turned out by the Trinidad mill is imported into the United Kingdom to compete with the ordinary pulp.

*Mr. Todd.*—Yes.

*President.*—In answer to question 15 about the trend of prices, I think it is a very difficult question. Perhaps it might be more conveniently dealt with by the Association on Monday.

*Mr. Todd.*—Yes, possibly.

*President.*—It is a general question. It is a question of estimates and guesses.

*Mr. Todd.*—According to the latest issue of the "Paper Trade Review", wood pulp prices in America would seem to have reached the peak.

*President.*—And to have taken a downward trend.

*Mr. Todd.*—Seemingly, in America.

*President.*—With regard to auxiliary materials has there been any marked change in the last few years in the amount of Indian materials and imported materials used?

*Mr. Todd.*—We give information on that point in Form I, and in our reply to question 18.

*President.*—Has there been an improvement in the quality of Indian materials in the last six years?

*Mr. Lowe.*—We consider that local China clay is very good.

*President.*—What about lime?

*Mr. Lowe.*—It is naturally not equal in quality to the best British lime. The lime we were using averages between 65 and 70 per cent CAO which we recognise as being very low.

*President.*—What about rosin?

*Mr. Lowe.*—Rosin is very good.

*President.*—Are there any other items in which you consider an improvement has taken place in recent years?

*Mr. Lowe.*—No. Alum is about equal to what it was in 1931.

*President.*—In regard to your recovery (reply to question 19) you have, I understand, made a very considerable advance last year.

*Mr. Lowe.*—Yes.

*President.*—Perhaps you could furnish us with figures later on.

*Mr. Lowe.*—The improvement in recovery has taken place only in the last three months, December 1937 and January and February 1938.

*President.*—The figure you have given at the bottom is your latest figure.

*Mr. Lowe.*—Yes.

*President.*—Does that apply to your soda recovery?

*Mr. Lowe.*—Yes.

*President.*—How much is your sulphate recovery?

*Mr. Lowe.*—That is precisely the same—80 per cent.

*President.*—Do you consider that you have reached your maximum in regard to sulphate?

*Mr. Lowe.*—No, there is probably room for an increase by 1 or 2 per cent.

*President.*—There is room for further improvement in the recovery of soda, is there not?

*Mr. Lowe.*—Yes. Probably there too, we may reach an average of 80 per cent. In that case, it very largely depends on the capacity of the plant.

*Mr. Rahimtoola.*—If you are able to get both the increases anticipated, viz., 80 per cent. of recovery in soda and 80 per cent. in sulphate, what would be the reduction in the cost of production?

*Mr. Lowe.*—I could not tell you off-hand.

*Mr. Rahimtoola.*—Could you send us the information later on?

*Mr. Lowe.*—Yes.

*President.*—With regard to apprentices (question 22), speaking from memory I think your experience of apprentices has been more favourable recently than it was in 1931.

*Mr. Lowe.*—Yes.

*President.*—In 1931, you were rather pessimistic about it, if I am not mistaken.

*Mr. Lowe.*—Not exactly pessimistic. We had had one or two bad experiences. Since then we have had equally good experiences.

*President.*—How many apprentices have you actually in the paper making side?

*Mr. Lowe.*—We have two who have just completed their indentures and are at present undergoing intensive training in the machine house.

*President.*—Do you consider that work in a paper mill is more exacting than in other industries?

*Mr. Lowe.*—I am afraid I do not know much of conditions in any other industry.

*Mr. Mellis.*—I cannot speak with any great authority but I rather think it is.

*President.*—In all mills a certain number of people drop out and the reason given is that they find their work very exacting. What I want to find out is: is the work in a paper mill more exacting?

*Mr. Mellis.*—We have not got a jute mill and so we cannot say. But the other two Managing Agents have.

*President.*—I shall ask them. How many young apprentices have newly joined you apart from those who have completed their period of training?

*Mr. Lowe.*—We have none. We have 15 young men from amongst whom we intend selecting suitable men for the two vacancies that have just occurred.

*President.*—What class of men do you find most suitable—upper middle class or lower middle class? I know it is rather a vague term.

*Mr. Lowe.*—It is difficult to generalise. In some cases we have trained with success men who have been with us from the age of 16 or 17 as laboratory boys. These boys get 5 or 6 years mill training before the University lad has finished his school studies. Then we have had one or two men from the upper middle class families who have done equally well.

*President.*—Do you insist on any minimum educational qualifications on the part of those whom you take in.

*Mr. Lowe.*—At first we did, but now there are no hard and fast standards. For instance we have admitted one apprentice who had no university education. Of the 15 youngsters working in the mill, some of them have had good high school training, and one or two have actually been through a University. There is no general rule. But we get quite good youngsters from high schools.

*President.*—You would rather get them at that stage than later?

*Mr. Lowe.*—Yes.

*President.*—Rather at the high school stage than at the University stage?

*Mr. Lowe.*—Yes.

*President.*—That is interesting.

*Mr. Rahimtoola.*—Are they promised a fair chance of getting employment in case they complete their apprenticeship?

*Mr. Lowe.*—I have here a standard form of apprentice agreement and subsequent service agreement (copy shown). Our apprenticeship agreement

promises after five years, employment on salaries rising from Rs. 200 to Rs. 400.

*Mr. Rahimtoola.*—Could you send us copies of the agreement form?

*Mr. Lowe.*—Yes.

*President.*—Could you tell us what the practice in England is about training? Do they take apprentices when they are young as a rule?

*Mr. Lowe.*—Yes, almost invariably. For instance, the covenanted men whom we employ will have started their training in paper works between the ages of 14 and 15.

*President.*—As early as that?

*Mr. Lowe.*—Yes. To-day there is a move to take men into the industry and train them after they have gone through a Public School. The University men as a general rule go on to the chemical side and the engineering side and not the actual paper making side of the industry.

*President.*—Speaking generally, they go in much younger to the paper making side than to the other sides?

*Mr. Lowe.*—Yes.

*President.*—With regard to the question of quarters for your staff, what proportion of your staff is housed in quarters provided by you?

*Mr. Lowe.*—33 per cent. of the Indian staff have been provided with quarters.

*President.*—The rest live in villages near by.

*Mr. Lowe.*—Yes.

*President.*—Do you consider that the number of quarters you have provided are sufficient? Supposing you provided more quarters, would the men now living in villages come and live there?

*Mr. Lowe.*—Yes.

*President.*—They would prefer to live in the Company's quarters.

*Mr. Lowe.*—We find a lot of people come and live in one room and at the week end they go their villages, 5 or 6 miles away. It is not that they bring their families and live in our lines. We have provided a number of family quarters but the vast majority of our unskilled workers have their families in their villages. They come and stay in our quarters for the working days during the week, and then go back to their homes.

*President.*—What would be the proportion of those who live with their families?

*Mr. Lowe.*—I believe it is a small percentage. Of the quarters we have provided 60 per cent. are family quarters and 40 per cent. are single quarters.

*President.*—Do the men live singly or do they double up?

*Mr. Lowe.*—Sometimes they double up; particularly in the winter.

*President.*—In regard to question 26—the question of the possibility of export of pulp at some future time—is there any inherent reason why bamboo pulp should not compete with wood pulp?

*Mr. Lowe.*—I consider there is no reason why bamboo pulp should not compete with wood pulp.

*President.*—It would be very interesting to see what happens to the Trinidad mill. It is only recently started. I don't imagine you have ever attempted to work out what would be the cost of exporting pulp to England?

*Mr. Lowe.*—No, we have not.

*President.*—What do you think about the possibility of utilisation of bamboo pulp for artificial silk. Have you given any thought to that subject at all?

*Mr. Lowe.*—No.

*President.*—The question of artificial silk is now in the air. The textile industry has taken up the matter.

*Mr. Lowe.*—I think the Dehra Dun people can give you more information than we can.

*President.*—Should you say *prima facie* bamboo pulp might be suitable?

*Mr. Lowe.*—I should not like to hazard an opinion.

*President.*—At present the price of paper sold by mills is entirely or mainly governed by the price of imported paper.

*Mr. Todd.*—Yes.

*President.*—With the increase in the number of mills do you think that internal competition would come in in the near future?

*Mr. Todd.*—I think it is bound to come.

*President.*—In the sugar industry the thing has been very marked. Upto 1934 the prices of sugar were governed by import prices and after that it was entirely a matter of internal competition.

*Mr. Mellis.*—Internal competition will play a very important part.

*President.*—At present mills are dealing with protected paper but with the increased capacity of the new mills, the total of all mills should be equal or possibly more than the consumption of protected paper, and so internal competition is likely to come into evidence.

*Mr. Mellis.*—Yes.

*President.*—Presuming that the qualities are approximately equal, is there any preference for imported or for Indian paper against imported paper, for example is there any sort of prejudice in favour of Indian paper from the swadeshi point of view?

*Mr. Todd.*—There is a certain amount of preference.

*President.*—It depends on the market?

*Mr. Todd.*—Possibly it does to some extent.

*President.*—In some markets is there a prejudice in favour of imported paper?

*Mr. Todd.*—I would not say that exactly. A lot depends on the quality of course, but I think the Indian dealer would prefer to buy Indian paper, on the whole.

*President.*—In the last enquiry the Board rather gathered that there was a certain amount of distrust of bamboo paper: does that apply to-day?

*Mr. Todd.*—I do not think so.

*President.*—Do you think people like bamboo paper?

*Mr. Todd.*—Yes, I think they do. There is the question of price too, with the Indian dealer.

*President.*—And I see you say there is no difference in price as between paper made mainly from bamboo and paper made mainly from grass.

*Mr. Lowe.*—There is no difference.

*Mr. Rahimtoola.*—What is the cost of making pulp? I think there is a difference between making one ton of grass pulp and one ton of bamboo pulp though the price realised for paper is the same.

*Mr. Lowe.*—The two are used together. There are very few papers that are made of grass pulp alone. In fact in our mill none whatever. We mix grass and bamboo pulp together.

*President.*—I understand from what you told me the other day that you have a standard mixture; your standard mixture is 50:50?

*Mr. Lowe.*—That is varied. In certain qualities which require greater strength we increase the proportion of grass.

*Mr. Rahimtoola.*—Is it a fact that there is no class of paper made in India entirely out of bamboo pulp?

*Mr. Lowe.*—Not in our mill.

*President.*—Could you briefly explain what is the difference between the green process and white process with regard to grass?

*Mr. Lowe.*—The green process is for cleaning the grass after digestion to remove sticks, stones, reeds or any other impurities. The white process is a similar process comprised of straining plant through which the bleached grass pulp passes.

*President.*—One is before bleaching and the other is after bleaching?

*Mr. Lowe.*—Yes.

*President.*—We will now turn to the question of works cost per ton of finished paper (Form VI). Compare 1931 and 1936. The cost of grass is now slightly higher than what it was in 1931. Is that owing to the increased proportion of grass?

*Mr. Lowe.*—Yes and a slight drop in the yield of grass into pulp.

*President.*—The main change of course is the introduction of bamboo. Waste paper has gone up. Does that mean you are using more waste paper now?

*Mr. Lowe.*—It happens to be so in the case of 1936. It varies a good deal from year to year. It just depends on the proportion of badami paper produced.

*President.*—Does it depend upon the availability of waste paper to some extent?

*Mr. Lowe.*—We have had no difficulty in securing ample supplies.

*President.*—What about rags? Is there any difficulty about the supply of rags?

*Mr. Lowe.*—None whatever. We can get far more than we require.

*President.*—And hemp and jute?

*Mr. Lowe.*—That is inclined to be affected by seasonal conditions. It is rather difficult to get hemp in the monsoon season but for rest of the year we get ample supplies.

*President.*—With the new mills coming into existence do you think there is likely to be any difficulty in the supply of these subsidiary materials like wastepaper, rags and so on?

*Mr. Todd.*—I should not think so; we believe there are ample supplies for everyone, although prices will tend to increase.

*Mr. Lowe.*—It is a very difficult market to assess.

*President.*—The figure for imported pulp has fallen steadily every year, has it not?

*Mr. Todd.*—Yes.

*President.*—In fact it has fallen from Rs. 106 per ton of paper in 1931 to Rs. 21 per ton of paper in 1936. Can you give us any idea of what the figure is likely to be in 1937?

*Mr. Todd.*—Imported pulp used was 978 tons in 1937 as against 1,152 tons in 1936. The proportion is lower.

*President.*—If you could give us your cost per ton for 1937 it would be useful to us.

*Mr. Todd.*—Yes, we will. Do you want just the works costs, or also the overheads?

*President.*—I think you can give us the total cost per ton of paper as in Form VI.

*Mr. Todd.*—Yes.

*President.*—In regard to China clay, there is a slight increase. Are you using more China clay per ton than before?

*Mr. Lowe.*—Very slightly. That depends again on the proportion of low grade paper made.



*President.*—I see there has been a decrease in your cost of packing. I understand that packing generally is rather more elaborate than it used to be. Is that a fact?

*Mr. Lowe.*—That is so. There is far more export packing,—that is packing into bales,—to-day than in 1931.

*President.*—In that case what is the reduction in the percentage of cost due to cheaper materials?

*Mr. Todd.*—The reduction was due to our being able to purchase Gunny and Baling Boards at lower rates.

*Mr. Lowe.*—They have all increased in 1937-38.

*President.*—With regard to this question of cost per ton, actually we must make some comparison with other mills without disclosing figures. I propose to say where it rather seems high. For instance the proportion of selling expenses and overheads seems comparatively high. Could you give us some idea of what your selling arrangements are?

*Mr. Todd.*—We have a number of salesmen, while in Calcutta, we have also a Delhi Branch office. We have also salesmen in Madras and Rangoon and we share the expenses of Bombay salesmen for all sales conducted through the Indian Paper Sales Association.

*Mr. Rahimtoola.*—Salesman is a whole time officer?

*Mr. Todd.*—Yes.

*President.*—You say you have an office in Delhi.

*Mr. Todd.*—We have our own Sales Branch there.

*President.*—Elsewhere are they selling on commission?

*Mr. Todd.*—Salary and commission.

*President.*—But they are whole time men.

*Mr. Todd.*—Yes. In Delhi we have four salesmen, two of whom are travelling all the time. When they come back from tour, the other two go on tour.

*President.*—Your figure of rents, rates and taxes seems rather high. Are there any special reasons?

*Mr. Todd.*—No. These are the actual rents, rates and taxes paid.

*President.*—Are there any special rates at Raneegunge in particular?

*Mr. Lowe.*—No.

*President.*—It does seem comparatively high.

*Mr. Mellis.*—Of course we have a prominent position in Clive Street. Our office is right opposite the Royal Exchange. Probably we pay a higher rent than others.

*President.*—I should probably have thought that the rents, rates and taxes for mills at Raneegunge must have been lower.

*Mr. Mellis.*—By having the mill at Raneegunge we have to maintain large stocks in Calcutta. We have a small finishing house at Calcutta which is not called for in the case of the other mills situated close to Calcutta.

*President.*—In any case it is not a large item in the total expenditure. As regards depreciation is that the statutory rate?

*Mr. Mellis.*—If we aggregate the depreciation for the last six years, it would come to less than the statutory rate. But consideration has to be given to large transfers from reserve accounts such as Improvements and Extensions and Reserve for Bamboo Plant. In 1933 we transferred over Rs. 5 lakhs from these reserves to depreciate the Block and in effect therefore our depreciation has exceeded the statutory rate.

*President.*—In regard to interest on working capital the usual practice of the Tariff Board is to take the average value of stocks of raw materials, finished articles, stores and so on and to allow on that average stock interest at some fixed rate. You have given us somewhere figures.

*Mr. Lowe.*—In answer to question 49.

*President.*—According to this the value of stocks would be over Rs. 10 lakhs.

*Mr. Mellis.*—Yes. Most of our interest represents interest on debentures.

*President.*—Would not that more properly come into the capital cost?

*Mr. Mellis.*—We call a debenture loan a loan required for working capital.

*President.*—You can look at it in that way. The practice of the Board is this: the Board will take a representative mill, take the working capital as a sort of average figure for average stocks. Supposing money was borrowed from a bank, what would be the reasonable rate of interest?

*Mr. Mellis.*—I doubt whether we can get money for less than 4 per cent.—probably one per cent. more than the bank rate, with a minimum of 4 per cent.

*President.*—Do you think that that would be a reasonable rate?

*Mr. Mellis.*—Yes.

*President.*—Actually what you have allowed for interest on working capital is very much below what might ordinarily be allowed.

*Mr. Mellis.*—This represents the actual interest paid.

*President.*—Because you provide working capital out of ordinary capital.

*Mr. Mellis.*—We are in that fortunate position.

*President.*—One cannot always take mills in such fortunate position. Interest on working capital is a legitimate charge on the works cost.

*Mr. Mellis.*—Yes.

*President.*—Your Head Office and Managing Agents commission is, I may say, definitely high in proportion.

*Mr. Mellis.*—Yes.

*President.*—Are you prepared to make a statement as to how it is calculated?

*Mr. Mellis.*—It includes our Managing Agent's commission.

*Mr. Rahimtoola.*—What is the basis for it?

*Mr. Mellis.*—Our Managing Agents' commission is 15 per cent. which is higher than the average Managing Agents' commission. There is a special reason for that.

*Mr. Rahimtoola.*—15 per cent. on profit before deduction of depreciation?

*Mr. Mellis.*—Yes.

*President.*—Any allowance for office expenses?

*Mr. Mellis.*—We have a monthly Managing Agents' allowance.

*President.*—How much is that?

*Mr. Mellis.*—Rs. 1,000 a month.

*President.*—The practice of the Board is to allow 10 per cent.

*Mr. Mellis.*—The rate we enjoy was given to us by the shareholders as a sort of *quid pro quo* for what we did for the Company. We have an agreement to that effect.

*President.*—It is higher than what is usually done.

*Mr. Mellis.*—It is a bit on the high side.

*President.*—Miscellaneous, what does that include.

*Mr. Todd.*—There are various items, which are difficult to allocate.

*President.*—Could you give us some idea of what they are?

*Mr. Mellis.*—We haven't got them here.

*President.*—Could you give us later on an idea of the main things which make up for miscellaneous?

*Mr. Mellis.*—Yes. Although the Managing Agents' commission is calculated at the rate of 15 per cent., if you take the history of the Company, it doesn't work out to such a high figure, because for many years the Company was not working at a profit. The Company would not have been in existence but for the Managing Agents.

*President.*—The object of the Board is to know on what basis they have been calculated.

*Mr. Mellis.*—We have been definitely given this percentage in recognition of what we did for the Company. This higher rate has been given by the shareholders.

*Mr. Rahimtoola.*—With regard to the cost of primary materials, if you take the quantity in tons per ton of finished paper, it has varied.

*Mr. Lowe.*—In the case of grass?

*Mr. Rahimtoola.*—In the total quantity. Bamboo and grass have varied according to the amount used. I am talking of the total primary material including the imported wood pulp per ton of finished paper. I don't know why that has varied.

*Mr. Lowe.*—We have increased, for instance, the proportion of grass and bamboo used and decreased the proportion of imported pulp.

*Mr. Rahimtoola.*—The total would be about the same. I am including the imported pulp. If you take 1931 figures and take 1936 figures, just for argument's sake, it is 2·118 tons as against 1·534 tons.

*Mr. Lowe.*—There has been a decrease in the yield over that period, but that is very slight and I can't think it accounts for more than half a ton.

*Mr. Rahimtoola.*—Please let us have this information later on.

*Mr. Lowe.*—Yes.

*Mr. Rahimtoola.*—You say in answer to question 48 your coal consumption would be reduced if the whole scheme is complete.

*Mr. Lowe.*—Approximately 500 tons per month.

*Mr. Rahimtoola.*—How much will that work out to per ton of finished paper?

*Mr. Lowe.*—We shall send the information later on.

*President.*—We want to know (a) what is the present cost of manufacture of pulp and paper and (b) to what you think they could be reduced when you have effected these various changes.

*Mr. Lowe.*—You want that in relation to the present day cost of chemicals?

*President.*—You rather think that one would offset the other, and the net result would be much the same.

*Mr. Lowe.*—Yes.

*Mr. Rahimtoola.*—By how much the price of coal has risen?

*Mr. Todd.*—Approximately by Rs. 2 a ton.

*Mr. Rahimtoola.*—What is present price of coal?

*Mr. Lowe.*—Rs. 5 f.o.r. colliery. To that has to be added the freight of Re. 1-1. That comes to Rs. 6-1 and the previous price at the time of the last enquiry was Rs. 3-2-1.

*Mr. Rahimtoola.*—What was the price last year?

*Mr. Lowe.*—Rs. 3-2 per ton ex-Colliery.

*Mr. Rahimtoola.*—There is an increase of Rs. 2 in one year.

*Mr. Lowe.*—Yes.

*Mr. Rahimtoola.*—I am comparing it with 1935-36.

*Mr. Lowe.*—I shall confirm it.

*Mr. Rahimtoola.*—The figures given here are Rs. 5,000 and Rs. 13,000.

*Mr. Lowe.*—The increase was very slight in 1935-36.

*President.*—In 1937 there was a big increase.

*Mr. Lowe.*—Yes.

*Mr. Rahimtoola.*—As regards chemicals I find you have ceased to use sodium sulphate and are now using salt cake. Why is that?

*Mr. Lowe.*—Sodium sulphide is subject to rapid oxidation into sodium sulphate and it is not a commercial proposition from the paper making point of view to use sodium sulphide as purchased from chemical manufacturers in preference to sodium sulphate. We did that in our early days for experimental work because we could not convert sodium sulphate ourselves into sodium sulphide.

*Mr. Rahimtoola.*—Are you manufacturing Manilla paper?

*Mr. Lowe.*—Yes.

*Mr. Rahimtoola.*—Is that the reason why you use hemp rope?

*Mr. Todd.*—Yes.

*Mr. Rahimtoola.*—That is one of the unprotected class of papers.

*Mr. Lowe.*—Yes.

*President.*—I understand that there is a true Manilla and imitation Manilla. True Manilla is mainly made from hemp.

*Mr. Lowe.*—Yes.

*President.*—And imitation Manilla may be made from anything?

*Mr. Lowe.*—Usually from wood pulp.

*Mr. Rahimtoola.*—Do you cover insurance for earthquake?

*Mr. Todd.*—No.

*Mr. Rahimtoola.*—I find that in the last two years the figure of insurance has gone down instead of going up.

*President.*—Did you suffer in the earthquake?

*Mr. Lowe.*—In Raneeganj we felt it very badly.

*President.*—Was any damage done?

*Mr. Lowe.*—In the villages near by a number of houses collapsed bungalows were very badly cracked and windows fell in.

*Mr. Rahimtoola.*—The figure for 1934 is more.

*Mr. Todd.*—Our total insurance varies from year to year.

*Mr. Mellis.*—It might be that our stocks were heavier then.

*Mr. Rahimtoola.*—In recent years it has gone down.

*Mr. Lowe.*—Paper stocks are very much lower now.

*Mr. Mellis.*—The rates will depend upon the stocks we have and which we want to cover.

*President.*—To go back to the cost per ton, you have given us cost per ton of bleached grass pulp and bleached bamboo pulp. For certain purposes we may want to know the costs of both bleached and unbleached pulp. What reductions should we make in these costs?

*Mr. Lowe.*—The cost of bleaching powder and a very small power and labour charge.

*President.*—I gather it is mainly the cost of bleaching powder.

*Mr. Lowe.*—Yes.

*President.*—What would you add to the cost of bleaching powder?

*Mr. Lowe.*—It is such a small part of the process.

*President.*—Rs. 1-8 has been mentioned.

*Mr. Lowe.*—That is a bit on the high side.

*President.*—Would you put it at about a rupee?

*Mr. Lowe.*—Yes.

*President.*—If we deduct the actual cost of bleaching powder *plus* one rupee, it would be all right.

*Mr. Lowe.*—Yes. That is of course a pure guess.

*President.*—Quite. We should not expect you to apportion overheads and things like that.

*Mr. Lowe.*—Quite.

*President.*—I understand that you are inclined to favour the scheme put forward by the India Paper Pulp Company, *viz.*, a sliding scale of protection based on the price of pulp.

*Mr. Todd.*—That is so.

*President.*—It has never been done so far. As far as I am aware, no Tariff Board has suggested a sliding scale of protection and there are difficulties about it. However we had better discuss that matter with the Association as all the mills have approved of the idea.

*Mr. Todd.*—Yes.

*President.*—In regard to the question of the protective duty on wood pulp, it has been suggested—I do not know whether the suggestion has been put forward by you—by one of the mills at any rate in the present duty fixing of Rs. 45 or Rs. 56-4 different kinds of pulp are not taken into consideration.

*Mr. Lowe.*—We have not mentioned it in our evidence but it certainly does seem unfair that bleached pulp should, for instance, be assessed the same duty as mechanical pulp.

*President.*—The price of bleached pulp of course is more than the price of unbleached pulp.

*Mr. Lowe.*—Yes.

*President.*—The difference between sulphite and sulphate pulp could not be very considerable.

*Mr. Lowe.*—That is true.

*President.*—That is probably a point which we need not take into consideration.

*Mr. Lowe.*—Yes. There is a big difference between the prices of bleached pulp and mechanical pulp.

*President.*—There is a difference between the bleached and unbleached pulp and there is a difference between these two and the mechanical pulp.

*Mr. Lowe.*—Yes.

*President.*—That again we might discuss with the Association.

*Mr. Todd.*—Yes.

*President.*—You made a definite recommendation that kraft and mechanical pulps might be admitted into the country free. There is no difficulty in distinguishing mechanical pulp. But what about kraft pulp?

*Mr. Lowe.*—Provided one could be assured that it was going to be used for kraft paper.

*President.*—Is kraft pulp a well enough known description so that Customs people can distinguish it?

*Mr. Lowe.*—I should think it would be very difficult, because one can get bleached kraft pulp.

*President.*—The initial difficulty is in distinguishing the kraft pulp.

*Mr. Lowe.*—Yes.

*Mr. Rahimtoola.*—Kraft pulp can be manufactured out of bamboo.

*Mr. Lowe.*—We have not completed our experiments in that direction. We have experimented and have endeavoured to make kraft pulp out of bamboo but we have not arrived at any final conclusions.

*Mr. Rahimtoola.*—You are making a very small percentage of pulp boards.

*Mr. Todd.*—Yes.

*Mr. Rahimtoola.*—Do you find any market?

*Mr. Todd.*—A limited market as it is an unprotected line.

*Mr. Rahimtoola.*—I want to know how the quality produced by the Indian mills compares with the imported product.

*Mr. Todd.*—We make a very good pulp board, comparable price for price, with the imported article.

*Mr. Rahimtoola.*—You have not increased your production because of the price.

*Mr. Todd.*—That is so.

*President.*—What is it used for?

*Mr. Todd.*—For various purposes, such as folders, etc.

*Mr. Rahimtoola.*—With regard to question 4, what other papers are you thinking of when you say that you hope to investigate the matter?

*Mr. Todd.*—We shall send you a confidential note on the subject.

*Mr. Rahimtoola.*—With regard to your reply to question 9, you have said Rs. 17-12 as the cost per ton of bamboo delivered at the mill. Could you give me the freight figure separately?

*Mr. Todd.*—They vary according to the particular area.

*Mr. Rahimtoola.*—What freight have you included in Rs. 17-12?

*Mr. Lowe.*—That is the price of bamboo delivered at the mill.

*Mr. Rahimtoola.*—If you look at the figures for the last three years, the price has varied from Rs. 13 to Rs. 17 per ton of bamboo delivered at the mill?

*Mr. Todd.*—The lower figures for 1931 to 1933 were due to the fact that we had stocks in 1930-31 which were written down during the following three years. The average freight would be Rs. 4 to Rs. 5 per ton.

*Mr. Rahimtoola.*—You did not buy any new bamboo?

*Mr. Todd.*—No.

*Mr. Rahimtoola.*—Shall we say that the freight is Rs. 4-12?

*Mr. Lowe.*—It would be very nearly correct.

*Mr. Rahimtoola.*—You might go through this question again and send us a note showing the freight and commission if any paid.

*Mr. Todd.*—No commission is paid. We shall send you a note regarding freight.

*President.*—Does the bamboo come from Government forests?

*Mr. Lowe.*—Not entirely.

*President.*—From private lands?

*Mr. Lowe.*—Yes.

*President.*—Have you ever considered the question of attempting to grow bamboo?

*Mr. Lowe.*—We have not really considered it. There is a small plantation near Raneganj and although that does not belong to us, we have been making use of it to get certain data regarding the growth of bamboo, but we have not seriously considered any proposition of growing bamboo on a large scale.

*President.*—Do you find anywhere people are actually growing bamboo with the idea of selling it to the mills?

*Mr. Lowe.*—We have no instances.

*President.*—It more or less happened to be there.

*Mr. Lowe.*—Yes.

*President.*—Is there a tendency to clear those fields or areas? Is there any danger of diminution of supplies for that reason?

*Mr. Lowe.*—There is a rapid regrowth of these common species normally there is a fresh crop every four years.

*President.*—If any area is felled there might be no regeneration.

*Mr. Lowe.*—It hardly comes into our calculations as far as our own property at Hazaribagh is concerned because the area is under the supervision of a Forest Manager.

*President.*—I was thinking of that more when you were buying from contractors.

*Mr. Lowe.*—Yes, that is a possibility. It would be short sighted attitude for people who depend on supplying bamboo for their income to adopt.

*Mr. Rahimtoola.*—With regard to question 11, there is no likelihood of a drop in the prime cost of chemicals. Do you mean imported or Indian chemicals?

*Mr. Todd.*—Mainly imported chemicals.

*Mr. Rahimtoola.*—What chemicals are you thinking of?

*Mr. Todd.*—Bleaching powder, caustic soda and salt cake.

*Mr. Rahimtoola.*—Could you give us their recent prices?

*Mr. Todd.*—Yes.

*Mr. Rahimtoola.*—Most of them have gone down.

*Mr. Lowe.*—During the six years 1931-1936?

*Mr. Rahimtoola.*—Yes.

*Mr. Lowe.*—But in answer to question 11 we are speaking of the likely trend of prices during the next year or two.

*Mr. Rahimtoola.*—In your answer to question 17 you have given us the auxiliary materials required per ton of paper produced. I would like to have prices along with quantities.

*Mr. Todd.*—Bleaching Powder £6-7-2 per ton, Caustic Soda £9-10 per ton, and Salt Cake £4-15 per ton.

*President.*—What prices are you quoting?

*Mr. Todd.*—These are f.o.b. prices. China clay which was recently Rs. 32-8 per ton has gone up to Rs. 39-8 per ton.

*President.*—In 1936 the price of China clay was Rs. 30?

*Mr. Lowe.*—Yes.

*Mr. Rahimtoola.*—The allocation of managing agency commission is not here. The main portion is on pulps?

*Mr. Lowe.*—It is in the proportions of 2/5ths and 3/5ths.

*Mr. Rahimtoola.*—It does not work like that. Take 1931 figure—21,000 on paper and 1,21,000 on pulp.

*Mr. Lowe.*—In 1931 we were using a large amount of wood pulp and a certain proportion of overhead charges had to be allocated against wood pulp. That 2/5ths and 3/5ths is against all pulp.

*Mr. Rahimtoola.*—The prices you have given in answer to question 28 of imported papers, are they all recent prices?

*Mr. Todd.*—Some of the prices were furnished in connection with the classification of paper enquiry in 1935.

*Mr. Rahimtoola.*—I am talking of 1936 prices.

*Mr. Todd.*—These are given on the 1st and 2nd page of our reply to question 18 and those on the first page are for the years 1931-36.

*Mr. Rahimtoola.*—You have given only two qualities?

*Mr. Todd.*—These are our two chief lines.

*Mr. Rahimtoola.*—What are to-day's prices?

*Mr. Todd.*—They vary considerably. We recently received prices from our Rangoon agents for continental creamlaid £33 c.i.f.; that has come down since to £27.

*President.*—Wood free creamlaid?

*Mr. Todd.*—Yes.

*President.*—This is the c.i.f. price. That includes landing charges?

*Mr. Todd.*—Landing charges would be extra—half a pie a lb.

*President.*—How much is it equivalent to per ton?

*Mr. Todd.*—Rs. 5-12 per ton.

*President.*—In answer to question 33 you say “we have reason to believe that as in the past the Indian market is not looked upon by manufacturers in Europe as being a particularly remunerative one on account of the large proportion of thin substances required \* \* \*”. Is that the demand in India in general?

*Mr. Todd.*—Yes, we make down to 43 grammes.

*President.*—In what size?

*Mr. Todd.*—That equals Demy 12 which is the thinnest substance we make.

*President.*—These are protected classes?

*Mr. Todd.*—Yes.

*President.*—Railways are the biggest buyers of Badamis.

*Mr. Todd.*—Yes.

*President.*—Have you increased the proportion of your sales to Government departments?

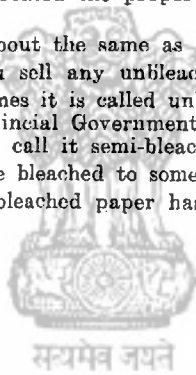
*Mr. Todd.*—It is much about the same as in previous years.

*Mr. Rahimtoola.*—Do you sell any unbleached papers?

*Mr. Todd.*—Yes. Sometimes it is called unbleached and sometimes semi-bleached. Some of the Provincial Governments call it unbleached printing and the Central Government call it semi-bleached.

*President.*—All papers are bleached to some extent?

*Mr. Lowe.*—So called unbleached paper has bleach in it.





## 7. Messrs. KRISHNALAL THIRANI and Co. Ltd., Calcutta:

### A.—WRITTEN.

Letter No. E/517, dated 1st April 1938, from the Managing Director,  
Krishnalal Thirani & Co. Ltd., Calcutta.

We have put up a factory for the manufacture of Sand paper, and the erection of the plant is about to commence. We find, however, that the manufacture will not leave us any profit unless the industry is given adequate protection and we are submitting herewith an estimate which we have tried to make as close as possible, for the consideration of the Board. We regret the delay in submitting our application, but we are prepared to appear at such place as may suit the convenience of the Board to give evidence in support of our case.

*Estimate of cost of 1 Ream (480 sheets) of Sand Paper (size 9" x 12") based on a daily production of 218.25 reams.*

#### 1. Raw materials:—

	Rs. A. P.	Rs. A. P.
(a) Glass Powder, 10882 mds., at Rs. 7-4 per md. . . . .	0 12 7-48	
(b) Glue, 05956 mds., at Rs. 40 . . . . .	2 6 1-45	
(c) Paper, 8.4215 lbs., at As. 2-7½ per lb. . . . .	1 6 1-28	
		4 8 10-21

#### 2. Manufacturing expenses:—

(a) Wages and supervision . . . . .	0 2 3-45	
(b) Power . . . . .	0 1 1-90	
(c) Stationery and postage . . . . .	0 0 1-05	
(d) Telephone and Lights . . . . .	0 0 1-41	
(e) Rent and Taxes . . . . .	0 0 8-80	
(f) Insurance . . . . .	0 0 0-88	
(g) Interest on working capital . . . . .	0 1 3-835	
(h) Depreciation . . . . .	0 1 3-835	
Raw materials & mfg. charges . . . . .		7 1-16

4 15 11-37

Realisation at the price which the  
cheapest variety of imported Sand  
Paper fetches in the market . . . . .

5 0 0

Total 0 0 0-63

The capital investment will be Rs. 1,13,000 including Rs. 50,000 as working capital.

No statistics are available showing the quantity of Sand-Paper imported.

**Evidence of Mr. KRISHNALAL THIRANI representing Messrs.  
KRISHNALAL THIRANI and Coy., Ltd., recorded at  
Matheran on Wednesday the 27th April 1938.**

B.—ORAL.

*President.*—I am sorry you have come before the Board with your application for protection to the sand paper rather too late. Strictly speaking you ought to have submitted your representation before the end of January. We notified in all the leading newspapers of the country that firms or persons interested in the enquiry should submit their representations to the Board not later than 25th January, 1938.

*Mr. Thirani.*—We did not apply to the Board for protection earlier because we thought that you might not deal with sand paper in this enquiry. Later on, we realised that it was a mistake on our part to have thought so, and submitted this representation. We regret very much the delay that has taken place.

*President.*—We cannot deal with your application in the usual way as it has reached us very late. We can only undertake to mention it in our report. You say that you have entered into a contract with the Titaghur Paper Mills Company to get your raw material, viz., kraft paper. Do they make kraft paper?

*Mr. Thirani.*—They are making. They have a small plant and make kraft paper if anybody wants it. We have actually placed an order with them.

*President.*—Has your factory been built yet?

*Mr. Thirani.*—Yes.

*President.*—Is it complete?

*Mr. Thirani.*—Yes. The plant is under installation and will begin working in May.

*President.*—What about the machinery?

*Mr. Thirani.*—We have received the machinery and it is under installation.

*President.*—Your raw material you have taken at Rs. 4-8-10 per ream. How many pounds make a ream?

*Mr. Thirani.*—About 22 lbs. make one ream.

*President.*—Is it only Indian paper that you are going to use?

*Mr. Thirani.*—Yes.

*President.*—You have taken staff and manufacturing charges at 4 annas 5-49 pies.

*Mr. Thirani.*—Yes.

*President.*—What is your process of manufacture? Can you describe it?

*Mr. Thirani.*—We put the roll of paper on the machine and then apply glue to it. Afterwards glass powder is sprinkled on it.

*President.*—By an automatic sprinkler?

*Mr. Thirani.*—Yes. There will be a man to see whether the glass powder is properly spread or not. If there is any excess material, it will be taken away from that. Then, it is dried on the drying tacle. Afterwards, it is cut according to the sizes required, and packed.

*President.*—As regards the interest on working capital, what is the amount you have taken?

*Mr. Thirani.*—Rs. 50,000.

*President.*—It seems rather high compared to the block capital.

*Mr. Thirani.*—We have to give goods on credit to our dealers.

*President.*—The working capital is calculated only on your raw material stock and your finished goods stock and nothing else.

*Mr. Thirani.*—It comes to about that.

*President.*—It seems a bit high.

*Mr. Thirani.*—During the monsoon we cannot run the machine full time, because there is difficulty in drying.

*Mr. Rahimtoola.*—What is the period of your working?

*Mr. Thirani.*—The working period will be the same but production slightly less. But, I mean the market will not be there. The demand will be less during the monsoon, and hence stock will accumulate.

*President.*—What interest do you allow on working capital?

*Mr. Thirani.*—10 per cent.

*President.*—The Board under present circumstance allows only 5 per cent. As regards depreciation, what rate have you taken?

*Mr. Thirani.*—10 per cent.

*President.*—The Board usually allows 6½ per cent.

*Mr. Thirani.*—Being a small unit, we think the rate should be higher.

*President.*—It cannot be helped. We will have to take 6½ per cent.—the Income-tax flat rate.

*Mr. Rahimtoola.*—Then, the three items will be roughly 6 annas.

*President.*—Does the glass powder come from Italy?

*Mr. Thirani.*—No. We intend buying scrap glass and crushing it into powder.

*Mr. Rahimtoola.*—Do you mean cups and saucers?

*Mr. Thirani.*—No. I mean other glass such as thin glass.

*Mr. Rahimtoola.*—Glass tumblers and such things?

*Mr. Thirani.*—Yes.

*President.*—What is your estimate of Rs. 7-4 per maund of glass powder based on?

*Mr. Thirani.*—We shall buy scrap and powder it.

*Mr. Rahimtoola.*—Do you get scrap in the market?

*Mr. Thirani.*—Yes.

*Mr. Rahimtoola.*—What is the price?

*Mr. Thirani.*—Rs. 7-4 per maund.

*Mr. Rahimtoola.*—This includes the crushing charge.

*Mr. Thirani.*—Yes.

*President.*—How do you calculate that?

*Mr. Thirani.*—We have arrived at that figure by calculating the required power, labour and so on.

*President.*—It is only an estimate.

*Mr. Thirani.*—Yes, it is an estimate but it is worked out by the expert.

*Mr. Rahimtoola.*—The actual cost of the raw material is Rs. 5-4.

*Mr. Thirani.*—Yes.

*Mr. Rahimtoola.*—It is crushed into powder in your own mill.

*Mr. Thirani.*—Yes.

*President.*—Is it Indian glue that you use?

*Mr. Thirani.*—We will use mixed glue, both Indian and imported.

*Mr. Rahimtoola.*—Where do you import it from?

*Mr. Thirani.*—From Germany and Czecho-slovakia.

*Mr. Rahimtoola.*—What is the price of that?

*Mr. Thirani.*—Rs. 50 per maund for the imported glue and Rs. 36 for the Indian glue.

*President.*—Kraft paper—2 annas  $7\frac{1}{2}$  pies per lb.—is that the price quoted by Titaghur?

*Mr. Thirani.*—Yes.

*President.*—As regards selling expenses, we usually take 5 per cent. on the whole output.

*Mr. Thirani.*—We will have also to pay agency charges and travelling expenses of salesmen.

*President.*—That applies also to importers? It is not peculiar to you.

*Mr. Thirani.*—But we will have to pay more, our product being new.

*President.*—So do other people. 5 per cent. is what we allow. You have taken profit at 6 per cent. Is it on the block capital?

*Mr. Thirani.*—No, on the value of the sales.

*President.*—Profit is usually calculated on the block capital. Your block capital is Rs. 1,13,000.

*Mr. Rahimtoola.*—Does that include buildings and everything?

*Mr. Thirani.*—Yes.

*President.*—Is it per resin that you have given?

*Mr. Thirani.*—Yes.

*Mr. Rahimtoola.*—If we take it at 6 per cent. on the block capital, it comes to 1 anna 9 pies.

*Mr. Thirani.*—The industry being new and small, the rate should be increased.

*President.*—We may increase it to 8 per cent.

*Mr. Thirani.*—In that case it will be about 7 pies extra.

*President.*—That will make a difference of how much?

*Mr. Rahimtoola.*—Roughly total cost will be Rs. 5-8.

*Mr. Thirani.*—Then there is the question of freight, which we have not included.

*Mr. Rahimtoola.*—Where is your factory situated?

*Mr. Thirani.*—Calcutta. The imported article comes to all the ports at the same price. Suppose we have to send it to Bombay, Madras, Karachi, etc., we will have to incur expenditure on account of freight.

*President.*—On the other hand, in Delhi and other upcountry stations, you have a freight advantage.

*Mr. Thirani.*—I am not asking for freight to Delhi.

*Mr. Rahimtoola.*—You will be selling all over India. In certain markets you will have an advantage and in certain others the importers will have an advantage. So, one cancels out the other.

*Mr. Thirani.*—We will have no freight advantage for any market, our factory being situated at a port. Moreover, suppose I am not able to sell all the production in Calcutta.

*Mr. Rahimtoola.*—The bulk of your production will be sold in Calcutta.

*President.*—In markets like Lucknow you will have a freight advantage.

*Mr. Thirani.*—No advantage.

*Mr. Rahimtoola.*—Do you know what freight is paid by importers?

*Mr. Thirani.*—No. We won't be able to sell in the parity of imported goods.

*President.*—Will your quality not be so good?

*Mr. Thirani.*—There is a prejudice against any new Indian article.

*President.*—There ought to be a prejudice in favour of the Indian article. You say that you will be able to make good quality.

*Mr. Thirani.*—We hope so.

*Mr. Rahimtoola.*—You say that you do not require any addition to be made to the duty on British goods. What do you think would be their price?

*Mr. Thirani.*—Rs. 10 to Rs. 11 per ream.

*Mr. Rahimtoola.*—That is practically double the Italian price.

*President.*—What is the Italian price?

*Mr. Thirani.*—Rs. 5-4 per ream.

*President.*—What is the duty?

*Mr. Thirani.*—30 per cent. on non-British goods. Rs. 5-4 which we have given you is the market price and not the c.i.f.

*Mr. Rahimtoola.*—Then the Italian c.i.f. price will be more than Rs. 3?

*Mr. Thirani.*—Yes.

*President.*—You want a duty of 60 per cent. in place of the existing 30 per cent.

*Mr. Thirani.*—Yes.

*President.*—Nobody knows what the total imports are.

*Mr. Thirani.*—About 2 lakhs of reams according to our information.

*President.*—What is that based on?

*Mr. Thirani.*—It is only a guesswork. In the Customs returns it is not shown separately.

*Mr. Rahimtoola.*—Have any importers given you an idea of their imports?

*Mr. Thirani.*—No. Our information is based on personal enquiries made of merchants and dealers in the bazar.

*President.*—Is it used in mills?

*Mr. Thirani.*—It is used for polishing, in tanneries and for cleaning walls before painting.

*President.*—Is it used in engineering shops?

*Mr. Thirani.*—They use emery cloth and not sand paper.

*President.*—What is it used in tanneries for?

*Mr. Thirani.*—Before tanning they apply this. I do not know more than that.

*President.*—Are there any points which you would like to raise with us?

*Mr. Thirani.*—We submit that we won't be able to sell in parity of the imported goods till we establish ourselves. It will take time for us to do so.

*President.*—You want quality difference to be added.

*Mr. Thirani.*—Yes.

*Mr. Rahimtoola.*—How much do you want on that score?

*Mr. Thirani.*—8 annas per ream.

*Mr. Rahimtoola.*—On a price of Rs. 5-4 to make an allowance of 8 annas on account of quality is rather high.

*Mr. Thirani.*—Unfortunately we cannot give you a definite idea.

*Mr. Rahimtoola.*—The difficulty of the Board is that you have not actually manufactured the sand paper and though you anticipate no difficulty, still one does not know what will ultimately happen and what kind of quality you will be able to turn out?

*Mr. Thirani.*—If we are to wait till we manufacture, we will miss this opportunity.

*Mr. Rahimtoola.*—You can apply to Government later.

*Mr. Thirani.*—Government may not take this into consideration, without your recommendation.

*Mr. Rahimtoola.*—As the President pointed out, we are about to complete our report and it is too late to investigate the question thoroughly.

*President.*—Now we have no time to write to the Collectors of Customs, importers and others. There is no time for all that.

*Mr. Rahimtoola.*—We have also no time to ascertain actual prices from other sources.

*President.*—One thing we can tell you: we will refer to this matter in our report. We cannot do anything more than that.

*Mr. Thirani.*—We are very sorry for the delay that has taken place in the submission of our application for protection, but hope you will give all possible help to this industry.



सत्यमेव जयते

## 8. The Rohtas Industries Ltd., Dalmianagar, Dehri-on-Sone, Bihar.

(1) *Letter No. 54, dated the 4th February 1938.*

We have to inform you that our paper factory is under erection and we shall start manufacturing paper from May 1938. As such, we have not got sufficient experience behind us to reply to your different questions. We can only let you know that ours is a Public Limited Company with its Registered Office in India with rupee capital. Most of our shareholders are Indians and most of the shares are held by Indians. All the Directors are Indians and the present superior management is entirely Indian. We expect to employ five Europeans for the manufacturing supervision, as suitable Indians are not available.

Our mills are equipped for manufacturing 25 tons of pulp and 20 tons of paper per day of 24 hours.

The main raw materials that we shall use are Bamboo and Sabai Grass, which will be available in our neighbouring districts.

We shall be manufacturing most of the qualities that are at present being manufactured by the existing Indian paper mills. Besides, our mills are equipped to manufacture machine-glazed qualities (poster), duplex and triplex cartons and pulp boards, drawing cartridge, duplicating—soft and hard, manilla and imitation art papers—white and coloured, which are at present classified as non-protective.

These qualities will be manufactured from the indigenous raw material, chiefly bamboo. We, therefore, request you to kindly recommend the extension of protective duties on these qualities of paper also, as that will widen the market.

(2) *Letter No. 167, dated the 8th February, 1938, from the Tariff Board to the Rohtas Industries, Ltd., Dalmianagar, Bihar.*

With reference to your letter No. 54, dated the 4th February, 1938, I am directed to ask you whether it will be possible for you at this stage to give an estimate of your cost of manufacture per ton of (a) pulp and (b) paper.

(3) *Letter No. 11420, dated the 9th February, 1938.*

In continuation of our last letter No. M. C./54, dated the 4th February, 1938, we now take the opportunity of communicating our views to you in regard to questions Nos. 51 and 54.

We feel that the import duty with the surcharge should be continued on the various kinds of paper as at present and suitable protection should also be made available to other grades and qualities of paper which the Indian Mills may be in a position to manufacture before long.

We hold the view that if the protection continues at the present level, it would be possible for the Indian Industry to develop considerably and to enable India to become self-sufficient to a greater degree than heretofore. Recently, considerable capital has been invested in the Paper Industry by Indians, and several Mills will commence manufacture before long. They have embarked upon manufacturing paper in the hope that the Tariff Board will continue to give the requisite protection in view of the excellent progress made by the Indian Mills during the last period of protection, and the possibility of manufacturing larger quantities and various qualities of paper inside the country from indigenous materials. We strongly feel that if the duty were reduced at the present juncture, it would give a great set-back to the industry, particularly, to the new mills which have

been brought into existence fully relying upon the continuance of the present protective duty and the surcharge.

In regard to question No. 54, we feel that it would hardly be fair to the industry for the Tariff Board to make recommendations in regard to the existing surcharge on protective and revenue duties in advance of their main recommendations. The Tariff Board has been appointed for the purpose of thoroughly investigating into the industry and for making recommendations for the continuance of protection, and we fail to see how in propriety, the Tariff Board would even like to take upon themselves the burden of making recommendations, which on further considerations and on further evidence they might have to modify.

We, therefore, strongly urge the Tariff Board not to make any recommendations whatsoever in regard to alterations in the import duty before they have had an opportunity of making a full and thorough study of the development of the industry, its present position and future needs,

*(4) Letter No. 65, dated the 10/11th March, 1938.*

We beg to enclose herewith our memorandum in reply to the questionnaire issued by you in connection with the enquiry now being made with regard to the protective duty on paper and pulp. You will see from the letters addressed to you and from the answer to the questionnaire now being enclosed herewith, that we are not yet working and therefore are not in a position to give you the information as the result of actual experience. Our answers are based on the estimate that we have formed to the best of information available in our hands. Under the circumstances we do not consider that it will serve any useful purpose if we were to give oral evidence before your Board, but in case the views submitted in the memorandum require further elucidation and clearing up, our representative shall be very glad to be present before your Board to explain either verbally or in writing any point that the Board would like, after its perusal.

In submitting, however, this memorandum, we beg to invite your attention to the fact that when the first enquiry was held in 1925 the Board came to the conclusion that there was no possibility of the extension of the industry to the extent, that it shall become a national asset only on sabai grass, which was then the most important and perhaps the only raw material largely used in the manufacture of paper. The Board, however, granted the protection in order to enable the paper mills to investigate the possibilities of bamboo which is not only sufficient for the needs of the country, but it is largely enough, if developed, to secure an export trade.

The Board's hopes which were entertained at the time of enquiry in 1925 with regard to the sabai grass have been more than justified by the results achieved before the next enquiry was held in 1930. The possibility at that time entertained by the Tariff Board, of a paper mill being erected near Saharanpur, was fully realised and the paper mill was established. The Board recommended to the Government of India in the first enquiry that a sum of 10 lakhs of rupees each to the Indian Pulp and Paper Mill and Rajmundry paper mill be advanced in order to enable these mills to explore the possibilities of using bamboo as raw material, the Government rejected this part of their recommendation, but the Indian pulp and Paper Mill carried out the necessary experiments without the assistance of Government and by the time the next enquiry came those experiments were found to be successful. So the period covered from 1925 to 1932 may be considered as the exploratory period for the utilisation of bamboo as raw material. In 1930-31 when the Board was again requested by the Government of India to go into the question whether the protection granted in 1925 had succeeded or had failed in its object, the Board came to the conclusion that the protection had succeeded and that a case had been made out for the protection of paper industry as laid out by the Fiscal Commission. The period from 1925 to 1931 may be considered as explained above as the



exploratory period for the utilisation of bamboo as raw material and the period from 1932 to 1937 may be considered as the period of successful utilisation of the bamboo as raw material and the establishment of the paper mills on that basis. If the protective duty is now modified or reduced in any way, then in the words of the Board mentioned in paragraph 83 of their report of 1931 all the work done hitherto on the development of bamboo will be wasted and a potentially important raw material of the country will remain undeveloped. If the protective duty on paper is replaced by the revenue duty, the old mills will not realise fair price either to pay dividend to shareholders or to make up the expenditure they have incurred on experiments in bamboo and the case of the new mills will be most deplorable. The reasons advanced for the continuation of protection in 1930 therefore still hold good.

During the course of the last few years many new mills have been projected. Some are nearing completion and others are still under erection. Barring the mill at Saharanpur which shall use sabai grass as their primary raw material, the other mills are going to use mostly bamboo as their raw material. The requirements of all these mills, those that are working and those that are about to work, will require the amput of bamboos that will secure for this raw material an unrivalled position as the primary raw material for paper and will eventually prove to be a great natural source of wealth, the output of these mills will probably be enough for the present needs of the country and therefore it may be said that during the next 5 or 7 years all these mills will have consolidated their position and bamboo will by that time become the chief raw material and the object of the protective duty will be fully realised.

It may be argued that the output of all the mills may be more than the country needs and there may be internal competition. That to our minds is not a bad thing in the interest of the consumer even if it were a fact. With the inauguration of the new reforms and the popular Governments functioning in the provinces, most of these Provincial Governments, if not all, will introduce during the next year or two a measure for more or less compulsory education. If that comes about and the vast young population of India have to be educated, these mills will be hard put to meet the demand and it will be necessary for enterprising people to erect new mills or to expand the present ones. The rapid progress of the industry as anticipated above will also encourage many people to explore the possibility of making pulp from bamboo and put up newsprint mill. If during the period between now and when the next enquiry comes along, one or two newsprint mills are established as the result of the renewed protection to paper mill industry, India will have reason to be grateful to the members of the Tariff Board, who by their foresight in recommending the continuation of the duty will enable the country to keep its wealth within its borders and for the use of its nationals. It is therefore our considered opinion that the continuation of protective duty including surcharge should be made into a consolidated protective duty and continued for next term of 7 years. The consumers have not and will not suffer by any means on account of the protective duty. As will be seen from the first report the Board gave protection to the extent that the mills will be able to realise Rs. 560 per ton, but when the next enquiry came, no mill was realising that amount. On the other hand, the realised price was less than the Board recommended for the continuation of the duty, the prices were in the neighbourhood of Rs. 460 per ton and until the present rise came in as the result of war clouds in Europe, the ruling market rate in the bazaar was from As. 3-3 to As. 3-7½ per lb. and the mills did not realise probably more than Rs. 420 to 450 per ton and if the present protection is continued for another term of 7 years with the greater output of the new and old mills, the prices will be competitive and the consumer will not in any way have to pay more than for foreign paper of similar qualities substance and finish.

As proprietors of a new mill, we request that a chance should be given to the new mills to establish themselves and consolidate their position by the continuation of the protective duty now in force.

#### REPLY TO QUESTIONNAIRE FOR MANUFACTURERS.

1. (a) Our concern is a public registered company.
- (b) It is registered in India with Rupee capital.
- (c) per cent. shareholders are Indians and per cent. shares are held by them.
- (d) All the Directors are Indians and the present superior management is entirely Indian. We expect to employ temporarily a few absolutely necessary number of Europeans for the supervision of manufacturing department in the mill.
2. Our mills are equipped to manufacture 20 tons of paper per day of 24 hours.
3. Our mill is not yet in operation.
4. In addition to the usual qualities made by the existing Indian paper mills this mill will take up some of the new lines, such as machine glazed qualities, duplex and triplex cartons and pulp boards, etc.
- 5 & 6. We are not in a position to answer as our mill is still to start operation.
7. We are of opinion that bamboo and grass are the two most suitable material from which all kinds of paper that are likely to be in demand in the Indian market can be made with the help of rags, hemp, etc. We do not think that there will be any scarcity of bamboo and grass supply. Other indigenous materials are not of much importance.
- 8 & 9. We are not in a position to answer as our mill is not yet to start operation.
10. We are in full agreement with the reply given by the Indian Paper Makers' Association in their letter, dated 7th February, 1938.
11. We shall adopt sulphate process for the manufacture of pulp from bamboo and grass.
  - (a) We prefer alkali process,
  - (b) Our mill is equipped for the manufacture of 17 tons of bleached pulp from bamboo in 24 hours,
  - (c), (d) & (e) Not yet made.
  - (f) We shall get bamboo from Palamau, Mirzapur and Rewa State.
  - (g) At Rs. 17 per ton at the mills.
  - (h), (i) & (j) In view of the most up-to-date equipments we hope that our coal and chemical consumption will be less in quantity than in other paper mills and the qualities of our paper will be superior.
12. We have not yet imported any kind of pulp.
13. We shall attempt to avoid the use of imported pulp, and in case of necessity, such as Government supplies where they insist on a certain admixture of pulp.
14. We have not yet got actual experience as our mill is not in operation.
15. It is difficult to say what will happen to the wood pulp prices in the near future, as there are so many factories that govern pulp sources. In spite of the fact that the Scandinavian pulp mills have purchased their raw materials for 1938 at very high rates, from 50 per cent. to 60 per cent. higher than a year ago, many are inclined to think that the pulp prices will fall gradually.
- 16 & 17. We have not yet made paper.
18. We have not yet much experience.

19. We expect soda recovery upto 60 per cent. at the start rising to 75 per cent.

20. Mill not yet in operation.

21 & 22. Although we have not yet started manufacture, we have taken apprentices during mill construction.

23. We are building complete and new quarters for our employees at the mill and the arrangement for clean and good water supply and medical attendance is already there and arrangement for their education and recreation will be made when the mill starts operation.

24. As the mill is still being erected, no changes have occurred and the question therefore does not arise.

25. We are in full agreement with the answer given to question No. 25 by the Indian Paper Makers' Association in their letter, dated the 7th February, 1938.

26. There is every possibility of developing market for Indian made pulp for paper in India and abroad, provided in the initial stages of this industry a reasonable amount of protection is given to keep the cheap continental papers out. There are very large areas of bamboo and suitable wood forests in India where water power is also available, but the difficulties of transport are the obstacles to the development of pulp industry in this country. If a substantial degree of protection was afforded, and road transport to the hills where both bamboo and wood for purposes of pulp are available in very large quantities and where water power is also available in abundance were improved by the Government of British India, people would be prepared to lay out money for the development of the pulp industry. Pulp could be made in enough quantity to feed Indian mills that are now importing pulp and mills, if any, established to meet the newsprint. It could also be possible to make it in the quantities available for export purposes.

27. The effect of the protective duty on wood pulp has resulted in the larger and more extensive use of Indian raw materials and particularly bamboo which it was the intention of the Government of India in the first instance to develop, as recommended by the Tariff Board in their report of 1925. This development of the use of Indian raw material had been steadily progressing and has now come to occupy a better position than the grass occupied before.

28. We are not in a position to answer this as we are not yet making paper.

29 to 32. We are not in a position to answer.

33. We are in full agreement with the reply given to this question by the Indian Paper Makers' Association in their letter, dated the 7th February, 1938, subject to this reservation that in our opinion the price they are obtaining at the rate of As. 1-9 and As. 1-10 per lb. of paper is unremunerative and leaves no margin of profit to them.

34. We are in full agreement with the answer given by the Indian Paper Makers' Association to question No. 34.

35. We have no actual experience as we are not making paper as yet, but judged from the prices ruling in the market, there is no material difference between the prices of paper made from bamboo and paper made from grass and other indigenous raw materials.

36. We are not in a position to reply as we are not making paper yet.

37. Same as above.

38. We are installing the newest and most up-to-date plant with the latest process of manufacture.

39. Our block capital will amount to Rs. 40,00,000 when the mill is completed.

40. No, not for the present.

41. Replied in answer to question No. 39.

42. As we are installing an absolutely new mill, the entire cost may be considered as the present day cost of (1) buildings, (2) plant and machinery.

43. We are not in a position to reply as we are not working as yet.

44 & 45. Rohtas Industries Ltd., own a sugar mill, a paper mill under erection and a cement factory under erection. The balance sheet of the Company is enclosed herewith for the Board's information, but it does not and cannot disclose any information regarding the paper mill as it is not yet working and therefore the figures relating to this concern cannot be included in the balance sheet.

46. The balance sheet is enclosed to answer this question.

47. Forms Nos. 5 and 6 are enclosed herewith, but they may be taken as only estimates based on the information available up-to-date. They cannot be considered as the working cost sheet or disclosing the actual cost of manufacture.

48. We are not in a position to reply as we have not yet started work.

49. Same as above.

50. We have enough working capital out of the share capital of the Company.

51. We consider that it is most essential and absolutely necessary in the interest of the industry in general and new mills in particular that the protection should be continued.

We consider that the present rate of protection including the revenue duty and surcharge should be consolidated into a protective duty and the rate should not be less than As. 1-3 per lb. of all classes of paper now protected. The protection should further be extended to the classes of paper that are not protected at present, but are proposed to be made by the new mills as mentioned in their individual memoranda. In asking for this continuation and further extension of the protective duty, we beg to invite your attention to the answer given by the Indian Paper Makers' Association to your question No. 28 in which it is stated that the foreign paper of the classes now protected is landing in Indian ports at As. 1-10 per lb. If the protective duty now granted to the industry were withdrawn or modified even to the extent of removing the surcharge, the importers would land paper in Indian ports at As. 1-10 *plus* Anna 1 duty, that means at As. 2-10 on which they could sell in the market at As. 2-10 or As. 3. There shall be very few mills in India who could make paper and sell it at that rate and get sufficient margin to declare reasonable dividend. The present rise in the price of paper is a temporary one and cannot be relied upon as a permanent feature. Before this rise, the price of paper ruling in the market was from As. 3-3 to As. 3-9 with a protective duty of As. 1-3 and the paper mills were not giving more than on an average 10 per cent. dividend on their original capital. If, therefore, the protective duty is modified in any way, the future of the industry in which, encouraged by the present protective duty, a very large amount of capital has been sunk, will be very dark indeed.

52. We are not in a position to answer as our mill is absolutely new and not yet working.

53. We are in full agreement with the answer given to question No. 53 by the Indian Paper Makers' Association.

54. We would urge upon the Tariff Board to make recommendation in regard to the existing surcharge on protective and revenue duties in advance of their main recommendations that the present surcharge should be

continued until the Tariff Board has made its final recommendations. As stated above in our reply to question No. 51, it is absolutely essential to continue the present protective duty including the revenue duty and surcharge. We consider that any change either in the form or in the scale of the duties at present imposed on the import of paper, will adversely affect the paper mill interest and create anticipations in the minds of the customers to withhold their purchases until the Board has made final recommendations which may react on the prevailing prices for good or for worse. To disturb, therefore, the present market conditions will not be in the interest of the industry.

Forms Nos. 1, 2, 3, 4, 5 and 8 are primarily meant for the mills that are actually manufacturing paper and whatever we write, will be on the basis of more estimate and approximate figures which in the course of working may vary to a little extent or to a great extent. We, therefore, consider that the information given will not be an accurate one, as it will not be based on the result of actual experience and therefore will not serve, in our opinion, the purpose for which the information has been asked for. However, we enclose herewith a statement based on our estimated cost of production and estimated margin of profit for the information of the Board, which must, however, be taken only as an estimate and nothing more.

### ROHTAS INDUSTRIES LIMITED.

(PAPER DEPARTMENT).

March, 1938.

[Estimate cost of production per ton of pulp and paper (average 70 per cent. Bamboo and 30 per cent. Sabai grass) for a mill of 6,000 tons capacity per year.]

Serial No.	Item.	Amount in Rs. per ton of pulp.	Cost of convert- ing 1 ton of pulp into paper.	Total cost of manu- facturing 1 ton of paper.
1.	Primary raw materials (Bamboo, Sabai grass, etc.) . . . . .	60	11	71
2.	Auxiliary raw materials (chemicals, etc.) . . . . .	50	20	70
3.	Supervision and Labour . . . . .	...	...	40
4.	Power and Coal . . . . .	...	...	30
5.	Repair, Sundries and spare parts . . . . .	...	...	20
6.	Sale Organisation . . . . .	...	...	70
7.	Insurance and Fire Protection, rent and taxes . . . . .	...	...	8
8.	Income and Supertax . . . . .	...	...	20
9.	Contingencies . . . . .	...	...	8
		—	—	—
	Total works cost . . . . .	110	31	337
		—	—	—

Serial No.	Item.	Total cost of manufacturing 1 ton of paper.
10. Depreciation—		
	Machinery 30 lakhs 7½ per cent. . . . . }	42
	Building 10 lakhs 2½ per cent. . . . . }	
11.	Interest on working capital (8 per cent. on Rs. 10,00,000) . . . . .	10
12.	Managing Agency, Sales . . . . .	20
Total Overhead charges . . . . .		72

*Fair Selling Price per ton of Paper.*

Total cost above . . . . .	337
Overhead charges . . . . .	72
	409
Present selling price . . . . .	500
Balance for dividend Reserve and Replacement Fund . . . . .	91

(5) *Letter No. 362, dated the 4th April, 1938, from the Tariff Board, to the Rohtas Industries, Ltd., Dalmianagar, Bihar.*

I am directed to request you to furnish the Board at an early date with particulars on the following points:—

- (1) Block capital of your Mills, and
- (2) Average estimated Bamboo cost.

(6) *Letter No. 1811, dated the 14th May, 1938.*

While thankfully acknowledging receipt of your letter No. 362, dated the 4th April, 1938, we beg to inform you that—

- (1) The block capital of our paper mill is about Rs. 40,00,000, and
- (2) The average estimated cost of bamboo is Rs. 17 per ton.

## 9. Orient Paper Mills, Ltd.

### A.—WRITTEN EVIDENCE.

(1) *Letter, dated the 1st February, 1938.*

We acknowledge receipt with thanks of your circular letter No. 22, dated the 6th January, 1938, and the enclosures, including the Questionnaire for manufacturers.

2. We beg to state in reply that ours is a new Company which has not yet commenced production, the Factory which will be situate in Orissa being still in course of construction and the erection of the plant being scheduled to start at the end of April next. We shall be working from bamboo as the basic raw material, and the plant on order is designed for the manufacture of both writing or printing paper and Kraft, though under suitable conditions the Company would prefer to confine its manufacturing activity to the latter. The output of the plant as guaranteed by the manufacturers is 26 tons of Kraft pulp and 22 tons of Kraft paper or 20 tons of bleached pulp and paper per day. The subscribed capital of the Company is Rs. 31 lakhs and the Directorate is entirely Indian.

3. The protection given to the Indian paper industry is under an Act which was an expression of the Legislature's will to encourage all possible exploitation of India's bamboo resources. At the time of the last Tariff Board inquiry, it was felt that the withdrawal of the protective duty "would inevitably lead to the disappearance of bamboo as a paper-making material"—which the Board rightly considered would be "a national loss". That calamity has been averted, and there has also been positive gain in the form of increased use of bamboo by the old mills. But so far as such utilization is concerned, the position cannot yet be regarded as very satisfactory, for some of the large schemes which were then in contemplation never materialized, and those which actually did, have not yet reached the point of production. Business conditions for some years subsequent to the passing of the Act of 1932 were anything but conducive to the inception of an enterprise of this kind. It was only with the improvement of conditions in 1936 that there were new flotations which promise to make the geographical distribution of bamboo much more advantageous to the country than it has hitherto been. These new Companies have yet to commence production and what we beg to submit for the serious consideration of the Board is the possibility that any removal of the measure of protection which the industry at present enjoys will deal a blow to the new enterprises and to the Investors from which they may take long to recover and give a setback to the cause of India's industrial development. We hope that the Board will recommend a continuance of the existing measure of protection and thus allow the industry some more time to reach the stage at which it can well hold its own against all possible competition from outside and give the benefit of its increased efficiency to the consumer in the same way as the sugar industry has been doing for some time.

4. We have stated above that under suitable conditions we would very much like to concentrate on the manufacture of Kraft. These conditions would be very largely determined by protection being afforded in the new tariff scheme to packing paper, including Kraft and Imitation Kraft regarding which the Tariff Board in 1931 declined to make any recommendation, especially as their manufacture in India had not been attempted and the Board thought that the Indian industry, in its own interest, had better consolidate the position it had reached than venture upon an entirely new line of production.

5. Since then the productive capacity of the country has considerably increased and it is necessary for the healthy growth and development of the industry that it be enabled to diversify its production and undertake the manufacture of qualities for which the country has at present to depend solely on imports.

6. Kraft comes under this category, all the qualities being lumped under "packing paper" the imports of which in 1936-37 were 364,000 Cwts. valued at Rs. 48 lakhs as against 405,000 Cwts. valued at Rs. 53 lakhs in the preceding year—50 to 60 per cent. of the supplies being from Sweden and Norway. According to an estimate made at the previous Tariff Board inquiry, about two-thirds of the packing paper imported into India are of the classes for which bamboo pulp might be used.

7. Our own investigation confirms the view expressed by some of the witnesses at the time that there was every possibility of Kraft being produced from bamboo pulp. The Board itself was "inclined to the view that there is no inherent impossibility in the production of Kraft paper from bamboo pulp", and the conclusion to which our inquiries have led us is that though the difficulties on the technical side remain as ever quite serious, they can be overcome if the industry is given adequate protection for a sufficiently long period against the danger of being crippled or killed by foreign competition which has been strengthening its hold on the market and which is bound to resist to the utmost any advance towards a field which it regards as its close preserve.

8. Early last year, our Consulting Engineers in London arranged to send out at our request a Swedish expert who spent some time in this country examining the possibility of Kraft manufacture from bamboo pulp, especially in co-operation with the Paper Pulp Section of the Forest Research Institute, Dehra Dun who were kind enough to place every facility for research at his disposal. The tests carried out there yield encouraging results. Though the Dehra Dun laboratory is not yet adequately equipped for experiments in connection with the manufacture of Kraft, such tests as have been carried out there on this and other occasions have established that possibility and confirmed the soundness of the technical advice which we have been able to obtain from experts in Europe. Altogether, those who have had anything to do with these tests or inquiries are much more confident now than they were in 1931 that the manufacture of Kraft from bamboo can be made a commercial success.

9. This, however, can come only if the Indian industry is afforded security against onslaughts from outside and thus enabled to undertake the up-hill task of technical improvement which is needed in a variety of directions before the country can produce as good Kraft as the Scandinavian supply, now so largely dominating the market. This particular stuff is well-known for certain special characteristics which represent the achievement of years devoted to perfecting the methods of manufacture. There is no reason why India with her abundant supplies of suitable raw material and other facilities, should not be able to produce at least a substantial part of her requirement in as efficient a manner, provided the industry is duly fostered by the State under a proper scheme of protection.

10. The tendency of Kraft prices has been distinctly downward, the decline amounting to nearly half-an-anna per lb. in the course of a year. Over and above this is the possibility of sales by foreign producers at unremunerative prices to retain their hold on the market in the face of growing competition. So far as the probable cost of production in India is concerned, this cannot be much below the cost of white printing paper—at least in the case of a new mill. Speaking for ourselves, we can say that we are advantageously situated in respect of supplies of bamboo and coal, but the advantage is offset by certain other factors. The capital-cost is increased by reason of the factory being far away from a town like Calcutta and also by reason of our having to equip ourselves, as a precautionary measure, with plant for making bleached paper in case we find it will not pay us to make Kraft. Then again, the manufacturing cost will always have to include transport charges on all chemicals and stores which must be indented from and all finished goods which must be despatched to a centre like Calcutta. The whole technique is for this country new and experience will have to be paid for. In the circumstances, we find that unless the



market is duly protected it will not be worth our while embarking on the production of Kraft and undertaking the pioneering work which is always costly.

We invite the Board's special attention to the fact that whereas of the protected varieties the total Indian consumption in 1936-37 was 55,000 tons as compared with 49,000 tons in 1930-31, the increase in respect of the non-protected varieties over the same period was from 105,000 to 153,000 tons. In the case of packing paper particularly, the increase was from 11,568 to 20,250 tons in 1935-36 and to 18,200 tons in 1936-37. In view of the fact that India offers an expanding market for such paper and that all other factors are so favourable to its production within the country itself, the scope of the existing protection should be duly extended and at a time when the international situation continues to cause such special anxiety, no strategic point in our economic position should be allowed to remain vulnerable.

(2) *Letter No. 153, dated the 3rd February, 1938, from the Tariff Board, to the Managing Agents, Orient Paper Mills, Ltd., Calcutta.*

In regard to your claim for protection of kraft paper, it is necessary for the Board to know in detail the cost at which kraft paper could be manufactured for comparison with the imported article in order to test the validity of the claim and to see what amount of protection would be necessary. The Board would be obliged if you could furnish them with a statement (with four spare copies) in advance before your evidence.

(3) *Letter, dated the 10th February, 1938.*

With reference to your letter No. 153, dated the 3rd instant, asking us to forward a detailed statement of the cost at which Kraft could be manufactured in India, we beg to submit our estimate subject to the following remarks.

Since our Factory is still under construction and we have not commenced production yet, the Board will realise our inability to furnish anything beyond an estimate based on such investigation as we have been able to make with due care and the experience of other Indian Mills producing white printing and writing paper. In making Kraft, the cost of bleaching has to be omitted but as against this provision has to be made for the special boiling and beating required for the production of a quality having the same characteristics as the imported commodity. Even with such expert assistance as we shall be obtaining, it will take some time to evolve the necessary technique and, in respect of cost of production, to reach the stage at which some of the old mills may find themselves to-day. In the case of a product like Kraft, the manufacture of which has not yet been attempted in this country and is technically regarded as a somewhat difficult problem, success can be achieved only through trial and perseverance extending over some years.

We estimate our probable works cost per ton of Kraft paper, without making any allowance for loss or wastage in conversion, to be Rs. 302-10-1 made up as follows:—

	Rs.	A.	P.
1. Bamboo . . . . .	47	13	7
2. Chemicals . . . . .	66	9	6
3. Coal . . . . .	19	8	0
4. Wages . . . . .	40	0	0
5. Stores and Repairs . . . . .	45	0	0
6. Supervision and Establishment . . . . .	30	0	0
7. Packing and Miscellaneous . . . . .	40	0	0
8. Freight to Calcutta . . . . .	13	11	0
	302	10	1

For the loss of fibre, Rs. 5-8 per ton will be a reasonable figure to assume making the total cost about Rs. 308.

1. *Bamloo*.—We expect the main part of our supply from areas in and around Sambalpur. The cost will vary with the area from which a particular supply is obtained. The average is expected to come to Rs. 16-8 as detailed below:—

	Rs. A.
1. Royalty . . . . .	2 0
2. Cutting and Extracting . . . . .	2 0
3. Transport to railway station mostly by rafting . . . . .	8 0
4. Stacking, loading, unloading, etc. . . . .	0 14
5. Railway freight . . . . .	1 10
6. Overheads . . . . .	2 0
	<hr/>
	16 8
	<hr/>

Since bamboo in this part is of a poorer quality than the Angul variety, we have taken 400 culms to a ton, though one trial consignment we had from Sambalpur actually gave us a higher figure than this. We have based our estimate on a 100 per cent. bamboo furnish, and assumed that 2-90 tons of bamboo as received from the forest will be required to make one ton of Kraft paper.

2. *Chemicals*.—(a) The process of digestion will be a variation of the pure soda process, and it will be necessary to use caustic soda and sodium sulphide in the following proportions:—

	Cwts.
Sodium Sulphide . . . . .	3½
Caustic Soda . . . . .	1

The cost is Rs. 7-15 and Rs. 10-4 per cwt., respectively, f.o.r. Calcutta, and the railway freight Shalimar to Ib, B. N. R., is As. 8-2 per maund in full wagon loads, besides the siding charge at the mill-site. Assuming that the despatches will invariably be in wagon loads, the cost at mill-site will be for sodium sulphide Rs. 8-10-9 and for caustic soda Rs. 10-15-9 per cwt., or for the required quantities thereof, Rs. 28-14-6 and Rs. 10-15-9 respectively—a total of Rs. 39-14-3 under this sub-head.

On the same basis—

	Rs. A. P.
(b) Lime coming from Katni, (6 cwts.) . . . . .	9 0 0
(c) Rosin (¾ cwt.) . . . . .	8 6 0
(d) Alum, including the quantity required for water purification (1½ cwt.) . . . . .	8 5 3
(e) Other chemicals . . . . .	1 0 0

The total for chemicals will thus come to Rs. 66-9-6.

3. *Coal*.—Our supply will be from an adjacent colliery and the cost is expected to come to Rs. 3-4 a ton. As the grade is inferior, the consumption is estimated at 6 tons per ton of finished paper.

*Items 4-7*.—These estimates are approximations based on the experience of other Indian Mills and our own requirements.

"Miscellaneous" includes items like insurance, bank charges, printing and stationery, rent and taxes, audit fees, brokerage, discount, travelling, telegrams, godown expenses, etc.

8. *Freight to Calcutta.*—This is the nearest town where the Company may expect to sell a substantial part of its production and the reduced freight applicable to the Company's product from lb to Shalimar, B. N. R., is As. 8 per maund in minimum loads of 300 maunds per wagon. The freight to Bombay and Madras will be Re. 1-0-4 and Re. 1-2-5 respectively.

*Fair Selling Price.*—Calculating overhead charges and profit in accordance with the usual practice of the Board to which reference is made in its last Report, pp. 89-90, we obtain—

	Rs.
Depreciation . . . . .	50
Interest on working capital . . . . .	12
Managing Agency and head office charges . . . . .	11
Profit . . . . .	64

or a total of Rs. 137 per ton of paper. On this calculation the fair selling price of Indian Kraft would be about Rs. 445 per ton. The present c.i.f. price of Scandinavian Kraft is about £22-10 per ton which represents a drop of about £5 from the level touched in July last.

The authorised capital of the Company is Rs. 50,00,000 of which Rs. 31,00,000 has so far been subscribed and paid up. The total block expenditure will come up to about Rs. 48,00,000 and fresh capital will have to be found for the purpose. The annual output will be a minimum of 6,000 tons.

In view of its reputation, Scandinavian Kraft is bound, for some time to come, to command a higher price in the market than any indigenous product and even if the difference be no more than a pice per lb., it will amount to Rs. 35 per ton. We hope this aspect of the matter will be given due consideration in coming to a decision on the range of protection which the industry requires.



(4) *Statements handed in by Orient Paper Mills on the 15th February, 1938.*

RESULTS OF TESTS AT DEHRA DUN AT JANUARY, 1937.

*Samples of Swedish Kraft Paper imported by Vulcan Trading Co.*

Sample number.	Beating S. R.	Weight gr/m <sup>2</sup> .	Breaking length in met.	Strength per cent.	Ashcroft lbs. per sq. inch.	Burst factor.	Temp. Fah.	R. H. per cent.	Remarks.
I	..	59.0	7,164	2.19	46.6	54.1	55	82	Average of both directions.
II	..	67.0	6,318	2.30	46.5	48.5	55	82	
III	..	40.7	5,872	1.86	28.3	48.6	54	82	
IV	..	44.0	5,712	2.47	31.5	50.1	54	59	
V	..	61.0	6,319	2.54	40.7	46.8	52.7	59	
VI	..	44.0	6,188	3.00	34.1	54.4	52.7	81	
VII	..	47.6	5,546	2.56	33.6	49.5	52.7	81	
VIII	..	50.0	6,220	2.53	36.2	49.4	52.7	81	
IX	..	47.6	5,567	2.30	31.3	46.0	52.7	81	
X	..	70.0	6,624	2.46	48.3	48.3	52.7	81	

Samples of Kraft Paper made in the laboratory at Dehra Dun.

Sample number.	Beating S. R.	Weight gr/m <sup>2</sup> .	Breaking length in met.	Stretch per cent.	Ashcroft lbs. per sq. inch.	Burst factor.	Temp. Fah.°	R. H. per cent.	Remarks.
II	..	59.4	6,857	1.7	31.1	36.6	60	78	This paper was made before I arrived.
III	..	61.6	7,510	1.9	43.4	49.4	60	78	
II	47.5	61.1	6,530	1.9	43.0	49.2	55	82	This paper is made of pulp from the first cook in big digester.
III	57.0	59.8	6,900	1.8	41.7	47.9	55	82	
IV	52.0	64.4	4,610	4.3	38.1	41.5	54	85	This paper is made of pulp from the 3 and 4 cook in the big digester.
	37.0	44.5	7,872	2.7	32.2	41.3	..	..	This paper is made of pulp from the 2, 3 and 4 cook in the big digester.
	38.0	59.6	5,582	2.8	34.9	41.0	58	80	Crushed bamboo.
	29.5	65.0	6,359	2.5	78.6	41.8	58	80	Chipped bamboo.

## RESULTS.

*Of tests with Craft paper made from bamboo. Samples received from Messrs. Bertrams Limited, Engineers, Sciennes, Edinburgh.*

Sample number.	Weight gr/m <sup>2</sup> .	Breaking length in met.	Strength per cent.	Ascroft per sq. inch.	Burst factor.	Remarks.
1	46.4	3,483	3.20	27.0	40.8	Only one direction.
2	56.9	6,797	2.25	34.3	43.0	Only machine direction.
3	54.2	5,258	2.85	32.4	51.1	Both direction.
4	61.4	5,669	3.40	40.0	45.5	do.
5	40.2	3,499	1.75	19.4	33.8	do.
6	42.8	2,492	1.82	17.0	27.8	do.
7	31.2	3,162	1.33	12.0	26.9	do.
8	26.8	4,575	1.40	17.2	44.9	do.

(5) *Letter, dated the 3rd March, 1938.*

We are enclosing herewith copy of the report received from the French mill where experiments were made in connexion with the production of Kraft from bamboo. This bears testimony to "the great tearing strength" of the paper obtained as a result of "the length of the fibres" (p. 3). Our own Swedish expert Mr. Ullstrom was able at Dehra Dun to obtain similar results and referring to these experiments, Mr. M. Bhargava, the Officer-in-charge of the Paper Pulp Section of the Forest Research Institute wrote to us saying that he felt confident that the requisite quality of the Kraft pulp can be produced from bamboo (p. 4).

We are also enclosing certain other expressions of opinion relating to Kraft, particularly the possibility of its production from bamboo pulp.

Enclosure 1.

*Letter from Messrs. Boring & Co., Ltd., London to the Orient Paper Mills, Ltd., Calcutta, dated the 2nd December, 1936.*

We believe that our engineer will be able to demonstrate the possibilities of bamboo for production of kraft of a high class, even if not of the very first qualities. However, if the treatment which we foresee will not produce the best kraft which is desirable for cement bags and similar purposes, we have in mind two ways in which this could be attained and at small additional cost.

Notwithstanding the experience we have already, it seems highly desirable that the laboratory enquiry proposed earlier and supported in your letter under review should be proceeded with as soon as possible. Consequently we trust you are arranging forthwith to send to Karlstad the parcel of about 10 cwt. of bamboo described in your earlier letter.

There is little doubt that the failure of Forest Research Institute, Dehra Dun to produce satisfactory kraft to date results from inadequacy

of their equipment as you imply. When they have installed the new experimental digester manufactured for them recently at Karlstad, we anticipate that the results will be very greatly improved. On the other hand, certain further equipment would be necessary in order to reach the same standard as would obtain with a really modern mill.

Probably you will have in mind that lack of success with trial cooks for kraft at Titaghur is due largely to the same reasons as apply to the Forest Research Institute trials.

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Enclosure 2.

*Letter from Messrs. Boving & Co., Ltd., London, to the Orient Paper Mills, Ltd., Calcutta, dated the 5th January, 1937.*

You will have heard from our engineers of the laboratory trials being made by certain of our friends on bamboo samples which Messrs. K. M. W. managed to provide in Sweden. We have just heard that these tests produced very good results and, moreover, that these same friends at a French Mill are prepared to carry out full scale commercial tests on a parcel of 50 tons of bamboo at the end of February.

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Enclosure 3.

*Letter from Messrs. Boving & Co., Ltd., London, to the Orient Paper Mills, Ltd., Calcutta, dated the 26th January, 1937.*

We are pleased to quote below Messrs. Papeteries de Gascogne's report regarding the test of bamboo made in their laboratory. This is as follows:—  
*Yield from the Cook.*

797 grs. of 100 per cent. dry wood gave 331 grs. 100 per cent. dry stuff.

$$\text{Yield } \frac{100 \text{ per cent. dry stuff}}{100 \text{ per cent. dry wood}} = 41.5 \text{ per cent.}$$

I mean with stuff that part which can be completely transformed into paper, the uncooked parts being separated. (Weight of the uncooked parts=44 grs.)

*Paper obtained.*

5' Refining	.	18 Schopper	.	Tensile 4777.8	Bursting	Tearing per cent.
				per cent. gm <sup>2</sup> :	2.80.	gm <sup>2</sup> : 160.4.
10' "	.	24 "	.	Tensile 5555.5	Bursting	Tearing per cent.
				per cent. gm <sup>2</sup> :	3.73.	gm <sup>2</sup> : 192.
15' "	.	26 "	.	Tensile 6021.5	Bursting	Tearing per cent.
				per cent. gm <sup>2</sup> :	4.73.	gm <sup>2</sup> : 196.8.
20' "	.	36 "	.	Tensile 6892.7	Bursting	Tearing per cent.
				per cent. gm <sup>2</sup> :	4.58.	gm <sup>2</sup> : 219.3.
25' "	.	47 "	.	Tensile 6388.9	Bursting	Tearing per cent.
				per cent. gm <sup>2</sup> :	5.26.	gm <sup>2</sup> : 204.6.

In connection with this test they write: "You will note the great tearing strength which is due to the length of the fibres which also has a great flexibility. These figures are not to be regarded as final but are subject to further investigation as to the best cooking cycle to be used".

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Enclosure 4.

*Extract from letter from the Officer-in-charge, Pulp and Paper Section, Forest Research Institute, Dehra Dun, dated the 4th February, 1937.*

I am in receipt of your letter of the 28th January, enclosing results of tests on bamboo in a French Mill. Mr. Ullstrom had shown me these results

when he was here. The results bear out my statement that it is possible to produce satisfactory grade of kraft paper from bamboo.

Mr. Ullstrom must have given you the details of the tests carried out here. I feel confident as a result of these tests that the requisite quality of the pulp can be produced from bamboo. I would have produced and sent you the right quality of paper also, but unfortunately the press rolls of our experimental paper machine are very defective and I cannot make the right kind of paper just now. I am trying to improve the rolls and I am proceeding with the experiments. As soon as I get satisfactory paper I shall send you the samples.

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*"The Digestion of grasses and Bamboo for Paper-making" by W. Raitt, formerly Cellulose Expert to the Government of India (pages 98-99).*

"Bamboo is capable of producing a wide range of paper grades, from a first class printing, as exhibited by that on which this book is printed, to resinsized writing paper and litho papers in one direction and a strong brown "Kraft" in the other, and will blend with any other stock".

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*Definitions from "A Dictionary of Paper and Paper-making Terms", by E. J. Labarre (Amsterdam).*

1. **Kraft**.—A very strong paper made from unbleached sulphate wood-pulp by prolonged boiling under low pressure, thus preserving strength (hence the name from German Kraft=Strength) because the stock has received less drastic chemical treatment. It is smooth, of a characteristic light brown colour, strong and flexible and highly resistant to sudden strains, and now also imitated in various ways. The word is also used in many combinations such as Kraft Browns, i.e., brown wrapping paper made according to this process which in fact is usually understood by the term "Kraft paper"; Kraft Pulp, the variety of sulphate wood-pulp made from spruce and other conifers for the production of Kraft wrapping paper; Kraft "union" a waterproof packing consisting of two sheets of Kraft paper conjoined by a coating of tar, Kraft Water-proof paper treated with paraffin, asphalt or other material to render it waterproof; Kraft waterproof, a light weight absorbent paper made of sulphate pulp, unsized, used principally for towelling.

2. **Imitation Kraft**.—Is a paper coloured to resemble the peculiar brown which is the natural colour of genuine Kraft. It is usually made of unbleached sulphite but may be a re-manufactured or bogus Kraft.

#### (6) Letter, dated the 1st April, 1938.

With reference to our letter of the 3rd March, 1938 along with which we forwarded certain reports on the possibilities of kraft production from bamboo, we have just heard from the Bombay Agent of Messrs. J. M. Voith of Germany, and this is what he writes:—

"I want to inform you that Messrs. Voith have made elaborate tests on bamboo in Germany (*Dandrocalamus Strictus Bamboo*) and the results are very good ones as regards the quality of unbleached sulphate paper. In fact the paper is in some respects better than pine kraft paper and in some respects slightly lacking, but the general quality is very good".

#### (7) Letter, dated the 5th July, 1938.

We take this opportunity to acquaint the Board with certain facts relating to Kraft in the production of which we have been so deeply interested, and to our own position.



Since evidence was tendered on behalf of the Company, prices of Kraft have further declined and c.i.f. quotations have recently been as low as £19 per ton for Real and £15 10s. per ton for imitation Kraft. It will be remembered that at the time of the Boards' visit to Calcutta in February last the prices were higher by nearly £3 per ton.

The Scandinavian organization of Wrapping paper manufacturers decided in April last upon considerable reduction in the output, but even that decision has not helped matters much and prices have further declined.

Meanwhile, we have made considerable headway with construction work and at the present rate of progress should be ready for manufacture by the end of October next.

Our paid up capital is Rs. 31 lakhs, and to add to our resources, we have recently raised another Rs. 10 lakhs through a debenture-loan. Further capital will have to be raised for the purpose of adding to our equipment another paper machine, but this question will be considered at a later stage when some experience has been gained of the present plant and of the varieties in demand in the Indian market.

We are fully equipped for the manufacture of kraft, and we are enclosing herewith a statement showing the special machinery we have obtained and the investment we have had to make for the purpose.

As we have previously brought to the notice of the Board, we have also had to equip ourselves with plant for making white printing as a precautionary measure and we have shown in the statement referred to above the part of the equipment which will be lying idle in case we confine our production to kraft.

We once more draw the Board's special attention to our case for adequate protection, as without it all our preparations will have been in vain and we shall be saddled not only with the cost of the investigations made in this end and other countries of the possibilities of manufacturing kraft from bamboo but also of the special plant purchased and now being erected at the site.

Taking an average price of £17 c.i.f. per ton, and adding to it Rs. 7 to represent landing charges, we obtain a total of about Rs. 234 per ton at which price good Scandinavian kraft can be imported to-day. With duty at 30 per cent., this becomes saleable in the Indian market at about Rs. 305 per ton, and we submit that this is a price at which competition would leave us no margin either for overheads or for profit.

The difference between the cost of white printing and kraft is mainly in respect of bleaching which the pulp in the case of the latter has not to undergo, but as against this it will be necessary to evolve by experimentation the special process of boiling and beating required for kraft, and this in itself will prove costly.

We may also remind the Board of the fact that we are far removed from markets which can absorb a substantial portion of our production, and this should be duly taken into consideration when calculating a fair selling price for Indian kraft.

We hope the Board will recommend protection for kraft with a view to end the existing uncertainty and enable a new industry of recognized national importance to be established, incidentally helping this Company to go ahead with its programme and avoid the loss which it would otherwise have to incur at the very start.

**Evidence of Mr. P. N. SINHA, recorded at Calcutta, on Tuesday,  
the 15th February, 1938.**

B.—ORAL.

*President.*—Mr. Sinha, what is your position?

*Mr. Sinha.*—I am Secretary to the Mills. I belong to the factory.

*President.*—You are the factory Manager?

*Mr. Sinha.*—Yes, virtually.

*President.*—Have you got a Technical Adviser?

*Mr. Sinha.*—We haven't got a Technical Adviser, but I have brought with me here our Chief Engineer.

*President.*—Most of the replies are concerned with the manufacture of kraft paper.

*Mr. Sinha.*—That is so.

*President.*—First of all we want to get at what the imports of kraft and imitation kraft are. Are we to understand that you want protection against kraft and imitation kraft?

*Mr. Sinha.*—Yes, against both.

*President.*—Your production is likely to be about 6,000 tons.

*Mr. Sinha.*—Yes, roughly speaking.

*President.*—That will be a very small proportion of the total imports.

*Mr. Sinha.*—The total imports of kraft do not exceed 12,000 tons, so it is not a small proportion.

*President.*—Kraft and Imitation kraft?

*Mr. Sinha.*—Yes. For the present, it will be about half of that.

*President.*—Of course we have got to consider the matter from the point of view of the consumer. You only make about half the quantity. If the price is raised to the consumer and then you make only half the quantity required, that is rather difficult.

*Mr. Sinha.*—We intend duplicating the plant very shortly if we are successful in this venture.

*Mr. Rahimtoola.*—The total imports will be about 10,000 tons.

*President.*—Then you will be making more than half?

*Mr. Sinha.*—That will be so.

*President.*—If we raise the duty on kraft paper, it will affect many other industries which are using kraft paper.

*Mr. Sinha.*—Possibly, for the time being.

*President.*—I have been told that they are manufacturing kraft paper at Dehra Dun.

*Mr. Sinha.*—We ourselves have had some experiments made there and elsewhere.

*Mr. Rahimtoola.*—Have you got samples of these papers?

*Mr. Sinha.*—Yes. These are samples of paper made at Edinburgh (shown). Those were made at Dehra Dun (shown).

*President.*—Have you got a copy of the Report of the Edinburgh people?

*Mr. Sinha.*—I have got a Report on the kraft paper made at Dehra Dun.

*Mr. Rahimtoola.*—This is made out of bamboo pulp?

*Mr. Sinha.*—Entirely. These are the results of the tests made at Edinburgh (shown).

*President.*—May we keep these?

*Mr. Sinha.*—Certainly.

*President.*—When we see the importers to-morrow, they may be interested to see these.

*Mr. Sinha.*—As I have said in our representation, Dehra Dun has not yet got a complete plant for making kraft.

*President.*—It is a baby plant, is it not?

*Mr. Sinha.*—Yes.

*President.*—Can you tell us what the Edinburgh people said about bamboo?

*Mr. Sinha.*—All the Reports we have received are very encouraging. We had an experiment made at a French mill. Their Report was that there is every possibility of making good kraft out of bamboo pulp.

*President.*—Would you mind giving us copies of the Reports, because we shall be interested to see it. This is a new departure and the Tariff Board have to be satisfied that satisfactory kraft paper can be made. That is the first thing we have to consider.

*Mr. Sinha.*—They wanted to make certain experiments on a large scale and for that purpose they asked us to send them a consignment of bamboo, but the freight came to a prohibitive figure and it was not sent.

*President.*—What is the present price of imported kraft?

*Mr. Sinha.*—Genuine kraft is between £21 and £22.

*President.*—And imitation?

*Mr. Sinha.*—It will be about £18. I saw one genuine kraft quotation yesterday for £21.

*President.*—Kraft paper is subject to what duty?

*Mr. Sinha.*—20 and 30 per cent. the preferential duty being on imports from United Kingdom.

*President.*—It is all foreign?

*Mr. Sinha.*—I should say, preponderantly.

*President.*—It is paying 30 per cent.?

*Mr. Sinha.*—Yes.

*President.*—Is any kraft paper coming from England?

*Mr. Sinha.*—Very little.

*President.*—It is all Continental.

*Mr. Sinha.*—Imitation comes chiefly from Germany, Real or Genuine from Sweden.

*President.*—30 per cent. on the present basis, what would that represent per lb.?

*Mr. Sinha.*—Roughly, 6 pies per lb.

*President.*—Do you think that the present prices of kraft are likely to be maintained or do you think that they are likely to fall?

*Mr. Sinha.*—We do apprehend a fall chiefly for the reason that America is increasing its production of kraft. There is a movement over there to make kraft from the pine trees in the Southern States. They will decrease their imports which have been substantial. There has also been a curtailment of exports to the Far East.

*President.*—Do you mean that Scandinavia and Germany will have to find new markets?

*Mr. Sinha.*—In all probability, yes.

*President.*—As regards your raw materials, are you assured of a sufficient quantity of bamboo?

*Mr. Sinha.*—The supplies are abundant for our purposes.

*President.*—There is no difficulty about that.

*Mr. Sinha.*—Absolutely none.

*President.*—What other subsidiary materials would you be using in addition to bamboo?

*Mr. Sinha.*—Nothing but bamboo as the basic raw material.

*President.*—You don't mix anything else with it?

*Mr. Sinha.*—No, we contemplate a cent per cent. bamboo furnish.

*President.*—We will now turn to your second letter about your estimates of costs which are important from our point of view. First of all the process of manufacture of kraft pulp, how does that differ from the manufacture of ordinary sulphate pulp as practised in this country? Can you tell us briefly what the difference is?

*Mr. Sinha.*—One difference is in the proportion of chemicals, because in the sulphate process for the bleached paper, they use more of caustic soda and less of sulphide. Here, of course, the proportions will be reversed more of sulphide and less of caustic. In fact, it may be possible at some stage to do away entirely with caustic soda.

*President.*—Will there be any difficulty about the smell?

*Mr. Sinha.*—We hope not in our locality.

*President.*—It is not a town?

*Mr. Sinha.*—No, it is mostly forest land, with villages at some distance from the factory.

*President.*—You don't think that there will be any complaint?

*Mr. Sinha.*—There should be none.

*President.*—In regard to your estimates of costs on the 1st page we have got from various mills what the costs of manufacture of sulphate is. They don't want any details to be disclosed, but we can indicate where your costs are high without going too much into figures. Your bamboo costs seem somewhat high, as your bamboo is fairly near. Delivered at mill it is going to be how much?

*Mr. Sinha.*—Rs. 16-8.

*President.*—That is a comparatively low figure.

*Mr. Sinha.*—I agree.

*President.*—On that basis, your figure for bamboo is on the high side.

*Mr. Sinha.*—The difference is in the quantity assumed necessary for each ton of kraft. The standard figure is 2-60 or 2-61 and we have assumed 2-90 for bamboo as it will be received from the forest, thinking that it will have more moisture.

*President.*—Your price is not for air dry bamboo?

*Mr. Sinha.*—No.

*President.*—If it is Rs. 16-8 for raw bamboo, what would be the air dry bamboo price? What would be the difference?

*Mr. Sinha.*—10 per cent. is the usual allowance made, but sometimes the moisture may be much more.

*President.*—We want to get the price of air dry bamboo delivered at the mill.

*Mr. Sinha.*—Whatever may be the moisture content, most of the items will remain unaffected, for instance, royalty, transport, stacking, railway freight, etc.

*President.*—Do you buy on the moisture content at all?

*Mr. Sinha.*—We shall not be buying when it comes to that. We shall work the forests ourselves.

*President.*—At any rate your figure for raw material seems to be rather on the high side. The next item is chemicals. There the cost seems to be extraordinarily high. Is the cost of chemicals more in your process than in the ordinary sulphate pulp.

*Mr. Sinha.*—Do you mean the quantity of chemicals?

*President.*—Yes.

*Mr. Sinha.*—It will be more or less the same.

*President.*—Your figure does seem extraordinarily high.

*Mr. Sinha.*—You mean the prices or the proportions?

*President.*—I am looking at the figures on page 2 where you have given the cost per ton. Have you installed a recovery plant?

*Mr. Sinha.*—We are going to.

*President.*—Is that included in your cost estimate?

*Mr. Sinha.*—Yes.

*President.*—What percentage of recovery do you expect?

*Mr. Sinha.*—Not more than 50 at present.

*President.*—It is low according to the modern practice. 80 is the usual standard.

*Mr. Sinha.*—I don't think we shall attain that for sometime to come.

*President.*—You have got coal on the spot.

*Mr. Sinha.*—Very near our factory site.

*President.*—So your cost of coal should be rather low.

*Mr. Sinha.*—The figure includes transport from the pit-head to the factory.

*President.*—What would be the cost of transport?

*Mr. Sinha.*—Re. 1 a ton, I should think.

*President.*—In that respect you are rather favourably situated, as you are very near the coal area and near bamboo. In that way you are rather at an advantage compared to any other mill. The figure seems to be a little bit high.

*Mr. Sinha.*—That is because the quality is rather poor, and the consumption cannot possibly be lower.

*President.*—Your estimate of wages seems more or less reasonable in comparison. For stores and repairs you have put a very high figure. Surely in your early stages your repairs ought to be low when your plant is new.

*Mr. Sinha.*—On almost every thing freight has to be added, and this alone means at least ten per cent. more.

*President.*—Your figure per ton is very high.

*Mr. Sinha.*—We are not in the same stage as the old mills are to-day. For a fair comparison, you must consider us where those mills were about ten years ago.

*President.*—In some ways you are in a better position in that your plant is new and you ought not to require so much repairs. You are in an advantage in that respect or should be. Your figure strikes me as very high, and your allowance for supervision and establishment is a high figure too.

*Mr. Sinha.*—That is because for supervision we have to import a special staff from Europe. At present it is very difficult to obtain the services of competent men here or abroad, especially for kraft. So, the figure is bound to be somewhat high. Then, it includes the staff on the administrative side.

*President.*—It is a high figure. As regards packing and miscellaneous, what does "miscellaneous" include?

*Mr. Sinha.*—We have explained that on page 4.

*President.*—Strictly speaking, these items should come under overhead. However, it is not so very material as long as all the items are included. Bank charges are a very small item. You don't mean interest on working capital?

*Mr. Sinha.*—No, just the ordinary bank charges.

*President.*—That is a very small item or should be.

*Mr. Sinha.*—Quite.

*President.*—As regards brokerage, do you mean practically your selling expenses?

*Mr. Sinha.*—Those will include this. Travelling in our case will be a fairly big item.

*President.*—What do you estimate packing alone at?

*Mr. Sinha.*—I could not say off-hand. As I have said, in respect of some of these items we are unable to make very close estimates as we have not yet reached the stage of production. We have in such cases gone by the experience of other mills.

*President.*—Judging by the information we have obtained from other mills, your figures seem to be rather high.

*Mr. Sinha.*—That may be so if you look to their present costs which cannot be transplanted to a new mill setting out in a new direction.

*President.*—In our calculation of works costs we do not include freight. We deal with *ex-mill* prices.

*Mr. Sinha.*—There is a special reason why it should be included in our case. The old mills in this province happen to be near Calcutta. In their case there may not be any reason for including that, but in our case there is every reason why it should be so included.

*President.*—You are nearer some other market.

*Mr. Sinha.*—We have no market for krait near about our place.

*President.*—In Central India, you have.

*Mr. Sinha.*—Very little. Even Nagpur is far off, about 380 miles from our place.

*President.*—Nagpur is nearer to you.

*Mr. Sinha.*—The important markets, especially from our point of view, are only Calcutta, Madras and Bombay.

*President.*—You have a slight advantage in respect of Bombay as compared with Calcutta Mills.

*Mr. Sinha.*—The Calcutta mills can send their goods by steamer.

*President.*—Partly by steamer and partly by rail, that is the practice. Coming to overheads, you have taken depreciation at 6½ per cent.

*Mr. Sinha.*—Yes.

*President.*—On a block capital of how much?

*Mr. Sinha.*—Rs. 48 lakhs.

*President.*—That includes your recovery plant.

*Mr. Sinha.*—It does.

*President.*—As regards interest on working capital what rate have you taken?

*Mr. Sinha.*—7½ per cent. on works costs calculated on 6 months output. Our works cost is Rs. 308 and the Board's figure was Rs. 327. So there will be a slight variation.

*Mr. Itahimtoola.* You have taken it from the last Tariff Board's report.

*Mr. Sinha.*—Yes. Rs. 11-8 will perhaps be the correct figure.

*President.*—As regards Managing Agency and head office charges, you have simply taken the Board's figure.

*Mr. Sinha.*—That is right.

*President.*—Actually what is the rate allowed for the Managing Agency commission?

*Mr. Sinha.*—10 per cent. on profits.

*President.*—After deducting depreciation?

*Mr. Sinha.*—Before depreciation is deducted but after paying interest.

*President.*—And profit you have taken at 8 per cent.

*Mr. Sinha.*—Yes.

*President.*—Taking your total and comparing it with the average price of kraft paper: the price varies from £18 to £23. Suppose we took £20 as the average price, and added Rs. 7 per ton as landing charges, that would amount to how much?

*Mr. Sinha.*—Rs. 274.

*President.*—The present rate of protection per ton is Rs. 140 + 35 = Rs. 175. According to your calculations, that would not be enough.

*Mr. Sinha.*—It should be enough.

*President.*—Not according to these calculations. The difference between the selling price you have given and the price we have worked out is more.

*Mr. Sinha.*—No, that is not so. If you add Rs. 175 to Rs. 274, you obtain Rs. 449 which is quite enough.

*President.*—I mean the difference is more than the basic duty viz., Rs. 140 per ton. The duty and the surcharge just cover it.

*Mr. Sinha.*—That is so.

*President.*—On Rs. 274, how much percentage does the duty work out to?

*Mr. Sinha.*—A little more than 51 per cent. If the surcharge is included, the percentage will be about 64.

*Mr. Rahimtoola.*—Do you contemplate making any other paper or only the kraft paper?

*Mr. Sinha.*—If we do not succeed in making kraft paper, we may make other paper. But we are, from the very beginning, thinking of making only kraft paper.

*Mr. Rahimtoola.*—That means that you are not sure that you will be able to make kraft paper.

*Mr. Sinha.*—Not at the ruling price. Unless protection is given it is impossible to make the production of kraft a success.

*Mr. Rahimtoola.*—When will you be in a position to know whether you can manufacture kraft paper? Have you read the last Tariff Board's report? You yourself state that the Board did not recommend protection because no kraft paper was made in India. The Board has seen the samples of kraft made on an experimental basis but unless it is made on a commercial basis it is not possible for the Board to recommend protection.

*President.*—When do you expect to begin manufacturing?

*Mr. Sinha.*—Next November.

*Mr. Rahimtoola.*—You say that your factory is still under construction.

*Mr. Sinha.*—Yes.

*Mr. Rahimtoola.*—Have you ordered the whole plant?

*Mr. Sinha.*—Yes, the entire plant has been ordered.

*Mr. Rahimtoola.*—Has the whole plant arrived?

*Mr. Sinha.*—Not entirely, but the whole plant is on order.

*Mr. Rahimtoola.*—What is the value?

*Mr. Sinha.*—Rs. 42 lakhs is the estimated total of block expenditure for the present with another paper machine yet to be ordered.

*Mr. Rahimtoola.*—And what is the subscribed capital?

*Mr. Sinha.*—Rs. 31 lakhs.

*Mr. Rahimtoola.*—How do you propose to secure the balance?

*Mr. Sinha.*—We have to raise further capital. Rs. 42 lakhs will be the entire block expenditure, without the cost of the additional machine.

*Mr. Rahimtoola.*—Could you not give us in pound sterling the cost of the plant and machinery you have ordered?

*Mr. Sinha.*—Just now, I can only give you for the paper and pulp part of it.

*Mr. Rahimtoola.*—Is it British or Continental?

*Mr. Sinha.*—It is German.

*Mr. Rahimtoola.*—You can send the figures later on.

*Mr. Sinha.*—I shall do so.

*President.*—Is your power plant coming from Germany?

*Mr. Sinha.*—The boiler equipment is British and the turbine part comes from Switzerland. The electrical drive is German again.

*Mr. Rahimtoola.*—Have you conducted any experiments yourself?

*Mr. Sinha.*—Our expert has made it.

*Mr. Rahimtoola.*—Where?

*Mr. Sinha.*—At Dehra Dun. He was there nearly a year ago and they gave him facilities to make it.

*Mr. Rahimtoola.*—Then by whom are the samples made?

*Mr. Sinha.*—Made by our expert.

*Mr. Rahimtoola.*—Is the estimate prepared by your expert?

*Mr. Sinha.*—No, this is our own estimate.

*Mr. Rahimtoola.*—How did you arrive at this estimate?

*Mr. Sinha.*—The estimate is based partly on some figures given by the Dehra Dun Institute for making kraft, and partly on the advice we have received from our consultants in England.

*Mr. Rahimtoola.*—Did you send the samples?

*Mr. Sinha.*—I was there last summer myself and showed them the samples.

*Mr. Rahimtoola.*—Did you actually see the kraft paper made in one of the English mills?

*Mr. Sinha.*—No, I never had such an opportunity.

*Mr. Rahimtoola.*—Has the man whom you consulted made any kraft paper?

*Mr. Sinha.*—Our consultants are the London agents of a reputed firm who are makers of machinery and who have had considerable experience of kraft in Sweden.

*Mr. Rahimtoola.*—Are these figures given by machinery makers?

*Mr. Sinha.*—Some of these figures were given by them. But they were naturally not in a position to give any close estimates of several items like "miscellaneous", "wages", etc.

*Mr. Rahimtoola.*—I am talking of bamboo, chemicals, coal and rosin.

*Mr. Sinha.*—The figures of course, vary. The machinery manufacturers have recommended proportions which are different from what our London consultants have given, this is so far as chemicals are concerned. What we have taken here is the proportions given by the Dehra Dun Institute for making kraft.

*Mr. Rahimtoola.*—By Mr. Bhargava?

*Mr. Sinha.*—I should think so.

*Mr. Rahimtoola.*—What was the actual percentage in the experiment made by your expert?

*Mr. Sinha.*—I have not got particulars of that.

*Mr. Rahimtoola.*—Is he not in your employ now?

*Mr. Sinha.*—He came over only for this purpose last year and he spent about 2 months in this country.



*Mr. Rahimtoola.*—Has he submitted any report?

*Mr. Sinha.*—Yes, the report which I have just handed.

*Mr. Rahimtoola.*—The figures you have given here show only the tests.

*Mr. Sinha.*—I think the Dehra Dun people might have particulars of the materials used in those experiments.

*Mr. Rahimtoola.*—How do you say that you have submitted some of these figures based on the experience of the existing mills. As far as I know present mills do not manufacture kraft paper.

*Mr. Sinha.*—That experience is with regard to bleached paper. After all, the difference is mainly in respect of the cost of bleaching.

*President.*—That is the main difference.

*Mr. Sinha.*—Yes, other items remain, more or less, the same.

*Mr. Rahimtoola.*—Does your plant and machinery differ from the plant and machinery required for printing and writing paper?

*Mr. Sinha.*—It has some special parts: the Yankee cylinder, for instance, which puts a glaze on one side only of the paper . . . .

*President.*—When you give the figures you might give the details.

*Mr. Sinha.*—I shall do so.

*Mr. Rahimtoola.*—In your answers you have assumed 2.90 tons of bamboo to make one ton of kraft paper. Is that also the assumption by the Forest Institute?

*Mr. Sinha.*—No. I think they took the figure of 2.61 air dry but we have taken 2.90 for bamboo as received from the forest.

*Mr. Rahimtoola.*—How did you obtain this figure?

*Mr. Sinha.*—That is just a rough guess, based on the assumption that the moisture content will actually be more than 10 per cent. which is allowed for air dry. At times it is as much as 25 per cent.

*Mr. Rahimtoola.*—And what about chemicals?

*Mr. Sinha.*—We have taken the Dehra Dun proportions as recommended for kraft.

*Mr. Rahimtoola.*—Dehra Dun is not manufacturing on a commercial scale.

*Mr. Sinha.*—So far nobody in Europe has been able to tell us anything very definite about bamboo because their experience has been confined to coniferous woods. The experience will have to be gained as we proceed with the manufacture.

*Mr. Rahimtoola.*—What about coal? 6 tons per ton of finished paper is rather on the high side.

*Mr. Sinha.*—That is because our coal is of inferior grade.

*President.*—Can you tell us if the period of cooking is longer or shorter than in ordinary sulphite pulp?

*Mr. Sinha.*—When these experiments were made at Dehra Dun, these were the four questions to be determined. The percentage of caustic soda and sodium sulphide; the total volume of liquor for digestion; the temperature or pressure schedule for digestion; and finally, the total period of digestion but on none of these points, they have yet been able to come to any final conclusion. They want further experiments to be made, so we do not know for certain what the results are going to be. These questions can only be determined under factory conditions when we come to close grips with the problems. In any case, kraft will require a very special kind of boiling and beating.

*President.*—Are you employing the fractional system?

*Mr. Sinha.*—We may find it necessary to employ that, as suggested by Dehra Dun. There is just one thing further I would like to mention. Most of the kraft in European countries other than Sweden is made from pulp

imported from that country. For instance, in England the kraft that is made is manufactured from pulp imported from Sweden. Similarly, in some other countries kraft is made from imported Scandinavian pulp and that pulp does not give as good results as it may be expected to do. The difference is due to the time factor because pulp which is dried on the cylinders for export loses some of its properties and when used after some weeks or months is not quite as good as pulp which can be made within the factory itself. It is here that we expect to have an advantage in making kraft paper, for we shall be making all our pulp ourselves and in this respect, we shall be, so to say, on a par with Sweden.

*President.*—In America there are people who are making both pulp and paper?

*Mr. Sinha.*—I believe that is so.

*President.*—What is the name of the place where the factory is going to be located?

*Mr. Sinha.*—1b. That is the nearest railway station on the B. N. R. main line and also the name of the river running by it.

*President.*—How many miles is it from Calcutta?

*Mr. Sinha.*—About 325 miles.

*Mr. Rahimtoola.*—Would you be able to start in April next?

*Mr. Sinha.*—No, only the erection of the plant; paper will be made sometime in November.



**10. Upper India Couper Paper Mills Limited, Lucknow.**

A.—WRITTEN.

(1) *Answers to the Questionnaire.*

1. (a) It is a Public Registered Company.
- (b) It is registered in India and the Capital is the Rupee one.
- (c) The proportion of the Indian Shareholders in the Company is 98 per cent.

The proportion of shares held by Indian Shareholders is 99 per cent.

- (d) All the Directors are Indians and also the superior management is wholly Indian.

Between April, 1936, and January, 1938, two Europeans were engaged temporarily, one as Manager and the other as Engineer who are now no more in the service of the Company.

2. (a) The capacity of our Pulp-making plant equipped as at present is sufficient to produce all the pulp necessary to feed our Paper-making machines.

- (b) 13 tons per day of 24 hours.

3. It is not possible to give the figures for actual pulp output of our mills as it is manufactured in wet condition which is only an intermediate part of the whole process of paper manufacture. But, assuming a loss of about 10 per cent. of pulp during subsequent operations the estimated pulp outputs are given below:—

(a) *Pulp.*

Year.	Pulp.
	Tons.
1931 . . . . .	2,381
1932 . . . . .	1,485
1933 . . . . .	2,398
1934 . . . . .	1,770
1935 . . . . .	2,346
1936 . . . . .	2,559

(b) *Paper.*

Finished output of saleable papers.

[illegible]

Output of paper including wrappers for internal use.

Year.	Paper. Tons.
1931 . . . . .	2,403
1932 . . . . .	1,684
1933 . . . . .	3,221
1934 . . . . .	3,107
1935 . . . . .	3,142
1936 . . . . .	2,988

4. Chief classes of paper manufactured in our mills are given below:—

Chief classes of paper.	Average percentage.
	Per cent.
White Printings . . . . .	26.96
Cream Laid and Woves . . . . .	25.53
Stamp Cap . . . . .	2.29
Semi Bleached . . . . .	12.68
Superior Badami . . . . .	1.20
Common Badami . . . . .	25.84
Glazed Buff . . . . .	0.54
White Drawing and Cartridge . . . . .	0.56
Blottings . . . . .	0.31
Antique Wove and Laid . . . . .	0.28
Coloured Printings . . . . .	0.25
Azure Laid . . . . .	0.16
Browns . . . . .	1.60
Wrappers and Cards . . . . .	1.82

There is no possibility of making other classes of papers.

5. Please see Form I to follow.

6. The quantity of each of the primary materials required to make (a) one ton of pulp and (b) one ton of paper is given below:—

(a) Pulp.		Cwts. for 1 ton.
Grass . . . . .		47½
Rags . . . . .		31½
Hemp . . . . .		37½
Jute . . . . .		31½
(b) Paper.		
Grass . . . . .		52½
Rags . . . . .		34½
Hemp . . . . .		42
Jute . . . . .		34½

7. Regarding the availability of our primary raw materials, we are getting as much as we need without any difficulty.

As Bamboo does not grow in sufficient quantity in these provinces and it is very difficult to obtain regular supply, we have not taken to the manufacture of pulp from bamboo.

The raw materials used by us for the manufacture of paper are quite suitable.

8. (a) to (c) There have been no changes.

9. We cannot give the information as we purchase grass through contractors f.o.r. Mill Siding.

10. The freight on coal is very heavy. The freight in our case works out to about double the price of coal at the pit head and any relief would certainly be of much help to us.

11. The processes of manufacture of pulp are given below:—

(a) *From Bamboo*.—We do not manufacture pulp from Bamboo.

(b) *From Grass*.—

(i) It is picked by pickers.

(ii) Dusted in the willow.

(iii) Boiled with Caustic Soda by Mr. Raitt's process of Fractional Digestion under steam pressure of 20 lbs. and 55 lbs. per square inch for 2 and 5 hours respectively.

(iv) Three washings are given in the digesters.

(v) Emptied and sorted out.

(vi) Washed and bleached in the Poacher.

(c) *From Rags, Hemp and Jute—*

(i) Sorted and dusted by pickers.

(ii) Chopped and re-dusted.

(iii) Boiled in the Revolving Boilers with Lime and Caustic Soda under steam pressure of 40 lbs. per square inch from 5 to 7 hours.

(iv) Emptied and sorted out.

(v) Washed and bleached in the Breakers.

It is impossible for us to fill up these forms (I and II) as the pulp is not manufactured in our mills separately.

12. Please see statement A to follow.

13. At present we have practically stopped the use of imported wood pulp totally and have substituted it by pulp from Sabai grass.

Occasionally on the demand of certain customers, *e.g.*, the Government of India who sometimes specify the inclusion of certain percentage of Sulphite Wood Pulp in some of their papers, wood pulp is used.

14. All the classes of paper which we manufacture are made without the admixture of Imported Wood Pulp. We do not find any marked difference between the Imported papers of similar qualities and the papers made by us.

15. We have stopped the use of Imported Pulp in our mills. But as far as we think the variation in the price of the wood pulp is due to (1) the scarcity of pulp in the pulp mills, (2) to the overproduction of the pulp thereby lowering the cost of production, and (3) the increasing demand of the market.

It is very difficult to forecast the probable trend of prices during the next few years. But in our opinion, if the political situation remains unchanged, there is every possibility for the prices to go down, provided also that the restriction to manufacture pulp to a certain limited quantity is removed.

16. In the last enquiry we had stated that the quality of our paper had improved and on the installation of Sabai Grass Screening, Washing and Bleaching plant and other devices the quality would be further improved. Now the erection of these plants is nearing completion and as soon as they are put into commission we expect further improvement in the quality of our papers.

17. Please see Form IV relating to auxiliary materials.

As regards auxiliary materials per ton of finished paper, please see statement B to follow.

18. Regarding the auxiliary materials we find the position almost the same as in 1931. The qualities and prices as compared with Imported materials are competitive.

19. Soda is the only auxiliary material recoverable.

At present we are not in a position to give figures of recovery of soda as our Soda Recovery plant already installed has not been put into operation yet, but which we expect to start very shortly.

20. We do not keep record of such information as we receive our supplies of raw materials through contractors *i.e.* Mill Siding.

21. Total labour employed from the year 1931 to 1936 is given below:—

	Average daily attendance of Mill workers.	Wages paid. Rs.
1931 . . . . .	713	1,23,711
1932 . . . . .	627	1,03,399
1933 . . . . .	730	1,18,419
1934 . . . . .	711	1,18,901
1935 . . . . .	733	1,20,531
1936 . . . . .	753	1,21,723

22. As we were completely Indianised in 1931, the question of further progress does not arise.

We have the following number of apprentices employed in our mills:—

6 in the Manufacturing Department.

1 in the Mechanical Department.

12 learners in the Engineering Department.

Moreover, we also undertake the training of passed students of Government Technical Schools coming through the Director of Industries.

23. We had stated at the time of last enquiry that arrangements for housing had been made for supervising staff, and for the rest of the labour no arrangements were in fact necessary, because practically all of our labour is drawn from villages within walking distances from the mills and they almost all being agriculturists do not wish to live here, hence no steps have been thought necessary to be taken in this respect.

*Water Supply.*—Water for drinking is taken from the Municipal taps provided in the mill.

*Medical Attendance.*—First aid is given inside the mill in cases of injury and medicines given free in cases of illness. We have our arrangements with the Local Hospitals where injured men are immediately sent for treatment at the expense of the Company.

24. Since the last enquiry great changes have been made in the power plant which formerly consisted of Lancashire boilers and steam engines. Now they have all been replaced by two Babcock and Wilcox Multitube Boilers with Automatic Stokers, Superheaters and Economisers, driving one 1,500 K.W. Turbo-Alternator generating 440 volts, 3 phase, 50 cycles A. C. Current. The modernised steam and power plant has enabled us to have more power available in the mill and effect economy in steam consumption. The new power plant was put into commission in the year 1932.

(b) Cost of power per ton of finished paper is Rs. 33.48.

Our consumption of coal per ton of finished paper is 3.18 tons.

25. (1) The total Indian production of paper—

	Tons.
(a) Protected . . . . .	48,000
(b) Unprotected . . . . .	5,000
	<hr/> 53,000

(2) Total Indian demand—

	Tons.
(a) Protected . . . . .	60,000
(b) Unprotected . . . . .	153,000
	<hr/> 213,000

26. Nil.

27. (a) It has certainly helped the old mills to consolidate their mills and encouraged new mills opening up.

(b) We are not in a position to reply to this.

28. Nil.

29. Please see statement D to follow.

30. Please see statement E to follow.

31 to 34. Nil.

35. There is no difference in price between paper made from bamboo and paper made from other indigenous materials.

36. There has not been any marked variation in the quality of our paper during the period under question.

37. Nil.

38. There has been no change in our processes of manufacture.

A short description of the new plant and machinery representing additions and replacements is given below:—

*Babcock and Wilcox Water Tube Boilers.*—In latter part of the year 1932, the two Babcock and Wilcox Water Tube Boilers were put into commission.

*Specification.*—Two Babcock and Wilcox Water Tube Boilers with automatic Chain Grate Stokers, Superheaters and Green's Patent Economisers, constructed for a working pressure of 200 lbs. per sq. in.

Heating surface of boiler=4,726 sq. ft.

Heating surface of superheaters=1,045 sq. ft.

Grate area of boiler=154 sq. ft. each.

Rating of Boiler=4,362 each.

Two Worthington Simpsons Feed Pumps.

Our present steam raising capacity is 23,000 lbs. per hour.

Our coal consumption has been reduced by 45 to 50 per cent.

*Metrovick 1,500 K.W. Steam Turbine.*—One set of self contained Impulse type Geared Pass-out Steam Turbine, 1,500 K.W. and 5,000 R.P.M. complete with a Surface Condensing plant with auxiliaries coupled with 1,875 K.V.A., 3 phase, 50 cycles, 400/440 Volts Alternator.

*Bellis and Morcom 100 K.W. High Speed Steam Engine.*—One set of Bellis and Morcom Vertical Non-condensing Steam Engine 100 K.W., 500 R.P.M. directly coupled to the Alternator 125 K.V.A., 50 cycles, 3 phase, 400/440 volts.

Main Switchgear containing two Main Alternator panels, Synchronous Panel and 9 feeders equipped with necessary instruments and automatic Oil Circuit Breakers and Relays with T. L. Fuses.

One set of Motor Generator 35 K.W. D.C. 110 volts for light and fans.

Two sets of Ward Leonard of 90 K.W. each for our paper machines.

*Filtered Water Pumping Plant.*—One Mather and Platt Electrically driven Centrifugal Pump, capacity 1,500 gallons per minute having a total head of 40 ft. from all causes.

One Worthington Simpson Centrifugal Pump of 2,500 gallons per minute capacity coupled to a Electrical Slipring Motor, having a total head of 80 ft.

One 1,000 gallons capacity Steam driven Centrifugal pump having a head of 65 ft.

Different kinds of Induction motors, 3 phase, 50 cycles, 400/440 volts ranging from 3 B.H.P. to 350 B.H.P. The total number of motors already in operation is 28. The motors of Soda Recovery and Grass Screening, Washing and Bleaching plants have not been included owing to their being not put into operation.

*Soda Recovery Plant.*—The installation of this plant was completed in the year 1936, but has not been put into operation.

*Sabai Grass Screening, Washing and Bleaching Plant.*—The Screening and Washing plant are complete and the Bleaching plant is under erection.

*Bewoid Mill.*—This Mill was put into commission in the year 1935 and giving us good results.

*Voith Revolving Strainers.*—Two Voith Revolving Strainers one for each Paper machine were installed in place of flat Strainers and were put into operation in the year 1935.

*One Bentley and Jackson Rewinder.*—This machine has been working since 1935.

39. The total expenditure incurred on Buildings and plant since 1931 is as follows:—

	Rs.	A. P.
Buildings . . . . .	1,04,224	10 11
Plant . . . . .	8,99,113	4 0
(a) Pulp . . . . .	3,49,212	12 10
(b) Paper . . . . .	6,54,125	2 1

In the above expenditure, the amount incurred on Sabai Grass Screening, Washing and Bleaching plant is not included as the plant is still under construction.

As we do not manufacture pulp from bamboo, no expenditure incurred on this account.

40. We do contemplate several replacements and extensions as given below:—

(a) Rag Chopper, Rag Duster, Beaters and Paper Cutter.

(b) A complete modern Paper-making machine with Pulp Preparation plant, Super Calenders, Grass Cutting and dusting arrangement and new digesters for grass.

41. The Block value of property after deducting depreciation as it stood on 31st December, 1936, is as follows:—

(a) Leases and Concession are for 50 years.

	Rs.	A. P.	Rs.	A. P.
(b) Leases Land at cost . . . . .	.....	.....	1,000	0 0
(c) Buildings (on leasehold land) . . . . .	1,32,018	13 11		
	31,462	7 5		
			1,63,481	5 4
(d) Plant and Machinery . . . . .	1,04,535	10 3		
	4,94,608	11 1		
			5,99,144	5 4
(e) Other Assets . . . . .	.....	.....	25,73,491	9 2
Total . . . . .	.....	.....	33,37,117	3 10

42. The estimated cost for erecting a mill of the same capacity as our mill is given below:—

	Rs.
	Lakhs.
(1) Buildings . . . . .	9
(2) Plant and Machinery . . . . .	21
Total . . . . .	30



43. The amount of Depreciation written-off since 1931 is given below:—

Year.	Amount.	
	Rs.	A. P.
1931 . . . . .	6,000	0 0
1932 . . . . .	Nil.	
1933 . . . . .	24,000	0 0
1934 . . . . .	25,800	0 0
1935 . . . . .	26,500	0 0
1936 . . . . .	26,336	3 2

*Reserve Fund created from surplus profits.*

	Rs.	A. P.
1931 . . . . .	42,122	11 0
1932 . . . . .	Nil.	
1933 . . . . .	Nil.	
1934 . . . . .	Nil.	
1935 . . . . .	Nil.	
1936 . . . . .	40,000	0 0

44. Following is the statement of the Paid-up Capital, amount and rate of dividend:—

	1931.	1932.	1933.	1934.	1935.	1936.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
(a) Capital paid up .	8,00,000	8,00,000	8,00,000	1,00,000	8,00,000	8,00,000
(b) Dividend paid .	40,000	Nil.	32,000	16,000	36,000	44,000
(c) Rate of dividend	5%	Nil.	4%	2%	4½%	5½%

45. We are sending you 12 copies of our Half-yearly Balance Sheets from 1931 to 1936.

46. No.

47. Please see Forms V and VI annexed.

48. If the conditions are normal and a full output is obtained, we anticipate a reduction in cost of manufacture due to the reduction in the overhead charges by 20 per cent., that is, Rs. 30 to 35 per ton, approximately.

49. The following is a statement of—

	Rs.
(a) The average value of the stocks of primary and auxiliary materials stores held by the Company . . . . .	10,53,452 yearly.
(b) The average outstanding in respect of goods held by the Company . . . . .	1,68,705 „

50. We have got sufficient working capital at present.

51. Nil.

52. (1) Cost of production has come down to some extent due to the reduction in the consumption of coal on account of the installation of the new power plant and also due to the Bewoid Mill.

(2) Since the installation of Rotary Strainers the loss of fibres has considerably reduced.

53. We wish that the protection should be continued as proposed by the Paper Makers Association in their answer to Question 51. We are in full agreement with it.

54 & 55. Nil.

## FORM I—(Qn. 5.)

## Primary Materials.

	1931.	1932.	1933.	1934.	1935.	1936.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<b>Bamboo—</b>						
(1) Quantity of material used . . . . .						
(2) Quantity of finished paper which material represents . . . . .						
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .						
<b>Grass—</b>						
(1) Quantity of material used . . . . .	1,309	931	1,603	602	237	47
(2) Quantity of finished paper which material represents . . . . .	498	200	613	150	76	15
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	20.72%	17.22%	15.93%	4.83%	2.43%	0.50%
<b>Waste Paper and Waste Paper Cuttings—</b>						
(1) Quantity of material used . . . . .	116	51	169	24	22	2
(2) Quantity of finished paper which material represents . . . . .	85	36	118	17	16	1
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	8.68%	2.14%	3.66%	0.55%	0.51%	0.03%
<b>Other Indigenous Materials—</b>						
(1) Quantity of materials used . . . . .	2,724	1,913	2,912	2,866	3,923	4,309
(2) Quantity of finished paper which material represents . . . . .	1,439	1,013	1,423	1,399	1,983	2,169
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	61.96%	60.15%	44.18%	45.02%	63.11%	72.59%

## Total Indigenous Materials—

(1) Quantity of materials used . . . . .	4,149	2,895	4,684	9,392	4,182	4,358
(2) Quantity of finished paper which materials represent . . . . .	2,072	1,339	2,054	1,686	2,075	2,185
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	86.21%	79.51%	63.77%	50.40%	66.04%	79.12%
Imported Pulp—						
(1) Quantity of material used . . . . .	252	866	1,128	1,635	1,101	713
(2) Quantity of finished paper which material represents . . . . .	214	811	968	1,390	936	606
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	8.91%	18.47%	29.74%	44.74%	29.79%	20.28%
Output of finished paper						
Output of finished paper . . . . .	2,286	1,650	3,012	2,956	3,011	2,791
Loading at 33 per cent. retention . . . . .	12	19	39	80	40	50
Percentage on paper . . . . .	0.51%	1.13%	1.21%	0.97%	1.25%	1.67%
Total output of saleable papers						
Total output of saleable papers . . . . .	2,298	1,669	3,051	2,986	3,051	2,841
Wrappers for internal use . . . . .	105	15	170	121	91	147
Percentage on total quantity of paper manufactured . . . . .	4.37%	0.89%	5.25%	3.89%	2.89%	4.92%
Total output including wrappers for internal use						
Total output including wrappers for internal use . . . . .	2,403	1,684	3,221	3,107	3,142	2,988

ANNEXURE A—(Qn. 12.)  
Statement of each kind of foreign pulp imported by us.

Class of Pulp.	Quantity.	Country of export.	Price c.i.f. Calcutta, per ton.	Port of importation.	Freight and Insurance, etc.	Landing charges per ton.	Transshipment charges.
	Tons. Cwt. Qr		£ s. d.			Rs.	Rs.
1931.							
Easy Bleaching Sulphite . . .	213 18 0	Norway, Sweden and America.	9 10 0 to 11 10 0	Calcutta	..	5	21
Bleached Sulphite . . .	25 0 0	Do.	13 0 0	Do.	..	5	21
1932.							
Strong Sulphite . . .	50 2 3	Do.	9 0 0	Do.	..	60	22
Easy Bleaching Sulphite . . .	326 6 2	Do.	8 9 0 to 10 10 0	Do.	..	60	22
Bleached Sulphite . . .	26 11 2	Do.	12 15 0	Do.	..	60	22
1933.							
Strong Sulphite . . .	101 11 2	Do.	8 5 0	Do.	..	60	21
Easy Bleaching Sulphite . . .	707 4 4	Do.	8 5 0 to 10 5 0	Do.	..	60	21
Bleached Sulphite . . .	670 8 2	Do.	10 7 6 to 12 5 0	Do.	..	60	21

1934.									
Strong Sulphite	.	.	98 2 0	Do.	9 5 0	Do.	..	61	21
Easy Bleaching	.	.	507 8 3	Do.	9 10 0 to 10 3 0	Do.	..	61	21
Bleached Sulphite	.	.	633 12 3	Do.	11 7 0 to 12 7 6	Do.	..	61	21
Aspen Soda Bleached	.	.	10 6 0	Do.	13 5 0	Do.	..	61	21
1935.									
Strong Sulphite	.	.	152 11 0	Do.	7 17 0 to 9 10 0	Do.	..	60	21
Easy Bleaching	.	.	278 5 1	Do.	8 10 0 to 8 18 9	Do.	..	60	21
Bleached Sulphite	.	.	475 5 1	Do.	10 12 6 to 11 2 0	Do.	..	60	21
1936.									
Strong Sulphite	.	.	100 14 0	Do.	8 12 9 to 9 4 0	Do.	..	61	21
Easy Bleaching	.	.	188 16 0	Do.	8 5 0 to 9 19 0	Do.	..	61	21
Bleached Sulphite	.	.	382 13 2	Do.	11 10 0 to 13 17 6	Do.	..	61	21

N.B.—Freight, Insurance, etc., not known to us as we purchase c.i.f. Calcutta.

## FORM IV—(Qn. 17.)

## Auxiliary Materials.

	1931.		1932.		1933.		1934.		1935.		1936.	
	Ton.	Price Rs. per ton.	Ton.	Price Rs. per ton.	Ton.	Price Rs. per ton.	Ton.	Price Rs. per ton.	Ton.	Price Rs. per ton.	Ton.	Price Rs. per ton.
<i>Pulp Making material.</i>												
Quantity of material used—												
(a) Indian . . . . .	414	21-58	293	21-50	405	23-39	459	20-13	621	19-85	679	19-83
(b) Imported . . . . .	201	208-26	154	283-79	220	274-44	86	271-94	63	261-29	37	236-32
<i>Bleaching material.</i>												
Quantity of material used—												
(a) Indian . . . . .	..	..	..	..	..	..	..	..	..	..	..	..
(b) Imported . . . . .	344	150-55	276	153-14	431	130-71	494	124-70	529	649-57	598	128-25
<i>Leaching material.</i>												
Quantity of material used—												
(a) Indian . . . . .	36	53-41	57	59-57	118	52-56	89	45-41	120	42-57	151	39-57
(b) Imported . . . . .	..	..	..	..	..	..	..	..	..	..	..	..
<i>Sizing material.</i>												
Quantity of material used—												
(a) Indian . . . . .	380	138-09	322	132-75	578	123-57	554	125-75	449	11-65	517	127-00
(b) Imported . . . . .	..	..	..	..	..	..	..	..	..	..	..	..
<i>Any other Auxiliary material.</i>												
Quantity of material used—												
(a) Indian . . . . .	62	24-09	43	22-39	60	22-48	53	21-03	69	21-30	59	21-13
(b) Imported . . . . .	8-42	231-82	8½	371-90	12-66	382-62	14-70	343-74	5-64	542-02	2-75	1,275-03
<i>Total Auxiliary materials.</i>												
Quantity of material used—												
(a) Indian . . . . .	892	..	721	..	1,161	..	1,155-54	..	1,259-33	..	1,406-54	..
(b) Imported . . . . .	553-42	..	438-40	..	668-66	..	594-70	..	597-64	..	637-75	..

## STATEMENT B.

*Statement of Auxiliary materials per ton of finished paper.*

Auxiliary materials.							Quantity per ton of paper.
							Tons.
Bleaching Powder	.	.	.	.	.	.	·16
Caustic Soda	.	.	.	.	.	.	·05
China Clay	.	.	.	.	.	.	·03
Rosin	.	.	.	.	.	.	·02
Casein	.	.	.	.	.	.	...
Katni Clay and Ochres	.	.	.	.	.	.	·02
Alum Ferric	.	.	.	.	.	.	·15
Lime	.	.	.	.	.	.	·18
Soda Ash	.	.	.	.	.	.	·003
Dyes	.	.	.	.	.	.	...



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STATEMENT D—(Qn. 29.)  
Statement of Freight.

Statement showing the rate of freight of paper per Maund from Badshahnagar, Howrah and Bombay to the following stations.

Station to	FROM BADSHAHNAGAR.				FROM HOWRAH.				FROM BOMBAY.			
	LESS THAN THREE HUNDRED MDS. (MINIMUM WAGON LOAD).		OVER 300 MDS. (WAGON LOAD.)		LESS THAN 300 MDS. (MINIMUM WAGON LOAD).		OVER 300 MDS. (WAGON LOAD.)		LESS THAN 300 MDS. (MINIMUM WAGON LOAD).		OVER 300 MDS. (WAGON LOAD.)	
	Per Md.	Per Mile.	Per Md.	Per Mile.	Per Md.	Per Mile.	Per Md.	Per Mile.	Per Md.	Per Mile.	Per Md.	Per Mile.
Howrah	As. P. 12 8	.24	As. P. 10 9	.21	Rs. A. P. ..	..	Rs. A. P. ..	..	Rs. A. P. ..	..	Rs. A. P. ..	..
Allahabad	5 5	.48	5 1	.45	1 2 9	.44	1 2 9	.44	1 5 11	.21	1 5 11	.21
Delhi	9 10	.37	8 3	.32	1 12 5	.38	1 9 8	.34	1 12 8	.36	1 12 8	.36
Benares	7 2	.44	6 2	.38	0 15 10	.44	0 15 10	.44	1 8 5	.32	1 8 5	.32
Agra Cantt.	7 10	.43	6 7	.36	1 12 7	.43	1 12 7	.43	1 11 3	.39	1 11 3	.39
Meerut City	9 7	.39	8 0	.32	1 13 4	.39	1 10 2	.35	2 3 0	.34	2 3 0	.34
Jaipur	7 2	.44	6 3	.39	1 12 5	.43	1 12 5	.43	2 0 4	.34	2 0 4	.34
Moradabad	7 8	.43	6 6	.37	1 12 5	.41	1 12 5	.41	2 0 11	.34	2 0 11	.34
Bareilly	6 0	.46	5 5	.41	1 11 6	.43	1 11 6	.43	1 15 0	.33	1 15 0	.33
Gaya	10 2	.33	8 7	.31	0 11 1	.46	0 11 1	.46	1 12 11	.37	1 12 11	.37
Aligarh	8 7	.42	7 1	.34	1 12 5	.43	1 12 5	.43	2 0 5	.34	2 0 5	.34
Hathras	8 1	.42	6 8	.35	1 12 5	.42	1 12 5	.42	1 15 9	.34	1 15 9	.34
Patna	10 5	.37	8 8	.31	0 12 5	.44	0 12 5	.44	1 13 1	.33	1 13 1	.33
Bhagalpur	12 7	.33	10 4	.27	0 10 1	.46	0 10 1	.46	2 1 10	.34	2 1 10	.34
Saharanpur	10 2	.37	8 6	.31	1 13 9	.39	1 10 10	.34	2 5 2	.35	2 5 2	.35
Naini Jn.	5 6	.47	5 2	.44	1 2 8	.44	1 2 8	.44	1 5 0	.3	1 5 0	.3



## STATEMENT E—(Qn. 30).

Statement showing average Net Realised ex-Factory prices per lb. for the different classes of papers since 1931 to 1936.

Classes of Papers.	1931.	1932.	1933.	1934.	1935.	1936.
	As. P.	As. P.	As. P.	As. P.	As. P.	As. P.
Brown . . . . .	2 6	2 4½	1 11½	1 7	1 8	1 10
Cream Laid 6 lbs. . . . .	3 7½	3 7½	3 5	3 3½	3 4½	3 5
Cream Laid 8 lbs. and up . . . . .	3 6½	3 3½	3 3½	3 1½	3 2	3 3
Coloureds . . . . .	3 7½	3 5½	3 5	3 3½	3 2	3 4
H. B. A. Govt. or Superior Badami . . . . .	3 3½	3 0	3 0	2 10½	2 10½	3 0
H. B. B. (Badami) 10 lb. . . . .	2 11½	2 7½	2 4	2 1½	2 2	2 2½
H. B. B. (Badami) Heavy . . . . .	2 9	2 6½	2 3	2 0½	2 0	2 1½
Wrapper and Brown card . . . . .	2 1½	1 11½	1 10	1 10	1 10½	1 11
White Printing . . . . .	3 5½	3 4½	3 4	3 2½	3 3	3 3½
White Drawing and cart . . . . .	3 4½	3 3	3 2½	3 1½	3 2	3 2
White Rough . . . . .	3 4½	3 3	3 2½	3 1½	3 2	3 3½
Govt. Stamp Cap . . . . .	4 5	4 8	4 8	4 8	4 9	4 9
Cream Wove . . . . .	3 6½	3 3	3 2½	3 1½	3 2	3 3½
Semi-Bleached . . . . .	3 4½	3 6	3 4	3 2	3 2	3 0½
Antique Wove . . . . .	3 4½	3 3½	3 3	3 1½	3 2	3 4
Antique Laid . . . . .	3 4½	3 3½	3 3	3 1½	3 2	3 4
Azure Laid . . . . .	4 6	3 4½	3 4	3 3	3 3½	3 5
Blottings . . . . .	4 11½	3 10½	3 10	3 7½	3 8	3 10½

(Qn. 36.)

The quantity of paper supplied to the Central and Provincial Governments, States and Railways is given below:—

Year.	Quantity of papers.	
	Tons.	
1931 . . . . .	1,387	
1932 . . . . .	897	
1933 . . . . .	1,217	
1934 . . . . .	1,276	
1935 . . . . .	1,091	
1936 . . . . .	1,039	

The average not realised ex-Factory price on the above supply is as follows:—

Classes of Papers.	1931.	1932.	1933.	1934.	1935.	1936.
	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.
<b>Central Government—</b>						
	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.
White Printing . . .	3 5	3 6	3 4	3 1½	3 1½	3 0½
Semi-Bleached . . .	3 3½	3 5	3 3	3 1	3 1	3 0
Badami . . .	2 10½	3 0	2 9½	2 8½	2 7	2 5½
<b>Provincial Government, United Provinces—</b>						
White Printing . . .	...	3 7	3 4½	3 2	3 2	3 1½
Semi-Bleached . . .	...	3 6	...	...	...	...
Glazed Buff . . .	...	...	...	...	...	2 6
Water-marked Paper . . .	...	5 2	...	...	...	...
<b>Patwari Paper—</b>						
Badami . . .	...	2 9½	...	2 1½	...	2 1½
Unbleached . . .	3 3½	3 5	...	3 1½	3 1	3 1½
Brown . . .	...	2 4	2 4	...	...	2 1½
<b>Bihar Government—</b>						
Water-marked Stamp paper . . .	4 5	4 8	4 8	4 8	4 9	4 9
<b>States—</b>						
Badami . . .	...	2 3	...	2 0½	...	...
White Printing . . .	...	...	...	3 0	...	...
Azure Laid . . .	...	...	...	3 6	...	...
<b>Railways—</b>						
Cream Laid . . .	3 7	3 7	3 3½	3 3½	3 2½	...
White Printing . . .	3 6	3 6	3 3½	3 3½	...	...
Superior Badami . . .	3 5	3 5	...	...	3 1	2 10
Badami . . .	...	...	2 1½	2 1½	...	...
Brown . . .	...	...	...	...	...	1 7
Blotting . . .	3 6	3 6	3 11	...	...	...

## FORM V—(Qn. 47.)

*Total Expenditure incurred on the Production of Paper.*

Manufacturing Expenses.	1931.		1932.	
	Rs. A. P.	Per cent.	Rs. A. P.	Per cent.
1. Primary Materials . . . . . (N.B.—Expenditure on each Material to be shown separately as well as the quantity of each used.)	2,64,923 3 0	25-08	1,86,016 0 0	20-25
2. Imported Pulp . . . . .	48,948 8 0	4-63	74,827 5 0	8-09
3. Auxiliary Materials . . . . . (N.B.—Expenditure on each principal material to be shown separately as well as the quantity of each used.)	1,78,005 3 0	16-89	1,42,631 1 0	15-53
4. Power and Fuel . . . . .	1,43,480 0 0	13-59	1,18,997 6 0	12-06
5. Current Repairs . . . . .	27,234 6 3	2-59	20,799 14 4	2-20
6. Labour . . . . .	1,23,711 6 3	11-71	1,03,399 2 11	11-25
7. Supervision and establishment—				
(a) Salaries of technical staff . . . . .	46,641 13 10	4-41	47,321 12 5	5-15
(b) Salaries of non-technical staff . . . . .	18,744 11 1	1-77	20,405 8 7	2-24
8. Checking packing . . . . .	25,350 0 0	2-50	19,058 7 0	2-08
9. Any other items in cost of manufacture.	34,210 15 0	3-33	30,947 8 0	3-37
<b>TOTAL</b> . . . . .	<b>9,08,389 18 5</b>	<b>85-00</b>	<b>7,63,904 1 3</b>	<b>83-18</b>
<i>Overhead charges.</i>				
10. Selling expenses . . . . .	4,60,006 9 10	4-35	66,091 6 4	7-29
11. Insurance . . . . .	12,742 9 3	1-18	13,009 10 2	1-42
12. Rents, Rates and Taxes excluding income-tax.	19,860 15 2	1-88	19,377 3 6	2-12
13. Depreciation (2½ and 5 per cent.) . . . . .	6,000 0 0	0-54	Nil	Nil.
14. Interest on working . . . . .	15,428 8 3	1-46	14,338 11 10	1-56
15. Head office expenses and Directors' fee.	22,239 0 0	2-10	18,343 9 9	1-99
16. Miscellaneous . . . . .	27,451 10 8	2-59	22,394 3 5	2-44
<b>TOTAL</b> . . . . .	<b>1,49,729 5 8</b>	<b>14-19</b>	<b>1,54,448 13 0</b>	<b>16-52</b>
<b>GRAND TOTAL</b> . . . . .	<b>10,58,119 3 1</b>	<b>..</b>	<b>9,18,352 14 3</b>	<b>..</b>
Total out put of paper for the year in Tons	2,298 0 0	..	1,660 0 0	..

## FORM V—(Qn. 47)—contd.

## Total Expenditure incurred on the Production of Paper—contd.

Manufacturing Expenses.	1933.		1934.	
	Rs. A. P.	Per cent.	Rs. A. P.	Per cent.
1. Primary Materials . (N.B.—Expenditure on each Material to be shown separately as well as the quantity of each used.)	2,59,936 0 0	12-03	1,91,656 9 0	14-23
2. Imported Pulp . . . . .	2,44,803 15 0	18-31	3,65,581 6 0	27-23
3. Auxiliary Materials . (N.B.—Expenditure on each principal material to be shown separately as well as the quantity of each used.)	2,10,010 12 0	15-73	1,74,125 14 0	12-97
4. Power and Fuel . . . . .	1,02,256 1 0	7-65	99,400 14 0	7-13
5. Current Repairs . . . . .	23,562 3 10	1-76	20,564 0 6	1-53
6. Labour . . . . .	1,18,415 0 3	8-87	1,18,901 7 9	8-55
7. Supervision and establishment—				
(a) Salaries of technical staff . .	48,016 0 6	3-52	45,672 3 11	3-42
(b) Salaries of non-technical staff .	19,315 2 5	1-43	19,362 9 11	1-44
8. Checking packing . . . . .	29,778 0 0	2-23	34,313 6 9	2-55
9. Any other items in cost of manufacture.	40,588 9 0	3-72	48,613 6 0	3-17
<b>TOTAL</b> . . . . .	11,95,230 1 0	82-35	11,00,183 12 0	182-62
<b>Overhead charges.</b>				
10. Selling expenses . . . . .	1,01,616 13 7	7-61	1,25,273 6 11	9-53
11. Insurance . . . . .	11,986 6 2	0-87	11,096 5 5	0-82
12. Rents, Rates and Taxes excluding income-tax.	27,443 10 0	2-25	30,999 4 8	1-54
13. Depreciation (2½ and 5 per cent.) .	24,200 0 0	1-86	26,300 0 0	1-92
14. Interest on working . . . . .	12,028 3 2	0-90	11,382 2 8	0-39
15. Head office expenses and Directors' fee.	27,630 7 3	2-37	24,270 6 5	1-53
16. Miscellaneous . . . . .	2,55,172 0 7	1-89	13,927 5 10	1-00
<b>TOTAL</b> . . . . .	2,29,776 8 9	17-75	2,32,946 15 6	17-38
<b>GRAND TOTAL</b> . . . . .	13,35,006 9 9	..	13,42,132 11 7	..
Total output of paper for the year in Tons	3,051 0 0	..	2,986 0 0	..

## FORM V—(Qn. 47)—contd.

## Total Expenditure incurred on the Production of Paper—contd.

Manufacturing Expenses.	1935.		1936.	
	Rs. A. P.	Per cent.	Rs. A. P.	Per cent.
1. Primary Materials . . . . . (N.B.—Expenditure on each Material to be shown separately as well as the quantity of each used.)	2,15,223 14 0	17-22	2,12,143 6 0	18-13
2. Imported Pulp . . . . .	2,37,663 4 0	19-03	1,57,315 4 0	13-48
3. Auxiliary Materials . . . . . (N.B.—Expenditure on each principal material to be shown separately as well as the quantity of each used.)	1,67,936 3 0	13-37	1,75,335 7 0	15-03
4. Power and Fuel . . . . .	1,03,824 1 0	8-31	98,511 15 0	8-67
5. Current Repairs . . . . .	28,253 1 9	2-25	35,677 5 4	3-05
6. Labour . . . . .	1,20,531 2 6	9-65	1,21,722 15 7	10-63
7. Supervision and establishment—				
(a) Salaries of technical staff . . . . .	45,912 8 3	3-67	44,887 14 9	3-95
(b) Salaries of non-technical staff . . . . .	19,219 5 8	1-53	19,854 5 9	1-70
8. Checking packing . . . . .	33,822 15 0	2-97	29,380 11 0	2-67
9. Any other items in cost of manufacture.	44,994 14 0	3-63	38,388 9 0	3-28
<b>TOTAL</b> . . . . .	10,10,431 4 9	81-45	9,33,217 13 5	80-64
<i>Overhead charges.</i>				
10. Selling expenses . . . . .	1,20,131 8 7	9-62	1,16,403 10 7	9-97
11. Insurance . . . . .	10,829 4 10	0-86	11,712 15 5	1-07
12. Rents, Rates and Taxes excluding income-tax.	25,351 2 1	2-03	24,817 6 4	2-08
13. Depreciation (2½ and 5 per cent.) . . . . .	26,500 0 0	2-12	26,336 3 2	2-25
14. Interest on working . . . . .	11,031 0 4	0-95	12,038 13 10	1-03
15. Head office expenses and Directors' fee.	13,154 12 5	1-35	20,927 7 6	1-79
16. Miscellaneous . . . . .	14,033 2 0	1-12	21,665 5 3	1-17
<b>TOTAL</b> . . . . .	2,31,990 14 3	18-55	2,33,401 13 7	19-36
<b>GRAND TOTAL</b> . . . . .	12,48,472 3 0	..	11,66,619 11 0	..
Total output of paper for the year in Tons	3,031 0 0	..	2,841 0 0	..

## FORM V—(Qn. 47)—contd.

*Total Expenditure incurred on the Production of Paper.*

Manufacturing Expenses.	1931.		1932.		1933.	
	Quantity.	Amount.	Quantity.	Amount.	Quantity.	Amount.
	Tons.	Rs. A.	Tons.	Rs. A.	Tons.	Rs. A.
<b>Primary Materials—</b>						
Bags and Cuttings .	1,321	85,553 6	808	55,778 8	1,325	74,962 10
Patnal . . .	606	33,285 0	314	17,094 8	659	32,944 7
Hemp rope . .	797	65,182 8	731	59,704 14	928	59,455 15
Balb grass . .	1,809	76,092 9	931	51,502 7	1,803	76,402 13
Waste Paper . .	116	4,809 12	51	1,936 0	169	6,170 3
<b>TOTAL</b> .	..	2,64,923 3	..	1,86,016 0	..	2,50,936 0
<b>2. Imported Pulp</b> .	252	48,948 3	366	74,327 5	1,123	2,44,503 15
<b>3. Auxiliary Materials—</b>						
Bleaching Powder .	344	51,791 13	276	42,267 11	431	56,339 10
Caustic Soda . .	201	53,921 5	154	43,704 4	220	60,377 4
China Clay . .	36	2,102 11	57	3,395 12	118	0,308 6
Rosin . . .	43	14,799 0	39	12,750 12	75	24,318 13
Casein . . .	..	..	..	..	..	..
Katal Clay and Ochres.	62	1,493 14	43	962 13	60	1,349 3
Alum Ferric . .	337	37,676 10	283	20,997 4	503	47,107 4
Lime . . .	414	8,936 11	299	6,420 1	405	9,478 7
Soda Ash . . .	8	1,203 5	8	1,330 10	12	1,931 13
Dyes . . .	42	1,109 14	40	1,792 14	66	2,911 1
Packing . . .	..	25,350 0	..	19,058 7	..	29,778 0
Other items in cost of manufacturing.	..	34,210 15	..	30,947 8	..	49,588 9
Miscellaneous Stores	..	22,582 9	..	18,358 1	..	21,520 7
<b>TOTAL</b> .	..	2,55,238 11	..	2,10,995 1	..	3,10,891 12
<b>4. Power and Fuel—</b>						
Coal . . .	13,011	1,43,480 0	11,153	1,18,997 6	9,738	1,02,354 1

FORM V—(Qn. 47)—*concl'd.**Total Expenditure incurred on the Production of Paper—contd.*

Manufacturing Expenses.	1934.		1935.		1936.	
	Quantity.	Amounts.	Quantity.	Amounts.	Quantity.	Amounts.
	Tons.	Rs. A.	Tons.	Rs. A.	Tons.	Rs. A.
<b>1. Primary Materials—</b>						
Bags and Cuttings .	1,336	71,067 0	2,007	98,469 8	1,050	92,698 14
Patmal . . .	525	25,161 7	567	23,033 12	739	26,868 6
Hemp rope . . .	1,005	72,030 7	1,349	82,241 9	1,620	90,065 11
Baib grass . . .	502	22,326 12	237	10,032 8	47	2,674 1
Waste Paper . .	24	1,072 15	22	1,446 9	2	136 6
<b>TOTAL</b> . . .	..	1,91,658 9	..	2,15,223 14	..	2,12,143 6
<b>2. Imported Pulp</b> .	1,635	3,65,581 6	1,101	2,37,663 4	713	1,57,815 4
<b>3. Auxiliary Materials—</b>						
Bleaching Powder .	494	61,603 6	529	64,956 15	593	76,697 0
Caustic Soda . . .	86	23,386 15	63	16,460 7	37	8,706 15
China Clay . . .	89	4,068 4	120	5,109 1	151	5,976 7
Resin . . . . .	86	27,402 14	92	23,018 13	88	22,034 3
Casein . . . . .	04	25 12	133	701 6	154	863 4
Katni Clay and Ochres.	53	1,115 4	99	1,470 8	59	1,347 2
Alum Ferric . . .	468	42,233 11	356	34,929 9	426	42,835 2
Lime . . . . .	459	9,239 11	621	12,331 13	679	13,467 0
Soda Ash . . . .	14	2,215 6	5	820 3	2	826 8
Dyes . . . . .	70	2,937 11	64	2,237 6	75	3,182 3
Packing . . . . .	..	34,313 5	..	33,822 15	..	29,380 11
Other items in cost of Manufacturing.	..	42,613 6	..	44,994 14	..	38,368 9
Miscellaneous Stores	..	3,120 12	..	7,926 1	..	15,649 13
	..	2,59,173 5	..	2,59,780 1	..	2,58,754 7
<b>4. Power and Fuel—</b>						
Coal . . . . .	9,095	96,400 14	9,609	1,03,824 1	9,835	98,511 15

## FORM VI—(Qn. 47.)

Works cost per ton of finished paper.

Manufacturing Expenses.	1931.		1932.		1933.	
	Rs.	Per cent.	Rs.	Per cent.	Rs.	Per cent.
1. Primary materials (N.B. — Expenditure on each material to be shown separately as well as the quantity of each used.) (Please see statement G annexed.)	115-28	25-08	111-46	20-25	85-2	19-47
2. Imported Pulp . . . . .	21-3	4-63	44-53	8-19	80-14	18-31
3. Auxiliary materials . . . . . (For separate quantity please see statement G annexed.)	75-32	16-39	85-46	15-53	68-83	15-73
4. Power and fuel . . . . .	62-44	13-66	71-3	13-9	33-52	7-66
5. Current repairs and maintenance	11-87	2-55	12-46	2-26	7-72	1-76
6. Labour . . . . .	53-43	11-71	61-95	11-26	38-81	8-86
7. Supervision and establishment—						
(a) Salaries of technical staff . .	20-3	4-42	23-35	5-15	15-74	3-6
(b) Salaries of non-technical staff.	8-16	1-78	12-23	2-22	6-36	1-43
8. Packing . . . . .	11-03	2-4	11-42	2-07	9-76	2-25
9. Any other items in cost of manufacture.	14-89	3-24	18-54	3-35	16-25	3-71
<b>TOTAL</b> . . . . .	<b>394-42</b>	<b>..</b>	<b>457-69</b>	<b>..</b>	<b>362-27</b>	<b>..</b>
<b>Overhead Charges.</b>						
10. Selling expenses . . . . .	20-02	4-36	40-14	7-30	33-31	7-61
11. Insurance . . . . .	5-55	1-27	7-71	1-41	3-83	0-87
12. Rents, rates and taxes (excluding income-tax).	8-64	1-88	11-61	2-11	9-06	2-05
13. Depreciation at our own rates at 2½ and 5 per cent.	2-61	0-56	..	..	7-93	1-81
14. Interest on working capital . .	6-71	1-46	8-59	1-56	3-94	0-93
15. Head Office expenses and Directors' fees.	9-68	2-11	10-99	1-99	9-06	2-07
16. Miscellaneous . . . . .	11-95	2-60	13-42	2-44	6-25	1-38
<b>TOTAL</b> . . . . .	<b>65-16</b>	<b>..</b>	<b>92-54</b>	<b>..</b>	<b>75-32</b>	<b>..</b>
<b>GRAND TOTAL</b> . . . . .	<b>459-58</b>	<b>..</b>	<b>550-23</b>	<b>..</b>	<b>437-59</b>	<b>..</b>



## FORM VI—(Qn. 47)—contd.

Works-cost per ton of finished paper—contd.

Manufacturing Expenses.	1934.		1935.		1936.	
	Rs.	Per cent.	Rs.	Per cent.	Rs.	Per cent.
1. Primary materials. (N.B.—Expenditure on each material to be shown separately as well as the quantity of each used.) (Please see statement G annexed.)	64.19	14.28	70.54	17.34	74.67	18.18
2. Imported pulp . . . . .	122.43	27.24	77.90	19.23	55.37	13.48
3. Auxiliary materials . . . . . (For separate quantity please see statement G annexed.)	58.31	13.97	54.75	13.37	61.72	15.02
4. Power and fuel . . . . .	32.28	7.18	34.03	8.32	34.68	8.44
5. Current repairs and maintenance	6.89	1.53	9.26	2.36	12.56	3.05
6. Labour . . . . .	39.82	8.86	39.51	9.65	42.85	10.43
7. Supervision and establishment—						
(a) Salaries of technical staff . .	15.3	3.4	15.08	3.68	15.8	3.84
(b) Salaries of non-technical staff.	6.48	1.44	6.8	1.53	7.00	1.7
8. Packing . . . . .	11.49	2.55	11.09	2.71	10.34	2.51
9. Any other items in cost of manufacture.	14.27	3.17	14.76	3.63	19.53	4.83
<b>TOTAL . . . . .</b>	<b>371.46</b>	<b>..</b>	<b>383.21</b>	<b>..</b>	<b>328.50</b>	<b>..</b>
<b>Overhead Charges.</b>						
10. Selling expenses . . . . .	41.08	9.38	39.37	9.62	46.97	9.97
11. Insurance . . . . .	3.7	0.82	3.55	0.89	4.12	1.00
12. Rents, rates and taxes (excluding income-tax).	6.93	1.54	8.31	2.03	8.56	2.08
13. Depreciation at our own rates at 2½ and 5 per cent.	8.64	1.93	8.69	2.23	9.27	2.25
14. Interest on working capital . .	3.98	0.86	3.91	0.97	4.24	1.03
15. Head Office expenses and Directors' fee.	8.13	1.86	7.59	1.81	7.37	1.79
16. Miscellaneous . . . . .	4.66	1.03	4.61	1.28	7.63	1.85
<b>TOTAL . . . . .</b>	<b>77.99</b>	<b>..</b>	<b>76.04</b>	<b>..</b>	<b>82.16</b>	<b>..</b>
<b>GRAND TOTAL . . . . .</b>	<b>449.45</b>	<b>..</b>	<b>459.25</b>	<b>..</b>	<b>410.66</b>	<b>..</b>

## FORM VI.

*Works cost per ton of finished paper.*

Particulars.	1931.		1932.		1933.	
	Quantity Per Ton.	Price.	Quantity Per Ton.	Price.	Quantity Per Ton.	Price.
<i>Manufacturing Expenses.</i>		Rs.		Rs.		Rs.
1. Primary Materials—						
Bags and Cuttings . . . .	·57	37·22	·52	33·42	·45	24·57
Patmal . . . . .	·26	14·48	·18	10·24	·21	10·70
Hemp rope . . . . .	·34	28·86	·45	35·77	·80	22·76
Balb grass . . . . .	·50	33·11	·55	30·85	·52	24·04
Waste paper . . . . .	·06	2·09	·03	1·16	·05	2·02
2. Imported Pulp . . . . .	·10	21·30	·21	44·58	·36	80·13
3. Auxillary Materials—						
Bleaching Powder . . . .	·14	22·50	·16	25·32	·14	18·46
Caustic Soda . . . . .	·03	23·46	·09	26·18	·07	19·7
China Clay . . . . .	·01	·91	·03	2·03	·03	2·03
Rosin . . . . .	·01	6·43	·02	7·63	·02	7·97
Casein . . . . .	..	..	..	..	..	..
Katni Clay and Ochres . .	·02	·65	·02	·57	·01	·44
Alum Ferric . . . . .	·14	16·39	·16	17·97	·16	15·43
Lime . . . . .	·18	3·88	·18	3·85	·18	3·10
Soda Ash . . . . .	·003	·54	·004	·79	·003	·63
Dyes . . . . .	..	·48	..	1·07	..	·95
Packing . . . . .	..	11·03	..	11·41	..	9·76
Other items in cost of manufacture.	..	14·88	..	18·54	..	16·25
Miscellaneous . . . . .	..	9·82	..	10·99	..	7·05
4. Power and Fuel—						
Coal . . . . .	6·05	62·42	6·68	71·29	8·19	33·51

## FORM VI—contd.

Works cost per ton of finished paper—contd.

Particulars.	1934.		1935.		1936.	
	Quantity Per Ton.	Price.	Quantity Per Ton.	Price.	Quantity Per Ton.	Price.
		Rs.		Rs.		Rs.
<i>Manufacturing Expenses.</i>						
1. Primary Materials—						
Rags and Cuttings . . . .	·44	23-80	·65	15-88	·68	32-62
Patmal . . . . .	·17	8-42	·18	7-54	·26	9-35
Hemp rope . . . . .	·33	24-12	·44	26-95	·57	31-70
Balb grass . . . . .	·16	7-47	·07	8-28	·01	·04
Waste paper . . . . .	·008	·85	·007	·47	..	·04
2. Imported Pulp . . . . .	·54	122-48	·36	77-88	·25	55-37
3. Auxiliary Materials—						
Bleaching Powder . . . .	·16	20-63	·17	21-29	·21	26-99
Caustic Soda . . . . .	·02	7-83	·02	5-39	·01	3-06
China Clay . . . . .	·02	1-35	·03	1-67	·05	2-10
Rosin . . . . .	·02	9-17	·03	9-18	·03	7-75
Casein . . . . .	..	·008	·004	·22	..	·80
Katni Clay and Ochres . .	·01	·37	·02	·48	·02	·43
Alum Ferric . . . . .	·15	14-14	·11	11-44	·15	15-07
Lime . . . . .	·15	3-09	·20	4-04	·23	4-74
Soda Ash . . . . .	·004	·74	·001	·26	..	·11
Dyes . . . . .	..	·95	..	·73	..	1-12
Packing . . . . .	..	11-49	..	11-08	..	10-34
Other items in cost of manufac- ture.	..	14-27	..	14-74	..	13-51
Miscellaneous . . . . .	..	2-71	..	2-61	..	5-50
4. Power and Fuel—						
Coal . . . . .	3-04	32-28	3-14	34-02	3-10	34-67

(2) Letter No. S. D./1274, dated the 10th March, 1938.

At the time of the oral evidence here, we agreed to send the following forms (enclosed herewith in triplicate) as required by you for your information.

*Replies to Questionnaire Nos. 5, 17, 30, 47, 11, 51, and Summary of Terminal tax paid in 1937 (Statements and Forms) as per details on the enclosure.*

Question No. 5, Form I, Primary materials (3 copies).

Question No. 17, Form IV, Auxiliary materials (3 copies).

Question No. 30, Statement E, The average ex-Mill realised prices (3 copies).

Question No. 47, Form V, Separate expenditure of Primary and Auxiliary materials (3 copies).

Question No. 47, Form V, Total expenditure incurred on the production (3 copies).

Question No. 47, Form VI, Separate expenditure of Primary and Auxiliary materials on finished paper (3 copies).

Question No. 47, Form VI, Works cost per ton on finished paper (3 copies).

Question No. 11, Answers (3 copies).

Question Nos. 51 and 55, 3 copies (Answers).

Summary of Terminal tax paid by the Co. in the year 1937, (3 copies in 2 leaves each).

FORM I.—Primary Materials.

(Qu. 5.)

From 1st January, 1937 to  
30th June, 1937.

Tons.

*Bamboo—*

(1) Quantity of material used . . . . . Nil.

*Grass—*

(1) Quantity of material used . . . . . 707

(2) Quantity of finished paper which material represents . . . . . 212

(3) Percentage of (2) on the total quantity of paper manufactured . . . . . 14.18%

*Waste Paper and Paper Cuttings—*

(1) Quantity of material used . . . . . 93

(2) Quantity of finished paper which material represents . . . . . 66

(3) Percentage of (2) on the total quantity of paper manufactured . . . . . 4.41%

*Other Indigenous Materials—*

(1) Quantity of material (Rag, jute and hemp) used . . . . . 2,072

(2) Quantity of finished paper which material represents . . . . . 1,012

(3) Percentage of (2) on the total quantity of paper manufactured . . . . . 67.69%

*Total Indigenous Materials—*

(1) Quantity of materials used . . . . . 2,872

*Total Indigenous Materials—contd.*

	From 1st January, 1937 to 30th June, 1937.
	Tons.
(2) Quantity of paper which material represents .	1,290
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	86.28%
<i>Imported Pulp—</i>	
(1) Quantity of material used . . . . .	213
(2) Quantity of paper which material represents .	181
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	12.11%
Output of finished paper . . . . .	1,471
Add loading at 33 per cent. . . . .	24
Total finished output . . . . .	1,495

We have given figures for the 1st half-year ending 30th June, 1937, the figures for the 2nd half-year ending December, 1937, are not available as the accounts are not yet audited.

*Form IV.—Auxiliary materials.*

(Qn. 17.)

	From 1st January, 1937 to 30th June, 1937.	
	Tons.	Price Rs. per ton.
<i>Pulp-making material—</i>		
Quantity of material used—		
(a) Indian . . . . .	318	20.12
(b) Imported . . . . .	100	185.53
<i>Bleaching material—</i>		
Quantity of material used—		
(a) Indian . . . . .	...	...
(b) Imported . . . . .	314	122.84
<i>Loading material—</i>		
Quantity of material used—		
(a) Indian . . . . .	49	35.34
(b) Imported . . . . .	...	...
<i>Sizing material—</i>		
Quantity of material used—		
(a) Indian . . . . .	813	114.02
(b) Imported . . . . .	...	...
<i>Any other auxiliary material—</i>		
Quantity of material used—		
(a) Indian . . . . .	24	21.09
(b) Imported . . . . .	2.38	618.48
<i>Total auxiliary materials—</i>		
Quantity of material used—		
(a) Indian . . . . .	704	...
(b) Imported . . . . .	416.38	...
		25 A

30. *Statement E.*—The average ex-mill realised prices are given below :—

	Per lb.
	As. P.
1931 . . . . .	3 5.44
1932 . . . . .	3 2.67
1933 . . . . .	3 1.42
1934 . . . . .	2 11.81
1935 . . . . .	3 0.17
1936 . . . . .	3 0.23
From 1st January, 1937 to 30th June, 1937 . . . . .	2 11.95

42. The estimated cost for erecting a mill with two Paper-making machines of 6,000 tons capacity annually would be as follows :—

	Rs.
(1) Plant and Machinery . . . . .	25,00,000
(2) Buildings . . . . .	10,00,000
<b>Total</b> . . . . .	<b>35,00,000</b>

*Loading.*—Regarding increase in loading since 1931, we have to say that during these years we have made more White Printing papers for market. In the last enquiry in the year 1930, the average percentage of whites was 27.9 per cent., whereas the percentage of the present time has gone up to above 50 per cent. When less White Printing papers are made for market, there is decrease in loading.

47. Form V and VI regarding Works costs are annexed hereto. The costs are shown both inclusive of Railway freight and commission and exclusive of same.

Separate statement showing quantity of each of primary and auxiliary materials together with their price is herewith enclosed for the year 1937, ending 30th June, 1937.

*Labour Trouble.*—Since 1931 to 1936, we had no labour trouble. The decrease in labour in those years is due to less number of men working at that time because we had not much more staff for picking grass as we were using more wood pulp. The increase in labour in the year 1936 is due to more number of men newly engaged for the picking of grass on account of the stoppage of the use of imported pulp.

Copy of statement showing terminal tax paid by us in the year 1937 is annexed.

**FORM V.—Separate expenditure of primary and auxiliary materials as required under Form V—(Qn. 47.)**

Total expenditure incurred on the Production of Paper.

Manufacturing Expenses.	From 1st January, 1937 to 30th June, 1937.	
	Quantity. Tons.	Amount. Rs.
<b>1. Primary Materials—</b>		
Rags and Cuttings . . . . .	981	51,802.38
Patmal or Jute . . . . .	327	12,342.62
Hemp Rope . . . . .	764	43,399.38
Sabai Grass . . . . .	707	27,656.44
Waste Paper . . . . .	29	2,066.06
Paper (re-pulped) . . . . .	64	15,675.38
Total . . . . .	...	1,52,942.26
<b>2. Imported Pulp . . . . .</b>	213	52,891.25
<b>3. Auxiliary Materials—</b>		
Bleaching Powder . . . . .	314	38,572.25
Caustic Soda . . . . .	100	18,553.38
China Clay . . . . .	49	1,731.94
Rosin . . . . .	44	10,371.12
Casein . . . . .	8	545.00
Katni Clay and Ochres . . . . .	24	506.31
Alum Ferric . . . . .	269	25,316.44
Lime . . . . .	318	6,399.06
Soda Ash . . . . .	2	255.12
Dyes . . . . .	33	1,217.00
<b>8. Packing . . . . .</b>	...	17,868.62
<b>9. Any other items in the cost of manufacture—</b>		
Dry and wet felts, Jackets, machine wires and belts . . . . .	...	26,502.31
Miscellaneous Stores.—Wood for mill use, lubricants, electric goods, etc. . . . .	...	10,442.62
Total . . . . .		1,58,281.17
<b>4. Power and Fuel . . . . .</b>	4,467	51,154.12
Total . . . . .	...	4,15,268.80

## FORM V—(Qn. 47.)

## Total Expenditure incurred on the Production of Paper.

Manufacturing Expenses.	1931.		1932.		1933.	
	Ra. A. P.	Per cent.	Ra. A. P.	Per cent.	Ra. A. P.	Per cent.
1. Primary Materials (For individual quantity see separate statement annexed)	2,64,923 3 0	28.47	1,86,016 0 0	21.99	2,59,936 0 0	21.12
2. Imported Pulp	48,948 3 0	4.89	74,327 5 0	8.79	2,44,503 15 0	19.86
3. Auxiliary Materials (For individual quantity please see separate statement annexed)	1,73,095 3 0	17.29	1,42,631 1 0	16.86	2,10,010 12 0	17.06
4. Power and fuel (coal)	1,43,460 0 0	14.33	1,18,997 6 0	14.06	1,02,256 1 0	8.31
5. Current repairs	27,284 6 3	2.72	20,799 14 4	2.46	23,582 8 10	1.92
6. Labour	1,23,711 6 3	12.36	1,03,399 2 11	12.22	1,18,419 0 3	9.62
7. Supervision and Establishment— (a) Salaries of technical staff	46,641 13 10	4.66	47,321 12 5	5.60	48,016 0 6	3.90
(b) Salaries of non-technical staff	18,744 11 1	1.87	20,405 8 7	2.41	19,215 2 5	1.56
8. Packing	25,350 0 0	2.53	19,053 7 0	2.25	29,778 0 0	2.42
9. Any other items in the cost of manufacture (Detail is given in separate statement for each of primary materials.)	34,210 15 0	3.42	30,947 8 0	3.66	49,582 9 0	4.03
TOTAL	9,06,889 13 5	..	7,63,904 1 3	..	11,05,280 1 0	..



<i>Overhead Charges.</i>									
10. Selling expenses	.	.	.	.	.	.	.	.	.
11. Insurance	.	.	.	.	.	.	.	.	.
12. Rents, rates and taxes (excluding income-tax) (Rent of land, Terminal tax and water tax—Municipal taxes).	.	.	.	.	.	.	.	.	.
13. Depreciation at our own rates ( $2\frac{1}{2}$ per cent. on Bdgs. and 5 per cent. on machinery.)	.	.	.	.	.	.	.	.	.
14. Interest on Working Capital	.	.	.	.	.	.	.	.	.
15. Head Office expenses and Directors' fee	.	.	.	.	.	.	.	.	.
16. Miscellaneous (inclusive of Stores miscellaneous, Henl. charges, Postage, Audit fee, etc.)	.	.	.	.	.	.	.	.	.
	6,360	4	10	0.64	8,910	14	7	1.06	9,492 7 9
	12,742	9	3	1.27	18,009	10	2	1.55	11,680 0 2
	19,860	15	2	1.99	19,377	3	6	2.30	27,443 16 0
	6,000	0	0	0.60	Nil			Nil	24,200 0 0
	Nil			Nil	Nil			Nil	Nil
	22,229	0	6	2.22	13,343	9	9	2.13	27,630 7 3
	27,451	10	8	2.74	22,394	3	6	2.66	25,172 0 7
<b>TOTAL</b>	94,654	8	5	..	82,035	9	5	..	1,25,624 15 9
<b>GRAND TOTAL</b>	10,01,044	5	10	..	8,45,939	10	8	..	12,30,905 0 9
Railway freight and commission on sales	39,646	5	0	..	58,080	7	9	..	92,123 6 10
Grand total after adding Railway freight and Commission	10,40,690	10	10	..	9,04,020	2	5	..	13,23,028 6 7

## FORM V—(Qn. 47)—contd.

Manufacturing Expenses,	1934.		1935.		1936.		From 1st January, 1937, to 30th June, 1937.	
	Rs. A. P.	Per cent.	Rs. A. P.	Per cent.	Rs. A. P.	Per cent.	Rs. A. P.	Per cent.
1. Primary Materials . . . . . (For individual quantity see separate statement annexed.)	1,91,658 9 0	15-73	2,15,223 14 0	19-08	2,12,143 8 0	20-14	1,52,942 4 0	28-14
2. Imported Pulp . . . . .	3,65,581 6 0	30-00	2,97,663 4 0	21-07	1,57,315 4 9	14-94	52,891 4 0	9-04
3. Auxiliary Materials . . . . . (For individual quantity please see separate statement annexed.)	1,74,125 14 0	14-29	1,67,036 3 0	14-81	1,75,335 7 0	16-65	1,03,467 10 0	17-63
4. Power and fuel (coal) . . . . .	96,400 14 0	7-91	1,03,824 1 0	9-20	98,511 15 0	9-36	51,154 2 0	8-74
5. Current repairs . . . . .	20,564 0 6	1-70	28,253 1 9	2-51	35,677 4 4	3-39	16,015 0 7	2-74
6. Labour . . . . .	1,18,901 7 9	9-76	1,20,531 2 6	10-09	1,21,722 15 7	15-55	59,107 9 4	10-11
7. Supervision and Establishment— (a) Salaries of technical staff . . . . .	45,672 3 11	3-75	45,912 8 3	4-09	44,897 14 9	4-25	24,835 14 11	4-24
(b) Salaries of non-technical staff . . . . .	19,352 9 11	1-59	19,219 5 3	1-70	19,854 5 9	1-88	10,261 6 6	1-75
8. Packing . . . . .	34,313 5 0	2-82	33,822 15 0	2-99	29,390 11 0	2-80	17,868 10 0	3-05
9. Any other items in the cost of manufacture . . . . . (Detail is given in separate statement for each of primary materials.)	42,613 6 0	3-50	44,994 14 0	3-99	39,388 9 0	3-64	26,502 5 0	4-55
TOTAL . . . . .	11,09,188 12 1	..	10,16,481 4 9	..	9,38,217 13 5	..	5,15,046 2 4	..

<i>Overhead Charges.</i>									
10. Selling expenses . . . . .	13,329 12 9	1-09	11,632 6 2	1-03	14,963 2 8	1-42	6,270 14 1	1-07	
11. Insurance . . . . .	11,096 5 5	0-91	10,859 4 10	0-86	11,712 5 5	1-11	5,740 14 6	0-98	
12. Rents, rates and taxes (excluding income-tax) (Rent of land, Terminal tax and water tax—Municipal taxes).	20,689 4 8	1-70	25,351 2 1	2-25	24,317 6 4	2-31	14,766 9 9	2-52	
13. Depreciation at our own rates (2½ per cent. on Bldgs. and 5 per cent. on machinery).	25,800 0 0	2-12	26,500 0 0	2-34	26,336 3 2	2-51	16,731 12 1	2-86	
14. Interest on Working Capital . . . . .	Nil	Nil	Nil	Nil.	Nil	Nil	Nil	Nil	
15. Head Office expenses and Directors' fee . . . . .	24,276 6 6	1-99	23,154 12 5	2-05	20,927 7 0	1-99	12,597 11 0	2-15	
16. Miscellaneous (Inclusive of Stores, miscellaneous, Rental charges, Postage, Audit fee, etc.)	13,927 8 10	1-14	14,063 2 0	1-24	21,665 5 3	2-06	13,913 1 9	2-38	
<b>TOTAL</b> . . . . .	1,09,123 3 1	..	1,16,560 11 6	..	1,19,922 7 10	..	70,020 15 1	..	
<b>GRAND TOTAL</b> . . . . .	12,18,306 15 2	..	11,28,042 0 3	..	10,53,140 5 3	..	5,86,067 1 5	..	
Railway freight and Commission on sales . . . . .	11,943 10 2	..	1,08,499 2 5	..	1,01,440 7 11	..	49,429 2 11	..	
<b>Grand total after adding Railway freight and Commission</b> . . . . .	13,30,250 9 4	..	12,36,541 2 8	..	11,54,580 13 2	..	6,34,496 4 4	..	

## FORM VI—(Qn. 47.)

*Expenditure of primary and auxiliary materials separately per ton of finished paper as required under Form VI.*

From 1st January, 1937, to  
30th June, 1937.

Manufacturing expenses.	Quantity per ton.	Price per ton. Rs.
<b>1. Primary Materials—</b>		
Rags and Cuttings . . . . .	·65	34·65
Patmal or Jute . . . . .	·22	8·25
Hemp Rope . . . . .	·51	29·03
Sabai Grass . . . . .	·47	18·49
Waste Paper . . . . .	·02	1·38
Paper re-pulped . . . . .	·04	10·48
<b>Total</b> . . . . .	...	<u>102·28</u>
<b>2. Imported Pulp</b> . . . . .	·14	35·38
<b>3. Auxiliary Materials—</b>		
Bleaching Powder . . . . .	·21	25·80
Caustic Soda . . . . .	·07	12·41
China Clay . . . . .	·03	1·16
Rosin . . . . .	·02	6·94
Casein . . . . .	...	0·36
Katni Clay and Ochres . . . . .	·01	0·34
Alum Ferric . . . . .	·18	16·93
Lime . . . . .	·21	4·28
Soda Ash . . . . .	·001	0·17
Dyes . . . . .	...	0·81
<b>4. Packing</b> . . . . .	...	11·95
<b>5. Other items in the cost of manufacture—</b>		
(a) Dry and wet felts, jackets, machine wires and belts, etc. . . . .	...	17·72
(b) Miscellaneous stores: Wood for mill use, lubricants, electric goods and other small things for mill use . . . . .	...	6·99
<b>Total</b> . . . . .	...	<u>105·86</u>
<b>6. Power and Fuel (coal)</b> . . . . .	2·98	34·21
<b>Grand Total</b> . . . . .	...	<u>277·73</u>

## FORM VI—(Qn. 47)—contd.

Works cost per ton of finished paper.

Manufacturing Expenses.	1931.		1932.		1933.	
	Rs.	Per cent.	Rs.	Per cent.	Rs.	Per cent.
1. Primary Materials (For separate quantity of each of the materials see statement already sent and the annexed one for 1937 1st half-year.)	115.23	26.46	111.45	21.99	85.20	21.11
2. Imported Pulp	21.80	4.89	44.53	8.79	80.14	19.87
3. Auxiliary Materials	71.82	17.29	85.46	16.86	63.83	17.06
(For separate statement please see statement already sent and the annexed one for 1937.)	62.44	14.33	71.3	14.07	33.52	8.32
4. Power and fuel—total	11.87	2.72	12.46	2.46	7.72	1.91
5. Current repairs and maintenance	53.63	12.36	61.95	12.23	38.81	9.62
6. Labour	20.30	4.46	28.35	5.59	15.74	3.9
7. Supervision and Establishment—	8.16	1.87	12.23	2.42	6.36	1.56
(a) Salaries of technical staff	11.03	2.53	11.42	2.25	9.76	2.42
(b) Salaries of non-technical staff	14.89	3.42	18.54	3.66	16.25	4.83
8. Packing						
9. Any other items in the cost of manufacture—						
Dry and wet felts, Jackets, machine wires and belts						
<b>TOTAL</b>	<b>384.42</b>	<b>90.53</b>	<b>457.69</b>	<b>90.32</b>	<b>362.33</b>	<b>89.61</b>

## FORM VI—(Qn. 47)—contd.

Works cost per ton of finished paper.

Manufacturing Expenses.	1931.		1932.		1933.	
	Rs.	Per cent.	Rs.	Per cent.	Rs.	Per cent.
<i>Overhead Charges.</i>						
10. Selling expenses . . . . .	2.76	0.63	5.34	1.05	3.11	0.77
11. Insurance . . . . .	5.55	1.28	7.71	1.52	3.83	0.94
12. Rents, rates and taxes (excluding Income-tax) . . . . .	8.64	1.98	11.61	2.29	9.00	2.23
13. Depreciation at our own rates (24 per cent. on Bldgs. and 5 per cent. on machinery) . . . . .	2.61	0.59	..	..	7.93	1.96
14. Interest on working capital . . . . .	..	..	..	..	..	..
15. Head Office expenses and Directors' fee . . . . .	9.69	2.24	10.99	2.17	9.06	2.25
16. Miscellaneous . . . . .	11.95	2.75	13.42	2.66	8.25	2.04
TOTAL . . . . .	41.19	9.47	49.07	9.68	41.18	10.19
GRAND TOTAL . . . . .	435.61	..	506.76	..	403.51	..
Railway freight and Commission . . . . .	17.26	..	34.80	..	30.19	..
Grand total including Railway freight and Commission . . . . .	452.87	..	541.56	..	433.70	..

## FORM VI—(Qn. 47)—contd.

Works cost per ton of finished paper.

Manufacturing Expenses.	1934.		1935.		1936.		From 1st January, 1937, to 30th June, 1937.	
	Rs.	Per cent.	Rs.	Per cent.	Rs.	Per cent.	Rs.	Per cent.
1. Primary Materials (For separate quantity of each of the materials see statement already sent and the annexed one for 1937 1st half-year.)	64.19	15.73	70.54	19.08	74.67	20.14	102.3	26.14
2. Imported Pulp	122.43	30.01	77.80	21.07	55.37	14.04	35.98	9.04
3. Auxiliary Materials (For separate statement please see statement already sent and the annexed one for 1937.)	56.31	14.29	54.75	14.81	61.72	16.65	60.21	17.69
4. Power and fuel—coal	32.23	7.91	34.03	9.2	34.68	9.36	34.22	8.74
5. Current repairs and maintenance	6.59	1.69	9.26	2.51	12.56	3.39	10.71	2.7
6. Labour	39.82	9.76	39.51	10.7	42.85	11.56	39.54	10.1
7. Supervision and Establishment— (a) Salaries of technical staff	15.30	3.75	15.08	4.06	15.80	4.26	16.61	4.23
(b) Salaries of non-technical staff	6.48	1.59	6.30	1.71	7.90	1.89	6.86	1.75
8. Packing	11.49	2.82	11.09	3.01	10.34	2.79	11.95	3.05
9. Any other items in the cost of manufacture— Dry and wet felts, Jackets, machine wires and belts	14.27	3.5	14.75	4.00	13.51	3.64	17.73	4.53
TOTAL	371.46	91.05	333.21	90.17	328.50	88.82	344.51	88.03

FORM VI—(Qn. 47)—*concl'd.*

*Works cost per ton of finished paper.*

Manufacturing Expenses.	1934.		1935.		1936.		From 1st January, 1937, to 30th June, 1937.	
	Ra.	Per cent.	Ra.	Per cent.	Ra.	Per cent.	Ra.	Per cent.
<i>Overhead Charges.</i>								
10. Selling expenses . . . . .	4.46	1.09	8.81	1.03	5.26	1.42	4.19	1.07
11. Insurance . . . . .	3.70	0.91	3.55	0.90	4.12	1.11	3.84	0.98
12. Rents, rates and taxes (excluding Income-tax)	6.93	1.70	8.31	2.25	8.56	2.31	9.86	2.53
13. Depreciation at our own rates (2½ per cent. on Bldgs. and 5 per cent. on machinery).	8.64	2.12	8.69	2.35	9.27	2.50	11.19	2.84
14. Interest on working Capital . . . . .	..	..	..	..	..	..	..	..
15. Head Office expenses and Directors' fee . . . . .	8.13	1.99	7.50	2.05	7.37	1.99	8.43	2.15
16. Miscellaneous . . . . .	4.66	1.14	4.62	1.25	7.63	2.05	9.31	2.38
TOTAL . . . . .	36.52	8.95	36.57	9.83	42.21	11.38	46.84	11.97
GRAND TOTAL . . . . .	407.98	..	369.78	..	370.71	..	391.96	..
Railway freight and Commission . . . . .	37.40	..	35.56	..	36.71	..	33.06	..
Grand total including Railway freight and Commission . . . . .	445.47	..	405.34	..	406.42	..	424.41	..



11. We have already stated that it is impossible for us to fill up Forms II and III, as the pulp is not manufactured in our mills separately.

The works costs of bleached pulp from grass given below is an approximate estimate only. Accuracy is practically impossible for the above reasons.

	Rs.
Cost of dry grass for 1 ton of bleached pulp . . . . .	108-00
Cost of Boiling material, Caustic . . . . .	75-94
Cost of bleaching . . . . .	22-40
Cost of labour of picking grass . . . . .	2-44
Cost of labour of Boiling House . . . . .	1-50
Cost of labour at Poacher . . . . .	1-40
Cost of power and fuel . . . . .	5-00
Supervision . . . . .	7-00
Office and sundry charges . . . . .	19-46
<b>Total</b> . . . . .	<b>246-14 per ton.</b>

The above cost is without recover of Soda.

If recovery is made the cost would be . . . . .	246-14
Less 50 per cent. Caustic . . . . .	37-65
<b>Total</b> . . . . .	<b>208-49</b>

51. We consider that protection should be continued.

The reasons which we gave in 1930 hold good to-day.

(i) The protection should be in a form of a duty on the basis of a sliding scale according to the world price of wood pulp.

(ii) The rate of duty should be in such a form so as to ensure us an average *ex-mill* selling price of As. 3 per lb.

(iii) The protection should be given on the same classes of papers as before.

	Rs.
55. (a) The average price realised, 1936, As. 3 a lb. . . . .	420 a ton.
Less duty at Rs. 140 a ton . . . . .	140 „
	<hr/>
	280 „
Less Surcharge . . . . .	35 „
	<hr/>
	245 „
Add duty at 20 per cent. . . . .	49 „
	<hr/>
Price realisable at Revenue duty . . . . .	294 „
	<hr/>
Total Output, 1936 . . . . .	2,841 tons.
Total receipts at Rs. 294 a ton . . . . .	8,35,254
Deduct—Works expenditure, 1936 . . . . .	10,53,140
	<hr/>
<b>Deficit</b> . . . . .	<b>2,17,886</b>

	Rs.
(b) If surcharge is removed the effect would be—	
The average price realised, 1936, As. 3 a lb. .	420 a ton.
Less duty at Rs. 140 a ton . . . . .	140 „
	280
Add duty at 20 per cent. . . . .	56
Price realisable at Revenue duty . . . . .	336 a ton.
Total output, 1936 . . . . .	2,841 tons.
Total receipts at Rs. 336 a ton . . . . .	8,73,600
Deduct—Works expenditure, 1936 . . . . .	10,53,140
Deficit . . . . .	1,79,540

*Summary of terminal tax paid by the Company in the year 1937.*

Particulars.	Amount.			
	Rs.	A.	P.	
Chemicals . . . . .	17,376	4	0	
Miscellaneous Stores . . . . .	1,548	12	3	
Raw Materials (by Co.) . . . . .	3,267	13	6	
Total . . . . .	22,192	13	9	Paid by the Company in 1937.

<i>N.B.—Besides the above amount paid by us on direct purchase, our Raw material Contractor has paid in 1937 on the quantity of raw materials delivered to us by him . . . . .</i>				
	1,849	5	0	Paid by the Contractor.
Total . . . . .	24,042	3	0	Total amount paid to the Municipality.

*Statement showing the rate and amount paid by the Company as terminal tax on the materials received in the year 1937.*

Name of Articles.	Quantity.			Rate per Md.			Amount.		
	Mds.	Srs.	Ch.	Rs.	A.	P.	Rs.	A.	P.
<i>Chemicals.</i>									
Bleaching Powder . . . . .	20,400	30	0	0	8	0	10,200	6	0
Caustic Soda . . . . .	7,397	5	0	0	8	0	3,698	9	0
Antichlor . . . . .	24	20	0	0	8	0	12	4	0
Alumina Ferric . . . . .	14,973	30	0	0	2	0	1,871	11	6
Rosin . . . . .	2,149	15	0	0	5	0	671	11	0
Lime . . . . .	14,496	0	0	0	0	6	453	0	0
Lactic Casein . . . . .	29	5	0	0	2	0	3	9	9
China Clay . . . . .	3,189	10	0	0	2	0	398	10	6
Ramraj . . . . .	1,607	20	0	0	0	6	50	8	9
Red Chalk . . . . .	517	0	0	0	0	6	16	2	6
Total . . . . .	...	...	...	...	...	...	17,376	4	0

Name of Articles.	Quantity.					Rate per Md.		Amount.		
	Mds.	Srs.	Ch.	Rs.	a.	p.		Rs.	a.	p.
<i>Raw Materials.</i>										
Wood Pulp . . . . .	2,763	0	0	0	2	0		345	6	0
Grass . . . . .	23,301	15	0	0	2	0		2,912	10	3
Hemp Rope . . . . .	629	0	0	0	0	3		9	13	3
Total . . . . .	...							3,267	13	6
<i>Miscellaneous articles.</i>										
Colours and Dyes . . . . .	12	15	0	2	8	0		30	15	0
Felts and Jackets and Apron . . . . .	25	30	0	2	0	0		65	1	9
Electrical material . . . . .	11	17	8	1	4	0		14	2	3
Cotton tape, Rubber Goods, Oxygen and Acetylene . . . . .	219	15	0	1	0	0		217	15	9
Iron articles . . . . .	384	35	0	0	12	0		289	7	9
Leather goods, Soap and grease . . . . .	115	36	8	0	8	0		57	15	6
Hessian cloth and asbestos goods . . . . .	694	5	0	0	6	0		259	14	9
Brass and Copper Shavings . . . . .	12	15	0	0	10	0		7	11	9
Castor Oil . . . . .	8	20	0	0	5	0		2	10	6
Board . . . . .	4	15	0	0	4	0		1	1	6
Iron Angle, Tee, Hoop iron and sheets, etc. . . . .	2,576	35	0	0	3	0		501	14	0
Lubricating oils, Fire clay and articles not mentioned in the Schedule . . . . .	744	30	0	0	2	0		94	10	0
Exported parcel . . . . .	1	0	0	0	1	0		0	1	0
Fire Bricks . . . . .	496	5	0	0	0	6		5	2	9
Total . . . . .	...							1,548	12	3

(3) Letter No. 296, dated the 22nd March, 1938, from the Tariff Board, to the Upper India Couper Paper Mills Co., Ltd., Lucknow.

I am directed to say that the Tariff Board requires figures for as late a date as possible of cost of manufacture of paper and the realised prices of the same and hopes that you will be good enough to send figures for your mill for 1937 under the above heads as early as possible.

(4) Letter No. 300, dated the 22nd March, 1938, from the Tariff Board, to the Upper India Couper Paper Mills Co., Ltd., Lucknow.

I am directed to acknowledge receipt of the various statements forwarded with your letter No. SD/1274, dated the 10th March, 1938, and to request that figures for the 2nd-half of the year 1937 may be supplied as early as possible.

2. I am also to point out that your statements Nos. 55 (a) and (b) do not give the information required by the Board. What it wanted to know was the effect of the removal of the revenue surcharge of Rs. 35 per ton maintaining the protective duty at Rs. 140 per ton. Similarly in calculating the cost of manufacture the reduction in the price of imported wood pulp by the removal of the present surcharge of Rs. 11-4 per ton on the material used should be taken into account.

3. I am to request that revised statements may be submitted in the light of the remarks made in paragraph 2 above.

(5) Letter No. 1633, dated the 24th March, 1938, from the Upper India Couper Paper Mills Co., Ltd., Lucknow.

**Re: GRIEVANCES OF THE LABOURERS OF THE UPPER INDIA COUPER PAPER MILLS Co., Ltd., LUCKNOW.**

As desired by the members of your Board we beg to submit herewith a copy of the above together with our replies [Not printed] which we regret could not be furnished earlier.

(6) Letter No. 363, dated the 4th April, 1938, from the Tariff Board, to the Upper India Couper Paper Mills Co., Ltd., Lucknow.

In continuation of this office letter No. 300, dated the 22nd March, 1938, I am directed to request you to furnish the Board with information regarding the latest cost of Sabai grass used in your mill.

(7) Letter No. SD/2125, dated the 28th April, 1938.

As desired in your letters Nos. 296, 300 and 363, dated the 22nd March, 1938, and 4th April, 1938, respectively, we beg to send herewith 3 copies each of our replies based on the latest figures of our Balance Sheets.

We are also enclosing herewith a copy each for both the half-year of 1937.

*Upper India Couper Paper Mills Co., Ltd., Lucknow.*

	Year 1937.
	Tons.
3. (a) Pulp . . . . .	3,104
(b) Paper excluding wrapper . . . . .	3,007
Paper including wrapper . . . . .	3,076

21. Reference your letter No. 328, dated the 28th March, 1938.—The statement of wages paid by us for different classes of labour, etc., is as follows:—

	1935.	1936.	1937.
	Rs.	Rs.	Rs.
Wages paid for Mill work . . . . .	1,20,531-12	1,21,722-94	1,24,100-6
Wages paid for technical staff . . . . .	45,912-5	44,887-88	48,996-75
Wages paid for non-technical staff . . . . .	19,219-31	19,854-31	21,579-63
Wages paid for Head Office . . . . .	20,684-00	17,074-43	21,184-88

24. (b) Cost of power per ton of finished paper is Rs. 36-65.

Our consumption of coal per ton of finished paper is 3-08 tons.

41. The Block value of property after deducting depreciation as it stood on 31st December, 1937, is as follows:—

	Rs.	A. P.
(a) Leases and concessions are for 50 years . . . . .	...	...
(b) Leases land at cost . . . . .	1,000	0 0
(c) Buildings on leasehold land . . . . .	2,32,916	5 8
(d) Plant and Machinery . . . . .	8,88,873	0 5
(e) Other Assets . . . . .	22,27,368	8 8
<b>Total . . . . .</b>	<b>33,50,157</b>	<b>9 9</b>

43. The amount of depreciation written off during the year 1937 is given below :—

Rs. 33,526-14.

The amount of reserve fund from surplus profits cannot be given as the meeting of the Shareholders has not yet been held.

44. (a) Paid-up Capital is the same as already stated in our replies.

(b) & (c) Replies to these can only be given after the General Meeting of the Shareholders is held.

45. Two Balance Sheets copies for the year 1937 are being sent.

49. The following is a statement of 1937 :

	Rs.	A. P.
(a) The average value of the stocks of primary and auxiliary materials, stores held by the Company . . . . .	10,33,405	14 7
(b) The average outstandings in respect of goods held by the Company . . . . .	1,53,380	0 0

The cut in the wages of the employees was introduced on 1st October, 1932, and restored on 30th June, 1937.

55. The reply to this question has been already been given in the month of March, 1938.

#### FORM I.—Primary Materials.

(Qn. 5.)

	1937: Tons.
<i>Bamboo—</i>	
(1) Quantity of material used . . . . .	Nil.
<i>Grass—</i>	
(1) Quantity of material used . . . . .	1,610·5
(2) Quantity of finished paper which material represents . . . . .	515
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	16·74%
<i>Waste Paper and Waste Paper Cuttings and Paper Re-pulped—</i>	
(1) Quantity of material used . . . . .	93·44
(2) Quantity of finished paper which material represents . . . . .	74
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	2·41%
<i>*Other Indigenous Materials—</i>	
(1) Quantity of material used . . . . .	4,348·2
(2) Quantity of finished paper which material represents . . . . .	2,174
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	70·67%

\* Other Indigenous materials are Rags, Hemp and Jute.

	Tons.
<i>Total Indigenous Materials—</i>	
(1) Quantity of materials used . . . . .	6,052·14
(2) Quantity of finished paper which materials represents . . . . .	2,763
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	89·82%
<i>Imported Pulp—</i>	
(1) Quantity of material used . . . . .	248·32
(2) Quantity of finished paper which material represents . . . . .	211
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	6·86%
Output of finished paper excluding wrapper for internal use . . . . .	2,974
Loading at 33 per cent. . . . .	33
Percentage on paper manufactured . . . . .	1·08%
Total output of saleable papers . . . . .	3,007
Quantity of wrappers made for internal use . . . . .	69
Percentage on the total quantity of paper manufactured . . . . .	2·24%
Total output including wrapper for internal use . . . . .	3,076

## FORM II.

11. We already stated that as the pulp of Sabai grass and other raw materials is not manufactured separately, it is impossible to give actual figures.

The works costs of bleached pulp from Sabai grass given below is an approximate estimate only.

	Rs.
Cost of Sabai grass dry for 1 ton of bleached pulp including terminal tax . . . . .	117·00
Cost of Boiling material—Caustic Soda . . . . .	75·94
Cost of bleaching material . . . . .	22·40
Labour (includes actual labour from picking to bleaching and $\frac{1}{2}$ of general labour) . . . . .	13·76
Coal $\frac{1}{2}$ of total coal . . . . .	12·22
Supervision $\frac{1}{2}$ of total supervision . . . . .	5·43
Office and sundry expenses (overhead charges, etc.) . . . . .	19·00
Total . . . . .	265·25

## FORM IV.—Auxiliary Materials—(Qn. 17).

	1937.	Tons.	Price per ton. Rs.
<b>Pulp Making Material—</b>			
Quantity of material used—			
(a) Indian . . . . .	658.55		19.83
(b) Imported . . . . .	225.00		183.00
<b>Bleaching material—</b>			
Quantity of material used—			
(a) Indian . . . . .	...		...
(b) Imported . . . . .	668.2		121.92
<b>Loading Material—</b>			
Quantity of material used—			
(a) Indian . . . . .	99.95		35.23
(b) Imported . . . . .	...		...
<b>Sizing Material—</b>			
Quantity of material used—			
(a) Indian . . . . .	662.27		116.55
(b) Imported . . . . .	...		...
<b>Other Auxiliary Material—</b>			
Quantity of material used—			
(a) Indian . . . . .	58.15		21.41
(b) Imported . . . . .	3.48		764.00
<b>Total Auxiliary Materials—</b>			
Quantity of material used—			
(a) Indian . . . . .	1,478.92		193.02
(b) Imported . . . . .	896.68		1,068.92

Statement showing average net realized ex-Factory Prices per lb. for the different classes of paper for 1937.

(Qn. 30.)

Item No.	Class of paper.	Rate. As. P.
1.	Brown . . . . .	1 11½
2.	Cream Laid 6 lbs. . . . .	3 6
3.	Cream Laid 8 lbs. . . . .	3 3½
4.	Coloureds . . . . .	3 4
5.	H. B. A. Government . . . . .	3 0½
6.	H. B. B. Badami 10 lbs. . . . .	2 3
7.	H. B. B. Badami Heavy . . . . .	2 2
8.	Wrapper and Brown Card . . . . .	1 11
9.	White Printing . . . . .	3 4
10.	White Drawing and Cartridge . . . . .	3 2
11.	White Rough . . . . .	3 4
12.	Government Stamp and Cap Paper . . . . .	5 3
13.	Cream Wove . . . . .	3 3½
14.	Semi-Bleached . . . . .	3 0½
15.	Antique Wove . . . . .	3 4
16.	Antique Laid . . . . .	3 4
17.	Azure Laid . . . . .	3 5½
18.	Blottings . . . . .	3 11

The average net realised ex-Factory price per lb. is As. 3-1-94.

Statement showing the average net realized ex-Factory Prices per lb. for paper supplied to the Central and Provincial Governments and other Railways—(Qn. 36).

## CENTRAL GOVERNMENT.

Class of Paper—	Per lb. As. P.
White Printing . . . . .	3 0½
Semi-Bleached . . . . .	3 0
Badami . . . . .	2 5½

## PROVINCIAL GOVERNMENT (UNITED PROVINCES).

	Per lb. As. P.
White Printing . . . . .	3 1½
Glazed Buff . . . . .	2 6
Badami Patwari . . . . .	2 3½
Unbleached Patwari . . . . .	3 2½
Brown Patwari . . . . .	2 2

## BIHAR GOVERNMENT.

	Per lb. As. P.
Water Marked Stamp Paper . . . . .	5 3

## OTHER RAILWAYS.

	Per lb. As. P.
Cream Laid . . . . .	3 2
White Printing . . . . .	3 2
Superior Badami . . . . .	3 0
Badami . . . . .	2 2
Brown . . . . .	2 0

The quantity of paper supplied to the Central and Provincial Governments, States and Railways is as follows:—

1,387 tons in 1937.

FORM V.—Separate Expenditure of Primary and Auxiliary materials as required under Form V.—Total Expenditure incurred on the Production of paper—(Qn. 47).

Manufacturing expenses.	Quantity in tons.	Amount in. Rs. A.
1. Primary Materials—		
Rags and Cuttings . . . . .	2,149.2	1,15,892 5
Patmal or Jute . . . . .	756.35	28,876 12
Hemp Rope . . . . .	1,442.65	81,468 2
Sabai Grass . . . . .	1,610.5	63,658 6
Waste Paper . . . . .	29.5	2,066 1
Paper Repulped . . . . .	63.94	15,675 6
		3,07,636 0
2. Imported Pulp—		
Wood Pulp . . . . .	242.32	60,175 5
Wood Pulp Mechanical . . . . .	6.00	1,075 7
		61,250 12



Manufacturing expenses.		Quantity in tons.	Amount in Rs. A.	
3. Auxiliary Materials—				
Bleaching Powder . . . . .		668.2	81,445	0
Caustic Soda . . . . .		225.0	41,175	6
China Clay . . . . .		99.95	3,523	3
Casein . . . . .		1.42	931	3
Rosin . . . . .		91.25	22,933	1
Soda Ash . . . . .		2.85	348	5
Alumina Ferric . . . . .		569.6	53,291	14
Katni Clay and Ochres . . . . .		58.15	1,242	9
Lime . . . . .		658.55	13,068	0
Dyes . . . . .		0.63	1,944	10
			<hr/>	
			2,19,903	3
			<hr/>	
4. Packing material . . . . .				
		...	29,709	9
5. Other items in the cost of manu- facture, such as Belts, felts and machine wires, etc. . . . .				
		...	47,808	8
6. Miscellaneous Stores, such as wood for mill use, Lubricants and electric goods, etc. . . . .				
		...	18,430	12
7. Power and Fuel—Coal . . . . .				
		9,229.40	1,10,206	9
			<hr/>	
Total Expenditure . . . . .			7,94,945	5

FORM V.—Total Expenditure incurred on the Production of paper—(Qn. 47).  
1937.

Manufacturing expenses.		Rs. A. P.			Per cent.
1. Primary materials . . . . .	3,07,636	0	0		26.87
(For individual quantity see separate statement annexed.)					
2. Imported Pulp . . . . .	61,250	12	0		5.35
3. Auxiliary materials . . . . .	2,19,903	3	0		19.20
(For individual quantity see separate statement annexed.)					
4. Power and Fuel—Coal . . . . .	1,10,206	9	0		9.62
5. Current Repairs . . . . .	37,404	14	6		3.27
6. Labour . . . . .	1,24,100	8	4		10.84
7. Supervision and Establishment—					
(a) Salaries of technical staff . . . . .	48,996	13	2		4.28
(b) Salaries of non-technical staff . . . . .	21,579	10	5		1.88
8. Packing . . . . .	29,709	9	0		2.59
9. Other items in cost of manufac- ture . . . . .	47,808	8	0		4.17
	<hr/>				
Total . . . . .	10,08,596	7	5		88.07

## Manufacturing expenses.

	1937.		
	Rs.	A. P.	Per cent.
<i>Overhead Charges.</i>			
10. Selling expenses . . . . .	12,290	4 8	1.07
11. Insurance . . . . .	11,192	6 1	0.98
12. Rents, Rates and Taxes (exclud- ing Income-tax) including rent of land, Terminal tax and water tax, Municipal taxes . . . . .	30,244	1 6	2.64
13. Depreciation at our own rates (2½ per cent. on building and 5 per cent. on machinery) . . . . .	33,526	14 0	2.93
14. Interest on working capital . . . . .	Nil. . . . .		
15. Head Office expenses and Directors' fee . . . . .	24,694	14 9	2.16
16. Miscellaneous . . . . .	24,617	13 5	2.15
Total . . . . .	1,36,506	6 5	11.93
Grand Total . . . . .	11,45,102	13 10	...
Railway freight and commission on sales . . . . .	94,689	5 1	...
Total including Railway freight and Commission . . . . .	12,39,792	2 11	...

Total output of finished paper in tons for the year 1937 . 3,007 tons.

FORM VI.—Separate statement of primary and auxiliary materials as required under Form VI.—Works cost per ton of finished paper.

Manufacturing expenses.	Quantity in tons.	Amount in Rs.
1. Primary materials—		
Rags and Cuttings . . . . .	0.72	38.52
Patmal or Jute . . . . .	0.25	9.59
Hemp Rope . . . . .	0.47	27.80
Sabai Grass . . . . .	0.50	21.16
Waste Paper . . . . .	0.009	0.68
Paper repulped . . . . .	0.02	5.21
2. Imported Pulp . . . . .	0.08	20.37
3. Auxiliary materials—		
Bleaching Powder . . . . .	0.22	27.08
Caustic Soda . . . . .	0.08	13.68
China Clay . . . . .	0.03	1.18
Casein . . . . .	...	0.31
Rosin . . . . .	0.03	7.62
Soda Ash . . . . .	0.001	0.12
Alumina Ferric . . . . .	0.18	17.71
Katni Clay and Ochres . . . . .	0.01	0.42
Lime . . . . .	0.22	4.35
Dyes . . . . .	...	0.65
4. Packing material . . . . .	...	9.87
5. Other items, such as belts, felts and machine wires, etc. . . . .	...	15.89
6. Miscellaneous stores, such as wood for Mill use, Lubricants and electric goods, etc. . . . .	...	6.12
7. Power and Fuel—Coal . . . . .	3.06	36.63

## FORM VI.—Works cost per ton of finished paper—(Qn. 47).

	1937.	
Manufacturing expenses.	Rs.	Per cent.
1. Primary materials . . . . .	102·31	26·85
(For separate quantity of each see statement annexed.)		
2. Imported pulp . . . . .	20·37	5·34
3. Auxiliary materials . . . . .	73·13	19·19
(For separate quantity of each see statement annexed.)		
4. Power and Fuel—Coal . . . . .	36·65	9·62
5. Current repairs and maintenance .	12·44	3·26
6. Labour . . . . .	41·27	10·83
7. Supervision and Establishment—		
(a) Salaries of technical staff .	16·29	4·27
(b) Salaries of non-technical staff .	7·18	1·88
8. Packing . . . . .	9·88	2·59
9. Other items in the cost of manufacture . . . . .	15·9	4·17
Total . . . . .	335·42	88·00
<i>Overhead Charges.</i>		
10. Selling expenses . . . . .	4·07	1·06
11. Insurance . . . . .	3·72	0·98
12. Rents, rates and taxes (excluding Income-tax) . . . . .	10·06	2·74
13. Depreciation at our own rates (2½ on building and 5 per cent. on machinery) . . . . .	11·15	2·93
14. Interest on working capital . . . . .	Nil	Nil.
15. Head Office expenses and Directors' fee . . . . .	8·21	2·15
16. Miscellaneous . . . . .	8·19	2·14
Total . . . . .	45·40	12·00
Grand Total . . . . .	380·82	...
Railway Freight and Commission . . . . .	31·49	...
Grand total including Railway freight and commission . . . . .	412·31	...
Total output for the year 1937 . . . . .	3,007 tons.	

**Evidence of Mr. GOARDHAN PRASAD BHARGAVA and Mr. Y. S. CHAUDHARY, representing the Upper India Couper Paper Mills Company, Limited, recorded at Lucknow, on Wednesday, the 23rd February, 1938.**

B.—ORAL.

*President.*—What is your position?

*Mr. Bhargava.*—I am the Director in charge of the paper mills. Mr. Chaudhary is the Manager of the mills.

*President.*—I see that between April, 1936 and January, 1938 you employed two Europeans temporarily. Was that for a specific purpose?

*Mr. Bhargava.*—One was to fill in the post of Mr. Sinha our previous manager who died and the other was merely to help us in the erection of the new machine.

*President.*—And they both left?

*Mr. Bhargava.*—Yes. One has gone to Bangalore.

*President.*—On page 2, you have given the percentage of different kinds of paper you manufacture. There are three main classes (white printings, cream laid and wove and common badami) which make 75 per cent. of your output.

*Mr. Bhargava.*—Yes.

*President.*—Has there been any change in that proportion in the last six years?

*Mr. Bhargava.*—No.

*President.*—The proportion has more or less remained the same.

*Mr. Bhargava.*—Yes.

*Mr. Rahimtoola.*—Even when badami was unprotected?

*Mr. Bhargava.*—Yes, we did not find any change.

*President.*—As regards badami, is there any unfair competition with imported badami? Are they importing badami coloured differently so as to escape the duty?

*Mr. Chaudhary.*—Yes. Paper made out of mechanical pulp coloured differently is in a fair competition with ours.

*Mr. Rahimtoola.*—It is being imported as printing paper.

*Mr. Chaudhary.*—It is sold as printing paper.

*Mr. Rahimtoola.*—Hard sized and tinted?

*Mr. Chaudhary.*—Yes.

*President.*—It is used for writing, is it?

*Mr. Chaudhary.*—There is a paper coming from foreign countries and generally people purchase this yellow coloured tinted paper as badami.

*President.*—It has got 70 per cent. mechanical pulp.

*Mr. Chaudhary.*—Yes.

*President.*—It is imported as printing paper.

*Mr. Chaudhary.*—Yes.

*President.*—Is that used for writing?

*Mr. Chaudhary.*—Yes.

*President.*—Is there much of that on the market?

*Mr. Bhargava.*—Yes.

*President.*—It comes from Bombay, I understand.

*Mr. Bhargava.*—Yes.

*President.*—Not from Calcutta?

*Mr. Chaudhary.*—No.

*President.*—In Calcutta we have been told by the Customs people that practically there is no badami imported. Do you know whether it is imported in Madras?

*Mr. Chaudhary.*—No.

*Mr. Bhargava.*—Our sales of badami might have increased but for the large quantities sent here by the Deccan mills.

*President.*—That is internal competition.

*Mr. Rahimtoola.*—The President is talking of foreign paper.

*President.*—What is it called?

*Mr. Chaudhary.*—Deep yellow coloured paper. It comes in not as badami exactly. It comes in as tinted paper more or less matching with buff.

*President.*—It contains some dye.

*Mr. Chaudhary.*—Yes.

*President.*—In answer to question 6 you have given the quantity of grass and so on required to make a ton of pulp and a ton of paper. How did you arrive at these figures?

*Mr. Chaudhary.*—We are not keeping any separate accounts for all these things for pulp and paper. We take the yearly consumption and then we take the proportion of the pulp and paper. In the case of paper it is more roughly by 10 per cent. because while manufacturing paper we get 10 per cent. fibre loss.

*President.*—5 per cent. fibre loss?

*Mr. Chaudhary.*—No, it is 10 per cent.

*President.*—The difference between 47½ cwts. of grass and 52½ cwts. of grass is about 5.

*Mr. Chaudhary.*—But the percentage is 10.

*President.*—Per ton of paper, the difference is 5.

*Mr. Bhargava.*—Yes.

*President.*—These are not exact figures.

*Mr. Bhargava.*—No. They are on the year's average consumption.

*Mr. Rahimtoola.*—How many tons of grass are required to make a ton of paper?

*Mr. Chaudhary.*—52½ cwts.

*Mr. Rahimtoola.*—47½ cwts. are required to make 1 ton of pulp.

*Mr. Chaudhary.*—Yes.

*Mr. Rahimtoola.*—The difference is due to loss in manufacture.

*Mr. Chaudhary.*—Yes.

*Mr. Rahimtoola.*—At what stage does the loss occur?

*Mr. Chaudhary.*—Our machine is very old. On the paper machine, the loss of fibre comes to 10 per cent.

*President.*—In regard to the question of raw materials (in your case it is grass) we had some discussion with the representatives of the local Government yesterday and the position now is that three mills are competing for the grass in the United Provinces, viz., the Star Mill, the Shree Gopal Mill and yourself. All the three mills would like to get their supplies from the United Provinces being nearer than Nepal. Will the quantity be sufficient for all three of you?

*Mr. Bhargava.*—I think so because formerly Nepal hills and Terai used to supply us and the Titaghur Mills also. There is a huge quantity of grass.

*President.*—The cost of transport of grass from Nepal is rather high. I am talking of the supply of grass in the United Provinces. Will the supply be sufficient for all of you?

*Mr. Bhargava.*—Certainly it will not be in excess of our requirements. It remains to be seen after 2 or 3 years working.

*President.*—All the mills are trying to get all their supplies as near as possible.

*Mr. Bhargava.*—The other two mills are nearer the Western Circle. We get ours from the Eastern Circle.

*President.*—Do you get your supplies from the Eastern Circle?

*Mr. Bhargava.*—Yes,

*President.*—Have you any lease?

*Mr. Bhargava.*—No. We always buy it through contractors. This year we have resolved to take a lease of one or two big tracts from Government.

*President.*—In the Eastern Circle?

*Mr. Bhargava.*—Yes. We are in correspondence with Government. We are also experimenting on the Ullah grass. We hope that experiments will succeed. There is an abundant supply of that grass near the railway line. The railway passes through the tracts.

*President.*—We have been told that Ullah grass is not so good as Sabai grass.

*Mr. Bhargava.*—We are experimenting on Ullah grass. We hope that it will prove to be as good as Sabai grass, if not better. Of course the yield is a bit less, but when we get it for a fraction of the price of the other thing, it does not matter.

*President.*—The cheapness more than compensates the yield.

*Mr. Bhargava.*—Yes. The Ullah grass makes much whiter paper. So, there is less bleaching required.

*President.*—Is it still in the experimental stage?

*Mr. Bhargava.*—I think the Forest Research Institute people have made some experiments on that. Mr. Bhargava in charge of the paper and pulp plant has made experiments.

*President.*—The quantity of that is almost unlimited.

*Mr. Bhargava.*—Yes, and it is not being used for any other purpose.

*President.*—It might be used for thatching.

*Mr. Bhargava.*—May be, but not very much. It is not used for making mattings.

*President.*—There is some competition for Sabai grass as it is used for other purposes.

*Mr. Bhargava.*—Yes. Village people buy it and make mattings. The bazar also requires it.

*President.*—For what purpose?

*Mr. Bhargava.*—For making mattings.

*President.*—Is that the principal use?

*Mr. Bhargava.*—Yes, but it is not a very big quantity that they consume.

*President.*—Is it used for thatching?

*Mr. Bhargava.*—No.

*President.*—It is only used for making mats.

*Mr. Bhargava.*—Yes.

*President.*—What about other indigenous materials? Where do you get your waste paper from?

*Mr. Bhargava.*—At present we are not using much waste paper. Whatever we are using, it is practically our own. Sometimes we come across chippings, which are cuttings. Large supplies are available. At present they are being exported to Bombay, to Poona and even to Titaghur.

*President.*—You do not rely much on waste paper?

*Mr. Bhargava.*—No, not at present. We intend putting up pulpers and then we will require more.

*President.*—It is used in the manufacture of cheaper qualities of paper.

*Mr. Bhargava.*—Yes.

*President.*—In the manufacture of badami?

*Mr. Bhargava.*—Not only in badami but also in white paper.

*Mr. Chaudhary.*—There is not much treatment required and it reduces the cost of manufacture.

*President.*—What about rags?

*Mr. Bhargava.*—We are getting as much as we require.

*President.*—How many qualities do you get?

*Mr. Bhargava.*—We get one quality and sort them out.

*President.*—Do you buy mixed rags?

*Mr. Bhargava.*—Yes: white ones for white papers and the balance for other papers.

*President.*—What about hemp?

*Mr. Bhargava.*—We had some difficulty this year owing to some purchases made by foreign countries through Ahmedabad at double or treble the price. Those purchases have now stopped. Since then, the market has again fallen.

*President.*—Any other materials?

*Mr. Bhargava.*—Old ropes, gunny, etc.

*Mr. Rahimtoola.*—I want to know the price of Ullah grass.

*Mr. Bhargava.*—It is not more than one rupee per maund.

*Mr. Chaudhary.*—It may never exceed one rupee.

*Mr. Rahimtoola.*—You have not bought that in any large quantities.

*Mr. Bhargava.*—No, only a couple of wagons.

*Mr. Rahimtoola.*—Do you think that it will not exceed one rupee per maund?

*Mr. Chaudhary.*—No, that is the price delivered at our mill.

*Mr. Rahimtoola.*—What is the percentage of yield?

*Mr. Chaudhary.*—As far as the experiments carried out at Dehra Dun are concerned, the yield has varied from 35 to 38 because the Ullah was obtained from different places. I think that it will be about 35.

*President.*—As against what?

*Mr. Chaudhary.*—38 to 40 of Sabai.

*President.*—7 per cent. less.

*Mr. Bhargava.*—Yes.

*Mr. Rahimtoola.*—You have made paper on an experimental basis out of Ullah grass, have you?

*Mr. Bhargava.*—Yes. As regards the cost, the estimate of one rupee is rather excessive. It is only our surmise because at present the field is not worked and when it is worked we shall have to pay royalty to Government or to any other body. There is railway freight. There is also terminal tax. I don't think that it will be more than 12 annas.

*President.*—As compared with how much of Sabai grass?

*Mr. Bhargava.*—Rs. 1-10 or Rs. 1-12.

*President.*—It will be a rupee less.

*Mr. Bhargava.*—Yes. Ullah grass is always obtainable in the plains. There is no question of going up to the hills.

*President.*—You will also be able to get it within a short distance from Lucknow.

*Mr. Bhargava.*—From within 100 miles.

*Mr. Rahimtoola.*—Don't you think that you will require some sort of wood pulp for furnish?

*Mr. Chaudhary.*—No.

*Mr. Rahimtoola.*—Do you think that the paper will be strong enough without it?

*Mr. Chaudhary.*—Yes, with hemp ropes.

*Mr. Rahimtoola.*—You say that bamboo does not grow in sufficient quantity. Is that information obtained from Government or is it private information? Or is it due to the uneconomic distance?

*Mr. Bhargava.*—I think that it is the opinion of Government that it is not grown in sufficient quantity.

*Mr. Rahimtoola.*—Have you made any enquiries about the possibility of using bamboo?

*Mr. Bhargava.*—We once invited tenders and we did not get sufficient response.

*Mr. Rahimtoola.*—Were the rates quoted?

*Mr. Bhargava.*—Yes.

*Mr. Rahimtoola.*—What were the rates given to you?

*Mr. Bhargava.*—As far as we remember, it was about Rs. 25.

*Mr. Rahimtoola.*—Delivered at the factory?

*Mr. Bhargava.*—Yes.

*Mr. Rahimtoola.*—Have you made any calculations as to what price you should pay in order to make it paying?

*Mr. Chaudhary.*—The price should not exceed Rs. 12 to Rs. 13 per ton.

*President.*—Delivered at the mill?

*Mr. Chaudhary.*—Yes. It should be Rs. 15 because as far as I know in Punalur, Travancore State, I used to get bamboo within Rs. 10.

*President.*—You have said that it is impossible to fill up Forms I and II. All the other mills have not found any difficulty in filling up statements regarding the cost of manufacture of pulp. What we want really is an estimate of the cost of manufacture of grass pulp. It does not matter about rags.

*Mr. Bhargava.*—We can give for grass.

*President.*—We understand that some allocation charges must be arbitrary as between pulp and paper naturally especially in regard to overheads.

*Mr. Bhargava.*—Yes.

*President.*—The other mills have taken the percentages as 60 and 40. It does not matter very much about overheads. Please give us the works cost of making pulp and paper.

*Mr. Bhargava.*—We will work out as best we can and send you.

*President.*—In 1937 you were using mainly grass.

*Mr. Bhargava.*—Yes.

*President.*—I understand your financial year is the calendar year ending 31st December. Could you give us your cost figure for 1937 for pulp and paper?

*Mr. Bhargava.*—Yes.

*President.*—When will your results be known?

*Mr. Bhargava.*—In the 1st week of April. We will send you copy of our balance sheet. If you want it for the past years we can give you those also.

*President.*—Yes. Speaking generally has your cost of manufacture for 1937 been reduced as compared to 1936?



*Mr. Chaudhary.*—Not much, but we expect that as soon as we start our recovery plant and bleaching plant it will come down.

*President.*—You say your factory is not at present using imported wood pulp. Does that apply to 1937?

*Mr. Chaudhary.*—Yes.

*President.*—For the whole of 1937 you did not use any imported pulp?

*Mr. Bhargava.*—We have not imported any.

*President.*—Is that owing to rise in the price of pulp?

*Mr. Bhargava.*—That is also one of the reasons, as it was not worth-while using it at that price.

*President.*—Before that were you using bleached or unbleached pulp?

*Mr. Bhargava.*—Bleached. We used a certain quantity of unbleached also.

*President.*—What is the advantage of using bleached pulp?

*Mr. Chaudhary.*—Here in India our plant not being so efficient it is better to use bleached pulp, in bleaching we lose the fibre.

*President.*—I find the cost of bleached pulp is higher than that of unbleached pulp.

*Mr. Chaudhary.*—It is.

*President.*—What would be the difference?

*Mr. Chaudhary.*—The difference will be about a pound c.i.f.

*President.*—Roughly Rs. 13 to Rs. 14: that represents roughly the cost of bleaching powder?

*Mr. Chaudhary.*—Yes.

*President.*—The Government of India do not insist now on any admixture of wood pulp?

*Mr. Bhargava.*—This year they have not but up to 1936 it was insisted on.

*Mr. Rahimtoola.*—You supply a certain amount to the Central Government but there is no mention of this in the replies?

*Mr. Bhargava.*—No. We have supplied about 1,000 tons of paper.

*President.*—We saw yesterday that you were doing various alterations and improvements. When do you expect you will be in full operation?

*Mr. Bhargava.*—The pulp process will be in operation within a month and the paper machines early in 1939 but the conversion process not till end of 1939.

*President.*—On the manufacture of pulp what decrease in cost do you expect?

*Mr. Chaudhary.*—About Rs. 15 per ton.

*President.*—When you get your new paper machine what would be the ultimate reduction in cost?

*Mr. Chaudhary.*—We expect a further reduction of Rs. 15.

*President.*—Will your output be increased?

*Mr. Bhargava.*—It will be more than doubled.

*President.*—That will be in 1939?

*Mr. Bhargava.*—Yes. Till then it will remain the same.

*President.*—You expect to double your capacity: you think your pulp manufacturing plant will be sufficient for it?

*Mr. Bhargava.*—That will also have to be increased.

*Mr. Chaudhary.*—We are going to instal two new digesters which will be sufficient for the new machine.

*President.*—That will be sufficient for 6,000 tons?

*Mr. Chaudhary.*—Yes, for 6,000 to 7,000 tons.

*President.*—In 1933 the output will remain very much the same as at present.

*Mr. Bhargava.*—Yes.

*President.*—In regard to your wages, comparing 1931 and 1936, though the number of persons employed have increased, the wage bill has decreased. Is that due to reduction in the scale of wages?

*Mr. Bhargava.*—Yes.

*President.*—You have reduced the scale of wages: in 1921 it was 1.23 lakhs, in 1936 it was Rs. 1.21 lakhs though the number employed was 713 in 1921 and 753 in 1936.

*Mr. Bhargava.*—There was 10 per cent. cut also.

*President.*—When was that imposed?

*Mr. Bhargava.*—We will let you know the exact date later.

*President.*—You have recently had a strike in your mill. How long did the strike last?

*Mr. Bhargava.*—Twelve days.

*President.*—What was the reason for the strike?

*Mr. Bhargava.*—We had discharged our Engineer and within a couple of hours the men struck work. There is a Paper Mill Workers' Union who wrote to us the next day that because of the discharge of the Engineer our men had struck work. That was their first letter and then after an exchange of two or three letters they changed their ground and said they wanted a general increase in wages. Afterwards it boiled down to this: they had written to us about 3 to 4 months back about certain grievances of the workers and we had agreed to remove them. We gave them time to remove them by the end of April, and the men have resumed work.

*President.*—What were the grievances you promised to remedy?

*Mr. Bhargava.*—It is a long list; details of working, leave rules and so on. If you like we can send you copies of this too.

*President.*—Yes, we would like to see that. Were there many labour disputes before?

*Mr. Bhargava.*—I do not think there was. I will however verify and let you know.

*President.*—You had no stoppages within the last six years owing to labour trouble?

*Mr. Bhargava.*—I will verify and let you know.

*Mr. Rahimtoola.*—How many days in the year do you work?

*Mr. Bhargava.*—300 days.

*President.*—In 1936 you have produced 2,908 tons and you say your capacity is 13 tons per day?

*Mr. Bhargava.*—That is the capacity of our machine, but the average comes to about 10 tons per day.

*President.*—Has the labour situation become more difficult?

*Mr. Bhargava.*—I do not think so.

*Mr. Rahimtoola.*—When did the two Europeans leave your service?

*Mr. Bhargava.*—One left last summer and the other only about 20 days ago.

*President.*—As regards your apprentices, from what class are they drawn?

*Mr. Bhargava.*—These come from good families and are fairly well educated; sometimes there are B.Sc.s also.

*President.*—Do you insist on any educational qualifications?

*Mr. Bhargava.*—Up till now we have not been insisting but hereafter we want to make restrictions as regards educational qualifications.

*President.*—Are you satisfied with the apprentices?

*Mr. Bhargava.*—Yes. Almost all our beater men and machine men are our original apprentices. When they join they have to sign an agreement and meanwhile we pay them during three years, Rs. 50, 75 and 100 when they finish their period satisfactorily. We hold an examination every year and increment is given according to the result of that examination and after three years if there is any permanent post we give them the first chance.

*President.*—Do most of the apprentices get permanent jobs?

*Mr. Bhargava.*—Almost all of them are working in our mill. One of them is getting about Rs. 400 as senior machineman.

*President.*—Do you find any of the apprentices finding the work too exacting and going away?

*Mr. Bhargava.*—No; they take keen interest in their work. One of our Managers was an apprentice. He started on Rs. 60 when he retired he was getting Rs. 800. He is still getting pension: he worked for more than 50 years.

*President.*—Yours is the oldest mill of those which are now existing?

*Mr. Bhargava.*—I think we are the oldest.

*President.*—Do you provide quarters for your apprentices?

*Mr. Bhargava.*—Yes.

*President.*—How many quarters have you got?

*Mr. Bhargava.*—We have got 4 for the apprentices and we have also got quarters for beatermen, machinemen, Manager, Engineer and Secretary.

*President.*—But not for ordinary labour?

*Mr. Bhargava.*—No. Labour comes from nearabout villages and they do not like living in mill quarters. In the harvest season there is more absence. They come from within three to four miles.

*Mr. Rahimtoola.*—Do you have any age limit for the apprentices?

*Mr. Bhargava.*—No particular age limit except the one which is put on by the Factories Act.

*Mr. Rahimtoola.*—What is the limit?

*Mr. Bhargava.*—The limit is 14.

*Mr. Chaudhary.*—We have only taken apprentices when they are 18 or 20.

*Mr. Rahimtoola.*—You say you take them when they pass the I.Sc. examination.

*Mr. Chaudhary.*—Yes. Generally and some are graduates.

*Mr. Rahimtoola.*—There is no age limit at present?

*Mr. Bhargava.*—No. We are going to frame rules regarding the age limit and educational qualifications.

*President.*—Have you any pension fund for the staff?

*Mr. Bhargava.*—No. We have got a Provident Fund.

*President.*—What is the basis of the Provident Fund?

*Mr. Bhargava.*—One anna per rupee. We pay three-fourth of an anna and the employee has to pay one anna and we give interest at 5 per cent. on the total amount.

*President.*—Have all people joined the Fund?

*Mr. Bhargava.*—We find that superior staff, clerks and supervising officers have joined, but the labour class do not join.

*President.*—You have got no labour on the Provident Fund.

*Mr. Bhargava.*—Before there was no Provident Fund for the labour class, but we have now made a provision that they can also join.

*President.*—Since when?

*Mr. Bhargava.*—You will find that in our replies.

*President.*—Have you any maternity benefit?

*Mr. Bhargava.*—No.

*Mr. Chaudhary.*—We have only 4 or 5 women.

*President.*—Don't you employ women for sorting?

*Mr. Chaudhary.*—We employ young boys for that purpose.

*President.*—You have no permanent medical staff?

*Mr. Bhargava.*—In the mill we have got a junior man with first aid knowledge. We have no dispensary at present. Over and above that, we give some contribution to the hospital.

*President.*—How far away is the nearest dispensary?

*Mr. Bhargava.*—About 1 mile.

*President.*—And hospital?

*Mr. Bhargava.*—2 miles.

*President.*—Do you have many accidents?

*Mr. Bhargava.*—Not many.

*Mr. Chaudhary.*—Occasionally.

*President.*—Is paper making dangerous on the whole?

*Mr. Bhargava.*—No. In about 4 or 5 years one person died of accident, but there are not many such accidents. The process is not of such a nature as to describe the paper manufacture as dangerous.

*President.*—It is not a dangerous occupation like some other industries.

*Mr. Bhargava.*—No. There are some industries in which accidents occur more frequently.

*President.*—I suppose the general tendency is towards electrification of the process.

*Mr. Bhargava.*—We have done it.

*President.*—We are told that the cost of coal has been increased in 1937.

*Mr. Bhargava.*—Yes.

*President.*—By how much?

*Mr. Chaudhary.*—Formerly it was Rs. 3 and now it is Rs. 6-4.

*President.*—It has gone up by Rs. 3.

*Mr. Chaudhary.*—Yes.

*President.*—Presumably it has increased the cost of production.

*Mr. Chaudhary.*—Yes in 1937. The price of raw material has also gone up.

*President.*—What do you mean by the raw material?

*Mr. Chaudhary.*—Hemp rope.

*President.*—What about grass?

*Mr. Chaudhary.*—The price of grass also has gone up.

*President.*—What about chemicals?

*Mr. Chaudhary.*—Not much.

*President.*—In your auxiliary materials there is no change?

*Mr. Chaudhary.*—No. There is one fact which we didn't mention in our replies to the questionnaire and that is, we have to pay about 2 annas per maund as terminal tax.

*President.*—On what materials?

*Mr. Chaudhary.*—On grass and chemicals. On bleaching powder we have to pay 8 annas per maund.

*Mr. Rahimtoola.*—These are municipal taxes?

*Mr. Chaudhary.*—Yes, and the total amount comes to Rs. 20,000 per annum.

*Mr. Rahimtoola.*—Is it the total terminal tax?

*Mr. Chaudhary.*—Yes.

*Mr. Rahimtoola.*—Including grass.

*Mr. Chaudhary.*—Grass and everything. The tax on grass which is most hit is 2 annas a maund.

*Mr. Rahimtoola.*—Have you brought this fact to the notice of the Local Government?

*Mr. Bhargava.*—We had a lot of correspondence regarding this with the Municipality and the Commissioner about 8 years back, but no result came about.

*President.*—You have not tried recently.

*Mr. Bhargava.*—No. In those days it was a bigger amount than that. Whilst we were trying that, there was octroi duty. That was changed into terminal tax and it became much less. Formerly we used to pay more than that. We shall submit a copy of the statement to you. The raw material contractors pay Rs. 24,000 a year.

*President.*—Contractors pay this over and above what you pay.

*Mr. Bhargava.*—Their rate is for materials delivered at mills after paying all charges they have to meet and what we have to pay is on grass. There are different kinds of contracts. Some are inclusive of terminal tax and some are exclusive. Some are f.o.r. rates.

*Mr. Rahimtoola.*—The total amount paid by the mill is about Rs. 24,000 in a year.

*Mr. Bhargava.*—Yes, without getting any advantages against it. We are almost outside the city.

*Mr. Rahimtoola.*—Outside the Municipal limits?

*Mr. Bhargava.*—We are inside the Municipal limits.

*President.*—You do get water supply, medical relief and sanitation?

*Mr. Bhargava.*—Yes. All that is not worth Rs. 24,000.

*Mr. Rahimtoola.*—You have not made any efforts to bring all these to the notice of the new Government who are very sympathetic to the paper mills.

*Mr. Bhargava.*—Not up till now. We had only a private talk. You can also help us.

*President.*—It is outside our scope. It is for you to approach the Local Government. We can't interfere.

In regard to the Indian production there will be a change after some years. At present the production of new mills is not equal to the demand even for protected kinds of paper. But judging by the figures supplied by the new mills, it looks as if the situation in a year or two will be very much changed. The present capacity of the existing mills may be taken at roughly 52,000 tons.

*Mr. Bhargava.*—Yes.

*President.*—As far as we can ascertain, the capacity of the new mills will be in the neighbourhood of 35,000 tons. They won't be working that to start with. By the end of this year new mills ought to be producing 20,000 tons and the following year it would work up to 30,000 tons. That would create rather a new situation.

*Mr. Bhargava.*—Yes. Side by side the demand may increase.

*President.*—I am coming to that. You are facing some local competition from Saharanpur.

*Mr. Bhargava.*—Yes.

*President.*—There are two points about that. To what extent do you think there is a possibility of increase in consumption?

*Mr. Bhargava.*—By 50 per cent.; not suddenly but gradually.

*President.*—What do you think is the normal increase in consumption per year? Have you ever tried to calculate that?

*Mr. Bhargava.*—We have not.

*President.*—One way of calculating is to take the pre-slump figures say about 1928 or 1929, compare them with the present consumption and take that as the average. That works out to 1,000 tons a year. The total increase is 5,000 to 6,000 tons since 1928-29. As you know there has been a decrease in consumption in depression years in 1931 and the following years.

*Mr. Chaudhary.*—In 1931 it was about 35,000 tons protected quantity and in 1936 it is 48,000 tons. That means an increase of 13,000 tons in six years.

*Mr. Rahimtoola.*—What was the demand in 1931?

*Mr. Chaudhary.*—The total Indian demand for protected was 49,000 tons in 1931 and now it is 60,000 tons. That means a difference of 11,000 tons.

*Mr. Rahimtoola.*—In six years.

*Mr. Bhargava.*—Yes, 2,000 tons yearly.

*President.*—1931 was a slump year. The consumption in that year must be very much less. You must take the pre-slump figure and compare that with the present figure.

*Mr. Bhargava.*—In our opinion the increase will be more now, because of compulsory primary education.

*President.*—The increase in consumption will help matters, but in order to increase consumption, the question of price comes in. The lower the price the more the consumption generally.

*Mr. Bhargava.*—Yes, almost all mills, even the old mills' cost of production should go down.

*President.*—And if prices are reduced, the consumption might be expected to increase.

*Mr. Bhargava.*—Yes, the consumption will also increase on account of compulsory primary education.

*President.*—More literacy.

*Mr. Bhargava.*—Yes.

*President.*—That is one way of absorbing the additional quantity produced. Another line is that all grass mills might make new lines of paper.

*Mr. Bhargava.*—Yes.

*President.*—One mill is hoping to make kraft paper.

*Mr. Bhargava.*—Yes.

*President.*—Do you consider that any other forms of paper should be protected?

*Mr. Chaudhary.*—That question has been taken up by the Association.

*President.*—One suggestion made is drawing cartridge should be protected. You are making white cartridge and not drawing cartridge.

*Mr. Chaudhary.*—White drawing cartridge.

*President.*—Small quantity?

*Mr. Bhargava.*—Yes.

*President.*—But you can make free hand drawing paper?

*Mr. Bhargava.*—Yes.

*President.*—When we met the Association, they said that it would be better if individual mills made their own suggestions as to whether they wanted an extension of the scope of protection, presuming that protection would be continued, but on that of course we have an open mind. First of

all the Tariff Board has got to consider whether protection should be continued and then secondly if it is to be continued, on what varieties and to what extent. Have you any suggestions to make about that?

*Mr. Chaudhary.*—White cartridge and kraft paper should be protected.

*President.*—You don't propose to make kraft?

*Mr. Chaudhary.*—We propose to do it. We are thinking of imitation art paper and we are going to manufacture M. G. Pressings.

*Mr. Rahimtoola.*—Have you made any calculations of what the cost would be?

*Mr. Chaudhary.*—At present we have not made any calculations.

*Mr. Rahimtoola.*—How do you wish to include that in the scheme of protection?

*Mr. Chaudhary.*—The other mills may be manufacturing as the imitation art is being manufactured in India. As regards M. G. we shall try and see how it goes in the market.

*Mr. Rahimtoola.*—You are making brown paper.

*Mr. Chaudhary.*—Very little.

*Mr. Rahimtoola.*—It is used in your own mill.

*Mr. Bhargava.*—We also supply to customers.

*Mr. Rahimtoola.*—To whom?

*Mr. Bhargava.*—U. P. Government.

*Mr. Rahimtoola.*—What quantity?

*Mr. Bhargava.*—15 tons.

*President.*—That is a very small quantity.

*Mr. Bhargava.*—Yes. We also supply to the Bengal and North-Western Railway.

*Mr. Rahimtoola.*—The price is 1 anna 10 pies per lb.

*Mr. Bhargava.*—Yes.

*President.*—In regard to the question of continuance of protection and also the special question as to whether there is any case for the continuance of the present revenue surcharge we have asked you to fill up certain forms. We have not yet received them.

*Mr. Bhargava.*—We have not filled them.

*President.*—When do you propose to send them?

*Mr. Bhargava.*—We shall send them soon.

*Mr. Rahimtoola.*—When you are sending the other forms, you may send these also.

*Mr. Chaudhary.*—Yes.

*President.*—The Government of India in their resolution said that it is open to the Tariff Board to make an advance recommendation if they think it advisable in regard to the revenue surcharge as to whether it is necessary to continue it or not. From the point of view of your mills, do you think that there is any case for the continuance of revenue surcharge? For the purpose of protection, do you claim that it is necessary?

*Mr. Chaudhary.*—It is necessary.

*President.*—You know that the additional protection afforded by the revenue surcharge has been described as fortuitous. It was not in the original scheme. It came to be imposed because there was a general surcharge. You got it by accident.

*Mr. Bhargava.*—Yes.

*President.*—We have received representations from importers and traders saying that the surcharge is unnecessary and is not necessary for protection. It is for the mills to make out a case to show that it is necessary.

*Mr. Bhargava.*—We think that it is necessary.

*President.*—A vague opinion like that is not any good.

*Mr. Rahimtoola.*—Will you send a note on that?

*Mr. Bhargava.*—Yes.

*President.*—It should be supported by figures.

*Mr. Bhargava.*—Yes.

*President.*—There is one point which you will have to take into consideration. The price of imported paper has recently gone up.

*Mr. Bhargava.*—Yes.

*President.*—Therefore in that respect you are in a better position to compete with foreign paper.

*Mr. Bhargava.*—As we have told you, our coal price has gone up.

*President.*—Your cost of production has come down since 1931.

*Mr. Bhargava.*—Yes.

*President.*—In 1931 you had one anna per lb. protection. It was only in November 1931 the revenue surcharge was imposed.

*Mr. Rahimtoola.*—What has been the trend of events after the fair selling price was fixed by the Board in 1931?

*President.*—We wanted you to send a statement like this (shown) showing the effect of the removal of the protective duty and the surcharge.

*Mr. Chaudhary.*—We would have done this thing in 12 days. We had no time. We were so busy.

*Mr. Rahimtoola.*—As you know, Government require this report urgently and I hope you will expedite it.

*Mr. Chaudhary.*—We shall send it immediately.

*President.*—You say that you don't find any difference between the imported paper and paper made out of bamboo, grass or any other pulp.

*Mr. Bhargava.*—We do not find any.

*President.*—Supposing the qualities are more or less equal, is there any preference for imported paper as against Indian paper?

*Mr. Bhargava.*—No.

*President.*—Is there any preference shown to Indian paper from the swadeshi point of view as against imported paper?

*Mr. Bhargava.*—Yes.

*President.*—Quality for quality, sentiment is in favour of Indian paper.

*Mr. Bhargava.*—Yes.

*President.*—You have given a description of changes and economics you have effected. On page 8, you say "In the above expenditure the amount incurred on Sabai grass, screening, washing and bleaching plant is not included as the plant is still under construction". What is your estimate of that?

*Mr. Bhargava.*—About Rs. 3½ lakhs.

*President.*—You have included the soda recovery plant in the figures you have given, viz., Rs. 3 lakhs. Is that correct?

*Mr. Bhargava.*—Yes.

*President.*—When you talk of the estimated cost for erecting a mill of the same capacity as your mill, what capacity have you in mind?

*Mr. Chaudhary.*—4,000 tons, including soda recovery plant and everything.

*President.*—How many machines have you?

*Mr. Bhargava.*—One machine.

*President.*—In Calcutta, we were considering the question of what would be the economic unit under present conditions, so that it might be possible



for us to work out the costs. What do you think would be an economic unit under present conditions for a new mill?

*Mr. Chaudhary.*—10 tons per day.

*Mr. Rahimtoola.*—That is 3,000 tons.

*Mr. Chaudhary.*—Yes.

*Mr. Rahimtoola.*—That is one paper machine.

*Mr. Chaudhary.*—Yes. The cost would be Rs. 25 to Rs. 30 lakhs.

*Mr. Rahimtoola.*—Including all the recent additions that are necessary for an up-to-date mill.

*Mr. Chaudhary.*—Yes.

*President.*—It was represented to us in Calcutta that under modern conditions a mill of economic capacity would require two machines.

*Mr. Chaudhary.*—That is the general opinion.

*President.*—They mentioned 6,000 tons and 2 machines.

*Mr. Chaudhary.*—2 smaller machines.

*President.*—Your machine is a big one.

*Mr. Chaudhary.*—It will produce 15 to 20 tons per day.

*Mr. Rahimtoola.*—Supposing you have a factory of 6,000 ton capacity, what would be the total expenditure for putting up a mill of that size with soda recovery plant and all?

*Mr. Chaudhary.*—It would be about Rs. 40 lakhs. That is what I think. We have not got figures to support that.

*Mr. Rahimtoola.*—You have replaced recently a lot of machinery. You might send us an estimate.

*Mr. Chaudhary.*—Yes.

*President.*—Would you work out the costs of a 6,000-ton mill with 2 paper machines, soda recovery plant and everything?

*Mr. Chaudhary.*—As far as the Mysore Paper Mill is concerned, they are thinking of one mill only. They have spent about Rs. 25 lakhs. Their pulp capacity will be more. Rs. 25 to Rs. 30 lakhs is a fair estimate.

*President.*—For a 3,000-ton unit?

*Mr. Chaudhary.*—Yes.

*President.*—We understand that most of the new mills provide for an output of about 6,000 tons.

*Mr. Chaudhary.*—Yes.

*Mr. Rahimtoola.*—You have got one machine and you can manufacture about 4,000 tons per annum.

*Mr. Chaudhary.*—Yes.

*Mr. Rahimtoola.*—Two machines will do more than 6,000 tons.

*Mr. Chaudhary.*—There may be one machine having a bigger capacity. Generally speaking in India our circumstances are quite different from those in England. We have to purchase felts, wires, etc., and have to keep them in stock.

*President.*—You can make those additions that are necessary for Indian conditions.

*Mr. Bhargava.*—In the case of 2 machines we will have to stock more spares.

*President.*—In England they have to specialise one class. Here you have to make so many classes and so two machines will be necessary.

*Mr. Bhargava.*—If we have two machines we lose much.

*President.*—I think we might agree that 2 machines will be necessary.

*Mr. Bhargava.*—Yes. But we are thinking that for our purpose one machine will be enough.

*President.*—Special varieties may be made on the smaller machine.

*Mr. Chaudhary.*—For a person starting quite new two machines will be necessary.

*President.*—With regard to the question of depreciation, 1932 had been a very bad year for some reason. What was the reason for that?

*Mr. Bhargava.*—It was not working for most of the time because of electrification.

*President.*—In that year, you were altering your plant.

*Mr. Bhargava.*—Yes.

*President.*—In 1931 I see you were able to transfer something to reserve fund but nothing more till 1936 when you transferred.

*Mr. Bhargava.*—Yes.

*President.*—Looking to your dividend statement, 1934 was not a very favourable year. What was the reason for that?

*Mr. Bhargava.*—The paper market was not good. Last time we paid 7 per cent. In 1937 in the first half year it will be 6 per cent. and in the second half year 7 per cent. The average is  $6\frac{1}{2}$  per cent. for the year. We expect better results now. It may be 8 per cent. per annum.

*President.*—In answer to question 48 you say you expect a reduction in your cost of manufacture by Rs. 30 to 35 per ton. You expect that in 1938?

*Mr. Bhargava.*—In 1939, half of it we may reduce in 1938 and the other half in 1939.

*President.*—You have given the average value of stocks held at about Rs. 10½ lakhs.

*Mr. Bhargava.*—Yes.

*President.*—As regards your working capital, do you provide that from the ordinary capital or do you borrow?

*Mr. Bhargava.*—We never borrow. We have got sufficient funds.

*President.*—Taking Form I, up till 1931-32 and 1933 you were primarily using grass but during the last year you have reduced the quantity of grass very considerably. What is the reason for that? In 1936 only 47 tons of paper were made out of grass.

*Mr. Bhargava.*—We had under erection some plant near our digesters and the washing plant was under erection; so we could not use the digesters and had therefore to stop the use of grass, and used other raw materials instead.

*Mr. Rahimtoola.*—During the first reduction you used a large quantity of imported wood pulp?

*Mr. Bhargava.*—In 1936 we used 730 tons and we increased hemp and rag. It was only in 1934 that wood pulp was used because wood pulp was very cheap.

*President.*—At present prices it is much better for you to make your own pulp?

*Mr. Bhargava.*—Yes.

*President.*—I take it, it was rather a question of price? In 1934, 1935 and 1936 the production of grass pulp was very small.

*Mr. Bhargava.*—We could not use the grass plant because of the erection.

*President.*—Surely erection did not take three years?

*Mr. Bhargava.*—It actually took more than two years. Unfortunately we lost one engineer and our work stopped, and it was nearly three years before we could build it.

*Mr. Rahimtoola.*—When you send us the cost of 1937 you might give us the figures of amount of grass you used. We want similar figures for all the forms.

*Mr. Bhargava.*—Yes. We will send the figures before the end of March.

*President.*—On the other hand you have reduced the quantity of waste paper cuttings. I think you told us that you would like to increase the quantity.

*Mr. Bhargava.*—Yes. At present we have no machinery to deal with waste paper.

*President.*—You have increased the percentage of loading in recent years. What is the reason for that?

*Mr. Bhargava.*—It depends on the quality of the paper.

*President.*—There had not been very large variation in the quantities of different kinds of paper you made. It has gone up.

*Mr. Bhargava.*—In 1931 the percentage was 0.51 and in 1936 it was 1.67.

*Mr. Rahimtoola.*—You might send in your explanation later on for that.

*Mr. Bhargava.*—Yes.

*President.*—We will pass on to Form II. Your proportion of bleached and unbleached pulp has varied from year to year.

*Mr. Bhargava.*—Yes.

*President.*—The lowest price you have been able to buy pulp is £7-17?

*Mr. Bhargava.*—Yes.

*President.*—Of course there was a big rise towards the end of 1936 up to £13.

*Mr. Chaudhary.*—It has gone up to even £19 to £20 now.

*President.*—From these figures it would seem that the difference in the price of unbleached and bleached pulp is more than £2 rather than £1?

*Mr. Chaudhary.*—It depends on the quality. Sometimes it comes to £1 and sometimes £2.

*President.*—On the average it would seem that the difference is like £2 and not £1.

*Mr. Chaudhary.*—Yes, that is correct.

*Mr. Rahimtoola.*—You have put down Rs. 60 as landing charges per ton.

*Mr. Chaudhary.*—That is including the duty. The duty is Rs. 56.

*Mr. Rahimtoola.*—That means the landing charge is reduced from Rs. 5 to Rs. 3-12?

*Mr. Chaudhary.*—Yes.

*Mr. Rahimtoola.*—Landing charge in 1936 was higher. You have put it down as Rs. 61: that means an increase in landing charges?

*Mr. Chaudhary.*—Yes. We have to pay terminal tax of 2 annas per ton.

*President.*—Turning to your auxiliary materials, have you increased the quantity of Indian materials you use?

*Mr. Bhargava.*—China clay is Indian, rosin is Indian, casein is partly Indian.

*Mr. Rahimtoola.*—Soda ash is Indian.

*Mr. Bhargava.*—No.

*President.*—Bleaching powder is imported and caustic soda is imported.

*Mr. Bhargava.*—Yes.

*President.*—China clay, Rosin, Katni clay and ochres and Alum ferrio are Indian.

*Mr. Bhargava.*—Yes.

*President.*—Dyes are imported.

*Mr. Bhargava.*—Yes.

*President.*—Has there been any improvement in the quality of Indian materials supplied during the last six years?

*Mr. Bhargava.*—They are improving.

*President.*—Are they satisfactory now?

*Mr. Chaudhary.*—Yes. We have nothing to complain about them.

*President.*—You have given us a statement of freights, that is your freights together with the freights for imported paper.

*Mr. Chaudhary.*—Yes.

*President.*—Where is competition most severe with imported paper?

*Mr. Chaudhary.*—Especially in Bombay and some of the States such as Kashmir and Travancore. In Travancore they have got duty free paper.

*President.*—So in Kashmir.

*Mr. Chaudhary.*—When I was in Travancore paper was coming duty free. As far as creamlaid is concerned, we used to quote 3 annas 4 pies while for the paper coming from foreign country, Messrs. John Dickinson and Company used to quote 2 annas 4 pies.

*President.*—Is there any import duty in Travancore?

*Mr. Chaudhary.*—No. Especially in Bombay and Madras competition is very keen.

*President.*—And you have to cut prices in Bombay and Madras.

*Mr. Bhargava.*—Yes. When we sell paper in Madras or Bombay, we either generally sell at cost or at a loss.

*President.*—Is competition very keen in Delhi?

*Mr. Bhargava.*—Yes. In Delhi Calcutta mills have got special freights.

*Mr. Rahimtoola.*—In nearer markets you are at a distinct advantage.

*Mr. Bhargava.*—Yes.

*President.*—In Delhi you have got a freight advantage over Calcutta mills.

*Mr. Bhargava.*—I don't think so. They get a lower rate.

*President.*—Let us compare. Your rate to Delhi is '37 and Meerut rate from Bombay is '32. Over 300 maunds it is the same.

*Mr. Bhargava.*—Yes.

*President.*—In Benares yours is slightly less.

*Mr. Bhargava.*—Yes.

*President.*—We have to take the full wagon load rates for purposes of our calculation. In Agra you appear to be at a disadvantage. Generally speaking looking into the statement containing your average realised prices, prices fell definitely in 1931 and in 1936 there was something of a rise. Has there been a further rise in 1937?

*Mr. Chaudhary.*—There has been a slight rise.

*President.*—The price of imported paper went up in 1937. Did you increase the price accordingly?

*Mr. Chaudhary.*—We have.

*President.*—In the same proportion?

*Mr. Chaudhary.*—Not in the same proportion.

*Mr. Bhargava.*—We have to follow the other mills.

*President.*—You give your prices for 1937 as well.

*Mr. Bhargava.*—Yes.

*President.*—Government Stamp Cap Paper you are actually charging more than you did in 1931. In 1931 it was 4 annas 5 pies and it is 4 annas 9 pies. What is the reason for that?

*Mr. Bhargava.*—It is the same since 1932. Our tender was given at this rate.

*President.*—There is a big drop in Azure laid from 4 annas 6 pies in 1931 to 3 annas 5 pies in 1936. Is there any special reason for this?

*Mr. Bhargava.*—Our Azure laid is inferior to that of the other mills.

*President.*—Generally speaking your lowest price was in 1934 and since then there has been a recovery. Is not that a fact?

*Mr. Bhargava.*—Quite.

*President.*—You have not given us your averages. Could you work them out for all the years and send them later?

*Mr. Bhargava.*—Yes.

*Mr. Rahimtoola.*—With regard to prices realised by you, I find Government Departments are paying you less than others. Take white printing. You realised 3 annas 3½ pies per lb. in 1936, whereas the Central Government is paying 3 annas ½ pie per lb. and the Provincial Government is paying 3 annas 1½ pies per lb. Why is that difference between the price realised from Government and the realised price at other places?

*Mr. Chaudhary.*—Bigger contracts.

*Mr. Rahimtoola.*—Is the competition different?

*Mr. Chaudhary.*—We have to compete with Calcutta mills in Calcutta.

*Mr. Rahimtoola.*—The price of 3 annas 3½ pies per lb. you have given in Statement E in 1936 is the average for all markets.

*Mr. Bhargava.*—We quote for big quantities and therefore a very low rate.

*Mr. Rahimtoola.*—In the calculation of the realised price which price shall we take into account?

*Mr. Bhargava.*—The average of the two.

*President.*—Do these figures in Statement E include Government supplies?

*Mr. Bhargava.*—Yes. The first statement includes everything.

*President.*—You supply the Bihar Government with Stamp Paper and not the United Provinces Government.

*Mr. Chaudhary.*—It is the understanding with all the mills when we supply the paper.

*President.*—It seems rather curious you supply the Bihar Government and not the United Provinces Government.

*Mr. Chaudhary.*—That is the understanding with the other mills.

*President.*—Prices are fixed by the mills in consultation.

*Mr. Chaudhary.*—Yes, for tenders.

*Mr. Bhargava.*—If we don't fix like that, prices would be even lower. Even then Government get their paper cheaper than the market.

*President.*—Turning to Forms V and VI as regards your primary raw materials, you have altered the proportion to some extent in accordance with the amount of the imported pulp used. We have already dealt with it.

*Mr. Bhargava.*—Yes.

*President.*—As regards the auxiliary materials, the percentage remains very much the same. I am comparing 1931 with 1936. Power, you have brought down considerably, but there has been a rise in 1936 as compared with the earlier years.

*Mr. Bhargava.*—Yes.

*President.*—I suppose the amount of fuel used depends on the amount of pulp you use.

*Mr. Bhargava.*—If we use more pulp, power consumed will be less.

*President.*—If you use more imported pulp, you don't have to make so much pulp.

*Mr. Bhargava.*—Quite.

*President.*—What are your other items in the cost of manufacture? What do they include? Would you give us details?

*Mr. Bhargava.*—Yes.

*President.*—Would you look up your Form VI? It is put in a different form. What do your selling expenses include? Do they include freight?

*Mr. Bhargava.*—Yes. We give free delivery.

*President.*—In the cost of manufacture the cost of freight is not usually included. So would you give your selling expenses without freight?

*Mr. Bhargava.*—Yes.

*Mr. Rahimtoola.*—What is the selling commission which you allow?

*Mr. Bhargava.*—Up to 10 per cent. and it depends on the quantity.

*Mr. Rahimtoola.*—Have you got your own shops?

*Mr. Bhargava.*—We have got agents.

*President.*—Have you got any offices upcountry?

*Mr. Bhargava.*—No.

*President.*—Have you whole time agents upcountry or do you sell on commission mainly?

*Mr. Bhargava.*—They have to keep shops where they stock our paper.

*President.*—Do they stock only your paper?

*Mr. Bhargava.*—All agents are supposed to stock only our paper.

*President.*—Are they paid only commission?

*Mr. Bhargava.*—Yes.

*President.*—No salary?

*Mr. Bhargava.*—No.

*President.*—I see that the proportion of insurance has gone up in recent years. What is the reason for that?

*Mr. Bhargava.*—Sometimes when we have more stock of grass, we have to pay more insurance because the rate for grass is very heavy.

*President.*—The proportion of your rents, rates and taxes is also very high compared with other mills. Can you give us the reason for that?

*Mr. Bhargava.*—One reason is that the terminal tax has been included in that.

*President.*—Does that include the terminal tax on raw materials?

*Mr. Bhargava.*—Yes.

*President.*—Did you not put it under raw materials?

*Mr. Bhargava.*—No.

*President.*—Correctly speaking, it ought to have come under raw materials.

*Mr. Chaudhary.*—Yes.

*President.*—Rents, rates and taxes mean taxes on buildings.

*Mr. Bhargava.*—Yes. We shall look that up and let you know.

*President.*—Your rate of depreciation is lower than the statutory rate. The statutory rate is 5 per cent. for buildings and 7½ per cent. for paper making plant.

*Mr. Chaudhary.*—Yes.

*Mr. Bhargava.*—Most of our old plant can be depreciated to a very low figure. The machinery had cost as per balance sheet Rs. 14 lakhs and odd and the depreciation written off is Rs. 13,29,000.

*President.*—For your purpose the amount of depreciation is sufficient.

*Mr. Bhargava.*—Yes.

*President.*—You have written down your machinery so much that probably the book value of your plant is more than its real value. What does this figure—interest on working capital—represent?

*Mr. Bhargava.*—The question has been misunderstood. Perhaps they have taken it to be the interest which we should pay.

*Mr. Rahimtoola.*—You don't take any loans.

*Mr. Bhargava.*—No.

*President.*—You understand what is meant by interest on working capital. You might correct that.

*Mr. Bhargava.*—It should be nil.

*President.*—The interest on working capital is allowed only on stocks and not on outstandings. The practice of the Tariff Board is to show interest on working capital.

*Mr. Bhargava.*—Yes.

*President.*—What does head office expense represent?

*Mr. Bhargava.*—It represents the expenditure incurred on the maintenance of the general office, clerks, cashier, accounts department, etc.

*President.*—There is no question of managing agents.

*Mr. Bhargava.*—No.

*President.*—It is your actual expenses on the clerical side and accounting side of the business?

*Mr. Bhargava.*—Yes.

*President.*—It includes Directors' fees.

*Mr. Bhargava.*—Yes. They represent a percentage of net profits—4 per cent. on the net profits earned by the Company.

*President.*—After deducting depreciation?

*Mr. Bhargava.*—Yes.

*Mr. Rahimtoola.*—If there is no profit, they get nothing.

*Mr. Bhargava.*—Nothing.

*President.*—What does this "miscellaneous" include? It is a fairly big item.

*Mr. Bhargava.*—We shall give you the details later.

*Mr. Rahimtoola.*—What is "patmal"?

*Mr. Bhargava.*—Old gunny bags, old ropes cuttings.

*President.*—It is waste stuff generally.

*Mr. Bhargava.*—Yes, gunny chiefly.

*President.*—How do you get a different name for grass?

*Mr. Bhargava.*—It is the same grass. As it is produced in different areas it is known by a different name.

*President.*—The most common name is Sabai grass.

*Mr. Bhargava.*—Yes.

*President.*—It is the name adopted in all official publications.

*Mr. Bhargava.*—Yes.

*President.*—Are there any points which you would like to raise with us beyond what we have been talking this morning or what is contained in the questionnaire?

*Mr. Bhargava.*—No.

### 11. Star Paper Mills Limited, Saharanpur.

(1) *Letter No. 1653, dated the 21st January, 1938.*

We have gone through the Questionnaire for manufacturers and lay before you the case for The Star Paper Mills, Ltd., Saharanpur (United Provinces).

At the moment the abovenamed Mills are not working but all Machinery for a single unit to manufacture from Bhabar grass is being shipped to us and we hope to be manufacturing by April, 1938. The machinery which we have ordered in an all British Unit to manufacture from grass, bamboo, and the like fibres. The whole plant has been designed by Messrs. James Bertram & Son, Ltd., and we will have a model grass Mill. In this Unit we hope to manufacture about six thousand tons of paper per year, and, while installing, we have laid down Steam and Power Plant enough to enable us to extend our manufacture to about 20,000 tons per annum bearing in mind that quality and the market demand must govern both output and quality.

It is our intention with the first Unit to manufacture solely from Bhabar grass of which we have held leases from Government Forest Department for many years. Originally the lease for Bhabar grass in the Western Circle was valued at Rs. 77,500 only, but as bamboo was most extensively used the Government could not find a ready market for the lease of Bhabar grass and eventually disposed of it for Rs. 30,000 per annum. We, therefore, resolved to float a Company and lay down an up-to-date Grass Pulp and Paper Mill in the United Provinces near the Western Circle Forest and extend the collection of Bhabar grass and now instead of paying Rs. 30,000, the Managing Agents of The Star Paper Mills, Ltd., are paying to Government Rs. 70,000 *plus* 25 per cent. of the Managing Agents' commission not exceeding Rs. 25,000 per annum. This means that the Government will receive about one lakh of rupees per year in Royalty which would not have been forthcoming, had we not floated this Company, the major portion of this money is paid for before any grass is extracted. This new Industry in the United Provinces will provide continual labour for about seven to eight thousand persons, and with one unit of manufacture, it will bring revenue to Railways of about 2½ lakhs of rupees yearly and of course the Tariff Board very well know it will be of great assistance to the immediate surroundings creating work for lime kilns, china clay, and Government Rosin Factories, etc.

It is the intention of the Star Paper Co., Ltd., to use only indigenous fibres, not any wood pulp whatever and as we extend our works, we have in mind to use other Indian fibres which are not at present being used in paper making. If protection is continued, we hope to go forward and lay down another Paper Making Unit for which we have provided power and we also hope to manufacture papers other than those which are catered for by manufacturers at the moment in India.

It was the intention of the Star Paper Co. to instal an Electrolytic Bleaching Plant, but having been informed by the Imperial Chemical Industries that they hoped to lay down a large Plant to manufacture Chlorine and Caustic Soda with the intention of supplying Indian Paper Mills with liquid chlorine at a price favourable to them, we purposely held off installing our own Plant. But we suggest to the Tariff Board that the expansion of Paper Manufacturing in India has encouraged a large firm such as the Imperial Chemical Industries to instal chemical works in India. Without the assistance of Tariff it would have been impossible for us to have ventured on a scheme such as we have taken up and we sincerely hope that assistance will continue to be given to enable us to go forward, developing the Paper Industry in its different branches so that in the course of time, India may be able to supply all requirements for internal consumption.



We also enclose our replies to Questionnaire and regret our inability to give more detail owing to the limited time at our disposal for studying replies to questions.

*Replies to Questionnaire.*

1. (a) Public Registered firm.
- (b) Registered in Calcutta—Rupee Capital.
- (c) Over 95 per cent. Indian Shareholders.
- (d) All Indian gentlemen Directorate assisted in the Technical Superior management by European.
2. Capacity of Mills will be (a) 5,900 tons of pulp and (b) 6,200 tons of paper.
- 3 to 5. Mills not started.
6. (a) Two and half tons of grass per one ton of pulp.
- (b) Three ton of grass to one ton of paper.
7. Unlimited supplies of raw material suitable for the manufacture of paper.
8. (a) No.
- (b) Same.
- (c) We have a concession from the United Provinces Government for Western Circle Bhabar grass for 25 years dating from July, 1937.
9. (a) As. 13 to As. 14 per maund.
- (b) As. 2 to As. 6 per maund.
- (c) Royalty to Government about 1 lakh rupees annually.
- (d) Other charges As. 3.
10. Coal is very high in freight Rs. 10 per ton and Railway refuse to give any concession.
11. (a) & (b) Soda process.
- Forms II and III at the moment, it is our intention to work only on grass, and as we have not started the Mill, we refrain from comment.
12. We do not intend to import pulp.
13. Not necessary to import pulp. In our opinion all classes of paper can be manufactured from indigenous fibre.
14. No reply.
15. Higher cost of wood pulp due to many causes and especially in difficult times.
- 16 to 22. Not started.
23. Taking every possible care for welfare of labour.
24. Laying down an up-to-date Mill.
25. (b) We are not started, but to enable manufactures to make progress, the manufacture of all kind of papers protection is necessary.
26. In our opinion it is quite possible to manufacture mechanical products in India.
27. (a) Protection on imported paper and wood pulp has entirely changed the prospects of Paper Manufacture in India which has encouraged capitalists to invest their money in Paper manufacture.
- (b) Has assisted in developing chemical industries, Lime Kilns, China Clay works and has brought extra revenue to Rosin-manufacturing, Coal, Railways, growing and cutting of grass, and bamboo and our estimate is that about half lakh of people will be employed in collecting raw material for Mills and Government has materially benefitted by extra revenue.

28. We are not in the market yet.  
 29 to 32. Not started.  
 33. It may be so.  
 34. Not started sales.  
 35 & 36. Not started.  
 37. Not having started we have not been effected. It is a matter of opinion.  
 38. Not started.  
 39. Putting down a new mill.  
 40. Not at the moment.  
 41 to 45. We are under construction.  
 46. Nil.  
 47 to 50. Under construction.  
 51. We do consider protection should be continued.

As we are under construction and have not full figures before us, we respectfully say that it is difficult for us to give a constructive opinion about enquiries under this heading, but we do know that without a safeguarding protection, it will be impossible for Mills to go forward. There are many trenches of the industry which can be developed if assisted by protection.

52. Under construction.  
 53. It is satisfactory for certain classes of paper but it ought to be extended to others.  
 54. We think the surcharge ought to be maintained which does not create any hardship to the general public.  
 55. Being under construction, we have not had time to study this question, as we ought to.

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(2) *Letter No. 93, dated the 26th January, 1938, from the Tariff Board, to the Star Paper Mills, Ltd., Saharanpur, United Provinces.*

With reference to your letter No. 1653, dated the 21st January, 1938, I am directed to request you to be so good as to supply the Board with the estimated cost of the mill, buildings, plant and machinery separately.

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(3) *Letter No. HO/947, dated the 31st January, 1938.*

We beg to acknowledge the receipt of your letter No. 93, dated 26th instant, addressed to our Mills office at Saharanpur and in reply to beg to inform you that the estimated cost of our mills is Rs. 30 lakhs, the cost of buildings being estimated at Rs. 5 lakhs and the balance for the plant and machinery.

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(4) *Letter No. HO/1125, dated the 26th February, 1938.*

With reference to our Mr. Bajoria's conversation with you over telephone on last Saturday, we give below the estimated cost of manufacture of Pulp and Paper:—

- (a) The estimated cost of manufacture of pulp from grass is Rs. 276 per ton.  
 (b) The estimated cost of manufacture of paper from grass is Rs. 376 per ton.

(5) *Letter No. T. B. 42/2224, dated the 16th April, 1938, from Mr. Bookless, Star Paper Mills, Saharanpur, United Provinces.*

I beg to be allowed to bring to your notice a letter offering to us pulps which are reputed to be free from Tariff or Surcharge, it came as a great shock to me to know that such beautiful pulps can be imported into India free of duty or surcharge. I was under the impression that all of these pulps were protected, otherwise, I would never have suggested to our managing agents to lay down a mill or to enter into a lease for an extended period to enable them to extract sabai grass and to manufacture paper solely from the same and also to make use of other grasses and indigenous fibres. I do not know, but it is my impression that in considering sulphate pulp that the Tariff Board by allowing this loop hole may have understood Sulphate Pulp to be strong brown unbleached and unbleachable kraft pulp.

I feel that it is my duty to bring this to your notice for I am positively sure that if loop holes are allowed, it will be impossible for mills relying solely on indigenous fibres to live because India will be made the dumping ground for surplus stocks, already there is curtailment of production in Norway, Sweden and Canada to enable pulp producers to control and maintain prices in the American and European markets. I know of one large pulp mill which has been stopped twice for two or three weeks within the last six months in order to curtail production and during the slump a few years ago this mill was never idle, there is definitely danger of India becoming a country to which surplus stocks may be shipped.

If one were sure that no Tariff would be placed on these imported pulps it would be a sound proposition to erect a mill to manufacture solely from wood pulp somewhere near the coast and adjacent to cheap electricity for the cost of fuel would hardly enter into it as so very little steam would be required for drying of paper only, capital requirements for such a mill would be very little compared with the lakhs of rupees required for a mill manufacturing from indigenous fibres such as grass, bamboo. The cost of storage, crushing, dusting, digester plant, soda recovery and the consumption of coal required for power and cooking to convert from raw material to pulp could all be eliminated.

I understood there was adequate protection against all bleached and bleachable wood pulp and I had no hesitation in suggesting to our managing agents to make sure of their raw material for manufacturing and they have entered into a long term lease and will the Government about one lakh of rupees Royalty annually to be allowed to extract raw material in turn after this year they will pay out about rupees seven lakhs per year for collection of the raw material. The Government Forestry Officials are under the impression that we have a low cost raw material, but I am disappointed as I know we are paying full value for the raw material.

It may be argued that a certain quantity of the better quality of sulphate or sulphite pulp is necessary for certain qualities of papers, but it has just come to my notice that one mill which was contemplating buying indigenous fibres has recently placed an order for wood pulp which is not protected and this was not a high quality of wood pulp. But if there was a Tariff and Surcharge on these pulps the manufacturer would use as small a quantity as possible, if he now used 25 per cent. and it was found to be more costly using imported pulp than to use indigenous fibres it would very soon be reduced to say 5 per cent. or 10 per cent., in my own case I have to consider advising my company about extending so that we may manufacture economically and reduce our overhead and working costs, if we can buy wood pulp, sulphite and sulphate and mechanical at figures quoted it would pay us to do so and manufacture M. G. papers, the extra capital outlay would be small, in turn if there be no tariff on the very high quality of sulphate pulp, it would pay us to manufacture best quality of papers and blend our sabai grass pulp with sulphate pulp and in extending instal only. Beaters and machines, again, suppose we wished to manufacture certain qualities of high quality Lodgers Account and it is necessary to use a large quantity of

strong sulphite or sulphate (which it is not) then the extra selling price of such a paper would be able to stand the Tariff on the pulp and it would make the manufacturer consider well how small a quantity he could use.

It is my humble opinion and I am sure if we are to make progress in pulp manufacture in India then we must have protection against the production of well established pulp mills in Europe who undoubtedly are going to try and keep their market for wood pulp of all qualities and if owing to an existing tariff on paper they find that more paper is being manufactured in India then they will push their product in India.

There is ample spruce in India waiting to be extracted for wood pulp and within sixty miles of our mill either for wood pulp or Rayon. It will be difficult to extract, I have spoken to Capitalists about it and would like to go further into it, but I am so discouraged at finding there is not any protection on so many classes of wood pulp, coming into the country that one cannot bring it forward not even for consideration, there are also in India large areas of bamboo from which beautiful strong sulphate pulp can be manufactured and pulp may be manufactured at low cost. I am sure all of this is well known to the Board, but to encourage capitalists to go forward might I ask the Board to consider and if they think it necessary to grant protection against all classes of wood pulp and also on all quality of paper except newsprint in reels, otherwise the industry will not make healthy progress.

The reason I suggest newsprint in reels to be exempted is because one does not wish to interfere with Newspapers, but other cheap white papers such as posters—M. G. Qualities, Manillas can all be manufactured in this country at rates which will not affect the general public—One does feel that the present system of allowing papers into the country which contain a certain percentage of mechanical pulp free of duty leaves a loop hole for abuse.

I am sure that Paper Manufacturers who are hoping to compete and use all Indian fibres will be grateful to the Board for any help they may receive in this direction.

(6) *Letter No. D. O. T. B. 42/2229, dated the 16th April, 1938, from Mr. Bookless, the Star Paper Mills, Ltd., Saharanpur, United Provinces, to Mr. A. L. Sahgal, Officer on Special Duty, Tariff Board.*

As requested I send you herewith details estimating cost of the Stretch between Pulp and Finished Paper. I do not think the estimate will be far out in actual practice. I have not allowed for cost of Storage or insurance of paper.

#### *Memo.*

From pulp to paper in a mill making five printings on a one machine unit with production of say 400 tons per month.

Power—	Horse Power.
Beater would consume . . . . .	400
Paper-making machine would consume . . . . .	180
Cutters Reelers Calenders would consume . . . . .	100
	<hr/>
	680

The above power would require 1 ton 5 cwt. to 1 ton 10 cwt. of coal per ton of paper, the figure is governed by quality of paper made. Size of orders making it possible to have steady runs.

	Rs. A.
Coal at Rs. 15 per ton . . . . .	22 8
(Production be hampered owing to indifferent making orders, then this figure would be increased, Estimated on 5,000 ton per annum.)	
Chemical and Dyes Sizing, etc., which is added to the Beater . . . . .	38 0 per ton of paper.
Machine furnishings, Wires, Felts, couch jackets monthly recurring charge . . . . .	10 12 per ton.
Oil consumed in paper-making from beater to paper . . . . .	2 0 „
Labour, wages, Beater Machine, cutters calender reeler . . . . .	1 8 „
Labour charges, Finishing Department . . . . .	3 8 „
Selling charges and agency fees . . . . .	20 0
Packing charges including wrappers and string . . . . .	15 0
Depreciation on capital outlay of machinery for Beaters machine cutters reelers super calender . . . . .	10 0
	<u>123 4</u>

- (7) Letter No. T. B. 42, dated the 29th April, 1938, from Mr. Bookless, Star Paper Mills, Saharanpur, United Provinces.

With reference to my letter No. T. B. 42/2224 of April 16 drawing your attention to the marketing of Bleached and Easy Bleaching Sulphate and other Pulps, I beg to enclose copy of a telegram just received giving quotations of pulps from Messrs. Elof Hansson Gothenburgh. This telegram shows how anxious selling agents are to lower prices to obtain business for Pulp in India.

Copy of a telegram received by our Calcutta Head Office from Messrs. Elof Hansson, Sweden:—

“Bleached 245/Easybleaching two twenty-five Bleachable two fifteen Unbleached 205/Kraft 192/6 Mechanical 130.”

- (8) Letter No. 465, dated the 29th April, 1938, from the Tariff Board, to the Star Paper Mills, Ltd., Saharanpur, United Provinces.

In reply to your letter No. T. B. 42/2224, dated the 16th April, 1938, I am directed to say that all wood pulp is subject to protective duty, the rate of which at present is Rs. 56-4 per ton. The Board therefore cannot understand how any pulp can come in free of duty. The total annual imports of pulp as given in the Customs Returns correspond closely with the figures given by Mills for their consumption of wood pulp. Have you any information that pulp made of material other than wood can be imported free of duty? The Board would be glad to know if you are in a position to substantiate your statement that imported pulp is being admitted free of duty at present.

- (9) Letter No. T. B. 42/2339, dated the 1st May, 1938, from Mr. Bookless, the Star Paper Mills, Ltd., Saharanpur, United Provinces.

With reference to your letter No. 465, the only information which I have regarding the import of chemical wood pulp free of duty is the letter of

Messrs. Elof Hansson which I submitted to Mr. Saghal in the original on the 16th ultimo (copy enclosed). On the 29th April I posted a copy of a telegram received from the same agents offering us chemical and mechanical wood pulps at low rates. I am very glad to have information that all wood pulp is subject to a protective duty of Rs. 56-4 per ton. I hope that this includes all chemical wood pulp cellulose sulphite, soda sulphate pulps also mechanical pulps, in view of the cut in prices and the falling off of demand in Europe it would appear that excessive stocks are being offered to purchasers in this country at cut rates.

We have not asked for quotations but for several months agencies in Europe have tried to induce us to purchase wood cellulose at prices which it would pay us to abandon manufacturing from indigenous fibres.

I have no information that pulp made from materials other than wood can be imported free of duty, there are other pulps such as Bleached Straw Pulp, Rag Pulp which it may be possible to import free from duty. I do not know if Eucalyptus and Aspin pulps are subject to Tariff or not, they ought to be.

Again the word wood pulp is often loosely applied and some argue that wood pulp is mechanical wood pulp only, but any pulp which has been chemically treated to rid it of oils, resins, or pectose and lignin is not wood pulp but cellulose pulp, in the paper industry of late years it is common practice to make use of the words "Wood Free" papers which means that it does not contain any mechanical wood pulp. Some mills manufacturing solely from chemical wood pulp cellulose advertise that they are a wood free mill, it would appear that care ought to be exercised that there be no loop hole for importing under a misnomer.

The wood pulp industry of Norway, Sweden and Finland is bound up in many ways with state which it is difficult to understand. If prices are low they still produce, there is so much at stake forestry, water power, lumbering and it is most difficult for capitalists and manufacturers to compete against such a combination, in fact they will not be able to compete unless adequately protected.

*Copy of letter, dated the 16th March, 1938, from Messrs. Elof Hansson, Goteborg, to Messrs. Star Paper Mills, Ltd., Calcutta.*

Referring to previous quotations for this material I take leave to draw your attention to the fact that *Kraft Sulphate Pulp* and *Mechanical Wood Pulp* are now exempted from import duty. In view hereof I feel sure you will be greatly interested in these kinds of pulp, and have permitted myself to send you to-day samples of the following brands, which I beg to offer you as follows:—

#### KRAFT SULPHATE PULP.

##### I.—Bleached.

		£	s.	d.
No. 803,	prime quality "Norrland 2 Stars White"	15	0	0
No. 805,	" " "Norrland 3 Stars"	15	0	0
No. 869,	" " "Kotka Class I"	15	0	0

##### II.—Easy Bleaching.

No. 340,	prime quality "Eds 2 Stars"	12	5	0
No. 595,	" " "Lojo Special Light" (Red)"	12	5	0
No. 170,	" " "Gutzeit 2 Stars"	12	5	0

##### III.—Bleachable.

No. 263,	prime quality "Kotka A P"	11	15	0
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IV.—*Unbleached Strong.*

			£	s.	d.
No. 135,	prime quality	"Nensjo Kraft Extra"	10	5	0
No. 217,	"	"Sandviken S Crown S"	10	5	0
No. 230,	"	"Ljusnan Lj Kraft"	10	5	0
No. 253,	"	"Korsnas Kraft"	10	5	0
No. 262,	"	"Uddeholm UHB K"	10	5	0
No. 284,	"	"Dynas Strong Kraft"	10	5	0
No. 363,	"	"Ostrand Quality 80"	10	5	0
No. 456,	"	"Aspa Kraft ES"	10	5	0
No. 593,	"	"Wifstavarf WWK"	10	5	0
No. 602,	"	"Oulo Kraft"	10	5	0
No. 670,	"	"Obbola Kraft"	10	5	0
No. 672,	"	"Husum Bear Extra"	10	5	0
No. 856,	"	"Tornator Seal Kraft"	10	5	0
No. 936,	"	"Munksund Kraft"	10	5	0
No. 37,	second	"K H B/2"	9	15	0
No. 190,	"	"Kalix Sekunda"	9	15	0
No. 608,	"	"Oulo II"	9	15	0
No. 661,	"	"Frano Buffalo B"	9	15	0
No. 765,	"	"Halla SS"	9	15	0

## WHITE DRY MECHANICAL WOOD PULP.

No. 51,	prime quality	"Satra"	8	10	0
No. 87,	"	"Torpshammar"	7	12	6
No. 92,	"	"Lottefors"	7	12	6
No. 742,	"	"Svarta"	7	12	6 (88/100)
No. 911,	"	"Stromsdal"	7	12	6 "
No. 995,	"	"Forsse"	7	12	6
No. 1258,	"	"Austrocarton P"	8	0	0 (88/100)
No. 1285,	second	"Austrocarton MF/II"	7	10	0 "

## BROWN DRY MECHANICAL WOOD PULP.

No. 1,	prime quality	"Stockfors"	9	0	0 (88/100)
No. 55,	"	"Dejefors"	9	0	0

## WHITE DRY MECHANICAL ASPEN PULP.

No. 45,	prime quality	"Forsvik Aspen"	11	0	0
No. 188,	"	"Fostvedt Aspen"	11	0	0
No. 479,	"	"Egeland EV"	11	0	0
No. 987,	"	"Satra Aspen"	11	0	0

as per 1·016 kilos, c.i.f. Calcutta, basis 99/100, unless otherwise stated, usual terms.

As regards other qualities of wood pulp, please note that to-day's prices are:—

	£ s. d.	£ s. d.
Prime Bleached Sulphite pulp . . .	13 10 0	to 14 10 0
Prime Semi-bleached Sulphite pulp . .	13 0 0	
Prime Easy Bleaching Sulphite pulp . .	12 5 0	„ 12 15 0
Prime Strong Bleachable Sulphite pulp .	11 17 6	„ 12 7 6
Prime Strong Unbleached Sulphite pulp .	11 10 0	„ 12 0 0

aforementioned terms and conditions.

I await to hear from you as to what requirements you have of each particular kind of pulp as well as what papers you are manufacturing.

*Copy of letter, dated the 5th April, 1938, from Messrs. Elof Hansson, Goteborg, to Messrs. Star Paper Mills, Ltd., Calcutta.*

I refer to my air mail letter of the 16th ultimo, and have herewith much pleasure in advising you that to-day I can offer you *Bleached Draft Sulphate pulp*, subject to confirmation, as follow:—

	£ s.
No. 803, prime quality "Norrland 2 Stars White" . .	13 0
No. 805, „ „ „ "Norrland 3 Stars" . .	13 0
No. 869, „ „ „ "Kotka White, Class I" . .	13 10

all per 1·016 kilos, c.i.f. Calcutta basis 90/100, usual terms.

Trusting to be favoured with your estimated commands on basis hereof, I beg to remain, Dear Sirs.

(10) *Letter No. T. B. 42/2341, dated the 1st May, 1938.*

In reply to your wire I am posting detail cost of a mill to manufacture from imported wood pulp only. If such a mill was being built the obvious place for it would be near to a port and where cheap electrical power would be available as very little stream would be required, but supposing that the mill generated its own power then the cost of fuel would be one ton of coal per ton of paper. It stands to reason, labour, railway freight would be cut, there would not be any necessity for skilled technical labour in soda recovery, grass, boiling, dusting, etc., which would all be eliminated and the large number of people employed in collecting and handling raw material in the jungle, extra clerical staff necessary in collecting of raw material would also be eliminated. This is all obvious and it is capital cost you ask for.

It will be obvious that we would not require nearly so much land for storage and housing labour. To handle the pulp cheaply, it would be dumped into lighters from the ship and from the lighters to a godown alongside a jetty where it would be sloshed to pulp and pumped to Bleaching containers in the mill.

In giving this estimate I have been liberal.

	£
Land say 12 Bighas . . . . .	1,000
All buildings including roofing . . . . .	9,000
Railway Siding . . . . .	2,000
Tube well to obtain clean water for manufacturing . . . . .	500
	<u>12,500</u>



<i>Paper-making Plant.</i>		£
Potcher or Pulper (any system)	1,000	
Bleaching Containers (2)	360	
Beater filling chest, Piping pumps, etc.	500	
Beaters	5,000	
Paper-making Machine	30,000	
Paper Cutting Machine	1,700	
Reeling	800	
Guilotine	315	
Clay and Size	585	
Alum Tank	20	
	<u>40,280</u>	
		£
Steam Boiler	5,000	less 4,500
Turbine—1,000 K.W.	2,500	,, 2,500
Switch Board	1,000	,, 500
Freight outward	5,000	
Cabling Motors Freight, etc.	5,000	
	<u>18,500</u>	less 7,500 = £11,000.
<i>Mechanic shop for repairs.</i>		
Buffing Machine	3,000	
Drilling Machine and Lathe	600	
	<u>3,600</u>	
	£	£
It may be that a super calender ought to be included but it is not necessary for white printings and laids—		
1st	12,500	12,500
2nd	40,280	40,280
3rd	18,500	11,000
4th	3,600	3,600
	<u>74,880</u>	<u>67,380</u>
Add 10 per cent. for market fluctuations	7,488	6,738
	<u>82,368</u>	<u>74,118</u>

But if cheap electricity were available then cost of turbine £2,500 would be eliminated and steam boiler charges reduced to £500 for drying of paper only and also reduced switch board £500. Total £7,500.

Therefore if cheap electricity were available the cost of a single unit to produce 6,000 tons of paper per annum would be £74,118 or Rs. 9,82,063 lakhs.

But if a boiler and turbine be installed it would require £82,368 to produce 6,000 tons per annum or 10,91,356.

(11) Letter No. T. B. 42/2397, dated the 8th May, 1938, from Mr. Bookless, Star Paper Mills, Saharanpur, United Provinces.

When discussing prices of imported paper with dealers I find that the price of unglazed white and coloured printings, Gold, Orange and Badami are imported at £13 per ton c.i.f. Karachi Foreign Kraft Brown paper £18 c.i.f. Karachi.

These prices make it impossible for manufacturers in India to compete the unglazed printings containing mechanical wood pulp, but it is doubtful if these papers could be purchased at such low prices in Europe. It is bad for India to have to admit that she has to depend on Europe for Newsprint and it is only because there is no form of protection that this exists.

If Newspapers are to enjoy the privilege of importing free of duty, it ought to be granted to *bona fide* Newspapers only.

I had in mind the possibility of manufacturing M. G. Posters and unglazed printings, but the importation of these cheap lines would not leave any margin.

The difficulty for Indian Manufacturers to compete against low priced mechanical wood papers admitted free of duty encourages dealers to import these qualities and enables them to make large profits which they can do as the paper is sold in competition with wood free paper manufactured in India.

This narrows the field of manufacture in India.

It is possible to manufacture a good quality of pulp to compete against mechanical wood, which would enable Indian Mills to place a competitive paper on the market for cheap Badammies and unglazed white and coloured printings or posters if an adequate duty were placed on the imported quality.

## 12. The Straw Board Manufacturing Co. Ltd., Saharanpur.

Letter No. 919, dated the 2nd April, 1938.

Subject:—TARIFF BOARD ENQUIRY INTO PROTECTION FOR PULP PAPER INDUSTRY.

We are in receipt of your letter No. 3/9-1/P. P., dated the 12th February, 1938, regarding the above and as desired we give below the production of Board year by year:—

									Tons.
1932	.	.	.	.	.	.	.	.	1,970
1933	.	.	.	.	.	.	.	.	3,309
1934	.	.	.	.	.	.	.	.	3,388
1935	.	.	.	.	.	.	.	.	3,654
1936	.	.	.	.	.	.	.	.	3,847
1937	.	.	.	.	.	.	.	.	4,321

and the expected production for 1938 is over 5,000 tons.

Regarding raw material, we produce boards from various reeds, grasses straws and waste vegetable fibres too numerous to mention here as the Tariff Board is not likely to be interested therein. We have run the factory more as a research laboratory than a production unit and consequently are now able to manufacture board from any type of vegetable fibrous material at a competitive price.

We are happy to be able to inform you that this industry is now in a healthy state and can live without any protection duty; the revenue duty at present in force being quite ample and the Tariff Board be informed accordingly.

In the matter of cost of production of paper in this country we would like to inform the Tariff Board that as it is an allied trade, we have studied the subject and found that similarly paper mills can work profitably on a

normal revenue duty and there is no reason to continue the present high protective duty. The making use of Bamboo for paper pulp is only an excuse and in the presence of almost unlimited resources of other fibrous materials in the country, it is very wasteful to grant the protection which raises the cost of paper to consumers and from country's point of view the bamboo might as well rot in the jungles rather than cost something for the benefit of using it as it at present does.

If the Tariff Board would like us to give evidence, we would be willing to do so on the Board giving a sitting in our Mill at Saharanpur which is an important paper-production centre in the North, as Jagadhri Paper Mill is only 18 miles and Star Paper Mills is only two miles away. Should the Board be unwilling to visit this factory then we are unable to appear before it.

### 13. Shree Gopal Paper Mills Ltd., Jagadhri, Punjab.

#### A.—WRITTEN.

(1) *Memorandum in reply to the Indian Tariff Board Questionnaire.*

1. (a) The Company is a Public Limited Company.

(b) It is registered under the Indian Companies Act VII of 1913 with Rupee Capital.

(c) The Share Capital is held mainly by Indians.

(d) The Board of Directorate, as it is constituted, is purely Indian.

The superior management of the Company is also Indian, with the exception that, on the manufacturing side, there are four European covenanted hands.

2. The machinery in the mills is designed to manufacture 7,500 tons of paper per annum and also the requisite pulp needed, from grass, rope cuttings, rags, etc.

3. No answer.

4. The chief classes of paper manufactured are as under:—

(Estimated finished weight—period from April to December, 1937.)

Quality.	Quantity.	Percentage to the total production.
	Tons.	
White Printing . . . . .	1,302·947	53·250
Cream Laid . . . . .	1,025·660	41·921
Brown Wrapping . . . . .	18·072	·739
Mottle Finish (Ptg. off sets) . . . . .	2·338	·095
Badami . . . . .	21·514	·883
White Cartridge . . . . .	9·522	·389
Antique Laid . . . . .	6·821	·279
Superior Badami . . . . .	16·187	·661
Azure Laid . . . . .	26·906	1·099
Ahmedabadi . . . . .	6·909	·282
Antique Wove . . . . .	2·893	·118
Manilla . . . . .	·182	...
Grey Mottle Cover . . . . .	6·138	·259
Cream Wove . . . . .	·311	...
Blotting . . . . .	·224	...
Total . . . . .	2,446·624	100·012

Yes, there are possibilities of manufacturing grease proof, Linen faced, one sided Lithos and Super Calendered papers.

5. Please see Form I duly filled in.

(a) *Pulp.*

	Tons.	Per cent.
1. Grass . . . . .	2.5	40
2. Rags and Ropes . . . . .	1.25	80
3. Paper Cuttings . . . . .	1.18	85
4. Wood pulp . . . . .	1	100

(b) *Paper.*

1. Grass . . . . .	3	33
2. Rags and Ropes . . . . .	1.43	70
3. Paper Cuttings . . . . .	1.33	75
4. Wood pulp . . . . .	1.18	85

7. Grass, rope cuttings, rags, paper cuttings and china clay are the indigenous materials employed in the manufacture of paper in this mill.

As for the sources of supply, grass is being obtained from jungles in the Punjab States, and from the forests in the Nepal and from the Eastern Circle of the United Provinces. Other indigenous materials are being obtained both from the Punjab and United Provinces. With regard, however, to grass, the only source where it is available in abundance is the Western Circle of the United Provinces, but as referred in a special note submitted by us, we are not obtaining any supplies from this source.

8. (a) The sources of supply of primary raw material are referred to in Answer 7 above.

(b) The methods of collection and transport are referred to in Answer 9 hereunder.

(c) As successors in business to the Punjab Pulp and Paper Mills, Ltd. (in Liquidation), we hope to obtain the grass concessions of the Kaleshwar Forest, and this is under negotiations with the Deputy Secretary, Government Punjab, Development Department, Lahore. It may be noted that the Promoters of the old Company had relied on obtaining the grass concessions of the forests in the Western Circle of United Provinces, where grass is found in abundance, but the circumstances under which we apprehend this source of supply being closed to us, and in regard to which a reference has been made in the special note submitted.

9. *Grass.*—The following are the average costs per ton delivered at the mill under sub-heads:—

	Per ton. Rs.
(a) Cutting . . . . .	10.21
Carting . . . . .	5.00
Baling . . . . .	.85
(b) Railway freight . . . . .	8
(c) Rent or Royalty . . . . .	5.1
(d) Other charges . . . . .	3
	<hr/> 32.20 <hr/>

10. This question has already been answered by the Indian Paper Makers' Association on behalf of its members.

We would, however, add, as referred to in the special note submitted, that the supply of grass obtained from Nepal Forests has been proving very uneconomical, as the concessions granted by the Railways for the transport of grass only go half way.

11. (a) Nil.

(b) We use grass as our principal raw material but in spite of our best efforts even to import 3rd of our present supply from Nepal and Eastern Circle of United Provinces we are not able to meet our full capacity, since another concern has monopolized all the Western Circle grass, hence due to paucity of this we shall be compelled to look for some other raw material in the near future to supplement our pulp supplies. The method used for grass is Soda Process, which constitutes briefly in dusting loading, adding caustic liquor, steaming under pressure, draining off spent caustic liquor, washing and cutting out cooked grass pulp.

(c) Amongst the other indigenous raw materials we use Hemp Ropes, old rags and new Tailor cuttings, the latter too only to a limited extent. The process used is again the Soda process, modified to suit this particular class of material.

(d) to (g) Nil.

(h) Our present coal consumption per ton of finished paper is 5.57 tons. While this is rather on the high side due to several reasons, nevertheless it is possible to reduce this to a slightly lower level by effecting certain economies, adequate steps for which are being taken. Reduction in the coal consumption by the improvement we are already undertaking may amount to from 5 to 7 per cent. but not more.

(i) We cannot expect to make large savings, since Caustic Soda and Bleach are imported and we have to pay monopoly prices apart from paying very heavy freight charges. Steps, however, are being taken to manufacture a portion of the above chemicals which may result in small savings.

(j) Yes, there is certainly a possibility of improving the quality of our paper soon as we have further alterations and additions in the plant, to modernize it and bring the mill up-to-date, which means extra capital.

12. (a) The quality of pulp imported during 1937 was as under:—

	Tons.
Sulphite Pulp . . . . .	50
Prime Bleached Sulphite Pulp . . . . .	725
Total . . . . .	<u>775</u>

(b) Continent.

(c) Karachi.

(d) to (g) Cost, insurance, freight, duty, landing charges and transportation up to the mill siding worked out the price to Rs. 330 per ton of 2,240 lbs. air-dry.

13. From our experience we do not think that imported pulp is absolutely indispensable for the qualities of paper we manufacture. Really first class papers can be and are made not only by us but by manufacturers in Europe from grass alone or grass and ropes and rags, etc.

Other mills in India, like us, placed as we are, use imported pulp only as a stand-by raw material in the case of breakdown in the pulp preparatory plant or due to the insufficient productive capacity of the same. The latter, again may be due to wrong and faulty co-relation of the different units of the whole mill or a purposeful design of the plant in order to use a certain proportion of imported wood pulp which in days gone by was plentifully cheap and easily available thus giving a short circuit to an enhanced production.

Thus for instance our mills is so designed that we have to use at least 20-30 per cent. wood pulp to achieve a certain economic tonnage. The only way, we could eliminate its use would be to enlarge our pulp preparatory plant, which requires extra investment.

14. So far as we are concerned all the qualities of paper enumerated above under Question 4 can be and have been made without the use of any imported wood pulp. And from our experience we can say that they compare very favourably indeed with imported paper of similar quality.

15. The recent sudden rise in the prices of wood pulp is due to many reasons, chief amongst which are:—

- (i) The increase in the price of wood pulp is due mainly to the increased demand for the same, apart from paper industry, in other Industries like, Cinema and Celluloid Industry, Synthetic Resins, and artificial silk, as also for explosives industry. The proof of which is that 70 per cent. of the expected wood pulp production for 1938 in the Scandinavian countries was sold out by June 1st, 1937.
- (ii) The increased cost of production due to the pulp wood supplies receding far back.
- (iii) General trade revival in the world after the slump.

Till such time as either there is a decreased demand in the worlds markets, or there go in existence some new pulp mills the present tendency of higher prices will remain and there is no likelihood of the same being reduced.

16. The manufacture of paper was started in our mills since April, 1937, and the indigenous materials employed other than grass are referred to in answer to the Question 6 (a) and (b), and so far as the quality is concerned, we have reasons to believe that it compares favourably with the production of other mills. We have no arrangements for the use of bamboo in our mills.

17. Please refer to Form IV duly filled in.

18. Full details of the availability of raw materials in India are shown in Form IV. Prices of the same for supplies during 1938 have advanced considerably over the prices that we paid for same during 1937.

19. In our process of cooking grass we can recover only Soda and our average percentage of recovery for the last 8 months is 53.8 per cent.

We have had as yet no opportunity to effect any improvements in the recovery process. In fact we as yet do not know the maximum limit of possible recovery under our peculiar conditions. Nevertheless, we are gradually changing our cooking process and in washing out of spent liquors, which working fully should increase our recovery to some extent from the present figures.

20. We have a limited experience in the extraction and collection of the primary materials since we have recently started departmental operations of grass contracts. We would estimate, however, that it keeps about 4,500 men fully occupied for 5/6 months to supply 4 lakh maunds of grass—to the mill.

21. Salaries and Wages for the period ending 31st December 1937—

[The Punjab Pulp and Paper Mills, Ltd. (in liquidation), was taken possession of by us on 26th November, 1936, and manufacturing started from 14th April, 1937.]

	Rs.	A.	P.
Productive (wages) . . . . .	63,995	12	0
Unproductive (wages) . . . . .	25,144	15	0
Administrative . . . . .	86,359	10	9
	<hr/>		
	1,75,500	5	9
	<hr/>		

22. Wherever possible we are employing Indian labour and the fullest of opportunities are open for Indians and Anglo-Indians for acquiring training in skilled work. At present we are employing 41 apprentices in our mill as follows:—

1. Chemical House . . . . .	4
2. Digesters and Potchers . . . . .	2
3. Screening and Bleaching . . . . .	3
4. Beater House . . . . .	1
5. Machine House . . . . .	4
6. Cutters . . . . .	1
7. Finishing House . . . . .	20
8. Workshop . . . . .	3
9. Electrical Shop . . . . .	3
	—
	41
	—

23. When we acquired this mill, there were no quarters for housing the labour or the clerical or semi-superior staff. In the short space of time at our disposal we are building suitable quarters as fast as we can for our labour even at the sacrifice of facilities for the housing of clerical or semi-superior staffs. These quarters are all modern brick and cement buildings with reinforced concrete roofs. Separate latrines, baths and kitchens are provided for all family quarters, whereas baths and kitchens are provided for all others. Latrines are of modern fly-proof design. Water lines are laid through the labour lines and in the quarters. Street lighting is furnished free. One qualified Doctor and two compounders man the well equipped dispensary, where medicine and medical advice is free to the labour and the staff. Football, Hockey and Tennis grounds with sports gear is provided free for physical recreation of the labour as well as the staff. For mental recreation periodically free shows of one kind or another are held. There are no educational facilities provided for at the present, but in a very short time we intend opening a day and night school. Preparations are also being made for imparting technical education concerning the processes involved in a pulp and paper mill to advanced apprentices and technicians. There is also a Rest House for the labour coming in or going out at shifts. We are also building a well equipped, self-contained indoor hospital.

24. Originally this mill was designed to generate their own steam and electricity from coal and for this purpose two Turbo-sets of 1,250 K.W. each were installed although the actual connected load amounted to over 2,500 K.W. when the major portion of the machinery is running the load is about 1,600 K.W. Our greatest draw back when we took over the mill was that both of these Turbines were smashed (possibly the chief reason for the closing down of the old mill) beyond repair. However, due to the assiduous and energetic work of our Engineering Department, we could make one of the sets run and produce power. This, however, was insufficient and in order to bridge over the gap of period between the time when we acquired the mill and the new Turbine (now on its way) installation, we had to get auxiliary engines to generate further power. This of necessity costs us more per unit of energy since smaller units and engines are much less efficient than larger direct driven Turbo units of modern design. Hence the changes in the arrangements for the supply of power in our mills, especially as regards (a) the source of power, are that we have been forced to use engines and an almost obsolete Turbine; (b) as regards the changes in cost, we can't

say; (c) regarding the consumption per unit of finished paper, we can't say of any changes but estimate at 1,200 units per ton of finished paper.

Total Units generated—

November, 1937 . . . . .	549,100
December, 1937 . . . . .	547,700

Finished paper during—

November . . . . .	475 tons.
December . . . . .	438 „
	<hr/>
	913 „

∴ Electrical units per ton of paper finished =  $\frac{1,096,800}{931} = 1,200 \text{ K.W.H.}$

This includes power supplied to the following:—

1. Boiler House.
2. Chemical House (not including Electro Bleach Plant).
3. Compressor House.
4. Workshop.
5. Pulp and Paper Mill sections including cutters.
6. Lighting load to the quarters.

25. This question has already been answered by the Indian Paper Makers' Association on behalf of its members.

26. We do not doubt the possibility for developing a market for Indian made pulp for paper and/or other purposes in so far as to make the existing paper mills and/or other Industries self-sufficient in the matter of imports from abroad. We are not aware of any enterprise contemplated in this direction, although experiments carried out at the various Research centres lend ample proof of the availability of indigenous raw materials other than bamboo and grass, for the manufacture of pulp.

27. The imposition of protective duty on imported wood pulp has no doubt provided an impetus to the manufacture of pulp from indigenous raw materials, just like bamboo and grass, but we have reasons to believe that such protective duty has, in some measure, been responsible in checking the development of other industry like "Rayon", where pulp is vastly employed as in Japan.

28. This question has already been replied by the Indian Paper Makers' Association on behalf of its members.

29. This question is partly answered by the Indian Paper Makers' Association in reply to the Board's question No. 34.

As our mill is situate at a place far remote from many of the coastal ports, competition at sea-port stations should prove very uneconomical.

30. The following are net prices realised ex-Factory:—

White Printings . . . . .	Rs. 478 per ton (average).
White Writings . . . . .	Rs. 490 per ton (average).

(Samples enclosed.)

31 & 32. No answer.

33 & 34. This question has already been answered by the Indian Paper Makers' Association on behalf of its members.

35. There is no difference in price between paper manufactured from bamboo pulp and paper manufactured from pulp of other indigenous materials.

36. As already stated, we have started manufacturing only from April, 1937, and our qualities show a marked improvement with the progress of time.



37. This question has already been answered by the Indian Paper Makers' Association on behalf of its members.

38. We came into being in November, 1936, and had practically no time for adopting any new processes or installing new plant and machinery. We had before us the Herculean task of starting the whole plant which was not only defunct and derelict for the last seven years but was not very well looked after as intricate paper mill but at the expense of a tremendous cost and work, only to find the inherently wrong design of the mill itself necessitating costly alterations; to find units of equipment either obsolete or not as modern as they ought to have been causing the lowering of efficiency till costly replacements are effected and finally to find machinery smashed or broken and in an unworkable condition necessitating purchase of new units altogether. For instance, besides other minor but important alterations, the following are major ones:—

- (i) Replacement of one Turbo Set in place of the old one, damaged beyond repairs.
- (ii) Alterations in the steam piping of the grass digesters.
- (iii) Converting the old grass conveyor and duster into one modern type and from open to closed type to minimize the dust nuisance.
- (iv) Fitting in of any entirely new cut-out gear.
- (v) Putting in new and more efficient type of pump impellers on all pumps.
- (vi) Discarded the old screening plant altogether and fitted in 4 more of a modern design and construction.
- (vii) Improvements in the green and bleach concentrators to effect better concentration and very much improved efficiency of output.
- (viii) Major changes in the pipe lines from Machine House to other departments of the Mill effecting the saving of water and fibre.
- (ix) Reconstruction of the entire Beating Plant to increase output.
- (x) Installed a modern method of Beater Feed, discarding old one which was obsolete.
- (xi) Putting in of new pumps on the stuff chests and important changes in the design of old auxiliary screens.
- (xii) Recovering the condensate from the machine cylinders, making it fit as boiler feed and sending the same to the boilers.
- (xiii) Improvements in the arrangements for heating of cylinders and calenders.
- (xiv) Improvements in the present paper cutting machines which are almost obsolete.
- (xv) Replacement and an enlargement of the entire Electrolytic plant to bring it up to date and capable to produce the full compliment of bleach requirements.
- (xvi) Sinking of two more tube wells to supplement the present water supply.
- (xvii) Putting in plant for the conservation of digesters blow out steam for feed water heating.
- (xviii) Building a new paper godown not provided for before. Excepting items 1, 14 and 15 which are still incomplete yet, we can confidently say that the results have fulfilled the expectations entertained. We have no doubts about the above 3 items, and are confident that they will conduce to the desired economies.
- (xix) Important alterations in the wet end of the machines.

39. Since November, 1936, we have spent not less than Rs. 6 lakhs on renovations, alterations and replacements on the whole plant. We would estimate that, at least, 60 per cent. of the above must go to the pulp side up

to and including the Beaters. But, in spite of this, the pulp preparatory plant is not capable to feed the machines to capacity. Nothing, so far, has been spent especially towards the requirements of bamboo pulp.

40. Indeed, we are contemplating very important extensions of our plant involving large sums of money—worthwhile to our mind. Some of them are:—

- (i) Providing for an additional grass conveyer and preliminary duster in series with the present one. This one being obsolete and not very efficient.
- (ii) Providing for 3 more grass digesters along with the auxiliaries and one Rag Digester.
- (iii) Providing for 2 more Rag Breakers and 2 modern type screens for the same.
- (iv) Providing for 2 modern type coarse screens for Bleached pulp.
- (v) Providing for complete bamboo crushing and chipping plant.
- (vi) Providing for 4 more modern type multiple bed plate Beaters and the interconnecting feed piping and pumps.
- (vii) Providing for a new Steam Conserving system of steam accumulators so necessary for all modern pulp and paper mills.
- (viii) Providing for 2 new modern type paper cutting machines.
- (ix) Providing for a Rewinder and Re-reeler.
- (x) Providing for a 10 Bowl Stock of Super Calender.

With the above extensions, costing approximately 8 lakhs of rupees, we can just come up to the designed capacity of the mill.

	Rs.
(i) Duster and Conveyer . . . . .	10,000
(ii) 3 Digesters . . . . .	40,000
(iii) 2 Rag Breakers and Rag Screens . . . . .	40,000
(iv) 2 Coarse Screens . . . . .	20,000
(v) Bamboo Crushing and Chipping Plant . . . . .	2,50,000
(vi) 4 Beaters . . . . .	1,00,000
(vii) Steam Accumulators . . . . .	50,000
(viii) 2 Cutters . . . . .	50,000
(ix) Rewinder and Re-reeler . . . . .	30,000
(x) Super Calender . . . . .	1,00,000
(xi) Ocean freights, duty, Railway freights and erection, etc., at 20 per cent. of the above . . . . .	1,10,000
<b>Total . . . . .</b>	<b>8,00,000</b>

41. The accounts of the first Financial Year are in the course of preparation and necessary apportionment is being made. We shall be in a position to give the figures in due course.

42. We estimate that if another mill of the same capacity as ours was built to-day in the locality where we are situated, it would cost:—

	Rs. in lakhs.
(a) Buildings . . . . .	10
(b) Plant and Machinery . . . . .	45
<b>Total . . . . .</b>	<b>55</b>

(The above estimate does not include erection and supervision charges.)

43 & 44. *Vide* answer to the question 41.

45. A copy of the Company's Statutory Report is enclosed.

46. The Company has issued Debentures in the sum of Rs. 10 lakhs bearing interest at 6 per cent. per annum taxable and redeemable, with option after seven years and ten years certain. The whole amount is outstanding.

47. Please refer to Forms V and VI duly filled in.

48. *Vide* answer to questions 38 and 40. With necessary additions and improvements we hope to keep down the cost of power consumed, and with an increase in the efficiency of the plant, the cost per ton of paper manufactured should go down.

49. (1) The value of stocks of primary and auxiliary materials is approximately Rs. 2,00,000 and the value of finished paper in the godowns is approximately Rs. 3,50,000.

(2) Our terms of business so far have been cash on delivery, and there are therefore no outstandings.

50. The business is being carried on with the capital originally raised and on the turnover of sales for the time being, but in case of need we look up to the Managing Agents to finance our requirements.

51. In the memorandum submitted to the Tariff Board, the Paper Makers' Association, on behalf of its members, made it clear that adequate protection is necessary. Speaking for ourselves as new entrants into the trade, with the several disabilities pointed out by us in our answers to the Questionnaire and also in the separate note submitted, we feel likewise that continuance of adequate protection is necessary.

The Tariff Board is also not unaware of the fact that a very huge sum is invested in the trade—both in putting defunct mills into operation, and the floatation of new mills, and the abolition of protection at this juncture will deal a death blow, for it is next to impossible for Indian Mills to face the keen foreign competition which as a corollary will follow the abolition and/or discontinuance of the present protective duties. For ourselves we had, in anticipation of the continuance of such protection struck an optimistic note in our prospectus issued to the public sometime after taking over the Punjab Pulp and Paper Mills, Ltd. (in liquidation)—

"The protection granted to the Industry extends up to 1939, and there can be no doubt that the Government whose policy is one of fostering Indian Indigenous Industry would surely extend the protection further."

Paper is a highly technical and chemical industry and in order to stabilise the manufacturing of same, on sound economic line, keen concentration is needed on research work and we submit that the period of protection has been too short, leaving aside the case of new mills which have yet to make a beginning.

We submit that the existing protective duties and surcharges be continued with other qualities of paper referred to in the memorandum of the Paper Makers' Association (in answer to Question 53) being classified as "Protective Qualities".

52. As we have just started manufacturing, and that an all round improvement in the machinery is a matter of necessity, as contemplated upon, we can ascertain results only after all improvements, etc., are made, and it is too premature, therefore, to give an answer to the points raised.

53. Please refer to the answer given by the Paper Makers' Association, on behalf of its members.

54 & 55. Nil.

## FORM I.

## PRIMARY MATERIALS.

From 14th April, 1937 to 31st December, 1937.

*Bamboo—*

- (1) Quantity of material used . . . . .
- (2) Quantity of finished paper which material represents . . . . .
- (3) Percentage of (2) on the total quantity of paper manufactured . . . . .

*Grass—*

- (1) Quantity of material used . . 5,829 tons (at 33 per cent. finished yield).
- (2) Quantity of finished paper which material represents . . . 1,943 tons.
- (3) Percentage of (2) on the total quantity of paper manufactured . . .  $\frac{1,943}{2,924} = 66.4$  per cent.

*Wastepaper and Paper Cuttings—*

- (1) Quantity of material used . . 90 tons.
- (2) Quantity of finished paper which material represents . . . 68 tons (Yield at 75 per cent. finished paper).
- (3) Percentage of (2) on the total quantity of paper manufactured . . . 2.33 per cent. ( $\frac{68 \times 100}{2,924}$ )

*Other Indigenous Materials—*

- (1) Quantity of material used . . 180 tons (Rags and Ropes).
- (2) Quantity of finished paper which material represents . . . 126 tons (at 70 per cent.).
- (3) Percentage of (2) on the total quantity of paper manufactured . . . 4.32 per cent. ( $\frac{126 \times 100}{2,924}$ )

*Total Indigenous Materials—*

- (1) Quantity of material used . . 6,099 tons (Grass 5,829, Waste Paper 90 and Rags and Ropes 180).
- (2) Quantity of finished paper which material represents . . . 2,137 (1,943+68+126) tons.
- (3) Percentage of (2) on the total quantity of paper manufactured . . . 73.08 per cent. ( $\frac{2,137 \times 100}{2,924}$ )

*Imported Pulp—*

- (1) Quantity of material used . . 275 tons.
- (2) Quantity of finished paper which material represents . . . 233 tons (at 85 per cent. yield).
- (3) Percentage of (2) on the total quantity of paper manufactured . . . 8 per cent. ( $\frac{233 \times 100}{2,924}$ )

NOTE.—We started manufacturing from 14th of April, 1937.

## FORM IV.

*Caustic Soda—**Nil.*

453.65 tons.

*Bleaching Powder—**Nil.*

330 tons.

*Soda Ash—**Nil.*

40 tons.

*China Clay—*

273.5 tons.

10.0 „

*Rosin—*

48.5 tons.

*Nil.**Alum—*

198 tons.

*Nil.**Lime—*

620 tons.

*Nil.**Dyes—**Nil.*

2.5 tons.

*Acids—*

3.0 tons.

*Nil.*

1,143 tons.

836 „

(2) *Letter No. 2611/38-P., dated the 18th February, 1938.*

In continuation of the oral evidence tendered by us on the 15th instant, whereat a reference has been made by us on the subject of inequitable freight rates, existing in so far as our mills are concerned, for despatch of paper and grass, we are enclosing herein a statement substantiating the points raised by us.

In the statement, under the *items 1, 2 and 3*, we have shown the concessional rates of freight enjoyed by the Titaghur Paper Mills, Bengal Paper Mills, etc., to Bombay and Ahmedabad, and the rates of freight on the several Railway systems, and under *item 4* we have shown the special concessions which we have been allowed to Bombay, Ahmedabad, Howrah and Karachi by the Railways concerned.

Under *item 5*, we have shown what should have been the concessional freights for us to the respective destination stations based on the schedules applied by the several Railways in respect of Titaghur Paper Mills, Bengal Paper Mills, etc.

*Under item 6*, we have shown freights from station to station for small lots and wagon-loads, as existing over the North Western Railway and East Indian Railway, and from the difference it will be seen that situate, as we are, in the Punjab and our home market being the Punjab, how hard we are hit by the existing rates over the North Western Railway who are very conservative in affording facilities.

*Under item 7*, columns 1, 2 and 3 represent the station of despatch, mileage, rate per maund in wagon-load for despatch of paper paid by us over the North Western Railway, and column 4 shows the rate of freight over the same mileage, in force, over the East Indian Railway. You will find that the discrepancy in rates is so high that it is positively detrimental to our interests, and as stated in the oral evidence, in spite of repeated requests and interviews with the Railway Officers no tangible results have been achieved. Notwithstanding that the Punjab is our home market, it will be noted how uneconomical it is for us to despatch paper paying such exorbitant rates of freight.

As stated in the oral evidence, Sabai grass is our principal raw material, but for reasons already explained, our main source of supply is far away in Nepal and even here we are smarting under the same disadvantage, *viz.*, exorbitant freight rates, and as will be noticed from the statement, *under item 8*, the average approximate distance from the station of despatch to destination, *i.e.*, Jagadhri *via* Saharanpur is 493 miles, over which the rate of freight, we pay, works out to As. 7-9 per maund, but in the case of Titaghur Paper Mills for transportation of grass from Saharanpur to Titaghur, a distance of 909 miles approximately, the rate of freight is Rs. 79 per wagon-load—the assumed capacity of the wagon being 160 maunds, but in this connection we refer you to the confidential note\* appended in the statement showing actually what the freight works out to per maund, as against As. 7-9, that we pay over a distance of 493 miles, and you can judge the inequitable treatment meted out. As it is unnecessary to multiply instances we have only referred in the statement to a few specific ones.

*Re: PULP.*

With regard to the reference made that our realised prices are higher than imported paper, quotations and corresponding samples obtained have shown us that the market selling rate for foreign paper—Printings and Writings, is about Rs. 20 to Rs. 25 per ton higher than our realised prices.

*G. I. P., B., B. & C. I. and E. I. Railways are affording special facilities to the Paper Mills in Bengal as under. All O. R. wagon loads.*

1. (a) To Bombay from East Dock Junction for traffic from Titaghur and Kankinara Paper Mills *via* Nagpur, a distance of 1,223 miles.
- (b) The total special freight rate is As. 14-3 per maund for a distance of 1,223 miles approximately.
- (c) The B. N. R. portion is As. 8-2 for 703 miles which is approximately a Schedule rate between C. R. & C. Q. as against normal class 2 rate Rs. 1-9-3 (less or more).
- (d) The G. I. P. portion is As. 6-1 for 520 miles approximately a Schedule rate between Schedule C. R. & C. Q. as against normal class 2 rate of Rs. 1-2-10 (less or more).

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\* Not published.

2. (a) To Bombay from Raniganj Bengal Paper Mills siding *via* Naini.  
 (b) The total special freight rate is Re. 1-0-4 per maund, for a distance of 1,228 approximately.  
 (c) The E. I. R. portion is As. 5-2 for 388 miles a rate approximate to between C. R. & C. Q. Schedules, as against their normal Schedule A rate of As. 8-9 (approximately).  
 (d) The G. I. P. portion is As. 11-2 for 840 miles equivalent to about Schedule C. M. rate as against normal class 2 rate of Rs. 1-14-1 per maund (less or more).
3. (a) To Ahmedabad (also Asarva & Kankaria) *via* Agra Cantonment for traffic from Naihati.  
 (b) The total special freight rate is Rs. 1-10-7 per maund for a distance of 1,300 miles approximately.  
 (c) The B., B. & C. I. portion is As. 11 per maund for a distance of 538 miles, a Schedule rate between C. J. & C. K. approximately as against the normal class 2 rate of Rs. 1-3-6 per maund.  
 (d) The E. I. R. portion is As. 15-7.

*The only special concessions which we have been allowed are as follows.*

4. (a) To Bombay *via* Delhi a distance of 861 miles, a freight of Rs. 1-9 per maund—as against class 2 rate of Rs. 1-14-10 per maund (G. I. P. Railway).  
 (b) To Ahmedabad from *via* Delhi a distance of 539 miles a freight of As. 14-6 per maund as against class 2 rate of Rs. 1-3-6 per maund (B., B. & C. I. Railway).  
 (c) To Howrah from *via* Saharanpur a distance of 938 miles a freight of As. 12-4 as against Schedule A rate of As. 14-4 (E. I. Railway).  
 (d) To Karachi from Jagadhri a distance of 880 miles a freight of As. 13-6 as against class 1 rate of Rs. 1-12-6 per maund (N. W. Railway).

*According to the special freights granted to other Mills, we should enjoy a similar benefit and our freight rates should be adjusted as follows.*

5. (a) To Bombay from *via* Delhi the special freight on the G. I. P. Railway should be between Schedule C. R. & C. Q., i.e., about As. 9 per maund.  
 (b) To Ahmedabad from *via* Delhi the special freight on the B., B. & C. I. Railway should be between Schedule C. J. & C. K., i.e., about As. 11 per maund.  
 (c) To Howrah from *via* Saharanpur the special freight on the E. I. Railway should be between Schedule C. R. & C. Q., i.e., about As. 10 per maund.  
 (d) *In connection with the N. W. Railway we submit a table showing the rates which should be charged as—*

	As. p.
6. Jagadhri to Karachi 880 miles special rate	
N. W. Railway . . . . .	13 6
<i>Via</i> Saharanpur to Howrah 938 miles special rate	
E. I. Railway . . . . .	12 4

Mileage.	Wagon loads, N. W. R.		Smalls, N. W. R.			Wagon loads, E. I. R.		Smalls, E. I. R.
	Class.	Rate per maund.	Class.	Rate per maund.	Sch.	Rate per maund.	Sch.	Rate per maund.
		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.
100	1	0 3 10	2	0 4 2	A	0 4 0	C. J.	0 4 0
200	1	0 7 0	2	0 7 8	A	0 5 11	C. J.	0 7 0
300	1	0 10 2	2	0 11 2	A	0 7 8	C. J.	0 9 0
400	1	0 13 4	2	0 14 8	A	0 8 11	C. J.	0 10 11
500	1	1 0 6	2	1 2 2	A	0 10 2	C. J.	0 12 6
600	1	1 3 8	2	1 5 8	A	0 11 5	C. J.	0 13 7
700	1	1 6 10	2	1 9 2	A	0 12 4	C. J.	0 14 8
800	1	1 10 0	2	1 12 8	A	0 13 4	C. J.	0 15 6
900	1	1 13 2	2	2 0 2	A	0 14 4	C. J.	1 0 0
970	1	1 15 5	2	2 2 7	A	1 0 7	C. J.	1 2 8

7. *Rates on despatches we are actually paying.*

Over N. W. Railway.	Mileage.	Rate per Maund, Wagon Load.	Over E. I. Rail- way. Rate per Maund, Wagon Load, over the same distance.
		Rs. A. P.	As. P.
Jagadhri to Quetta . .	824	1 10 9	18 7
„ „ Peshawar . .	506	1 0 8	10 3
„ „ Rohri . .	585	1 3 2	11 3
„ „ Rawalpindi . .	398	0 13 3	8 11



8.

## Railway Freight on Grass.

Source of Supply:—Nepal.

Stations of Despatch B. N. W. Railway.	Distance to Barsbanki (on E. I. R.) Station of Transshipment.		Freight rate Per Maund on B. N. W. Railway.		Distance from Barsbanki to Saharanpur, i.e., E. I. R. portion.		Distance from Saharan- pur to Jagadhri (Our mill siding) N. W. Railway portion.		Total approximate distance from Station of despatch to Jagadhri.		Freight per Maund.		Total Freight.		Freight Rates enjoyed by Titagarh Paper Mills on Grass despatches from Saharanpur to Titagarh.	
	Miles.	As. P.	Miles.	As. P.	Miles.	As. P.	Miles.	As. P.	Miles.	As. P.	From Barsbanki (E. I. R.)	From Saharanpur to Jagadhri (N. W. R.)	As. P.	Miles.	Wagon load rate (not per Maund) Rs. 79 per wagon load assumed capacity 160 Maunds.	Distance from Saharan- pur to Titagarh.
(1) Tulipur . .	95	1 11									5	8	2 1	908	Even on this basis Freight works out to 7 as. 10½ p. over a distance of 908 miles, while we pay 7 as. 9 p. over a distance of 493 miles.	
(2) Naipalganj Road.	127	2 4											5 0			
(3) Kawapur . .	90	1 9											0 8			
(4) Jarwa . .	120	2 2			358		18		117				7 9			
(5) Shoharatgarh .	155	2 6							358				Per maund.			
	587	10 8							18							
	Average distance to Bara- banki—117 miles.	Average Freight— 2 as. 1 p.							493							

(3) *Letter No. 6617/88-P., dated the 25th April, 1938.*

We beg to acknowledge your telegram of date reading as under:—

“416 Kindly Wire Railway Freight and other charges from Calcutta to your Factory on one ton of Imported Pulp”

and have, in reply, telegraphed you to-day, as per confirmation copy enclosed.

Consignments of wood pulp, imported by us, are cleared at Karachi and not at Calcutta, and the railway freight together with other incidental charges up to our mills siding works out to Rs. 30 per ton—the freight charged being As. 13-8 per maund, being the special rate quoted to us by the N. W. Railway.

(4) *Letter No. 7238/88-P., dated the 7th May, 1938.*

We enclose herein the following Forms, duly completed:—

Form No. II

„ „ III

„ „ V

„ „ VI

as also replies to the Questionnaire in duplicate.

We regret very much the unavoidable delay in forwarding you the report

## FORM II.

*Total Expenditure incurred on the production of Bleached Pulp.*

(Mills started working from April, 1937.)

	Tons.	Rs.
1. Primary materials—		
(a) Grass . . . . .	5,829	1,87,621
(b) Rags and Ropes . . . . .	180	11,700
2. Chemicals and other auxiliary materials—		
Caustic . . . . .	453	77,010
Soda Ash . . . . .	40	4,400
Bleaching Powder . . . . .	330	50,325
Lime . . . . .	620	7,943
Other Chemicals . . . . .	5	500
Other expenses for recorded Caustic used . . . . .	...	46,000
3. Power and fuel . . . . .	...	1,28,155
4. Current repairs and maintenance . . . . .	...	4,000
5. Labour . . . . .	...	16,175
6. Supervision and establishment . . . . .	...	15,160
<b>Total . . . . .</b>	<b>...</b>	<b>5,48,989</b>

7. Insurance . . . . .	6,685
8. Rents, Rates and Taxes (excluding income-tax) . . . . .	980
9. Depreciation at statutory rates . . . . .	29,750
10. Interest on working capital . . . . .	11,725
11. Head Office expenses and managing agents' commission . . . . .	15,050
12. Miscellaneous . . . . .	4,550
Total . . . . .	68,740
Grand Total . . . . .	6,17,729

Total output of pulp for the year in tons . . . 2,475 tons.

### FORM III.

#### *Cost per ton of Bleached Pulp.*

(Mills started working from April, 1937.)

	Rs. A. P.
1. Primary materials—	
(a) Grass . . . . .	80 8 0
(b) Rags and Ropes . . . . .	
2. Chemicals and other auxiliary materials—	
Caustic . . . . .	75 4 0
Soda Ash . . . . .	
Bleaching Powder . . . . .	
Lime . . . . .	
Other Chemicals . . . . .	
Other expenses for recorded Caustic used . . . . .	
3. Power and fuel . . . . .	51 12 0
4. Current repairs and maintenance . . . . .	1 10 0
5. Labour . . . . .	6 9 0
6. Supervision and establishment . . . . .	6 2 0
Total . . . . .	221 13 0
7. Insurance . . . . .	2 11 3
8. Rents, rates and taxes (excluding income-tax) . . . . .	0 6 4
9. Depreciation at statutory rates . . . . .	12 0 4
10. Interest on working capital . . . . .	4 11 9
11. Head Office expenses and managing agents' commission . . . . .	6 1 3
12. Miscellaneous . . . . .	1 13 5
Grand Total . . . . .	251 13 0

## FORM V.

Total Expenditure incurred on the Production of Paper from April 14, 1937, to December 31, 1937.

Particulars.	Quantity. Tons.	Value. Rs.	Per cent.
<i>Manufacturing Expenses.</i>			
1. Primary materials—			
(a) Grass . . . . .	5,829	1,87,621	
(b) Waste Paper . . . . .	90	5,625	
(c) Rags and Ropes . . . . .	180	11,700	
Total . . . . .	...	2,04,946	22.7
2. Imported Pulp . . . . .	275	90,750	10.1
3. Auxiliary materials—			
Caustic Soda . . . . .	453	77,010	...
Soda . . . . .	40	4,400	...
China Clay . . . . .	273	15,015	...
Alum . . . . .	198	9,702	...
Rosin . . . . .	48	8,472	...
Lime . . . . .	620	7,943	...
Bleaching Powder . . . . .	330	50,325	...
Other Chemicals . . . . .	5	500	...
Total . . . . .	...	1,73,367	19.2
4. Power and Fuel . . . . .	...	2,24,185	24.9
5. Current Repairs and Maintenance . . . . .	...	17,000	1.9
6. Labour . . . . .	...	89,140	9.8
7. Supervision and Establishment—			
Salaries of Technical and Non-Technical Staff . . . . .	...	86,300	9.6
8. Packing . . . . .	...	16,500	1.8
Total . . . . .	...	9,02,188	100.0
<i>Overhead Charges.</i>			
10. Selling Expenses . . . . .	...	64,122	...
11. Insurance . . . . .	...	19,100	...
12. Rents, Rates and Taxes (including Income-tax) . . . . .	...	2,800	...
13. Depreciation at statutory rates . . . . .	...	84,907	...
14. Interest on working capital . . . . .	...	33,466	...
15. Head Office Expenses and Managing Agents' Commission . . . . .	...	42,808	...
16. Miscellaneous . . . . .	...	12,890	...
Total . . . . .	...	11,62,281	...

Total output of paper for the year in tons . . . . 2,446

NOTE.—We started our manufacturing operations from April 14, 1937.

## FORM VI.

*Works cost per ton of finished paper.*

(From 14th April, 1937, to 31st December, 1937.)

Particulars.	Quantity.		Per cent.
	Tons.	Rs. A. P.	
1. Manufacturing Expenses—			
Primary Materials—			
Grass . . . . .	5,829	76 11 4	
Waste Paper . . . . .	90	2 4 9	
Rags and Ropes . . . . .	180	4 12 6	
Total . . . . .	...	83 12 7	22.7
2. Imported Pulp . . . . .	275	37 1 8	10.1
3. Auxiliary Materials—			
Caustic Soda . . . . .	453	31 7 9	
Soda . . . . .	40	1 12 9	
China Clay . . . . .	273	6 2 2	
Alum . . . . .	198	3 15 9	
Rosin . . . . .	48	3 7 5	
Lime . . . . .	620	3 4 0	
Bleaching Powder . . . . .	330	20 9 2	
Other Chemicals . . . . .	5	0 3 2	
Total . . . . .	...	70 14 2	19.2
4. Power and Fuel . . . . .	...	91 10 2	24.9
5. Current Repairs and Maintenance . . . . .	...	6 15 4	1.9
6. Labour . . . . .	...	36 7 0	9.8
7. Supervision on establishment—			
(a) Salaries of Technical staff . . . . .	...	...	...
(b) Salaries of Non-Technical staff . . . . .	...	35 4 6	9.6
8. Packing . . . . .	...	6 12 0	1.8
Total . . . . .	...	368 13 0	100.0
<i>Overhead Charges.</i>			
10. Selling expenses . . . . .	...	38 0 0	
11. Insurance . . . . .	...	7 12 11	
12. Rent Rates and Taxes . . . . .	...	1 2 4	
13. Depreciation . . . . .	...	34 11 5	
14. Interest on working capital . . . . .	...	13 10 11	
<i>Head Office Expenses.</i>			
15. Managing Agents' Commission . . . . .	...	17 8 0	
16. Miscellaneous . . . . .	...	5 4 3	
Total . . . . .	...	486 14 10	

Total output of paper for the year in tons . . . . . 2,446

Note.—We started our manufacturing operations on 14th April, 1937.

**Evidence of Mr. K. C. THAPER and Mr. P. S. NARAIN recorded  
at Calcutta on Tuesday, 15th February, 1938.**

**B.—ORAL.**

*President.*—What is the position you gentlemen hold in the Mills?

*Mr. Thapar.*—I am the Managing Director, and Mr. Narain is the Manager of the mill.

*President.*—In regard to your raw material, grass, I see you had some difficulty with the paper mill at Saharanpur.

*Mr. Thapar.*—Yes.

*President.*—And they have now got the area nearest to you?

*Mr. Thapar.*—Yes. They have taken all that area for 15 years.

*President.*—So that you have got to draw your supplies either from the Punjab States or Nepal?

*Mr. Thapar.*—Yes.

*President.*—What is the distance to Nepal?

*Mr. Narain.*—493 miles,—approximately from stations of despatch on the Bengal and North-Western Railway to our mills siding.

*President.*—What is the freight?

*Mr. Thapar.*—Freight on the average comes to As. 7-9 per maund, bringing up the cost of our raw material to about Rs. 40 per ton.

*President.*—And your coal has to come from a considerable distance too?

*Mr. Thapar.*—Yes.

*President.*—Where do you get your coal from?

*Mr. Thapar.*—From Bengal.

*President.*—It works out to Rs. 16-8 per ton?

*Mr. Thapar.*—Yes.

*President.*—The price of chemicals has risen recently, since 1936-37?

*Mr. Thapar.*—Yes.

*President.*—Is that going to increase your costs?

*Mr. Thapar.*—Yes, by about Rs. 17 per ton.

*President.*—Has the price of coal risen also?

*Mr. Thapar.*—Yes, by about Rs. 3-8 per ton.

*President.*—What difference will that make to your costs?

*Mr. Thapar.*—In coal it makes about Rs. 20 per ton and in chemicals about Rs. 17 per ton.

*President.*—That will mean an increase in the cost of Rs. 37?

*Mr. Thapar.*—Yes.

*President.*—Is your raw material going to be dearer than it was before?

*Mr. Thapar.*—Yes; last year we got some quantity from Saharanpur and we have now started getting from Nepal.

*President.*—What is the price from the Saharanpur area?

*Mr. Thapar.*—We were getting at Rs. 22 per ton; now it has gone up to about Rs. 40.

*President.*—What does the freight per ton work out to?

*Mr. Thapar.*—About Rs. 13-8.

*President.*—You say your cost is Rs. 22; adding Rs. 13-8 for freight it comes to Rs. 35. Where does the extra Rs. 5 come in?

*Mr. Thapar.*—That is the average cost; the cheaper cost of the stuff we get from the North-Western Railway and the higher cost of the material we get from the other side and the average comes to Rs. 40 per ton.

*Mr. Narain.*—We are working out the contract ourselves in Nepal, and overheads on account of establishment have to be added.

*Mr. Thapar.*—We are a firm of contractors ourselves and overheads for establishment, cutting and carting, etc., will be less.

*President.*—From Saharanpur you had contractors?

*Mr. Thapar.*—At that side we had contractors but in Nepal we are working ourselves.

*President.*—Would it not be more expensive to work departmentally?

*Mr. Thapar.*—We ourselves are contractors so this difficulty does not arise with us. We have got a contract department.

*President.*—Your capacity is 7,500 tons. Are you working to capacity yet?

*Mr. Thapar.*—Not yet. We are working at present up to about 6,000 tons but we hope to get our turbine working at the end of next month and then we hope to work to capacity.

*President.*—Almost the whole of your output is white printing and Cream laid: others are unimportant.

*Mr. Thapar.*—Yes.

*President.*—I ask that question because the question has been raised whether protection should be given for drawing cartridge which is at present unprotected. Could you increase your manufacture of white cartridge if it is protected?

*Mr. Thapar.*—Yes, drawing cartridge.

*President.*—Is there much competition from imported drawing cartridge?

*Mr. Thapar.*—There is.

*President.*—All other kinds of cartridge paper are protected, it is only the drawing cartridge that is not protected. You could increase your production?

*Mr. Thapar.*—Yes.

*President.*—What is this Ahmedabadi that you manufacture?

*Mr. Thapar.*—These are for account books under the Indian system. It is white printing, slightly polished and is used in what we call "bahi" in our language. The Gujratis all keep their accounts on this paper.

*President.*—How would you class it according to ordinary paper classification?

*Mr. Thapar.*—White printing.

*President.*—Are you contemplating making any other lines of paper?

*Mr. Thapar.*—Not yet.

*President.*—In your finished paper the percentage of grass would be how much?

*Mr. Thapar.*—Last year we had about 80 per cent.

*President.*—In Form I it is given as 66 per cent. I think. You increased it since then?

*Mr. Thapar.*—Yes, we wanted to standardise it at 80 per cent.

*President.*—Is your year Calendar year?

*Mr. Thapar.*—We are closing this half year in December and full year in June.

*President.*—Waste paper cuttings about a little over 2 per cent.?

*Mr. Narain.*—Yes.

*President.*—Other indigenous materials are, I suppose, rags and ropes.

*Mr. Narain.*—Yes.

*President.*—Imported pulp at present is 8 per cent.?

*Mr. Thapar.*—Yes.

*President.*—I think you expect to reduce it.

*Mr. Thapar.*—We will reduce it. We could not arrange the other raw materials easily. We cannot get all from one source. We have to get half a load here and half a load there. It takes time to organise it.

*President.*—What Punjab States are they?

*Mr. Thapar.*—We have got Kalsia, Nahan and Patiala. From none of these three States we are getting any help. We tried our best, but have failed. You know what the conditions are in the States. It is very difficult to get anything from them. We approached the Commissioner who did the opening ceremony of our mill to help us. He promised, but that also didn't materialise. So all the States are holding out and their own people have got it. They are all naturally bargaining and trying to squeeze out as much as they can.

*President.*—Do you get it from the contractors?

*Mr. Thapar.*—We have to buy from people who have taken lease from them. At the time I purchased the mill, I thought that my cost would not go beyond Rs. 18. I did take all precautionary measures. I studied the previous Tariff Board Report and before I purchased the mill, I was definite in my own mind that the cost would not go beyond Rs. 17 to Rs. 18 per ton and that I would get the raw material in ample quantities. In that belief I gave notice in time to the Forest Department and also to the States. They said that they would put up to auction and I would get it. As soon as I purchased the mill, I found everybody going back on his promise and others manipulating. The result is instead of paying Rs. 17 to Rs. 18 for the raw material, we have now to pay Rs. 40 a ton. I would have to close down the mill, but for Nepal where I had to go and bid very high. I had to pay 3½ annas per maund royalty while the other people are paying only one anna or one anna 6 pies.

*President.*—I think the railway freights are rather high.

*Mr. Thapar.*—Before we took the mill, the East Indian Railway were quoting to all these Calcutta Mills from Saharanpur Rs. 79 per wagon of 160 maunds and actually they were wagons that brought in about 300 to 350 maunds. Taking the minimum load it works out to 7 annas. They were getting their grass at a distance of 1,000 miles at 7 annas while we have to pay 7-9 annas for 493 miles. In spite of the fact that we have approached both the railways, the results obtained go only half-way. The same discrimination applies in the case of paper. Further the sea route is available to the Calcutta mills. They can go to Karachi, Bombay and Madras. They have also special freight rates quoted to them to stations all over India. We have to go from the interior to distant markets and we have only a rail route available to us. That explains the reason why they are satisfied. Unless we do get these concessions, we will remain handicapped.

*President.*—On the other hand in your immediate neighbourhood you have some freight advantage.

*Mr. Thapar.*—If you take the same distance on the East Indian Railway and the North Western Railway, it will be seen that the freight rates on the latter are 60 per cent. more. We go as far as Rohri (North Western Railway) a distance of 585 miles. We have to pay a freight of Re. 1-3-2 per maund and these Calcutta mills go from Calcutta to Delhi paying 8 annas only for a distance of 900 miles.

*Mr. Rahimtoola.*—The price stated here is Rs. 32 per ton.



*Mr. Thapar.*—Last year we could take our supplies from Saharanpur. This year we had to go to Nepal. That has added to the cost.

*Mr. Rahimtoola.*—That has not been stated here.

*Mr. Thapar.*—The figure that we have given you is based on last year's working. Those supplies we are now denied.

*Mr. Rahimtoola.*—Altogether.

*Mr. Thapar.*—Yes, and we have to go to Nepal.

*Mr. Rahimtoola.*—What is the price at which you are able to get paper cuttings?

*Mr. Thapar.*—It varies from Rs. 2-12 to Rs. 3-8 per maund.

*Mr. Rahimtoola.*—What are rope cuttings?

*Mr. Thapar.*—Hemp rope.

*Mr. Rahimtoola.*—At what price you are able to get that?

*Mr. Narain.*—We started getting at Rs. 2-6 and we are now paying Rs. 2-14 to Rs. 3 delivered at mills, although at one time, during the later part of 1937, we had to pay as high as Rs. 3-15 per maund, delivered mill siding.

*Mr. Rahimtoola.*—What is the reason for the price of these materials going up?

*Mr. Thapar.*—It is because the price of wood pulp has gone up and everybody has begun to use the indigenous materials. So the prices of these materials have gone up.

*President.*—Your process of manufacture is the ordinary soda process. In the digestion do you use the fractional system or the direct overhead system?

*Mr. Thapar.*—I can't tell you.

*President.*—There are two variations in the process of manufacture. Some people use the fractional system.

*Mr. Thapar.*—I can't say.

*President.*—Is it what you generally describe as the direct overhead method?

*Mr. Narain.*—Yes.

*President.*—You have not at present got a soda recovery plant.

*Mr. Thapar.*—We could not run that, because we are working with our old turbine. We can't put full load on that. The moment we put in our new turbine, we will start doing it.

*President.*—Have you got the plant?

*Mr. Thapar.*—Yes.

*President.*—Is it the old plant?

*Mr. Thapar.*—It has already been put in order. Immediately power is available, we will start.

*President.*—When you get your new turbine, I take it you will be able to reduce the consumption of coal per ton.

*Mr. Thapar.*—That will also come down.

*President.*—You use only unbleached imported pulp?

*Mr. Thapar.*—No—we use both bleached and unbleached.

*President.*—Delivered at mill the price of wood comes to Rs. 330 per ton.

*Mr. Thapar.*—Yes.

*President.*—Are you using less imported pulp since the end of the year?

*Mr. Thapar.*—We are reducing every day.

*President.*—Are you employing any European staff?

*Mr. Thapar.*—Yes.

*President.*—How many?

*Mr. Thapar.*—5 Europeans.

*President.*—Do you expect to be able to replace them in course of time?

*Mr. Thapar.*—There is no chance for immediate replacement.

*President.*—You have apprentices under training?

*Mr. Thapar.*—Yes.

*President.*—The old mill had no quarters.

*Mr. Thapar.*—No, with the exception of three bungalows.

*President.*—You are now building quarters.

*Mr. Thapar.*—Yes.

*President.*—Where does your labour come from?

*Mr. Thapar.*—We have got some imported labour on the technical side and finishing house and other labour is local labour.

*President.*—Ultimately what proportion of your labour do you expect to house?

*Mr. Thapar.*—At least 80 per cent.

*President.*—And the remainder will come from the villages?

*Mr. Thapar.*—Yes.

*President.*—Is there any difficulty about labour supply in your neighbourhood?

*Mr. Thapar.*—No.

*President.*—Are you contemplating the use of bamboo?

*Mr. Thapar.*—I am just now exploring the possibility of obtaining bamboo in our nearby areas. If I get, I have to, in order to reduce my pulp cost, otherwise there is no chance for me.

*President.*—In regard to this question of further extensions, you talk about bamboo crushing and chipping plant.

*Mr. Thapar.*—Yes.

*President.*—In regard to the cost of putting up a mill of your capacity, the Board is at present considering the possibility of working out the works cost for representative mill for paper as we did in the case of sugar. You may remember in the case of sugar we did not take the largest or the smallest mill. We took a sort of average mill. What do you think would be the representative size of a typical mill?

*Mr. Thapar.*—6,000 tons.

*President.*—What do you think roughly would be the cost of putting up an up-to-date 6,000 ton mill?

*Mr. Thapar.*—I have not studied that question but I should say Rs. 50 to Rs. 55 lakhs.

*President.*—You have given Rs. 55 lakhs for your mill but your capacity is higher.

*Mr. Thapar.*—Yes. For a 6,000 ton mill, it would be about Rs. 50 lakhs.

*President.*—Your estimate of Rs. 55 lakhs does not include the cost of erection.

*Mr. Thapar.*—No.

*President.*—So, the cost of a 6,000 ton plant would be about Rs. 50 lakhs.

*Mr. Thapar.*—Yes.

*President.*—As regards the debenture loan which you have raised is that for installing additional machinery and so on or is it for working capital?

*Mr. Thapar.*—It is only for additions and alterations that were made.

*President.*—Your stocks, etc., will come to about Rs. 5½ lakhs.

*Mr. Thapar.*—Yes.

*President.*—Before we come to the question of the amount of protection required, we had better go through your forms. You have not been able to give an estimate of the cost of production of pulp.

*Mr. Thapar.*—We can give you figures now.

*President.*—You have not filled up two forms for bleached and unbleached pulp.

*Mr. Thapar.*—We can supply them now.

*President.*—What does it work out to?

*Mr. Thapar.*—We will submit a detailed statement to-morrow morning.

*President.*—What is the total figure?

*Mr. Thapar.*—Rs. 254.

*President.*—Is it for bleached or unbleached pulp?

*Mr. Thapar.*—Bleached pulp.

*President.*—And for the bleached what will be the total?

*Mr. Thapar.*—Rs. 254 is the cost of bleached pulp.

*Mr. Rahimtoola.*—At what price did you purchase the mill?

*Mr. Thapar.*—Rs. 25,52,630.

*Mr. Rahimtoola.*—And Rs. 8 lakhs on extensions.

*Mr. Thapar.*—Rs. 6 lakhs up till now. Still, some more machinery is coming. On the whole we reckon it will cost about Rs. 8 lakhs more.

*Mr. Rahimtoola.*—That means Rs. 33 lakhs.

*Mr. Thapar.*—Yes.

*Mr. Rahimtoola.*—Your block will be Rs. 33 lakhs?

*Mr. Thapar.*—Rs. 35 lakhs.

*Mr. Rahimtoola.*—The capacity is 7,500 tons.

*Mr. Thapar.*—Yes.

*Mr. Rahimtoola.*—The prices you have given in answer to question 30, are for 1936-37?

*Mr. Thapar.*—For the period ending December 1937.

*Mr. Rahimtoola.*—White printing is creamlaid, is it not?

*Mr. Thapar.*—Yes.

*President.*—We will turn now to your works costs. You have not been able to give us your overhead charges. Will you be able to give them in a month or so?

*Mr. Thapar.*—Yes.

*President.*—Will you be able to complete Form VI?

*Mr. Thapar.*—Yes. In regard to freights I want to add a statement showing the disadvantages that our mill is suffering from in comparison with the Calcutta mills.

*President.*—You have not given us yet.

*Mr. Narain.*—No, we have only touched on it in a separate note. We have not given you the full details, and shall submit same in the course of a day or two.

*President.*—If you send in a statement, it would be helpful. In regard to your works cost per ton of finished paper, you have given your cost as Rs. 380. Is that the works cost?

*Mr. Thapar.*—Yes.

*President.*—Do you expect you will be able to bring that down when you have got your new turbine?

*Mr. Thapar.*—We hope to bring it down, but it will take some time.

*President.*—On this occasion the Tariff Board will have to compare the works costs of different mills.

*Mr. Thapar.*—As I have told you, our costs would have been lower but for our difficulty in regard to raw materials. Straightaway that has put up our cost. If we instal a bamboo crushing plant or make some other cheaper arrangements to get our raw materials and if we get lower freights from railways, we will be able to stand on our own legs.

*President.*—Your chief difficulty is raw materials.

*Mr. Thapar.*—Yes.

*President.*—Can you tell us roughly what your overhead charges will come to per ton?

*Mr. Thapar.*—About Rs. 90 per ton.

*President.*—That will bring up the works cost to Rs. 470.

*Mr. Thapar.*—Yes.

*President.*—Does that include profit?

*Mr. Thapar.*—No.

*President.*—Is Rs. 470 above your realised price?

*Mr. Thapar.*—About Rs. 10 to Rs. 12 less.

*President.*—The average of your white writing and white printing will be Rs. 484.

*Mr. Thapar.*—Yes. Rs. 90 includes our depreciation, interest on working capital, head office expenses, insurance and freight. It includes freight also.

*President.*—We do not include that in our works cost.

*Mr. Thapar.*—These prices we have given *ex-factory*. We have included all our expenses in Rs. 90. If we are to exclude the freight, we have to deduct Rs. 26 out of Rs. 90, leaving a balance of Rs. 64.

*President.*—The margin will be about Rs. 20 for both qualities.

*Mr. Thapar.*—Yes.

*President.*—That will only give you a profit of 4 to 6 per cent.

*Mr. Thapar.*—It would work out to  $2\frac{1}{2}$  to 3 per cent.

*President.*—You have only been working for a short time. No doubt difficulties have occurred in the early stages. To what figures do you think you would be able to bring your costs down?

*Mr. Thapar.*—It all depends on the price at which we will be able to get our raw materials. The bamboo costs of the Calcutta mills to begin with were Rs. 38 to Rs. 39 per ton.

*President.*—It was more than that at one time.

*Mr. Thapar.*—I am talking of conditions about three years back.

*President.*—In 1925 it was very much higher.

*Mr. Thapar.*—Yes. They have now reduced to about Rs. 20 per ton. They find themselves therefore in good position.

*President.*—Your raw material is about double their price.

*Mr. Thapar.*—Yes. When they have nicely established themselves they do not think of us!

*President.*—Of course, the Board has realised the position of old mills and new mills. We are going to meet the new mills this afternoon.

*Mr. Thapar.*—The raw materials form the principal item in the manufacture of paper.

*President.*—Not to the extent of sugarcane?

*Mr. Thapar.*—No.

*President.*—It does not represent 53 per cent. of the total cost of manufacture?

*Mr. Thapar.*—No.

*President.*—With regard to the general claim for protection as you no doubt are aware your costs are very much higher than the costs of other mills?

*Mr. Thapar.*—Yes.

*President.*—You cannot forecast any particular reduction in the near future.

*Mr. Thapar.*—No, it is very difficult, unless the Government come to our rescue in getting raw materials.

*Mr. Rahimtoola.*—These prices that you are realising—how do they compare with imported prices?

*Mr. Thapar.*—I have not studied that question.

*Mr. Rahimtoola.*—According to the prices here they work out to £35 to £36 per ton, whereas the prices we have been able to get for 1937-38 are £27 per ton.

*Mr. Thapar.*—For what classes.

*Mr. Rahimtoola.*—White printing and Cream laid.

*Mr. Thapar.*—Is it for the imported paper?

*Mr. Rahimtoola.*—Yes. You are getting very good prices.

*Mr. Thapar.*—I have not studied that aspect of the question. Therefore I cannot tell you much about it. Of course, we do not find much competition.

*Mr. Rahimtoola.*—Which are the markets you cater for?

*Mr. Thapar.*—From Bengal to Peshawar—mostly Northern India.

*Mr. Rahimtoola.*—You have certain freight advantage as compared with imported paper in those markets.

*Mr. Thapar.*—Yes. We get a higher price in the United Provinces and Punjab and get lower prices on the Karachi side, on the Calcutta side and on the southern side.

*President.*—Do you send your paper as far as Calcutta?

*Mr. Thapar.*—Yes, just to maintain the prices. If we were to sell all our production in one province, then we would have to cut down prices. So, we try to sell our output in various markets, getting less in distant places and more in our home markets.

*Mr. Rahimtoola.*—Have you not provided more for current repairs and maintenance?

*Mr. Thapar.*—No. This is only for maintenance not overhauling the machinery.

*President.*—In regard to the general question of protection, you have got protection of one anna per lb. guaranteed up to 31st March 1939. We have got to enquire into that. There is no question that protection will continue after that period at all. Your claim is that the basic rate of one anna a lb. will not be sufficient protection?

*Mr. Thapar.*—It is not sufficient; we want the protection to be kept on the present level of annas 1-3.

*President.*—That means including the present surcharge?

*Mr. Thapar.*—Yes.

*President.*—Of course the present price of imported paper is fairly high on the whole.

*Mr. Thapar.*—We cannot depend on it and the wood pulp prices that were quoted two or three months ago have started coming down already and the prices are bound to come down still further as soon as things have settled down. They quoted us £24 for wood pulp; the quotation now is £18 to £19.

*President.*—And the price of paper?

*Mr. Thapar.*—Our dealers say that they are getting cheaper quotations than before.

*President.*—At present prices you find no difficulty in marketing your production?

*Mr. Thapar.*—Not much but still we do get some difficulties. We have to compete with the Calcutta mills; the internal competition is there. They do all that they possibly can and we do all we can to find a market.

*President.*—When the new mills come in in three or four months you will have internal competition?

*Mr. Thapar.*—It will be like sugar. If more mills come in there is bound to be internal competition.

*President.*—When do you think internal competition will seriously affect prices?

*Mr. Thapar.*—I should say by the end of this year. By September Mr. Dalmia's products will be put on the market and the Star people say they will be on the market by June or July but I think they will be a little later but I think by the end of this year there will be keen internal competition.

*President.*—I suppose the Mysore mills will not affect you very much?

*Mr. Thapar.*—They will in this way that they will flood their own market and the Calcutta mills will flood their own market—markets on this side where they are already sending their paper which is naturally their nearest market—and this will indirectly affect all the markets.

*President.*—Do you anticipate overproduction by the end of this year?

*Mr. Thapar.*—It all depends on the Congress Government. If they enforce primary education in all the Congress provinces then we might survive till the third mill comes in, but if this primary education is not going to be enforced by that time there is bound to be internal competition.

*President.*—Some of the tendencies in primary education mean simplification and that will mean less consumption of paper.

*Mr. Thapar.*—I do not think so. There will be more consumption of paper.

*President.*—Have you thought of what would be the normal figure of increase of consumption of paper every year?

*Mr. Thapar.*—It depends on so many things. There are so many factors, educational and industrial revival of the country in different directions and so on. It is very difficult to go into all the factors. It may take five years, but we will be in full swing by the end of this year.

*President.*—When we met the Association yesterday we tried to make an estimate of what might be the normal figure by taking the consumption before the slump and the present consumption. I think it worked out very high.

*Mr. Thapar.*—There was unprecedented slump.

*President.*—We took the pre-slump figures and compared them with the present consumption.

*Mr. Thapar.*—It all depends on the speed which a country maintains in its development in different directions.

*President.*—There is another point. If the price of paper is kept very high, consumption is not likely to increase very quickly.

*Mr. Thapar.*—That is right; no body will deny it but internal competition will adjust this just as in the case of sugar. Now the production is so high and if we are free from one danger, internal competition will adjust the whole thing. We cannot gauge to what level the landed price of wood pulp will go down to-morrow and what our position will be to-morrow. We must have time but if there is internal competition *plus* competition from outside, then we are doomed.

*President.*—Do you think there is likely to be a development on the lines of the Sugar Syndicate?

*Mr. Thapar.*—It all depends on these big people's attitude. If they want to crush us then it is a different thing but if they join hands with the smaller mills then something may develop.

*President.*—Do you suggest any new classes of paper which should be protected supposing protection is continued?

*Mr. Thapar.*—Kraft is the other class which Birlas are now undertaking to manufacture and other people may think of manufacturing if they are ensured of protection. There is a big demand for it in the country and immediately they are ensured that there is no fear of outside competition they would begin to manufacture.

*President.*—Of course it is not very certain whether kraft paper could be made economically in India.

*Mr. Thapar.*—There is a company which it is intended to float in Kashmir. I happened to go into their figures and that seemed to me to be definitely a good proposition and I shall go even so far as to say that even without protection at least in the particular area on a particular production they can survive though there may not be a big profit. With protection they would be able to increase their output and would be able to make a profit.

*President.*—From wood pulp?

*Mr. Thapar.*—Yes. They have made the necessary laboratory test of the wood.

*President.*—Have you visited the Forest Research Institute at Dehra Dun recently?

*Mr. Thapar.*—I visited the Institute 9 or 10 months ago.

*President.*—Are they doing any work which is helpful to the mills?

*Mr. Thapar.*—They do help us.

*President.*—Can you suggest a way by which you can get more help from the Institute or are you satisfied with what they are already doing?

*Mr. Thapar.*—I have not thought over it. But surely whatever we put to them we do get their suggestion.

*President.*—I believe they have actually manufactured some kraft paper in the Institute?

*Mr. Thapar.*—I did not see it. I was there with my own difficulties. I took different kinds of materials and asked them if they would try them. They did try the materials last week but I have not yet got a report from them as to how far the new materials could be worked on.

*President.*—Is that a different kind of grass?

*Mr. Thapar.*—Yes.

*President.*—Is there any possibility of utilising some other kinds of grass?

*Mr. Thapar.*—We are experimenting on it with the help of the Dehra Dun Institute.

*President.*—If that is successful it might make the situation assured?

*Mr. Thapar.*—Yes.

*President.*—As far as your mill is concerned do you suggest protection of any other class of paper?

*Mr. Thapar.*—None except white cartridge which we have just mentioned.

*Mr. Rahimtoola.*—The only thing that I want to ask is, why at the end of the period of protection have so many mills come into being? Protection was granted in 1932 for seven years.

*Mr. Thapar.*—Because the position of the paper mills in 1931 was very bad and almost hopeless and naturally people were very much discouraged and did not like to invest money into the project. And the slump was there. Then the sugar protection came in and another revival was coming on and there was another protection for paper also and people thought it would be a sound proposition now. Naturally when people get encouragement from what they find Government is going to do for the industrial development of the country they come in and invest money.

*Mr. Rahimtoola.*—But no kind of promise was given to them that protection would be continued?

*Mr. Thapar.*—But once protection is given they always feel that if there is a crisis Government will come to their rescue. They have got the experience of the Tata Iron and Steel Company; then there is the case of sugar. In this way they have got encouraged and invested money. The same applies to other industries also: there are now 27 rolling mills in India; then take the case of the nail industry: more nail mills are being put up all over the country.



सत्यमेव जयते



# 14. The Deccan Paper Mills Co., Ltd., Poona.

## A.—WRITTEN.

(1) Letter No. P. 171/135 of 1938, dated the 11th January, 1938.

As desired over the Phone we beg to enclose herewith copies of letters in connection with surcharge as follows:—

- (1) Letter No. 50-P.M.A. of 27th June, 1936, from the Secretary, Indian Paper Makers' Association, Calcutta, to the Secretary to the Government of India, Department of Commerce, Simla.\*
- (2) Letter No. P/109-164 of 29th June, 1936, from the Deccan Paper Mills Co., Ltd., Poona, to the Secretary, Commerce, Department, Government of India, Simla.
- (3) Letter No. 83-P.M.A. of 28th September, 1936, from the Secretary, Indian Paper Makers' Association, Calcutta, to the Secretary to the Government of India, Department of Commerce, Simla.\*

*Letter No. P. 164/109 of 1936, dated the 29th June, 1936, from the Deccan Paper Mills Co., Ltd., Poona, to the Secretary, Commerce Department, Government of India, Simla.*

**Re: PROPOSED GOVERNMENT ENQUIRY IN THE JUSTIFICATION FOR THE CONTINUANCE OR OTHERWISE OF THE SURCHARGE ON THE PAPER PROTECTIVE DUTIES.**

With regard to the question of the continuance or otherwise of the existing 25 per cent. surcharge on the Paper protective duties which will shortly be the subject of a departmental enquiry by the Government of India as announced in the paragraph 4 of Tariffs Resolution No. 202-T. (3)/35, dated the 23rd May, we have the honour to submit that our representation in favour of the retention of the surcharge has already been submitted to Government conjointly with other Indian Paper Mills, but we submit this separate and additional representation to stress the disastrous effects which the removal of the surcharge will have on our Mills particularly more than any other Paper Mills in India, and we beg to adduce the facts and reasons in support thereof.

2. Situated as we are, the utilisation of bamboos and grasses for paper making is not economically possible having regard to the location of our Mills, and we therefore have to depend upon imported Pulp for our raw materials to a far greater extent than any other Mill in India. As a result thereof, since the year 1931, when a heavy duty on imported pulp was levied at the recommendation of the Tariff Board, our profits have been diminishingly low year by year, so that in the year 1934-35, even without allowing for depreciation, the profit amounted to only Rs. 31,572 whereas the depreciation alone at the usual rate of 5 per cent. on buildings and 7½ per cent. on Machinery and Plant would have amounted to Rs. 80,261 as will be seen from the figures given below:—

Year.	Profits made without allowing for depreciation.	Dividends declared after allowing only 1 per cent. towards depre- ciation.
	Rs.	Per cent.
1931-32 . . . . .	56,761	4
1932-33 . . . . .	62,036	4
1933-34 . . . . .	30,185	3
1934-35 . . . . .	31,572	...

\* Published with Indian Paper Makers' representations.

3. Further it has already been shown in the joint representation of the Indian Paper Mills that the Mills have never realised the fair selling price intended by the Tariff Board in their Report of 1931. In this respect our individual position is still worse, owing to the fact that in Bombay, prices of paper are lower than in any other market in India because of the relative nearness of the Bombay market to the Continental manufacturers and because of the fact that Bombay is generally used as one of the Chief dumping grounds by foreign manufacturers. This is another reason why our profits have fallen far short of those anticipated by the Tariff Board in their Report of 1931.

Under these circumstances, if the surcharge on paper is removed, its effects on our Mills cannot but be highly disastrous the extent of which will be seen from the figures given in the statement attached herewith.

4. It will be seen from the above that notwithstanding every effort of ours to improve the situation, facts as regards foreign competitive prices and the levy of a heavy duty on pulp, had a choking effect on our enterprise, which is all the more deplorable since the proposed removal of the surcharge comes at a time when we have strained all our resources in erecting a new Turbo-Electric Power Plant at a heavy cost, and further when, to give effect to the intentions of the Tariff Board, we are investigating the possibility, under the advice of the Director of Industries, of the erection of a bamboo pulp Mill in the Kanara District as a feeder to our Mills.

5. In addition to the above facts which militate against our favourable working an anomalous position has been created by the fact that whereas the prices of pulp have gone up, those of paper have dropped, chiefly owing to the recently introduced system of barter by Germany, which operates on us very disadvantageously.

6. If therefore the proposed measure of removing the surcharge is carried out it means practically the wiping out of our Mills, a result which we sincerely trust is not contemplated by Government.

(2) *Letter No. P. 54/137 of 1938, dated the 14th February, 1938.*

We have the honour to forward under separate cover by Registered Post our answers to the Board's Questionnaire for manufacturers sent to us by your letter No. 22, dated the 6th January, 1938, together with two spare sets. Two more sets follow a day or two later.

We trust the replies will furnish the information required, and if any further information be necessary, we shall be happy to supply the same, so far as it may be in our power to do so.

#### REPLIES TO THE QUESTIONNAIRE ISSUED BY THE INDIAN TARIFF BOARD, JANUARY, 1938.

1. (a) Our concern is a public registered Company.

(b) The Company is registered in India with rupee capital.

(c) The shareholders of the Company are Indians, excepting two who are Europeans who hold 8 shares out of a total of 1,850. The proportion of Indian shareholders to Europeans is as 420 to 2, and the proportion of shares held by Indians and Europeans is as 1,842 : 8. That is to say 99.52 per cent. are Indian shareholders, and the shares held by them represent 99.56 per cent. of the total.

(d) The Directorate is wholly Indian, and the superior management of the Company is entirely in Indian hands. No changes have occurred in the constitution of our Company since 1931-32.

2. The capacity of our two Mills as at present equipped is about 4,500 tons per annum. The total capacity of our three machines, however, is about 6,000 tons.

3. The actual output of our Mills for each year since 1931-32 has been as follows:—

	Tons.
1931-32 . . . . .	2,698
1932-33 . . . . .	3,035
1933-34 . . . . .	3,119
1934-35 . . . . .	3,007
1935-36 . . . . .	3,342
1936-37 . . . . .	3,336

4. The chief classes of paper manufactured in our Mills are ledger, bond, and writings; white, coloured (including Superior Badami) and antique printings; ordinary badami; cartridge, blotting, cards, covers, etc.; and brown and coloured wrappings.

The average percentage of the total output which each represents is as follows:—

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
Writings . . . . .	11.90	15.46	13.31	17.25	13.17	13.34
Printings . . . . .	34.74	38.24	36.10	34.40	35.97	28.88
Ordinary Badami . . . . .	39.40	27.96	32.79	33.55	41.70	45.35
Wrappings . . . . .	11.52	13.95	14.61	12.68	8.88	11.53
Cartridge, blotting Cards, Covers, etc. . . . .	2.44	4.40	2.19	2.12	0.28	0.85

Since one of our paper machines at Poona is so designed that it can be used as an ordinary machine for M.F. paper (i.e., both sided glazed) as well as an M.G. Machine for one sided glazed paper (e.g., poster paper) there is a possibility of manufacturing White and Coloured posters, and M.G. Covers and Wrappings if these varieties are protected. Further we can manufacture at our Bombay Mills lined thin boards for cartons and boxes.

5. Form I regarding our consumption of primary materials is annexed hereto.

6. The quantity of each of the primary materials required for one ton of paper, according to our estimate, is as follows:—

Rags—on the average 2 tons per ton of finished paper.

Hemp and gunny—on the average 2 tons per ton of finished paper.

Imported bleached Pulp—1.18 tons per ton of finished paper.

Waste paper—1.2 to 1.4 tons per ton of paper, depending upon the quality.

7. As to the availability of bamboos and grasses it is now a generally acknowledged fact that both bamboos and grasses are in increasing demand as pulp making materials. The situation of each Mill governs the economic development in this direction. As is well known there are several areas in India which can supply bamboo for pulp making on an all India Scale, an important one on the Western Coast of India may be specified as the Kanara Forests, which is estimated to supply 40,000 to 45,000 tons of bamboo raw material per annum for a pulp Mill situated there.

As to rags, gunny, jute, waste paper, etc., our supplies of these materials during the year 1936-37 amounted to about 3,100 tons. By extending our sources of supply to distant areas we count upon getting 4,000 tons or more, but the economical area within which this is possible depends upon the price of imported pulp.

8. Besides our normal sources from which our primary materials are drawn, we have been recently getting considerable supplies of rags and waste paper from Central Provinces and United Provinces, and Northern India, as well as from Madras.

Almost all our primary materials are supplied by our contractors, and transported by rail in press-packed bales.

9. We regret our Mills are so situated as not to enable us to make pulp from bamboo and grasses economically, and therefore no bamboo or grass is used in our Mills. However, recently a few wagons of sabai grass have been received for trial at Rs. 63-4 per ton f.o.r. Hadapsar Station (which is the railway station adjoining our Poona Mills), which includes charges under (a) Cutting, Carting and Baling, (b) Railway freight of Rs. 31-14 per ton, (c) Rent or Royalty, and (d) other charges, details of which are unknown to us.

10. The question has been answered by the Indian Paper Makers' Association, Calcutta, to which a reference is craved. We state in addition that the outlook on this question is essentially one of the situation of the Mill, and ours which is situated on the Great Indian Peninsula Railway suffers from a drawback due to the differential rates presented by the different railway Companies. For instance the East Indian Railway concessional freight from Delhi to Calcutta is lower than that granted by the Great Indian Peninsular Railway from Delhi to Bombay, although the distance is practically the same.

11. Bamboo and grasses are not used in our Mills.

As to the other indigenous materials, viz.: Rags, Canvas, Hemp and Jute, the process consists in sorting, dusting, chopping and willowing, boiling in rotary boilers with about 3 to 6 per cent. caustic soda at about 50 lbs. pressure, washing in a rag-washing machine, and bleaching (when necessary) in potchers or breaking engines.

The process of manufacture of pulp from waste paper consists in boiling either with 2 to 3 per cent. of caustic soda or with 4 to 5 per cent. of soda ash, and washing in potchers, or, for coarse paper, kneading with water and steam in pulping machines. Forms II and III are annexed hereto.

12. Annexure A gives the particulars required.

13. The quantity of imported pulp used in our Mills for each class of paper during 1936-37 is as follows:—

Class of Paper.	Average quantity of pulp used.		Kind of Pulp.
	Per cent.	Tons.	
Writings . . . . .	68	298	Bleached Pulp.
Printings . . . . .	56	549	Do.
Badamis . . . . .	9.5	144	Strong or Unbleached Pulp.
Cartridges, Manillas . . . . .	26	6	Do.
Covers, Cards, etc. . . . .			
Blottings . . . . .	...	...	

The above figures show a consumption of about 1,000 tons of pulp, necessary partly to supplement the available quantity of Indian primary materials, and partly to impart the required qualities to the finished paper.

Since we have recently increased our beating capacity we hope to increase our production of paper in the near future, and therefore count upon using a quantity of pulp between 1,500 to 2,000 tons per annum, depending upon the quantity and quality of paper produced, until the time when bamboo pulp is available. The minimum quantity of imported pulp will then depend upon the quantity and quality of bamboo pulp that will be available for our use, but generally speaking even if bamboo pulp be available in sufficient quantities, about 15 to 20 per cent. of imported pulp will still be necessary to impart the required qualities to the finished paper.

14. The market qualities of Ordinary Badami, and Wrappings are manufactured without the admixture of imported pulp, and generally speaking they are inferior to the corresponding kinds of imported paper.

15. The price of wood pulp in Europe and America has, as is well known, gone up due to the Scandinavian agreement to raise prices, and due also to increased demand for paper, rayon, cellophane and plastics, etc., to which an impetus has been given by the war conditions and scare prevalent in Europe and the East. The future under the circumstances is very uncertain, particularly so as extensively large pulp mills are being organized in America which are likely to bring down the prices. Another factor in this direction is that intensive research is being practised for discovering fresh raw materials for the manufacture of pulp.

We may state that a quality of Bleached Sulphite Pulp which was obtained on 16th June, 1937, at £19 7s. 6d. per ton c.i.f., Bombay is now offered at £14 5s. c.i.f.

16. As ours is neither a grass nor a bamboo mill, it is not possible for us to make use of indigenous materials other than rags, canvas, jute, hemp, waste paper, etc. Our recent progress in manufacture of paper from these materials is very appreciable. Since 1931-32, we have used these in increasing quantities so that our consumption of these materials during the period under review is about 40 per cent. more than during the corresponding period covered by the last enquiry. Our progress since 1931-32 will be seen from the following statement:—

Total indigenous materials used in—		Tons.
1931-32	.	1,693
1932-33	.	1,790
1933-34	.	1,955
1934-35	.	1,986
1935-36	.	2,428
1936-37	.	3,113

As to progress in quality, the accompanying samples of our paper will speak for themselves.

17. Form IV, relating to auxiliary materials is annexed hereto.

The following table gives our consumption of auxiliary materials per ton of finished paper arrived at by distributing the total consumption over the total quantity of paper produced during the year. The figures are taken from our actual working figures for the period of 12 months ended 31st March, 1937:—

	Quantity per ton Paper
	Ton.
Caustic Soda	·009
Soda Ash	·002
Bleaching Powder	·007
China Clay	·019
French Chalk	·008
Rosin	·013
Bewoid	·022
Sulphate of Alumina	·046
Mineral Colours	·006
Dyes	·001

In case of the auxiliary materials not included in the above list, the quantity used per ton of paper is so small as to be almost negligible.

18. Since 1931-32 there has been an appreciable improvement in the quality of China Clay produced in India, and a certain quantity of the Indian product is being used by us at competitive price.

Rosin, French Chalk, Casein, Yellow and red ochres are available more freely than before. Our full requirements of these materials are purchased exclusively from Indian products. Although these still fall short in quality to the imported varieties, they are suitable for our purpose and are obtained at prices which compare favourably with those of the foreign product.

19. The percentage of caustic soda used for boiling rags and similar materials is so small that its recovery is not economically possible. Clays and ochres are recovered from the machine back water, and are used over again. This is the only recovery possible in our case.

20. Our primary materials are purchased from contractors at inclusive rates per ton delivered into our Mills, and therefore we have no record as to the labour force employed in their collection. We may, however, state that according to the contractors' estimate the total labour employed is about 15 per 100 tons. Calculating on this basis the labour employed during the period under review is approximately as follows:—

1931-32 . . . . .	405
1932-33 . . . . .	455
1933-34 . . . . .	468
1934-35 . . . . .	451
1935-36 . . . . .	501
1936-37 . . . . .	500

21. The total labour employed in our Mills during each of the past six years is as follows:—

1931-32 . . . . .	512
1932-33 . . . . .	517
1933-34 . . . . .	498
1934-35 . . . . .	508
1935-36 . . . . .	598
1936-37 . . . . .	656

The above figures are averages for the year.

The details of the above labour for the year 1936-37, are as follows:—

(1) Chargemen in responsible positions—(i.e., in charge of paper machines, beaters, Turbo-alternator, motors, etc. . . . .	20
(2) Mistries and trained men (including fitters turners, etc.) . . . . .	105
(3) Men . . . . .	250
(4) Women:—	
Rag sorters and waste paper sorters . . . . .	145
Finished-paper sorters . . . . .	55
Others . . . . .	66
(5) Boys . . . . .	12
(6) Girls . . . . .	3
Total	656

The total salaries paid during 1931-32 to 1936-37 are as follows:—

	Labour.	Supervision and Establishment.
	Rs.	Rs.
1931-32 . . . . .	1,13,175	35,400
1932-33 . . . . .	1,06,701	34,900
1933-34 . . . . .	1,16,106	37,709
1934-35 . . . . .	1,05,197	38,394
1935-36 . . . . .	1,07,578	37,832
1936-37 . . . . .	1,29,370	40,853

22. There has been no European or imported labour employed in our Mills excepting one individual in charge of our sorting and despatching department. All our skilled workmen and supervisors are Indians and most of them are from adjacent villages who have been trained in our Mills from boy-hood upwards.

During the period under review we have had fifteen educated young men as paid and unpaid apprentices, in the paper-making department, seven of whom were graduates in Science. We have also had ten apprentices in the electrical and mechanical departments, getting practical training in the mechanical and electrical branches of our Mills four of whom were graduates in engineering.

23. Almost all our workmen are obtained locally, who prefer to live in their own adjacent villages. We provide housing for those who require it, for which purpose blocks of rooms have been built and accommodation supplied free of charge. The Government have recently set up in connection with our Mills an Industrial Settlement (Criminal Tribe Settlement), with provision of huts for the settlers. Besides these, two blocks of rooms are lent by us for their use free of charge. About 225 settlers are working in our Mills.

We have a paid medical man to attend to our workmen and their families, medicine and other adjuncts being provided free of charge. We have also a paid lady health-visitor to look after the welfare-work for women and their children. A creche is provided where infants of female workers are taken care of during working hours by 4 ayas in charge of the lady health-visitor.

We have a school in charge of a qualified teacher, where the children of the mill hands receive education upto the 3rd vernacular standard. Arrangements have also been made for the education of adult workers, both male and female, under the supervision of the Shaksharata Prasarak Mandal (Society for the spread of literacy), facilities being given to workmen to attend the classes in batches for an hour or so at a time during their working hours. About 102 women and 98 men are now able to read and write to a certain extent.

For recreation purposes a play-ground has been provided in our Mill Compound, as well as out side it in the village.

24. (a) Since 1936 the old steam power-plant at our Poona Mills has been replaced by an up-to-date 800 B.H.P. Steam Turbo-Alternator of the pass-out type, with a complete electric drive. Two of our old boilers have been replaced by boilers working at 180 lbs. pressure, with superheaters up to 600° F. and have installed 27 motors including a special variable-speed Commutator Motor for each of our two paper machines. This has effected a considerable saving in coal, inclusive of the supply of steam bled from the turbine at low pressure for process work. (b) The cost of coal is on the average Rs. 33 per ton of finished paper (c) The consumption of power is on the average 1,100 K.W. Hours per ton of finished paper. This is with reference to Central Provinces coal which is 15 to 20 per cent. inferior to Bengal coal.

25. This question is answered by the Indian Paper Makers' Association, to which a reference is craved.

26. It is undisputable that the demand of wood pulp is a growing one all the world over in view of the fact that it is the raw material not only for paper but for rayon, plastics, and allied industries, which latter have very recently grown to large dimensions. Under the circumstances a comprehensive policy for the development of bamboo pulp not only for Indian consumption but for export is one of national utility. The establishment of a pulp mill on a suitably large scale under favourable conditions therefore depends upon (1) the consumption of its production by Indian mills, and (2) thereafter for export.

At present the Paper Mills in India, with the exception of a very few are using their own pulp, but it is possible that the new grass mills which are being erected will eventually create a demand for bamboo pulp, which, added to our own, may reach at least 10,000 tons per annum, in which case a separate pulp mill to cater for the Indian Paper Mills is a possibility.

In Europe and America the number of paper and pulp mills is far larger, and working under more favourable conditions than in India, with the result that competition with them by Indian pulp is a matter for the distant future.

It must be remembered in this connection that the allied industries of rayon, plastics, etc., have requirements of their own which involve special material and treatment, which therefore do not come under the category of the present enquiry.

Except in Kashmere perhaps, where the Conifers have their habitat the possibilities of mechanical factories in India are remote, unless experiments being made at Dehra Dun prove successful.

27. With reference to the effect of the protective duty on wood pulp on (a) the paper industry in India, we submit that the protective duty was imposed with a view to encourage the development of bamboo pulp industry with the result that the Mills who were in a position to manufacture bamboo pulp have increased their production of bamboo pulp for their own use; but those Mills who were not so situated have been adversely affected, and they have been unable to increase their production of white paper which they would otherwise have done.

(b) With regard to other industries we are not aware of any development arising as a consequence of the protective duty.

28. This question is answered by the Indian Paper Makers' Association, to which a reference is craved.

29. Annexure B gives the particulars required.

30. The price realised by us for each principal class of paper manufactured for each year since 1931-32 is as follows:—

Year.	Writing.	Printings.	Badami.	Wrappings.	Cartridge, Blotting Covers, Cards, etc.
	As. p.	As. p.	As. p.	As. p.	As. p.
1931-32	3 3½	3 3	2 3	1 7	2 7½
1932-33	3 3½	3 3	2 4½	1 5½	3 0½
1933-34	3 1½	2 11½	2 0	1 9	2 5
1934-35	3 0	2 9	1 9	1 5½	2 0½
1935-36	3 0½	2 9	1 9½	1 7	1 9½
1936-37	3 0½	2 9	1 10	1 6½	1 10



31. The prices at which the products of our Mills have been sold at upcountry centres generally correspond with those realised by us in the Bombay Markets making due allowance for freight from Bombay to destination.

32. Generally speaking the prices realised by us for our paper in the market are a little lower than the price of corresponding class of imported paper. The reasons for this are as follows:—

- (1) The market for Indian paper is more or less crystallised and leaves little margin for the middle men to secure adequate profits. The case is different with imported paper where the variability of price affords considerable margin in varying the selling price, which fact affects Indian paper adversely quality for quality.
- (2) The imported paper on the other hand goes to the market so to speak with a hall-mark of a higher quality which the ordinary consumer is not in a position to be a good judge of, with the consequence that the middle men are able to make capital out of it.
- (3) Although the desire to support an Indian industry is gaining ground, the feeling does not in a majority of cases stand the temptation of securing higher profits which are possible from foreign products.

33. This question is answered by the Indian Paper Makers' Association, to which a reference is craved.

34. This question is answered by the Indian Paper Makers' Association, to which a reference is craved. We may, however, observe that Bombay being the gateway of India the conditions of competition here are far keener than elsewhere, and the mentality of the Bombay dealer is to achieve quick returns with as small a profit as is conceivable.

35. We are not aware that there is any difference in price between paper in which bamboo is used and paper made from other indigenous materials.

36. The improvements made in the quality of paper produced by us in 1931-32 which was principally due to several improvements effected in our Poona Machine and to the new paper machine erected in the Poona Mills, has been not only maintained, but the quality is further improved and is better in respect of texture uniformity in weight and colour owing to the increase in the beating power now possible by the installation of a larger power unit and the more uniform electric drive, and to the installation of 3 new bleaching and potching engines.

The annexure C gives the particular required as regards the quantity of paper supplied to the Central and Provincial Governments and to State and other Railways, and the price realised for each class of paper so supplied during the past six years.

37. This question is answered by the Indian Paper Makers' Association, to which a reference is craved.

38. Since 1931-32 we have installed the following new machinery:—

One, new heavy type Nutall's Rag & Rope Chopper.

One Rag Washing Machine (counterflow principle).

Three 800 lb. washing and bleaching Potchers.

One Beloit's Duplex Revolving Cutter.

Two guillotine cutting machines.

One Stamping Machine for cutting paper discs for gin roll washers.

One Disc Ruling machine.

Also the complete power plant and motors referred to in our answer to question No. 24.

All the above have in performance come up to our expectations.

39. The total amount spent by us since 1931-32 on extensions or alterations of plant and machinery as regards paper is Rs. 2,55,100 which includes the sums spent in building an additional Salle, a fire proof godown for storing pulp, and 4 blocks of rooms for our employees, also the new power plant referred to above, and the total cost of erection.

40. We contemplate the following replacement or extensions of our plant:—

- (1) An Electrolytic plant for producing electrolytic bleaching liquor.
- (2) Two Erkensators or Centrifugal purifying machines.
- (3) A few Vortrap Classifiers for removal of grit, sand, etc., from paper-making stock.
- (4) Two additional bleaching and washing potchers.
- (5) New Calendar rolls for our machines.
- (6) A slitting and re-reeling machine.
- (7) A complete new cone-drive for our paper machine at Poona.
- (8) One Rengers Pasteboard Lining Machine.

41. The block value of property as it stood in our books at the end of the last complete year for which figures are available viz., the year ended 31st March 1937, is as follows:—

	Rs.
(a) Leases and Concessions . . . . .	...
(b) Lands . . . . .	4,643
(c) Buildings . . . . .	3,71,006
(d) Plant and machinery . . . . .	10,10,755
(e) Other assets (office and mill furniture) . . . . .	5,653

42. We estimate the present day cost of buildings plant and machinery for erecting a mill having the same capacity as our Mills would be about Rs. 30,00,000 to 35,00,000.

43. Annexure D gives the particulars required.

44. (a) The amount of the paid up share capital ranking for dividend each year since 1931-32 is as follows:—

	Rs.
1931-32 . . . . .	9,24,000
1932-33 . . . . .	9,24,000
1933-34 . . . . .	9,24,000
1934-35 . . . . .	9,24,000
1935-36 . . . . .	9,24,000
1936-37 . . . . .	9,24,000

(b) The actual amounts distributed as dividends each year since 1931-32 is as follows:—

	Rs.
1931-32 . . . . .	36,960
1932-33 . . . . .	36,960
1933-34 . . . . .	27,720
1934-35 . . . . .	...
1935-36 . . . . .	...
1936-37 . . . . .	27,720

(c) The percentage on the paid up share capital which the dividend represented each year since 1931-32 is as follows:—

	Per cent.
1931-32 . . . . .	4
1932-33 . . . . .	4
1933-34 . . . . .	3
1934-35 . . . . .	...
1935-36 . . . . .	...
1936-37 . . . . .	3

45. Five copies of our Balance Sheet for each year since 1931-32 are sent herewith.

46. Annexure E gives the particulars required.

47. The forms V and VI relating to the cost of manufacture are annexed hereto.

48. We give in the statement below our estimate of future works cost, based on the works cost of 1935-36 when conditions were deemed to be normal, if full output is obtained.

	Quantity.	Expenditure.
	Tons.	Rs.
1. Primary materials—		
Rags, Hemp, Jute, etc. . . . .	413	24,780
Waste Paper and Paper Cuttings . . . . .	2,866	1,46,170
2. Imported Pulp . . . . .	2,136	4,56,182
3. Auxiliary materials—		
Sulphate of Alumina . . . . .	169	19,961
Rosin and Bewoid Size . . . . .	159	41,662
Clays . . . . .	176	13,770
Caustic Soda . . . . .	26.6	8,510
Soda Ash . . . . .	...	227
Bleaching Powder . . . . .	23.4	2,802
Starch . . . . .	12.2	1,372
Silicate . . . . .	12.2	2,173
Ochres . . . . .	11.9	634
Aniline Dyes . . . . .	...	11,838
Other chemicals . . . . .	...	1,214
4. Power and fuel . . . . .	...	1,44,000
5. Current repairs and maintenance . . . . .	...	76,000
6. Labour . . . . .	...	1,27,600
7. Supervision and establishment—		
(1) Salaries of technical staff . . . . .	...	27,860
(2) Salaries of non-technical staff . . . . .	...	13,730
8. Packing . . . . .	...	31,360
9. Other items in the cost of manufacture . . . . .	...	...
Total . . . . .		11,51,845

Total output of paper in tons—4,500.

Total works cost Rs. 255.9 per ton of paper.

It will be seen that whereas the works cost in 1935-36 amounted to Rs. 267.48 per ton, the estimated cost for a full output is Rs. 255.9, *i.e.*, there is a reduction of Rs. 11.58 per ton which makes a difference of about Rs. 52,110 a year. This does not take into account the further reduction in the estimated cost per ton which is inevitable on account of the usual overhead charges being distributed over a larger outturn.

The reduction in cost under each head is as follows:—

	Per ton of paper.
	Rs.
Power and fuel ... . . . .	10.52
Current repairs and maintenance . . . . .	1.24
Supervision and establishment . . . . .	2.08
Labour . . . . .	3.81
	<hr/>
Total	17.65

Against the above it must be taken into account the increase in cost amounting to Rs. 6.07 per ton of paper which is due to the fact that the indigenous primary materials are calculated at higher rates, because the increased quantity necessary has to be procured from distant sources.

49. (1) The average value of the stocks of primary and auxiliary materials, stores, and finished goods, held by the Company is as follows:—

	Rs.
Imported Pulp, other primary materials, chemicals, clays, colours, etc., at cost price . . . . .	3,08,640
Mill and Engineers Stores, Felts, Wires, Jackets, Machinery Spares, Packing Materials, Coal, Fuel, etc., at cost price . . . . .	1,02,980
Finished goods at market price . . . . .	2,86,520

(2) The average outstandings in respect of goods sold by the Company are Rs. 3,23,380.

50. Our working capital is provided partly by our Reserve Fund and partly by Loans and Deposits.

51. The circumstances adduced above indicate to us the necessity for a continuance of a protective duty in no way less than which obtains at present. In the matter of imported pulp we may suggest that in view of the encouragement of the Indian Industry a quota system might be adopted allowing a maximum for each mill free of duty with a provision for levying duty above that quantity. Secondly, the duty should be fixed on the air dry basis and not on the total weight received at the Indian port. The air dry weight may be accepted on a certificate accompanying each consignment by recognised European authorities, which might be subject to a check by the Indian Port Authorities.

Further, we submit that as Kraft paper and paper containing mechanical pulp are not protected, Kraft and Mechanical Pulp should likewise be allowed to enter the country without the specific duty which is at present imposed.

52. (1) Since starting our new power plant at our Poona Mills in August, 1936, our coal consumption is reduced by at least 24 per cent., notwithstanding that for the last past few months increased quantities of rags have been used necessitating a greater consumption of power. This saving in the consumption of power, *viz.*, 24 per cent., is equivalent to about 0.85 tons of coal per ton of finished paper.

Further we estimate that the losses on the paper-cutter have been reduced by about  $\frac{1}{2}$  per cent. due to the instalment of the Beloit Cutting Machine in our Poona Mills. This means a saving of 6 to 7 tons of finished paper during the year.

(2) Reduction in losses in the process of manufacture have been effected in certain directions, *e.g.*, reduction in the percentage of "broke" and cutter losses, etc., but ours being more or less a rag mill where recovery of chemicals do not come into question as such, as in a grass or bamboo mill, the reduction in losses effected is not very appreciable.

(3) There is a general improvement in the quality of our paper as will be seen from the samples sent herewith, and this has helped us to hold our own in the market.

53. This question is answered by the Indian Paper Makers' Association, to which a reference is craved. We would, however, beg leave to mention and suggest that there is a tendency to evading the protective duty on Badami paper by importing substitutes containing mechanical pulp but tinted differently from buff or Badami. We may quote instance, with deference that the United Provinces Government are including in their schedule of requirements hard-sized mechanical tinted paper which is duty free, to replace badami paper to the extent of 550 tons per annum. We give below a copy of the specification of this paper as mentioned in their Tender issued on the 15th October, 1937:—

*Item 7.—Tinted News Printing* 554 tons, maximum substance 74 G.S.M., minimum substance 63 G.S.M. "Specification—Item No. 7 Tinted News Printing,—This is to be either cream, pale blue, or pale pink or other pale tint but not buff, badami, or white, should be of good standard quality containing not less than 65 per cent. mechanical wood, reasonably free from specks, and sufficiently sized and glazed. Should also be suitable for writing on with ink. Maximum ash limit 15 per cent."

We request that the point might be duly considered and the necessary relief given.

54. Regarding surcharge we submit that its removal will affect us very adversely as shown in our reply to Question No. 55.

55. (a) The following statement show the effect of replacing protective duties by revenue duties on the finances of our Company:—

	Rs.
Average price realised in 1935-36 for the protected varieties . . . . .	395 a ton.
Less duty at Rs. 175 a ton (including surcharge)	175
	<hr/>
	220
Add duty at 25 per cent. . . . .	55
	<hr/>
Price realised at revenue duty . . . . .	275 a ton.
	<hr/>
Total output 1935-36 of the protected varieties .	1,698 tons.
Total output of the non-protected varieties ( <i>i.e.</i> , Badami, wrappings, etc.) of which the average value realised was Rs. 245 a ton . . . . .	1,644 tons.
	<hr/>
Total .	3,342 tons.
	31 A

	Rs.
Total receipts, protected varieties at Rs. 275 a ton . . . . .	4,66,950
Total receipts, non-protected varieties at Rs. 245 a ton . . . . .	4,02,780
	<hr/>
	8,69,730
Deduct total expenditure 1935-36 . . . . .	10,78,662
	<hr/>
Deficit . . . . .	2,08,932
Less duty on 1,582 tons imported pulp at Rs. 56-4 . . . . .	88,987
	<hr/>
Net deficit . . . . .	1,19,945

(b) The following statement shows the effect of removing the existing surcharge on the finances of our Company:—

	Rs.
<i>Year 1935-36—</i>	
The protected varieties made in the year 1935-36, amounted to . . . . .	1,698 tons.
Deficit due to the removal of surcharge on 1,698 tons of protected varieties at Rs. 35 a ton . . . . .	59,444
Gain on account of the removal of surcharge on 1,582 tons of imported pulp at Rs. 11-4 a ton . . . . .	17,798
	<hr/>
Net deficit . . . . .	41,646

It will be seen from a reference to our Balance Sheet and Profit and Loss Account for the year referred to above, viz., the year ending 31st March, 1936, that the gross profit made by our Company in that year was Rs. 30,948-14-1. The removal of surcharge, therefore, would have meant to us an absolute loss of Rs. 10,698 without taking even a small sum for depreciation.

*N.B.*—The particulars given above are on air-dry basis, and in round figures.

The paper on which the foregoing is typed has been made at our Reay Paper Mills, Mundhwa, Poona, and the paper for the cover at our D. Pudumjee Paper Mills, Bombay.

## FORM I.

## Primary Materials.

	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<b>Bamboo . . . . .</b>	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>
<b>Grass . . . . .</b>	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>
<b>Waste Paper and Paper Cuttings—</b>						
(1) Quantity of material used	1,513.45	1,663	1,763	1,743	2,122.75	2,711
(2) Quantity of finished paper which material represents.	1,262.10	1,259.86	1,435.40	1,373.60	1,683.66	2,144.21
(3) Percentage of (2) on the total quantity of paper manufactured.	46.78	41.51	46.02	45.68	50.38	64.28
<b>Other Indigenous Materials—</b>						
<b>Rags, Hemp, Jute, etc.</b>						
(1) Quantity of material used	180.60	127	192	243	306	402.4
(2) Quantity of finished paper which material represents.	90.30	63.50	96	121	153	201.2
(3) Percentage of (2) on the total quantity of paper manufactured.	3.35	2.10	3.08	4.40	4.60	6.00
<b>Total Indigenous Materials—</b>						
(1) Quantity of material used	1,594.05	1,790	1,955	1,986	2,428.75	3,113.40
(2) Quantity of finished paper which material represents.	1,352.40	1,323.36	1,531.40	1,494.60	1,836.66	2,345.41
(3) Percentage of (2) on the total quantity of paper manufactured.	50.13	43.61	49.10	50.08	54.98	70.23
<b>Imported Pulp—</b>						
(1) Quantity of material used	1,467	1,864	1,705	1,595	1,582.00	997.43
(2) Quantity of finished paper which material represents.	1,246.9	1,584.40	1,449.3	1,355.75	1,344.70	847.80
(3) Percentage of (2) on the total quantity of paper manufactured.	46.22	52.20	46.47	45.10	40.23	25.41

## FORM II.

## Total Expenditure incurred on the Production of Bleached Pulp.

	1931-32.		1932-33.		1933-34.		1934-35.		1935-36.		1936-37.	
	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.
1. Primary materials— Rags . . . . .	130.40	8,553	87.00	5,472	150.00	8,940	160.50	9,854	256.00	16,042	330.00	24,205
2. Chemicals and other auxiliary materials— Caustic Soda . . . . .	7.80	2,769	4.50	1,788	9.00	3,285	9.00	2,970	15.38	4,915	19.25	5,294
Bleaching Powder . . . . .	0.94	1,075	5.20	780	9.40	1,215	8.50	1,147	13.80	1,536	21.00	2,415
3. Power and fuel . . . . .	..	1,836	..	1,240	..	2,170	..	2,280	..	3,328	..	4,200
4. Current repairs and maintenance. . . . .	..	146	..	109	..	136	..	180	..	352	..	503
5. Labour . . . . .	..	1,202	..	570	..	1,537	..	1,620	..	2,360	..	3,850
6. Supervision and establishment. . . . .	..	130	..	95	..	156	..	180	..	285	..	438
7. Any other items in cost of manufacture. . . . .	..	..	..	..	..	..	..	..	..	..	..	..
TOTAL . . . . .	..	15,711	..	10,357	..	17,519	..	18,221	..	20,021	..	40,905
8. Insurance . . . . .	..	129	..	73	..	123	..	170	..	230	..	376
9. Rents, rates and taxes (excluding income-tax). . . . .	..	412	..	242	..	378	..	426	..	674	..	935
10. Depreciation at 1 per cent. . . . .	..	105	..	116	..	212	..	234	..	391	..	558
11. Interest on working capital . . . . .	..	473	..	323	..	696	..	810	..	1,500	..	2,724
12. Head office expenses and managing agents' commission. . . . .	..	591	..	351	..	656	..	709	..	985	..	1,140
13. Miscellaneous . . . . .	..	236	..	140	..	282	..	413	..	541	..	581
TOTAL . . . . .	..	2,036	..	1,250	..	2,347	..	2,770	..	4,321	..	6,323
GRAND TOTAL . . . . .	..	17,747	..	11,607	..	19,866	..	21,001	..	33,342	..	47,228
Total output of pulp for the year in tons. . . . .	76.70	..	51.20	..	88.20	..	94.50	..	150.60	..	205.90	..



**FORM III.**  
**Cost per ton of Bleached Pulp.**

	1931-32.		1932-33.		1933-34.		1934-35.		1935-36.		1936-37.	
	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.
1. Primary materials—												
Rags . . . . .	1-70	111-51	1-70	106-86	1-70	101-36	1-70	104-19	1-70	106-52	1-70	117-55
2. Chemicals and other auxiliary materials—												
Caustic Soda . . . . .	0-10	36-10	0-10	34-92	0-10	37-24	0-10	31-43	0-10	32-64	0-10	25-71
Bleaching Powder . . . . .	0-09	14-01	0-10	15-23	0-10	13-78	0-09	12-14	0-10	10-20	0-10	11-73
3. Power and fuel . . . . .	..	23-94	..	24-22	..	24-60	..	24-13	..	22-10	..	20-40
4. Current repairs and maintenance . . . . .	..	1-90	..	2-13	..	2-11	..	1-90	..	2-34	..	2-44
5. Labour . . . . .	..	15-67	..	17-00	..	17-42	..	17-14	..	17-00	..	18-70
6. Supervision and establishment . . . . .	..	1-69	..	1-91	..	2-11	..	1-90	..	1-91	..	2-13
7. Any other items in cost of manufacture.	..	..	..	..	..	..	..	..	..	..	..	..
<b>TOTAL</b> . . . . .	..	204-84	..	202-29	..	198-63	..	192-83	..	192-71	..	198-68
8. Insurance . . . . .	..	1-67	..	1-52	..	1-39	..	1-89	..	1-52	..	1-83
9. Rents, rates and taxes (excluding income-tax) . . . . .	..	5-37	..	4-72	..	4-20	..	4-49	..	4-48	..	4-54
10. Depreciation at 1 per cent.	..	2-54	..	2-27	..	2-40	..	2-48	..	2-60	..	2-71
11. Interest on working capital . . . . .	..	6-17	..	6-31	..	7-89	..	8-57	..	9-96	..	11-77
12. Head office expenses and managing agents' commissions . . . . .	..	7-71	..	6-86	..	7-44	..	7-51	..	6-54	..	7-04
13. Miscellaneous . . . . .	..	3-08	..	2-73	..	3-20	..	4-37	..	3-59	..	2-82
<b>TOTAL</b> . . . . .	..	26-54	..	24-40	..	26-61	..	29-31	..	28-68	..	30-71
<b>GRAND TOTAL</b> . . . . .	..	231-36	..	223-69	..	225-24	..	222-14	..	221-40	..	229-37
Total output of pulp for the year in tons.	76-70	..	51-20	..	88-20	..	94-50	..	150-50	..	205-9	..

## ANNEXURE A—(Qn. 12.)

## Imports of Wood Pulp.

	Kind of Pulp.	Quantity Imported.	Country from where imported.	Port of importation.	Price per ton c.i.f. Bombay varying from to		Landing charges.	Transport charges to Mills.
					£ s. d.	£ s. d.		
		Tons.					RS. A. P.	RS. A. P.
1931-32	Bleached Sulphite . . . . .	1589.7	Sweden . . . . . Norway . . . . . Finland . . . . . America . . . . . Japan . . . . .	Bombay	11 0 0 to 14 0 0	5 5 0	8 10 0	
	Easy—Bleaching . . . . .	20.0	Japan . . . . . Norway . . . . .	"	11 2 6	5 5 0	8 10 0	
	Unbleached Sulphite . . . . .	319.5	Sweden . . . . . Finland . . . . .	"	8 12 6 to 10 15 0	5 5 0	8 10 0	
	Bleached Sulphite . . . . .	1161.60	Sweden . . . . . Norway . . . . . Finland . . . . . America . . . . .	"	11 0 0 to 13 5 0	5 5 0	8 10 0	
	Unbleached Sulphite . . . . .	200.63	Sweden . . . . . Norway . . . . . Finland . . . . .	"	8 2 0 to 9 0 0	5 5 0	8 10 0	
1932-33	Bleached Sulphite . . . . .	1529.31	Sweden . . . . . Finland . . . . . Norway . . . . . America . . . . .	"	10 12 6 to 12 15 0	5 5 0	8 10 0	
	Bleached Sulphite . . . . .							
1933-34	Bleached Sulphite . . . . .							

1934-35	Aspen—Bleached	117-65	Norway	.	.	.	11 0 0	5 5 0	8 10 0
	Unbleached Sulphite	219-00	Sweden	.	.	.	7 13 9 to 9 10 0	5 5 0	8 10 0
	Soda—Bleached	48-95	Sweden	.	.	.	11 15 0 to 12 17 6	5 5 0	8 10 0
	Bleached Sulphite	1220-82	Norway	.	.	.	11 12 4 to 13 5 0	5 5 0	8 10 0
			Sweden	.	.	.			
			America	.	.	.			
	Aspen—Bleached	50-10	Norway	.	.	.	12 2 6	5 5 0	8 10 0
			Sweden	.	.	.			
	Unbleached Sulphite	201-35	Norway	.	.	.	8 18 9 to 9 17 6	5 5 0	8 10 0
			Sweden	.	.	.			
	Soda—Bleached	71-90	Sweden	.	.	.	12 17 6	5 5 0	8 10 0
	Mechanical	10 20	Sweden	.	.	.	7 15 0	5 5 0	8 10 0
1935-36	Bleached Sulphite	1377-57	Norway	.	.	.	10 0 0 to 12 2 6	5 5 0	8 10 0
			Sweden	.	.	.			
			America	.	.	.			
	Soda—Bleached	49-25	Norway	.	.	.	12 10 0	5 5 0	8 10 0
	Unbleached Sulphite	95-30	Sweden	.	.	.	8 5 0 to 8 15 0	5 5 0	8 10 0
			Sweden	.	.	.			
1936-37	Bleached Sulphite	857-10	Norway	.	.	.	11 7 8 to 14 2 0	5 5 0	9 2 0
			Finland	.	.	.			
			America	.	.	.			
	Easy—Bleaching	49-70	Sweden	.	.	.	9 12 6	5 5 0	9 2 0
	Unbleached Sulphite	131-57	Norway	.	.	.	8 2 6 to 9 5 0	5 5 0	9 2 0
			Norway	.	.	.			

FORM IV.  
Auxiliary Materials.

	1931-32.		1932-33.		1933-34.		1934-35.		1935-36.		1936-37.	
	Tons.	Price per ton.	Tons.	Price per ton.	Tons.	Price per ton.	Tons.	Price per ton.	Tons.	Price per ton.	Tons.	Price per ton.
		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
<i>Pulpmaking material—</i>												
Quantity of material used—												
Caustic Soda—												
(a) Indian . . .	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
(b) Imported . . .	9.70	350 to 360	7.20	360 to 370	12.40	360 to 370	13.20	320 to 340	16.20	310 to 330	24.30	270 to 280
Soda Ash—												
(a) Indian . . .	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
(b) Imported . . .	5.00	160 to 170	0.75	180 to 170	2.16	150 to 160	3.55	135 to 140	1.34	130 to 130	6.50	115 to 129
<i>Bleaching material—</i>												
Quantity of material used—												
Bleaching Powder—												
(a) Indian . . .	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
(b) Imported . . .	10.40	150 to 160	7.20	145 to 155	0.80	130 to 140	13.60	130 to 140	17.30	110 to 130	24.30	110 to 120

<b>Loading materials—</b>												
Quantity of material used—												
China Clay—												
(a) Indian . . .	Nil.	Nil.	Nil.	Nil.	Nil.	47-40	50 to 60	63-25	52 to 80	30-40	65 to 90	
(b) Imported . . .	43-20	68 to 74	69-30	55 to 65	80-20	31-70	50 to 60	32-85	52 to 80	39-93	65 to 90	
French Chalk—												
(a) Indian . . .	20-30	60 to 62	30-70	58 to 62	38-90	30-40	50 to 60	45-15	53 to 62	34-90	60 to 62	
(b) Imported . . .	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	..	..	
<b>Sizing material—</b>												
Quantity of material used—												
Caustic Soda—												
(a) Indian . . .	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
(b) Imported . . .	7-70	350 to 360	6-20	360 to 370	6-20	7-90	320 to 340	3-50	310 to 330	4-60	270 to 280	
Roain—												
(a) Indian . . .	81-70	200 to 310	58-60	310 to 320	61-85	76-90	230 to 270	37-20	225 to 270	44-62	212 to 240	
(b) Imported . . .	Nil.	Nil.	2-45	242	3-00	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
Bewold—												
(a) Indian . . .	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
(b) Imported . . .	13-00	290 to 300	52-85	280 to 300	48-60	46-00	280 to 290	80-40	280 to 290	67-17	280 to 325	
Glue—												
(a) Indian . . .	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	2-25	480 to 750	
(b) Imported . . .	Nil.	Nil.	0-15	700	0-85	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	





## ANNEXURE B—(Qn. 29.)

Destination.	From Bombay Mills.	Rate per maund. Rs. A. P.
<i>From Bombay.</i>		
Delhi . . . . .	857	1 10 8
Cawnpore . . . . .	939	1 8 8
Agra . . . . .	835	1 9 8
Gwalior . . . . .	763	1 12 0
Ajmer . . . . .	611	1 6 11
Nagpur . . . . .	518	1 3 6
Ahmedabad . . . . .	303	0 13 10
Hyderabad (Deccan) . . . . .	492	1 2 6
<i>From Hadapsar.</i>		
Delhi . . . . .	941	1 0 1
Cawnpore . . . . .	868	1 1 10
Agra . . . . .	863	1 0 1
Gwalior . . . . .	791	1 0 0
Ajmer . . . . .	726	1 9 1
Nagpur . . . . .	547	1 4 7
Ahmedabad . . . . .	422	1 0 1
Hyderabad (Deccan) . . . . .	369	0 14 3
<i>From Madras.</i>		
Bangalore . . . . .	222	0 9 1
<i>From Hadapsar.</i>		
Bangalore . . . . .	808	1 5 4

सत्यमेव जयते



## ANNEXURE C—(Qn. 36.)

Qualities.	1931-32.		1932-33.		1933-34.		1934-35.		1935-36.		1936-37.	
	Tons.	Price realised per ton.	Tons.	Price realised per ton.	Tons.	Price realised per ton.	Tons.	Price realised per ton.	Tons.	Price realised per ton.	Tons.	Price realised per ton.
		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
<i>Paper supplied to the Bombay Government.</i>												
Azure Laid . . . . .	10	548	5	560	4	500	6	513	9	513	18	513
Cream Wove . . . . .	35	548	53	548	16	548	24	560	34	560	59	560
Cream Laid . . . . .	42	490	..	..	26	461	58	432	53	432	85	432
Antique Paper . . . . .	..	..	..	..	5	513	..	..	..	..	..	..
White Cartridge . . . . .	11	496	1/10	496	1/10	496	..	..	1/10	496	1/10	496
White Printing . . . . .	151	479	153	484	139	461	123	432	137	432	149	432
Superior Badami . . . . .	188	449	191	461	181	449	178	420	200	420	228	420
Inferior Badami . . . . .	159	385	152	397	167	391	168	350	221	362	270	362
Coloured Paper . . . . .	1 1/2	435	..	..	..	..	5	383	1 1/2	388	1 1/2	388
Brown . . . . .	6 1/2	339	..	..	9	304	11 1/2	280	6	280	8 1/2	280
Manillas . . . . .	24	374	..	..	..	..	..	..	..	..	..	..
<i>Paper supplied to the Central Government (including the G. I. P. Railway and the N. W. Railway).</i>												
White Printing . . . . .	151	467	100	484	126	461	138	432	111	432	98	420
Semi-bleached . . . . .	..	..	22	473	17	449	12	426	48	426	9	414
Whited Brown . . . . .	6	455	2 1/2	473	7	449	1	426	2 1/2	426	6	414
Badami . . . . .	147	374	34	391	36	368	65	374	134	356	87	339
Brown . . . . .	..	..	..	..	12	304	25	280	19	280	15	280

## ANNEXURE C—(Qn. 36)—contd.

Qualities.	1931-32.		1932-33.		1933-34.		1934-35.		1935-36.		1936-37.	
	Tons.	Price realised per ton.	Tons.	Price realised per ton.	Tons.	Price realised per ton.	Tons.	Price realised per ton.	Tons.	Price realised per ton.	Tons.	Price realised per ton.
		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
<i>Paper supplied to the U. P. Government.</i>												
Azure Laid . . . . .	..	..	5	549	..	..	..	..	4/10	549	..	..
Cream Wove . . . . .	..	..	11	520	..	..	..	..	..	..	..	..
White Printing . . . . .	..	..	72	478	40	450	27	421	..	..	..	..
Superior Badami . . . . .	..	..	10	456	..	..	..	..	..	..	..	..
Semi-bleached Printing . . . . .	..	..	45	456	27	438	..	..	1	438	..	..
Badami . . . . .	..	..	122	374	13	868	21	351	82	268	90	298
Brown . . . . .	..	..	..	..	70	298	56	269	61	269	23	269
<i>Paper supplied to the N. S. Railway.</i>												
Cream Laid . . . . .	1½	490	490	..	..	..	2½	420	8½	420	4	420
White Printing . . . . .	..	..	..	..	..	..	..	..	19	397	19	397
Badami . . . . .	..	..	..	..	9	268	23	268	54	257	49	257
Brown . . . . .	..	..	..	..	..	..	..	..	..	..	2½	268
Blotting . . . . .	..	..	..	..	..	..	½	490	½	490	..	..
<i>Paper supplied to the S. I. Railway.</i>												
Superior Badami . . . . .	11½	435	13½	450	..	..	..	..	..	..	..	..
Badami . . . . .	..	..	..	..	..	..	2	225	23	226	2	226
<i>Paper supplied to the M. and S. M. Railway.</i>												
Cream Laid . . . . .	..	..	..	..	..	..	9½	415	..	..	..	..
White Printing . . . . .	..	..	..	..	..	..	..	..	62	391	..	..

## ANNEXURE D—(Qn. 43.)

Year.	(1) THE AMOUNT OF DEPRECIATION WRITTEN OFF EACH YEAR.			(2) THE AMOUNT OF RESERVE FUND CREATED EACH YEAR.	
	Plant and Machinery.	Building.	Office and Mill furniture.	Out of profits.	Out of un-claimed dividends.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1931-32 . . .	8,021 15 0	3,378 0 1	224 12 6	5,000 0 0	..
1932-33 . . .	8,157 13 7	3,381 10 6	240 11 0	10,000 0 0	..
1933-34 . . .	8 246 10 10	3,401 5 5	274 10 6	10,000 0 0	..
1934-35 . . .	8,320 15 0	3,570 11 0	288 15 0	10,000 0 0	6,700 0 0
1935-36 . . .	9,797 3 0	3,672 15 6	281 9 0	10,000 0 0	..
1936-37 . . .	9,868 3 9	3,600 2 0	282 12 0	10,000 0 0	..

## ANNEXURE E.

(Reference Question No. 46.)

Year.	LOANS ON PROPERTY.		LOANS ON STOCK.		DEPOSITS.		Debentures.
	Raised during the year.	Out-standing.	Taken during the year.	Out-standing.	Taken during the year.	Out-standing.	
	Rs.	At 8 per cent. Rs.	Rs.	At 7 per cent. Rs.	Rs.	About 7½ per cent. (average). Rs.	
1931-32 . . .	Nil.	60,000	47,524	1,25,787	11,158	1,56,154	Nil.
1932-33 . . .	..	60,000	..	88,323	44,177	2,00,331	..
1933-34 . . .	..	60,000	90,403	1,78,726	34,481	2,88,812	..
1934-35 . . .	..	60,000	..	1,56,709	1,26,103	3,64,915	..
1935-36 . . .	40,000	1,00,000	915	1,57,623	94,369	4,59,284	..
1936-37 . . .	Nil.	1,00,000	..	1,44,248	8,000	5,39,413	..

## FORM V.

## Total Expenditure incurred on the Production of Paper.

	1931-32.			1932-33.			1933-34..		
	Tons.	Rs.	Per cent.	Tons.	Rs.	Per cent.	Tons.	Rs.	Per cent.
<i>Manufacturing expenses—</i>									
1. Primary materials—									
Rags, Hemp, Jute, etc. . . . .	180.6	10,059	1.03	127.25	6,592	0.60	192.0	9,754	0.64
Waste Paper and Paper Cuttings . . .	1,513.45	94,418	9.62	1,663.0	1,07,596	9.78	1,763	94,144	9.11
2. Imported Pulp . . . . .	1,467	3,05,141	31.17	1,865	4,06,435	36.94	1,705	3,74,185	36.22
3. Auxiliary Materials—									
Sulphate of Alumina . . . . .	175.90	28,420	2.69	102	14,984	1.36	127	15,304	1.43
Resin and Bewoid Size . . . . .	94.7	33,211	3.38	113.9	37,633	3.42	113.45	34,319	3.32
Clays . . . . .	63.50	4,495	0.46	100.0	6,036	0.56	119.10	6,508	0.63
Caustic Soda . . . . .	17.40	6,177	0.63	13.40	4,891	0.44	18.60	6,789	0.66
Soda Ash . . . . .	5.00	825	0.08	0.75	124	0.01	2.16	335	0.03
Bleaching Powder . . . . .	10.40	1,612	0.16	7.20	1,080	0.10	9.80	1,323	0.13
Starch . . . . .	..	..	..	1.25	213	0.02	1.30	221	0.02
Silicate of Soda . . . . .	5.40	1,296	0.13	0.35	82	0.01	0.75	176	0.02
Others . . . . .	18.05	1,323	0.13	21.20	1,272	0.12	21.80	1,199	0.11
Aniline Dyes . . . . .	3,223 lb.	10,907	1.11	2,714 lb.	11,445	1.04	3,003 lb.	7,455	0.72
Ultra Marine Cobalt . . . . .	360 "	225	0.02	756 "	473	0.04	672 "	420	0.04
Other chemicals . . . . .	..	2,348	0.23	..	1,663	0.15	..	878	0.09
4. Power and fuel . . . . .	..	1,09,419	11.16	..	1,23,650	11.24	..	1,03,323	9.99

5. Current repairs and maintenance . . . . .	..	58,536	5-97	..	58,783	5-34	..	46,775	4-58
6. Labour . . . . .	..	1,13,175	11-53	..	1,06,701	9-70	..	1,16,108	11-25
7. Supervision and establishment—									
(a) Salaries of technical staff . . . . .	..	23,700	2-42	..	22,945	2-09	..	24,914	2-41
(b) Salaries of non-technical staff . . . . .	..	11,700	1-19	..	11,955	0-09	..	12,795	1-24
8. Packing . . . . .	..	18,512	1-89	..	19,737	1-79	..	23,656	2-29
9. Other items in cost of manufacture . . . . .	..	..	..	..	..	..	..	..	..
Total . . . . .	..	8,33,502	84-95	..	9,44,319	85-83	..	8,80,609	85-23
<i>Overhead charges—</i>									
10. Selling expenses . . . . .	..	26,458	2-69	..	28,783	2-62	..	20,209	1-95
11. Insurance . . . . .	..	7,694	0-78	..	8,009	0-73	..	6,923	0-67
12. Rents, rates and taxes (excluding income-tax).	..	24,569	2-50	..	24,553	2-23	..	21,336	2-06
13. Depreciation at 1 per cent. . . . .	..	11,625	1-18	..	11,780	1-07	..	12,013	1-16
14. Interest on working capital . . . . .	..	28,189	2-87	..	32,811	2-98	..	39,308	3-80
15. Head office expenses and managing agents' commission.	..	35,203	3-59	..	36,755	3-25	..	37,061	3-59
16. Miscellaneous . . . . .	..	14,067	1-43	..	14,210	1-29	..	15,923	1-54
Total . . . . .	..	1,47,805	15-05	..	1,55,901	14-17	..	1,52,773	14-77
Grand Total . . . . .	..	9,81,307	..	..	11,00,220	..	..	10,33,382	..
Total output of paper for the year in tons . . . . .	2,658	..	..	3,035	..	..	3,119	..	..

## FORM V—contd.

## Total Expenditure incurred on the Production of Paper—contd.

	1934-35.			1935-36.			1936-37.		
	Tons.	Rs.	Per cent.	Tons.	Rs.	Per cent.	Tons.	Rs.	Per cent.
<i>Manufacturing expenses—</i>									
1. Primary materials—									
Rags, Hemp, Jute, etc.	243.0	10,873	1.09	306.0	17,042	1.58	402.4	25,567	2.41
Waste Paper and Paper Cuttings	1,743	61,135	6.16	2,122.75	89,551	8.30	2,711	1,77,244	16.71
2. Imported Pulp	1,595	8,44,555	84.69	1,582	8,37,913	31.33	997.43	2,40,357	22.71
3. Auxiliary Materials—									
Sulphate of Alumina	99	9,920	1.00	124.8	14,786	1.37	152.65	17,242	1.63
Resin and Bowditch Size	122.9	33,220	3.34	117.60	30,861	2.86	111.79	30,195	2.85
Clays	118.5	6,186	0.62	142.25	10,200	0.95	105.23	7,565	0.71
Caustic Soda	21.10	6,963	0.71	19.70	6,304	0.58	28.9	7,948	0.75
Soda Ash	3.55	490	0.05	1.34	168	0.02	6.5	767	0.07
Bleaching Powder	13.60	1,736	0.17	17.80	2,076	0.19	24.3	2,795	0.26
Starch	..	..	..	9.00	1,710	0.16	1.30	306	0.03
Silicate of Soda	7.70	1,232	0.12	9.20	1,610	0.15	1.75	271	0.03
Ochres	18.70	935	0.10	8.55	470	0.04	19.80	1,188	0.12
Aniline Dyes	2,460 lb.	5,673	0.57	3,623 lb.	8,769	0.81	4,323 lb.	9,044	0.85
Ultra Marine Colour	112 "	70	0.01	..	..	..	672 "	420	0.04
Other chemicals	..	638	0.06	..	974	0.09	..	1,052	0.10
4. Power and fuel	..	1,18,505	11.98	..	1,42,125	13.18	..	1,22,540	11.55

5. Current repairs and maintenance . . . . .	..	55,903	5-63	..	60,742	5-63	..	42,955	3-99
6. Labour . . . . .	..	1,05,187	10-60	..	1,07,578	9-98	..	1,29,370	12-20
7. Supervision and establishment—									
(a) Salaries of technical staff . . . . .	..	25,354	2-55	..	25,351	2-35	..	27,555	2-90
(b) Salaries of non-technical staff . . . . .	..	13,040	1-31	..	12,451	1-17	..	13,298	1-25
8. Packing . . . . .	..	20,932	2-11	..	23,231	2-15	..	19,400	1-83
9. Other items in cost of manufacture . . . . .	..	..	..	..	..	..	..	..	..
<b>Total</b> . . . . .	..	8,22,607	82-82	..	8,93,942	82-89	..	8,76,978	82-69
<b>Overhead charges—</b>									
10. Selling expenses . . . . .	..	27,012	2-72	..	32,428	3-00	..	26,746	2-52
11. Insurance . . . . .	..	9,283	0-93	..	8,125	0-75	..	9,331	0-88
12. Rents, rates and taxes (excluding income-tax).	..	22,045	2-22	..	23,781	2-20	..	23,212	2-19
13. Depreciation at 1 per cent. . . . .	..	12,131	1-23	..	13,752	1-27	..	13,841	1-30
14. Interest on working capital . . . . .	..	42,000	4-23	..	52,859	4-90	..	60,156	5-07
15. Head office expenses and managing agents' commission. . . . .	..	36,761	3-70	..	34,710	3-22	..	35,956	3-39
16. Miscellaneous . . . . .	..	21,378	2-15	..	19,065	1-77	..	14,434	1-36
<b>Total</b> . . . . .	..	1,70,660	17-18	..	1,84,720	17-11	..	1,83,666	17-31
<b>Grand Total</b> . . . . .	..	9,93,267	..	..	10,78,662	..	..	10,60,644	..
<b>Total output of paper for the year in tons</b> . . . . .	3,007	..	..	3,342	..	..	3,336	..	..

## FORM VI.

Works cost per ton of finished paper.

	1931-32.			1932-33.			1933-34.		
	Tons.	Rs.	Per cent.	Tons.	Rs.	Per cent.	Tons.	Rs.	Per cent.
<b>Manufacturing Expenses—</b>									
1. Primary materials—									
Rags, Hemp, Jute, etc. . . . .	0.06	3.73	1.03	0.04	2.17	0.60	0.06	3.13	0.94
Waste paper and Paper Cuttings . . . . .	0.56	35.00	9.62	0.54	35.45	9.78	0.58	30.18	9.11
2. Imported Pulp . . . . .	0.54	113.10	31.11	0.61	133.92	38.94	0.54	119.97	36.22
3. Auxiliary materials—									
Sulphate of Alumina . . . . .	0.07	9.79	2.69	0.034	4.94	1.36	0.041	4.91	1.48
Rosin and Bewoid Size . . . . .	0.04	12.31	3.38	0.037	12.40	3.42	0.036	11.00	3.32
Clays . . . . .	0.002	1.67	0.46	0.033	2.00	0.55	0.035	2.09	0.63
Caustic Soda . . . . .	0.006	2.29	0.63	0.004	1.61	0.44	0.005	2.18	0.66
Soda Ash . . . . .	0.002	0.31	0.08	..	0.04	0.01	..	0.11	0.03
Bleaching Powder . . . . .	0.003	0.59	0.16	0.002	0.36	0.10	0.003	0.42	0.13
Starch . . . . .	..	..	..	..	0.07	0.02	..	0.06	0.02
Silicate of Soda . . . . .	0.002	0.48	0.13	..	0.03	0.01	..	0.05	0.02
Ochres . . . . .	0.007	0.49	0.13	0.007	0.42	0.12	0.007	0.38	0.11
Aniline Dyes . . . . .	..	4.08	1.11	..	3.77	1.04	..	2.40	0.72
Ultramarine Colours . . . . .	..	0.08	0.02	..	0.16	0.04	..	0.18	0.04
Other chemicals . . . . .	..	0.87	0.23	..	0.56	0.15	..	0.28	0.09
4. Power and fuel . . . . .	..	40.55	11.16	..	40.74	11.24	..	33.13	9.99



5. Current repairs and maintenance . . . . .	..	21.70	6.97	..	19.36	5.34	..	15.00	4.53
6. Labour . . . . .	..	41.04	11.53	..	25.16	9.70	..	27.22	11.25
7. Supervision and establishment—									
(a) Salaries of technical staff . . . . .	..	8.78	2.42	..	7.36	2.09	..	7.98	2.41
(b) Salaries of non-technical staff . . . . .	..	4.33	1.19	..	3.94	1.09	..	4.10	1.24
8. Packing . . . . .	..	9.86	1.89	..	6.50	1.79	..	7.57	2.29
9. Any other items in cost of manufacture . . . . .	..	..	..	..	..	..	..	..	..
Total—Works Cost . . . . .	..	308.93	84.95	..	311.14	85.83	..	282.34	85.23
<b>Overhead Charges—</b>									
10. Selling expenses . . . . .	..	9.80	2.69	..	9.48	2.62	..	6.48	1.95
11. Insurance . . . . .	..	2.85	0.78	..	2.64	0.73	..	2.22	0.67
12. Rent, rates and taxes (excluding income-tax) . . . . .	..	9.11	2.50	..	8.09	2.23	..	6.84	2.06
13. Depreciation at 1 per cent. . . . .	..	4.31	1.18	..	3.88	1.07	..	3.86	1.16
14. Interest on working capital . . . . .	..	10.45	2.87	..	10.82	2.98	..	12.40	3.80
15. Head office expenses and managing agents' commission . . . . .	..	13.05	3.59	..	11.78	3.25	..	11.88	3.59
16. Miscellaneous . . . . .	..	5.21	1.43	..	4.68	1.29	..	5.11	1.54
Total . . . . .	..	54.78	15.05	..	51.37	14.17	..	48.98	14.77
Grand Total . . . . .	..	363.71	..	..	362.51	..	..	331.32	..
Total output of paper for the year in tons . . . . .	2,698	..	..	3,035	..	..	3,119	..	..

## FORM VI—contd.

Works cost per ton of finished paper—contd.

	1934-35.			1935-36.			1936-37.		
	Tons.	Rs.	Per cent.	Tons.	Rs.	Per cent.	Tons.	Rs.	Per cent.
<b>Manufacturing Expenses—</b>									
1. Primary materials—									
Rags, Hemp, Jute, etc. . . . .	0.06	3.62	1.09	0.09	5.13	1.53	0.12	7.56	2.41
Waste paper and Paper Cullings . . . . .	0.57	20.34	6.16	0.63	20.79	8.30	0.81	58.14	16.71
2. Imported Pulp . . . . .	0.53	114.58	34.69	0.47	101.11	31.33	0.29	72.20	22.71
3. Auxiliary materials—									
Sulphate of Alumina . . . . .	0.03	3.80	1.00	0.033	4.42	1.37	0.046	5.17	1.63
Resin and Beweld Size . . . . .	0.048	11.05	3.34	0.035	9.23	2.86	0.034	9.05	2.85
Clays . . . . .	0.039	2.06	0.62	0.043	8.05	0.95	0.032	2.27	0.71
Caustic Soda . . . . .	0.007	2.32	0.71	0.006	1.88	0.58	0.009	2.38	0.75
Soda Ash . . . . .	0.002	0.16	0.05	..	0.05	0.02	0.002	0.23	0.07
Bleaching Powder . . . . .	0.005	0.58	0.17	0.005	0.61	0.19	0.007	0.83	0.26
Starch . . . . .	..	..	..	0.003	0.51	0.16	..	0.09	0.03
Silicate of Soda . . . . .	0.003	0.41	0.12	0.003	0.48	0.15	0.	0.08	0.03
Ochres . . . . .	0.006	0.32	0.10	0.003	0.14	0.04	0.006	0.36	0.12
Aniline Dyes . . . . .	..	1.39	0.57	..	2.62	0.81	..	2.71	0.85
Ultramarine Colours . . . . .	..	0.08	0.01	..	..	..	..	0.13	0.04
Other chemicals . . . . .	..	0.21	0.06	..	0.29	0.09	..	0.32	0.10
4. Power and fuel . . . . .	..	39.41	11.93	..	42.53	13.18	..	36.73	11.45

6. Current repairs and maintenance . . . . .	18-59	5-63	15-18	5-63	12-70	3-99
6. Labour . . . . .	34-95	10-00	32-19	9-08	38-78	12-20
7. Supervision and establishment—						
(a) Salaries of technical staff . . . . .	8-44	2-55	7-59	2-35	8-26	2-60
(b) Salaries of non-technical staff . . . . .	4-84	1-31	3-73	1-17	3-90	1-25
8. Packing . . . . .	6-96	2-11	6-95	2-15	5-82	1-83
9. Any other items in cost of manufacture . . . . .	..	..	..	..	..	..
Total—Works Cost	273-56	82-82	267-48	82-80	262-90	82-69
<b>Overhead Charges—</b>						
10. Selling expenses . . . . .	8-98	2-72	9-70	3-00	8-02	2-52
11. Insurance . . . . .	3-08	0-08	2-43	0-75	2-80	0-88
12. Rents, rates and taxes (excluding income-tax).	7-33	2-22	7-12	2-20	6-96	2-19
13. Depreciation at 1 per cent. . . . .	4-05	1-23	4-11	1-27	4-15	1-30
14. Interest on working capital . . . . .	13-87	4-23	15-82	4-90	18-03	5-47
15. Head office expenses and managing agents' commission.	12-23	3-70	10-39	3-22	10-78	3-39
16. Miscellaneous . . . . .	7-11	2-15	5-70	1-77	4-32	1-36
Total	56-75	17-18	55-27	17-11	65-08	77-31
Grand Total	330-31	..	332-75	..	317-96	..
Total output of paper for the year in tons . . . . .	3,007	..	..	..	..	..

(3) *Supplementary replies to Questions Nos. 55(a) and 55(b) handed in on the 19th March, 1938.*

55. (a) The following statement shows the effect of replacing protective duties by revenue duties on the finances of our Company:—

	Rs.
Average price realised 1936-37 (2 as. 3½ p. per lb.)	318
Less duty and surcharge (Rs. 140 and Rs. 35) .	175
	<hr/>
	143
Add duty at 20 per cent. . . . .	28
	<hr/>
Price realised at Revenue Duty . . . . .	171
	<hr/>
Total receipt at Rs. 171 a ton (Total output 1936-37—3,336 tons) . . . . .	5,70,456
Deduct works expenses 1936-37 . . . . .	9,23,945
	<hr/>
Deficit . . . . .	3,53,489

11·6 per cent., however, of our output consisted of wrappings which are not protected by the higher duty. If we allow the full average realised price on this proportion of our output—387 tons our total receipts would be increased by Rs. 53,889; but would still be short of the amount of works expenditure by Rs. 2,96,600. In addition we need for depreciation at 6½ per cent. on the block value of our property Rs. 63,950, and for interest on loans Rs. 60,156.

55. (b) Had the surcharge of Rs. 35 per ton only been removed, the effect on our finances would have been as shown in the following statement prepared on similar lines to the above:—

	Rs.
Average price realised as shown in (a) . . . . .	318
Less surcharge . . . . .	35
	<hr/>
Price realisable under Protective Duty without surcharge . . . . .	283
	<hr/>
Total Receipts at Rs. 283 a ton (Total output—3,336 tons) . . . . .	9,44,088
Deduct works expenses 1936-37 . . . . .	9,23,945
	<hr/>
	20,143
	<hr/>
	Rs.
Depreciation at 6½ per cent. . . . .	63,950
Interest on Loans . . . . .	60,156
Head Office expenses . . . . .	35,956
	<hr/>
Deficit . . . . .	1,39,919
	<hr/>
387 tons of wrappings not affected by the surcharge of Rs. 35 . . . . .	13,545
	<hr/>
Actual deficit . . . . .	1,26,374

(4) Prices of Pulp during January, 1936, to February, 1938, handed in on the 19th March, 1938.

Date.	Bleached.	Sulphite Pulp.	Easy Bleaching.	Sulphite Pulp.
	£ s.	£ s.	£ s. d.	£ s. d.
1936—				
3rd January .	10 0	to 10 5	7 15 0	to 8 0 0
21st February .	10 11	„ 11 0	8 0 0	„ 8 10 0
24th April .	11 10	„ 12 0	8 10 0	„ 8 12 0
5th June .	11 10	„ 12 0	8 15 0	„ 9 0 0
4th September .	12 0	„ 12 10	8 15 0	„ 9 0 0
9th October .	12 10	„ 12 15	9 5 0	„ 9 7 6
20th November .	13 10	„ 13 10	10 0 0	„ 10 10 0
25th December .	13 10	„ 14 0	11 0 0	„ 11 10 0
1937—				
8th January .	14 10	„ 15 0	11 10 0	„ 12 0 0
29th January .	15 0	„ 15 10	12 5 0	„ 12 10 0
12th February .	15 0	„ 15 10	12 10 0	„ 13 0 0
19th February .	16 0	„ 16 10	13 17 6	„ 14 2 6
12th March .	17 0	„ 18 0	15 0 0	„ ...
2nd April .	17 10	„ 18 10	15 10 0	„ 16 0 0
7th May .	17 10	„ 18 10	16 10 0	„ 17 10 0
21st May .	19 10	„ 20 10	17 0 0	„ 18 0 0
9th July .	19 10	„ 20 10	17 10 0	„ 18 10 0
3rd September .	19 10	„ 20 10	17 10 0	„ 18 10 0
17th September .	19 10	„ 20 10	18 10 0	„ 18 15 0
24th September .	19 10	„ 20 10	17 10 0	„ 18 0 0
22nd October .	19 10	„ 20 10	17 10 0	„ 18 0 0
26th November .	19 10	„ 20 10	17 10 0	„ 18 0 0
17th December .	18 0	„ 19 0	16 10 0	„ 17 10 0
1938—				
21st January .	18 0	„ 19 0	16 0 0	„ 17 0 0
28th January .	...	„ 16 0	...	„ 15 0 0
4th February .	15 10	„ 16 10	14 0 0	„ 14 10 0
11th February .	15 0	„ 16 0	13 0 0	„ 14 0 0
18th February .	15 0	„ 16 0	12 0 0	„ 13 0 0

(5) Letter No. 297, dated the 22nd March, 1938, from the Tariff Board to the Deccan Paper Mills Co., Ltd., Poona.

I am directed to say that the Tariff Board realises that it may be impossible for you to supply exact information about the cost of manufacture of paper in your Mill and its realised prices for 1937-38 but will be glad to have as early in April next as possible such information on the points as may be available, as compared with 1936-37.

2. The Board will also like to have any later information available as to

(1) the price at which imported paper has been landed in India,

(2) the price at which imported pulp, bleached and unbleached, has been landed in India;

(3) the quantities of imported pulp used by your Mill in 1937-38,

- (6) *D. O. letter No. 326, dated the 27th March, 1938, from Mr. F. I. Rahimtoola, Member, Tariff Board, to Mr. F. D. Pudumjee, The Deccan Paper Mills Co., Ltd., Poona.*

May I trouble you about some information I require with regard to the use of imported pulp by your mill? In reply to Question No. 5, in Form No. 1, dealing with primary materials you state that the percentage of wood pulp on the total quantity of paper manufactured in 1936-37 is 25.41 whereas if I take the total tonnage manufactured by you in that year namely 3,336 and divide it by the total tonnage of imported pulp used in that year namely 997 tons the percentage comes to over 29. I cannot reconcile these two figures unless it is shown that some quantity of paper manufactured by your mill is without the admixture of imported pulp. I will feel grateful if you could telephone to me tomorrow between 12 and 5. My telephone No. is 19. If, however, you think that an explanation cannot adequately be given on the telephone then please post a letter so as to reach us by Tuesday afternoon.

- (7) *Letter No. 328, dated the 28th March, 1938, from the Tariff Board to the Deccan Paper Mills Co., Ltd., Poona.*

With reference to your reply to Question No. 21 of the Questionnaire, I am directed to request you to furnish the Board with informations as to the wages paid by you for different classes of labour—superior, skilled and unskilled—for the last 3 years.

- (8) *Letter No. P. 114/139 of 1938, dated the 28th March, 1938, from Mr. F. D. Pudumjee, The Deccan Paper Mills Co., Ltd., to Mr. F. I. Rahimtoola, Member, Tariff Board.*

I thank you for your letter No. 326 of the 27th inst. enquiring about the quantity of Pulp used by us during the year 1936-37, and would state in reply thereto that the total quantity of Pulp used during the year referred to is tons 997.43, and the total output of paper for the same year is tons 3,336. Therefore, the actual consumption of Pulp works out to 29.89 per cent. of the total quantity of paper made, as has been shown by us in Form VI.

The figure shown in Form I, viz.: 25.41, represents the percentage of the quantity of the finished paper which the Pulp represents on the total quantity of paper manufactured. It will be seen that this figure when divided by .85 gives the percentage of the actual quantity of Pulp used on the total outturn, viz.: 29.89 per cent.

I hope the above information will be found satisfactory.

- (9) *Letter No. 353, dated the 4th April, 1938, from the Tariff Board to the Deccan Paper Mills Co., Ltd., Poona.*

With reference to your reply to Question No. 14, the Board will feel grateful if you could let us have the following information at an early date:—

- No. 1.—The quantity and quality of protected classes of paper actually manufactured entirely from indigenous pulps, i.e., grass and bamboo, without the admixture of imported pulp, during the last five years.
- No. 2.—The ex-mill realised price of these classes as compared to similar qualities of imported and Indian paper (with admixture of imported pulp).

(10) *Letter No. 418, dated the 13th April, 1938, from the Tariff Board to the Deccan Paper Mills Co., Ltd., Poona.*

I am directed to say that the Board would be glad to know the reason of your using bleached pulp in preference to unbleached pulp when the difference in price between the two qualities is from £2 to £3.

(11) *Letter No. 420, dated the 13th April, 1938, from the Tariff Board to the Deccan Paper Mills, Co., Ltd., Poona.*

Will you please refer to your replies to Question No. 30 of the questionnaire and furnish the Board with your total average net realised prices ex-mill of all classes of paper from 1931-32 to 1937-38.

(12) *Letter No. P. 153/140 of 1938, dated the 18th April, 1938.*

We have the honour to acknowledge receipt of your letter No. 418, dated the 13th inst., stating that the Board would be glad to know the reason of our using bleached pulp in preference to unbleached pulp when the difference in price between the two qualities is from £2 to £3.

In reply we beg to state that the chief reasons for using bleached pulp in preference to unbleached pulp are the high cost of bleaching powder, losses in bleaching, the cost of labour and power required in the process of bleaching, loss of time, and the difficulty in bleaching the dried pulp to the standard shade of whiteness obtained by the makers who bleach it in the state before it is dried.

We would state that the cost of bleach, and the value of the pulp lost in bleaching, taking Easy Bleaching Pulp even at £12 per ton c.i.f., or Rs. 232 at Mills, would alone amount to more than Rs. 25 per ton, as shown below:—

	Rs.
Bleach, about 8 per cent., at Rs. 120 per ton . . .	9.6
Losses: 2 per cent. chemical losses in bleaching, and 4 to 6 per cent. fibre losses in washing, say total 7 per cent., at Rs. 232, roughly . . .	16.2
<b>Total . . .</b>	<b>25.8</b>

We would mention that a prime quality easy bleaching sulphite with a "Bleachability" number of 7 per cent. to 9 per cent. is not possible at a price which is more than £.2 below the price of the corresponding bleached variety. Those available at a price below this are difficult to bleach, and cannot be brought up to the standard shade, economically under Indian conditions.

We do not think that the foreign mills offer bleached pulp so much for financial reasons as for finding a bigger market for their product, particularly those pulp mills which also make bleached papers; and it is not expected that the Indian Mills can bleach more economically than these Mills, equipped as they are with enormous plants for Multistage bleaching, working under most favourable conditions, and with expert labour.

(13) *Letter No. P. 157/140, dated the 18th April, 1938.*

With reference to your letters No. 297, dated the 22nd March, 1938, No. 328, dated the 28th March, 1938, No. 353, dated the 4th April, 1938, and No. 420, dated the 13th April, 1938, we have the honour to give below the information required therein.

*Reference, your letter No. 297 of 22nd March, 1938.*—The cost of manufacture of paper in our Mills, and its realised price, for 11 months from April, 1937, to February, 1938, are given in Statements A and B herewith enclosed. The figures given are approximate.

*Reference, above letter, para. 2 (1).*—The prices at which imported paper has been lately landed in Bombay are, to our knowledge, as follows:—

	£
	c.i.f., Bombay.
<b>Cream Laid—</b>	
Borregard . . . . .	28
Austrian . . . . .	24
Holland . . . . .	23/5
<b>White Printing—</b>	
Borregard . . . . .	28
Austrian . . . . .	24
<b>Coloured Banks—</b>	
Austrian . . . . .	28
Norwegian . . . . .	29

*Reference, above letter, para. 2 (2).*—The quality and quantity of pulp imported by us since April, 1937, and their prices are as follows:—

Date of Arrival.	Quality.	Tons.	Prices c.i.f. Bombay.
			£ s. d.
6th January, 1937 . .	Bleached Sulphite Pulp	50	19 7 6
28th January, 1937 . .	Do.	51.67	20 17 6
4th July, 1937 . .	Do.	31.8	20 17 6
14th July, 1937 . .	Do.	50.6	19 7 6
14th July, 1937 . .	Do.	50	21 0 0
30th July, 1937 . .	Do.	46	22 15 0
20th August, 1937 . .	Do.	10	20 17 6

A further consignment of 75 tons of Bleached Sulphite Pulp is arriving on the 20th inst. at £18 15s., and at the same time, 50 tons of a slightly cheaper quality at £14 10s. c.i.f., Bombay.

No unbleached or easy bleaching sulphite has been imported by us during the period mentioned.

*Reference, above letter, para. 2 (3).*—The quantities of imported pulp used by our Mills during the 11 months, April, 1937, to February, 1938, are as follows:—

	Tons.
Bleached Sulphite Pulp . . . . .	305.74
Unbleached Sulphite Pulp . . . . .	49.63



*Reference, your letter No. 328 of 28th March, 1938.*—With reference to our reply to Question No. 21 of the Questionnaire, we give below the required information as to the wages paid by us for different classes of labour—superior, skilled and unskilled—for the last three years:—

Year.	Superior Staff. Skilled Labour. Unskilled Labour.		
	Rs.	Rs.	Rs.
1934-35 . . .	10,081	37,273	67,924
1935-36 . . .	12,260	37,708	69,870
1936-37 . . .	12,777	38,663	90,707
11 months from April, 1937, to Feb., 1938 .	10,419	36,340	84,812

In the Superior Staff we have included Paper-Machine foremen, Beater foremen, Shift engineers, and a workshop foreman.

*Reference, your letter No. 353 of 4th April, 1938.*—The only quality of protected paper actually manufactured by us entirely from indigenous materials, without the admixture of imported pulp, is the market quality of Badami Paper. The quantity of this class of paper manufactured during the last five years, and its ex-mill realised price, are as follows:—

Year.	Quantity. Price realised.	
	Tons.	Rs. Per ton.
1933-34 . . . . .	807	252
1934-35 . . . . .	764.4	208
1935-36 . . . . .	957	210
1936-37 . . . . .	1,066	221
11 months from April, 1937, to Feb., 1938	1,082.5	253.8

It is not possible for us to compare the above realised prices with those of similar quality of imported and Indian paper (with admixture of imported pulp), as we are not aware of such qualities being sold in the market, excepting those containing more than 75 per cent. mechanical pulp.

*Reference, letter No. 420 of 13th April, 1938.*—The total average net realised prices ex-mill of all classes of paper for 1931-32 to 1937-38 are as follows:—

	Rs. Per ton.
1931-32 . . . . .	373.8
1932-33 . . . . .	372.3
1933-34 . . . . .	333.3
1934-35 . . . . .	329.7
1935-36 . . . . .	321.2
1936-37 . . . . .	317.9
11 months from April, 1937, to February, 1938 .	332.3

2. In continuation of our oral evidence on March 19th, we have the honour to give below the supplementary information asked for by the Board.

*Reference, p. 4 of our oral evidence.*—A list of rags used in our Mills is herewith enclosed, and also a list of waste paper, with prices.

*Reference, p. 17 of our oral evidence.*—We give in Statement C herewith enclosed, figures showing the different cost of raw materials in this year as compared with the last.

*Reference, p. 32 of our oral evidence.*—In our reply to Question 48 of Questionnaire, we have estimated our total future works cost at Rs. 11,57,845. In calculating this cost we have taken the price of imported bleached pulp same as for 1936-37, viz.: £11 10s. c.i.f. The total works cost would therefore be increased by Rs. 85,440 if the price of pulp were taken at £14 10s., which is the price at present obtained, though for a slightly inferior quality of Bleached Pulp. The total works cost therefore would work out to Rs. 274.9 per ton of paper, instead of 255.9 as originally shown in our reply referred to.

*Reference, p. 33 of our oral evidence.*—As desired, we give below later figures of bleached and unbleached imported pulp, taken from Paper Trade Journals. The prices are, as in the previous list handed over during our evidence, f.o.b. foreign ports:—

Date.	Bleached.	Sulphite Pulp.	Easy Bleaching.	Sulphite Pulp.
	£ s.	£ s.	£ s.	£
25th February, 1938 . .	15 0	to 16 0	12 0	to 13
4th March, 1938 . .	15 0	„ 16 0	12 0	„ 13
11th March, 1938 . .	13 10	„ 14 10	11 10	„ 12
18th March, 1938 . .	13 0	„ 13 10	11 10	„ 12
25th March, 1938 . .	13 10	„ 16 10	11 10	„ 12

*Reference, p. 36 of our oral evidence.*—We give below, as desired, details of the miscellaneous expenses incurred during\* the year 1936-37:—

	Rs.	A.	P.
Printing, Advertising and Stationery . . .	5,090	14	4
Law and Registration charges . . .	1,079	8	6
Telegrams and Telephone, Postage . . .	3,272	9	1
Sundries, including travelling expenses, workman's welfare work and social func- tions, electric light, taxi and carriage hire, etc. . . . .	4,981	9	10
<b>Total . . . . .</b>	<b>14,424</b>	<b>9</b>	<b>9</b>

3. As promised at our oral evidence we have pleasure in sending by separate post a few samples of M.G. papers made by us a few years ago.

## STATEMENT A.

(As per Form V of the Questionnaire.)

*Total expenditure incurred on the production of paper during 11 months from April, 1937, to February, 1938.*

	Tons.	Rs.	Per cent.
<i>Manufacturing Expenses.</i>			
(1) Primary materials—			
Rags, Hemp, Jute, etc. . . . .	867.05	58,092	5.98
Waste Paper and Paper Cuttings . . . . .	2,722.46	2,29,900	23.26
(2) Imported Pulp . . . . .	355.37	1,06,697	10.79
(3) Auxiliary Materials—			
Sulphate of Alumina . . . . .	129.80	15,684	1.58
Rosin and Bewoid size . . . . .	110.93	31,018	3.14
Clays . . . . .	72.66	4,570	0.46
Caustic Soda . . . . .	56.65	15,208	1.54
Soda Ash . . . . .	11.30	1,240	0.12
Bleaching Powder . . . . .	62.95	7,560	0.76
Starch . . . . .	...	...	...
Silicate of Soda . . . . .	...	...	...
Ochres . . . . .	20.00	1,445	0.14
Aniline Dyes . . . . .	...	13,710	1.38
Ultramarine Colours . . . . .	...	136	0.01
Other chemicals . . . . .	...	1,520	0.15
(4) Power and fuel . . . . .	...	1,03,413	10.46
(5) Current repairs and maintenance . . . . .	...	54,778	5.54
(6) Labour . . . . .	...	1,21,152	12.26
(7) Supervision and Establishment—			
(a) Salaries of Technical Staff . . . . .	...	25,890	2.62
(b) Salaries of non-technical Staff . . . . .	...	12,108	1.22
(8) Packing . . . . .	...	12,630	1.27
(9) Other items in cost of manufacture . . . . .	...	...	...
<b>Total Works cost</b> . . . . .	...	<b>8,16,751</b>	<b>82.68</b>
<i>Overhead Charges.</i>			
(10) Selling expenses . . . . .	...	24,146	2.44
(11) Insurance . . . . .	...	8,086	0.81
(12) Rents, rates, taxes . . . . .	...	21,535	2.18
(13) Depreciation at 1 per cent. . . . .	...	12,560	1.27
(14) Interest on working capital . . . . .	...	58,460	5.92
(15) Head Office expenses and Managing Agents' commission . . . . .	...	32,871	3.28
(16) Miscellaneous . . . . .	...	14,070	1.42
<b>Total</b> . . . . .	...	<b>1,71,228</b>	<b>17.32</b>
<b>Grand Total</b> . . . . .	...	<b>9,87,979</b>	<b>100</b>

Total output of Paper during 11 months in tons . . . . . 2,981

## STATEMENT B.

(As per Form VI of the Questionnaire.)

*Works cost per ton of finished Paper for 11 months from April, 1937, to February, 1938.*

	Tons.	Rs.	Per cent.
<i>Manufacturing Expenses.</i>			
(1) Primary Materials:—			
Rags, Hemp, Jute, etc. . . . .	0.290	19.50	5.98
Waste Paper and Paper Cuttings . . . . .	0.913	77.11	23.26
(2) Imported Pulp . . . . .	0.119	35.79	10.79
(3) Auxiliary Materials:—			
Sulphate of Alumina . . . . .	0.043	5.26	1.58
Rosin and Bewoid size . . . . .	0.037	10.41	3.14
Clays . . . . .	0.024	1.51	0.46
Caustic Soda . . . . .	0.019	5.13	1.54
Soda Ash . . . . .	0.004	0.42	0.12
Bleaching Powder . . . . .	0.024	2.53	0.76
Starch . . . . .	...	...	...
Silicate of Soda . . . . .	...	...	...
Ochres . . . . .	0.006	0.48	0.14
Aniline Dyes . . . . .	...	4.60	1.38
Ultramarine Colours . . . . .	...	0.05	0.01
Other chemicals . . . . .	...	0.51	0.15
(4) Power and Fuel . . . . .	...	34.69	10.46
(5) Current repairs and maintenance . . . . .	...	18.38	5.54
(6) Labour . . . . .	...	40.64	12.26
(7) Supervision and Establishment—			
(a) Salaries of technical staff . . . . .	...	8.69	2.62
(b) Salaries of non-technical staff . . . . .	...	4.06	1.22
(8) Packing . . . . .	...	4.24	1.27
(9) Other items in cost of manufacture . . . . .	...	...	...
Total works cost . . . . .	...	274.00	82.68
<i>Overhead Charges.</i>			
(10) Selling expenses . . . . .	...	8.10	2.44
(11) Insurance . . . . .	...	2.71	0.81
(12) Rents, rates, taxes . . . . .	...	7.22	2.18
(13) Depreciation at 1 per cent. . . . .	...	4.21	1.27
(14) Interest on working capital . . . . .	...	19.61	5.92
(15) Head Office expenses and Managing Agents' commission . . . . .	...	10.86	3.28
(16) Miscellaneous . . . . .	...	4.72	1.42
Total . . . . .	...	57.43	17.32
Grand Total . . . . .	...	331.43	100

\* Total output of Paper during the 11 months in tons . . . . . 2,931

\* Details are as follows:—

	Tons.	Per cent.
Writings . . . . .	382.6	12.84
Printings . . . . .	742.6	24.88
Badamis . . . . .	1,440.8	48.36
Wrappings . . . . .	413.1	13.86
Cartridge, Blottings, Cards, Covers, etc. . . . .	1.9	0.06
Total . . . . .	2,981	100

## STATEMENT C.

*Comparative cost of Raw Materials during 1936-37 and 1937-1938.*

	Average cost per ton.	
	1936-37.	1937-38.
	Rs.	Rs.
Rags, Hemp, Jute, etc. . . . .	63.6	67
Waste Paper and Paper Cuttings . . . . .	65.4	84.2
Sulphate of Alumina . . . . .	112.7	120.8
Rosin Indian and Bewoid . . . . .	269.67	279.6
Clays . . . . .	72.0	62.8
Caustic Soda . . . . .	274	268.5
Soda Ash . . . . .	118	109.7
Bleaching Powder . . . . .	115	120
Ochres . . . . .	60	72

*List of rags used in our Mills during 1937-38 and prices.*

	Prices f.o.r. Hadapsar.			
	Form Bombay. Price per ton.		From Upcountry. Price Per ton.	
	Rs.	Rs.	Rs.	Rs.
New Tailors Cuttings Bleached White . . . . .	120	to 160		
New Tailors Cuttings Grey . . . . .	100	„ 120		
New Tailors Cuttings Mixed . . . . .	25	„ 40		
New Hosiery Cuttings Bleached White . . . . .	140	„ 160	180	to 200
New Hosiery Cuttings Cream . . . . .	120	„ 140		
Old Rags White . . . . .	55	„ 60	80	to 85
Old Rags Coloured . . . . .	30		50	
Nawar (white cotton) . . . . .	110			
Canvas White . . . . .	100			
Old tent rags white . . . . .	80			
Tent rags coloured . . . . .	35			
Condemned Healds . . . . .	45	to 55	63	
Khaki Cuttings . . . . .	30	„ 40		
Carpet and paddings . . . . .	30	„ 45		
Khaki Canvas . . . . .	35	„ 45		
Old manilla ropes . . . . .	45	„ 55		
Old Hemp . . . . .	45	„ 55		
Old gunny fine quality . . . . .	28	„ 38		
Old gunny Coarse quality . . . . .	15	„ 25		
Old Cotton ropes . . . . .	100			

*List of Waste Paper used in our Mills during 1937-38 and prices.*

Prices f.o.r. Hadapsar.			
	From Bombay. Rs. per ton.	From Upcountry. Rs. per ton.	From Security Ptg. Press, Nasik. Rs. per ton.
Superfine Shaving . . . . .	105	...	218
White No. 1, Shaving . . . . .	90	128 to 180	
White No. 2, Shaving . . . . .	75	90 „ 115	
Letters Heavy . . . . .	55	...	
Letters Light . . . . .	50	75 to 78	
Blue, No. 1 . . . . .	50	85	
Kraft . . . . .	40	50 to 78	
Coloured Paper Cuttings . . . . .	40	50 „ 68	
Unprinted White Crumpled pieces	75	...	
Manillas . . . . .	70	78 to 115	
Pamphlets . . . . .	40	...	
Light Grey . . . . .	35	...	
Varnished Cuttings . . . . .	32	...	
Straw Boards . . . . .	...	...	
Railway Tickets . . . . .	...	...	
Post Cards . . . . .	...	...	101

(14) *Letter No. 429, dated the 20th April, 1938, from the Tariff Board to the Deccan Paper Mills Co., Ltd., Poona.*

With reference to your letter No. P. 157/140 of 1938, dated the 18th April, 1938, intimating that about 1,066 tons of badami papers were manufactured in 1936-37, without the admixture of imported pulp, I am directed to refer you to your reply to Question No. 13 of the Questionnaire where it is stated that 9.5 per cent. of the imported pulp was used in the manufacture of badami paper in the same year and to request you to explain the position more fully.

(15) *Letter No. P. 280/140 of 1938, dated the 23rd April, 1938.*

We have the honour to acknowledge receipt of your letter No. 429, dated the 20th inst., referring us to our letter No. P. 140/157 of 18th inst., wherein we have intimated that about 1,066 tons of Badami paper were manufactured in 1936-37, without the admixture of imported pulp, whereas in our reply to Question No. 13 of the Questionnaire we have stated that 9.5 per cent. of the imported pulp was used in the manufacture of Badami paper in the same year, and beg to explain the position more fully as follows.

The total quantity of Badami paper manufactured during 1936-37 was about 1,513 tons, out of which about 1,066 tons were Badamis for the market, and about 447 tons for the various Governments. The market quality of Badamis was manufactured without the admixture of pulp, whereas the Government qualities, viz., 447 tons, were made with the admixture of 144 tons of imported pulp. This accounts for what we have mentioned in our reply to Question No. 13 of the Questionnaire that 9.5 per cent. of imported pulp were used, taking both the market and Government Badamis together.

**Evidence of Mr. F. D. Pudumjee and Mr. B. B. Kharadkar recorded  
at Poona on Saturday, the 19th March, 1938.**

**B.—ORAL.**

*President.*—What is your position in the Company, Mr. Pudumjee?

*Mr. Pudumjee.*—I am the Managing Director of the Company and Mr. Kharadkar is the Assistant Manager.

*President.*—Have you actually used your M. G. machine?

*Mr. Pudumjee.*—We have tried making M. G. papers and have been successful, but it does not pay us to make them, being unprotected.

*President.*—You have not used it on a commercial scale?

*Mr. Pudumjee.*—No.

*President.*—Can you use it for poster paper?

*Mr. Pudumjee.*—Yes; it has been tried, and samples have been satisfactorily printed upon in several colours.

*President.*—And all sorts of coloured wrappings?

*Mr. Pudumjee.*—We have not tried, but we can make them.

*Mr. Rahimtoola.*—Have you got any samples of the papers you made?

*Mr. Pudumjee.*—Yes, we can send you samples of buff coloured manilla: they were manufactured about three years ago.

*President.*—What would be the demand for poster papers in India?

*Mr. Pudumjee.*—There is a large demand owing to the increasing requirements of the cinema firms. But these are not shown separately in the returns. Being cheaper than ordinary printing paper, calenders are also printed to an increasing extent on these M. G. white papers.

*President.*—Is there any other use to which you can put your M. G. machine?

*Mr. Pudumjee.*—Yes for M. G. covers, wrapping papers, and manilla.

*Mr. Rahimtoola.*—Is it not a fact that this class of paper is now imported as mechanical paper?

*Mr. Pudumjee.*—Imitation manilla is not mechanical.

*Mr. Rahimtoola.*—What about real manilla?

*Mr. Pudumjee.*—Real manilla is not being imported because it is expensive.

*President.*—As regards poster papers, they are mechanical?

*Mr. Pudumjee.*—White Poster Paper may contain a small quantity of mechanical pulp to reduce the cost, though as a rule they are not mechanical.

*Mr. Rahimtoola.*—My idea in asking you this question was that if they are mechanical papers, the price would be so cheap that to put any protective duty would be very exorbitant.

*Mr. Pudumjee.*—If they contained more than 70 per cent. they would be cheaper but would not be suitable for most of the purposes for which poster papers are used.

*President.*—You agree that they should pay a revenue duty?

*Mr. Pudumjee.*—Yes, but it may so happen that being cheaper, they may be used to some extent as substitute for the better kinds if they served the purpose, but never so well as wood free posters.

*President.*—Since we mentioned the question of mechanical pulp, you did import a small quantity?

*Mr. Pudumjee.*—A very small quantity for cheaper qualities of paper to enable us to compete with imported paper, but we could not do it. It cost nearly £8 and the duty remained the same.

*Mr. Rahimtoola.*—Suppose there was no duty, it would have paid you?

*Mr. Pudumjee.*—We imported it just to try if we could compete.

*President.*—You have given up the experiment?

*Mr. Pudumjee.*—Yes, because it was not possible.

*President.*—As regards raw material, as I asked you, you have put in a list of the different kinds of papers—superfine shavings, White No. 1 shavings, White No. 2 shavings, letters heavy. Are these white?

*Mr. Pudumjee.*—They are white; heavier and stronger kinds of paper.

*President.*—Letters light.

*Mr. Pudumjee.*—Those are a cheaper class.

*President.*—Blue No. 1?

*Mr. Pudumjee.*—Those are light blue coloured paper mostly used for linotype machines. We have these sorted out separately.

*President.*—What is the furnish of this blue paper?

*Mr. Pudumjee.*—Unbleached sulphite pulp mostly.

*President.*—Then kraft, coloured paper cuttings?

*Mr. Pudumjee.*—These are mixed coloured papers.

*President.*—Unprinted white pieces?

*Mr. Pudumjee.*—These are from newspaper printing presses. Mostly pieces left over after the reels are used up on the rotary presses.

*President.*—Manillas?

*Mr. Pudumjee.*—All are imitation manillas made from unbleached sulphite pulp.

*President.*—Pamphlets.

*Mr. Pudumjee.*—They may not contain mechanical: these are mostly printed book papers.

*President.*—Strawboards: do you make any boards?

*Mr. Pudumjee.*—Up to a certain limit of thickness.

*President.*—You have not given us a list of the rags.

*Mr. Pudumjee.*—We will send you a list.

*President.*—The best quality of rags?

*Mr. Pudumjee.*—These are tailors' cuttings and cuttings from the cotton mills—the ends that are cut off after the cloth is finished. These are Bleached cuttings mostly, some would be the unbleached sorts.

*President.*—And then ordinary rags?

*Mr. Pudumjee.*—These are used and worn rags.

*President.*—We asked for information from the Customs people about the export of rags. You will find that there are small imports even from England, not a large quantity. A certain quantity is exported. They go from Bombay.

*Mr. Pudumjee.*—They are mostly new tailors' cuttings and cuttings from the cotton mills. These are used for hand made papers and high class writings and banks, which yield a high price.

*President.*—You send us a list of the rags.

*Mr. Pudumjee.*—Yes.

*President.*—You have given us the approximate price of these papers. You can give those for rags as well. You send us a complete list to give us an idea. They vary very much of course.

*Mr. Pudumjee.*—Yes.

*President.*—What about your prospects of using bamboo pulp?



*Mr. Pudumjee.*—We have been going into this matter. We can get bamboo from the Kanara forests, and we find that its use here is possible; but for a small production of 4,000 tons of bamboo pulp, the initial cost for a bamboo plant would be high. The smallest economical unit would be about 10,000 tons. So we thought we might join hands with one of the Calcutta mills and start a mill at site at Kanara, where 40,000 to 45,000 tons are available, and take our own share of the pulp made. We have been considering this matter, but I do not think it is feasible, not in the near future.

*President.*—We were talking with the Mysore Paper Mills yesterday. Apparently they have a surplus capacity.

*Mr. Pudumjee.*—Yes. Before they started on their project we had a talk about it with their agents. We said we would be only too pleased to take up the surplus.

*President.*—What will be the lead from your mills to the Kanara forests?

*Mr. Pudumjee.*—About 350 miles. It can be reached by sea but we find the rail route is better as otherwise it has to be shipped to Bombay and from there sent here by rail, or from Marmagao.

*Mr. Rahimtoola.*—What is the lead from Bhadravati to your place?

*Mr. Pudumjee.*—It would be about 800 miles, but we may get concession rates.

*President.*—Would there be any difficulty in transporting the pulp?

*Mr. Pudumjee.*—No. They might send it 60 per cent. moist or completely dry.

*President.*—You have been trying recently a small quantity of grass: with what success?

*Mr. Pudumjee.*—It makes very good paper; Boiled with about 13 per cent. caustic it bleaches well with about 6 per cent. of bleaching powder, but the landed price at our place is rather high, about Rs. 63.

*President.*—You have got the plant for it?

*Mr. Pudumjee.*—We have got digesters but not the recovery plant. Some years ago we tried to cultivate sabai at Mundhwa on about 100 to 150 acres of land but it was a failure, as the soil was found not suitable for growing this kind of grass.

*President.*—For your rags and waste paper you have to go a long distance?

*Mr. Pudumjee.*—Yes, but even then it pays us to get rags from long distances, since the price of pulp has gone up.

*President.*—You have to go as far as Madras in the South and as far as Lucknow in the north?

*Mr. Pudumjee.*—Even further, to Delhi and even Lahore.

*President.*—With these new mills coming into existence will there be increased competition in regard to rags and papers?

*Mr. Pudumjee.*—I do not think much, as they will be using very small quantities of rags. This will not matter much as far as we are concerned.

*President.*—You can get sufficient quantities of rags and papers only you have to go further afield?

*Mr. Pudumjee.*—Yes.

*President.*—In regard to your paper how much do you boil and how much do you just knead?

*Mr. Pudumjee.*—For the better classes of hadamis for Government use, we boil the waste paper, but for the ordinary kinds which we sell at a low price in the market we simply knead without boiling.

*President.*—Have you any information about the manufacture of hand-made paper from waste paper?

*Mr. Pudumjee.*—They sent from Hyderabad two of their men called *kagzis* to our mills here. We showed them the modern methods of making pulp and hand-made paper but when they went back they took to their old processes again using their old moulds, and making paper by hand from waste paper very weak in strength and generally poor in quality. It would be simply a waste of energy to make paper by hand from waste paper. They should have good pulp from strong white rags. The only difficulty with them is pulping of rags.

*President.*—That means simply pounding?

*Mr. Pudumjee.*—Yes. We suggested that there should be a central pulp plant which would provide pulp to the various hand-made paper makers, but as they are scattered about and not grouped together in any one locality it was not possible.

*President.*—Do you know anything about the industry in the Bombay Presidency?

*Mr. Pudumjee.*—I have some slight personal knowledge about it, but I have complete details got from various sources.

*President.*—We were informed that some people are making hand-made paper not very far from Poona.

*Mr. Pudumjee.*—Yes at Junnar, about 58 miles from Poona. At one time there were more than 15 houses making hand-made paper at Junnar but now only 2 families are left over. They soften waste paper with caustic soda and pound it by hand.

*Mr. Rahimtoola.*—What stone are they using?

*Mr. Pudumjee.*—The ordinary rough stone. After the paper has been softened with caustic soda they take it to the river where they wash it on a piece of cloth. The washed pulp is pounded or kneaded on a rough stone by the palm of the hand. It is a very crude process. But the skill of handling the mould is there, and the industry can be developed if supplied with suitable pulp. We suggested that ready-made pulp be supplied by us to them in barrels, but the proposal was not accepted. They said if it was a cottage industry the whole process was to be carried out by hand.

*President.*—If the raw material used is waste paper it is not necessarily an indigenous material?

*Mr. Pudumjee.*—That is so, but most of the Indian requirements of writings and wood free printings are now being supplied by the Indian mills, about 80 per cent.

*President.*—Not completely. A certain amount of hand-made paper is imported from England and the Continent. That, we understand, is a very high class paper.

*Mr. Pudumjee.*—Yes.

*President.*—Made from linen?

*Mr. Pudumjee.*—Made from cotton and linen.

*President.*—That is a very expensive paper?

*Mr. Pudumjee.*—Yes, cost about one rupee a lb.

*President.*—That does not compete with the Indian hand-made paper which is a different quality altogether.

*Mr. Pudumjee.*—Quite. The Indian hand-made paper which is made from waste paper hardly fetches more than 4 or 5 annas a lb.

*President.*—There has been a great increase in the cost of imported pulp in 1937. The highest price reached in June, 1937.

*Mr. Pudumjee.*—It went up to £19-10-0 on 26th November 1937. I have here a statement gathered from the Paper Trade Journals showing how it went up. (Handed in).

*President.*—The price was highest from about the middle of 1937 till about November, 1937.

*Mr. Pudumjee.*—Yes.

*President.*—£18-10-0 was the highest for easy bleaching. It has now come down.

*Mr. Pudumjee.*—Yes. We are now getting bleached pulp at £15 c.i.f. Bombay.

*President.*—And the unbleached.

*Mr. Pudumjee.*—About £2 less.

*President.*—Generally speaking the difference between bleached and unbleached is £2.

*Mr. Pudumjee.*—Sometimes it is more, but we might take it at £2.

*Mr. Rahimtoola.*—Would it be correct to say that the difference would be £2 to £3?

*Mr. Pudumjee.*—No, the difference would be about £2.

*President.*—In regard to auxiliary materials, given in Form IV, Caustic Soda and Soda ash have to be imported.

*Mr. Pudumjee.*—Yes.

*President.*—As regards bleaching powder what kind of powder do you import?

*Mr. Pudumjee.*—Containing 36/37 per cent. of chlorine. We import German as well as English.

*President.*—I gather that you still import a considerable proportion of China clay.

*Mr. Pudumjee.*—The difference in price between the Indian and the foreign China clay is small, and the foreign clay is better. For the better kinds of writing paper we use English China clay. It is not necessary, but as the difference in price is not much, we prefer the foreign clay.

*President.*—In that respect you are less swadeshi than some of the other mills.

*Mr. Pudumjee.*—Because we are further away from Cossimbazar from where we get the clay. Freight is very heavy and it raises the price by about Rs. 27 a ton. The other mills get the advantage of the lesser freight being so much nearer.

*President.*—Then you are importing quite a lot of Bewoid size.

*Mr. Pudumjee.*—We use Indian Rosin as well. We find Bewoid size cleaner and better to use. Our requirements are small and the Bewoid sizing machine costs a lot. The price is high because of the patent.

*President.*—If you have that plant, you can use Indian Rosin entirely?

*Mr. Pudumjee.*—Yes, quite.

*President.*—It is quite an important item. As regards sulphate of Alumina, can you not get that in India?

*Mr. Pudumjee.*—We got that from Messrs. Dharamsi Morarji Mills at Ambernath, but it contained iron. They could not purify it to the degree we wanted, for the price.

*President.*—There is really no reason why it should not be possible to manufacture it locally.

*Mr. Pudumjee.*—I suppose it is a question of cost. The foreign product is guaranteed to the extent of less than half per cent. of iron.

*President.*—On the whole the quantity of imported auxiliary materials you use is high compared to other mills. It is a question of freight, is it?

*Mr. Pudumjee.*—Yes

*President.*—You say the quality of Indian auxiliary materials still falls short in comparison to the imported varieties.

*Mr. Pudumjee.*—Yes it does.

*President.*—In the case of all kinds?

*Mr. Pudumjee.*—As I say sulphate of alumina obtainable on our side falls far short in purity from iron. China clay falls short of the foreign quality. Rosin is quite satisfactory. The quality that we get is quite good compared to the American product. French chalk is quite all right. The Indian quality is quite satisfactory. Silicate of soda we use is Indian, but not so clean as the foreign product. Casein is all Indian and is quite satisfactory.

*Mr. Rahimtoola.*—Indian China clay is satisfactory, but you don't use it due to high freight.

*Mr. Pudumjee.*—Quite. When it is a question of price, we give preference to the better imported quality for better kinds of paper. Ochres are Indian although not so good as the Italian. For the purpose of colouring they are quite satisfactory.

*President.*—You have got a number of apprentices under training. Have you sent your apprentices to Dehra Dun to undergo the course there?

*Mr. Pudumjee.*—An apprentice who came to us from Kashmir with a letter of recommendation from the Director of Industries after certain training in our mills is now learning at Dehra Dun. Four other apprentices all graduates in science, who were sent to us by the Mysore paper mills, had a course of training at Dehra Dun.

*President.*—In regard to your labour, criminal tribes you employ. Are they satisfactory?

*Mr. Pudumjee.*—I think we have no reason to complain. There may be one or two very difficult to manage, but most of them are obedient and willing to work.

*President.*—What do they earn?

*Mr. Pudumjee.*—They begin with 6 annas a day. As soon as they obtain some proficiency or skill, they get 8 to 10 annas per day. We even give 12 annas to men who work as assistants.

*President.*—12 annas is a good wage.

*Mr. Pudumjee.*—Yes, there are only a few at that rate.

*President.*—Are they likely to be promoted to the higher rate as soon as they get experience.

*Mr. Pudumjee.*—Yes, as soon as they get experience, for instance, as back-tenders on the paper machine.

*President.*—You say you pay the medical man. Does he go to the mill every day?

*Mr. Pudumjee.*—Yes, he goes to our mill every day. A part of his salary is paid by the Industrial Settlement. We pay Rs. 40 and the Settlement pay Rs. 20.

*Mr. Rahimtoola.*—How much time does he spend in your mill?

*Mr. Pudumjee.*—About 2 hours. Medicine is provided by us free. We keep a small dispensary at the mills.

*President.*—I take it the most important change you have effected in the machinery is in the power plant.

*Mr. Pudumjee.*—Yes.

*President.*—And that has effected considerable economy.

*Mr. Pudumjee.*—Yes, and it has given us more heating power. We would not have been able to deal with the quantity of rags we are now using if it had not been for the new power plant.

*President.*—The present cost of coal is on an average Rs. 33 per ton.

*Mr. Pudumjee.*—Yes.

*President.*—What was the previous figure?

*Mr. Pudumjee.*—About Rs. 45 a ton.

*President.*—The price of coal has recently gone up.

*Mr. Pudumjee.*—About a rupee a ton, C. P. coal, and this coal is inferior to the Bengal variety by 16 to 17 per cent.

*President.*—As regards your realised prices, the lowest price was in 1934-35 as far as I can judge.

*Mr. Pudumjee.*—Yes.

*President.*—And they went up slightly in 1935-36 and again in 1936-37. In 1937-38 they have gone up further owing to the rise of the imported paper.

*Mr. Pudumjee.*—Yes.

*President.*—What would be the extent of the rise in 1937-38?

*Mr. Pudumjee.*—Bleached varieties have now gone up by about 7 pies per lb. less 10 per cent., or say 6 pies per lb. nett.

*President.*—Badami?

*Mr. Pudumjee.*—2 to 3 pies at the most.

*President.*—Wrappings by 2 pies.

*Mr. Pudumjee.*—Yes. As regards badami supplied to Government, the price has not gone up.

*Mr. Rahimtoola.*—In this class of paper you are getting more from the public than from the Government.

*Mr. Pudumjee.*—Yes at present.

*President.*—Cartridge, Blottings, Covers etc?

*Mr. Pudumjee.*—About 4 to 5 pies.

*President.*—That means you have gone back pretty well to the 1931-32 level and in some cases even higher.

*Mr. Pudumjee.*—Just a little higher.

*President.*—Except in the case of badami.

*Mr. Pudumjee.*—Yes.

*President.*—Your badami price is still below the 31-32 level. Would you be able to give us your cost figures for 1937-38 by about the middle of April?

*Mr. Pudumjee.*—Yes, but we could give you only approximate figures.

*President.*—Also give us some idea of the prices realised.

*Mr. Pudumjee.*—Yes.

*President.*—We have been told that the margin between the price of Indian paper and imported paper is now wider than it used to be.

*Mr. Pudumjee.*—Yes.

*President.*—To what extent?

*Mr. Pudumjee.*—About 5 pies per lb.

*President.*—Before that it was how much?

*Mr. Pudumjee.*—The ordinary market quality was about 2 pies per lb.

*President.*—The margin is now about 5 pies.

*Mr. Pudumjee.*—Yes.

*President.*—Why have not the Indian mills increased their prices to the same extent as the imported paper?

*Mr. Pudumjee.*—I suppose, not to be unreasonable. Individually, we would have increased the prices on account of the enormous rise in the cost of pulp but the Calcutta mills were satisfied, as the rise was sufficient to cover their increased cost of production and bring them the same profit as before. So, they retained their prices at the present levels, and we had to follow suit.

*President.*—Did your costs go up in 1936-37?

*Mr. Pudumjee.*—Yes, on account of the higher prices of materials.

*President.*—Did the price of coal go up?

*Mr. Pudumjee.*—Not much. As we have had recently to restrict the use of imported pulp, we now have to go further afield for rags.

*President.*—What about chemicals?

*Mr. Pudumjee.*—Not so much. The rise was only 3 to 4 per cent.

*President.*—Under what items did the rise take place?

*Mr. Pudumjee.*—Principally rags and waste paper.

*President.*—That is, in your raw materials?

*Mr. Pudumjee.*—Yes. Since then, the price of coal has gone up a little but we have now a more efficient power plant and we have the advantage of that.

*President.*—You might give us figures showing the different costs of the raw material in this year as compared with the last. You say that that is the item under which the rise has taken place.

*Mr. Pudumjee.*—Yes.

*President.*—You say that the competition is most severe in Bombay.

*Mr. Pudumjee.*—Yes. That has always been so. As a matter of fact the Calcutta mills realise a better price for their paper in Calcutta than we get or they get in Bombay.

*President.*—What is the reason for that?

*Mr. Pudumjee.*—Bombay is practically the distributing centre in India. Most of the imports come principally to Bombay, from where they are distributed to up-countries. There are several dealers who import large quantities which are put on the market at almost cost price to effect quicker returns. At times they may not be able to sell at any profit at all for financial reasons.

*President.*—Do you speak about the peculiar mentality of the Bombay dealer?

*Mr. Pudumjee.*—Yes, he believes in small profits and large turnover.

*President.*—We have heard a good deal about the imports of the Japanese paper. Can you tell us anything about that particularly?

*Mr. Pudumjee.*—Not much. They are putting on the market a fairly good quality at 3 annas 2 pies a pound.

*President.*—Is it printing paper?

*Mr. Pudumjee.*—Yes. Some time back it used to come at 2 annas 11 pies. Fortunately the quantity was not large enough to affect us much.

*President.*—The lowest price was 2 annas 11 pies.

*Mr. Pudumjee.*—Yes.

*President.*—Is that for printings?

*Mr. Pudumjee.*—Yes.

*President.*—It has now gone up to 3 annas 2 pies.

*Mr. Pudumjee.*—Yes. Of course, the price varies according to quality.

*President.*—When was the price lowest?

*Mr. Pudumjee.*—About a couple of years ago.

*President.*—Was it lower than the Continental price?

*Mr. Pudumjee.*—Much lower.

*President.*—Would you consider that price remunerative to them?

*Mr. Pudumjee.*—I don't think so.

*President.*—We have got to consider the question whether it amounts to dumping.

*Mr. Pudumjee.*—Yes, it does. If you deduct the duty at 1 anna 3 pies and freight and selling expenses, the price realised by them would be very small indeed.

*President.*—When the Japanese white printings were sold at 2 annas 11 pies, what was the lowest Continental price?

*Mr. Pudumjee.*—About 3 annas 3 pies.

*President.*—The difference would be about 3 or 4 pies.

*Mr. Pudumjee.*—Yes. For some reason or other, they could not send large quantities to India and so it did not affect us much.

*Mr. Rahimtoola.*—The Japanese price a few months ago was 3 annas per lb. The present price is 3 annas 5 pies per lb.

*Mr. Pudumjee.*—Even now it is sold at 3 annas 2 pies per lb.

*Mr. Rahimtoola.*—It is not 3 annas 5 pies per lb.

*Mr. Pudumjee.*—The price of some qualities may be different.

*Mr. Rahimtoola.*—How do you compare the quality with the Indian paper?

*Mr. Pudumjee.*—It compares favourably.

*Mr. Rahimtoola.*—I suppose the price that they would fetch would be equal to the price you realise in the open market.

*Mr. Pudumjee.*—Very easily.

*Mr. Rahimtoola.*—That means that paper is inferior to the foreign paper.

*Mr. Pudumjee.*—Yes, it is not so good as the Dutch, Swedish or German paper. The difference is very slight. But it compares very favourably with ours and sometimes is even better.

*President.*—Has the Japanese war with China affected their imports to any extent?

*Mr. Pudumjee.*—They are still coming in at 3 annas 2 pies and as you say at 3 annas 5 pies. That shows that the war has not affected the imports much.

*President.*—Your main improvements in quality you attribute to better beating, more uniform electric drive and installation of a new bleaching plant.

*Mr. Pudumjee.*—Yes.

*President.*—Do you make many of these gin roll washers?

*Mr. Pudumjee.*—A small quantity only: about 50 to 60 tons.

*Mr. Rahimtoola.*—We have visited the mill.

*Mr. Pudumjee.*—This mill is exclusively working on these washers.

*President.*—I see you are making your own bleaching materials.

*Mr. Pudumjee.*—Yes. We are getting it. But we do not hope to make chlorine and caustic soda separately. It will be a simple process for making hypochlorite of soda direct for bleaching.

*President.*—You have no doubt heard about the new chemical factories coming up—one near Calcutta and so on who are making bleaching caustic soda.

*Mr. Pudumjee.*—It would enable us to get it cheaper.

*President.*—The question of freight comes in there.

*Mr. Pudumjee.*—Yes.

*President.*—There is a factory being started at Mettur. I am not quite clear what they are going to make.

*Mr. Pudumjee.*—There is a large factory being started for the fixation of nitrogen from air and for making sulphate of ammonia side by side for fertilising purposes. I think that they are going to make also caustic soda and bleach.

*Mr. Rahimtoola.*—Which factory is that?

*Mr. Pudumjee.*—I forget at the moment.

*President.*—Are you referring to the Mettur scheme?

*Mr. Pudumjee.*—It may not be Mettur. It is somewhere in the Mysore State. The State have a large interest in it.

*Mr. Rahimtoola.*—Mr. Ramanathan, the President of the Mysore Paper Mills, is also the Chairman of the Company which is going to manufacture chemicals and fertilisers.

*President.*—He spoke more about Mettur.

*Mr. Rahimtoola.*—Yes, President asked him that question specifically.

*President.*—You speak of the cost of erecting a mill of similar capacity. What output have you in view?

*Mr. Pudumjee.*—6,000 tons. This does not take into consideration the cost of the recovery plant, etc., needed for grasses and bamboos. That is a very heavy item.

*Mr. Rahimtoola.*—We are told that it would cost Rs. 3½ lakhs if it is obtained from the United Kingdom.

*Mr. Pudumjee.*—It will cost more if the erection charges are included.

*Mr. Rahimtoola.*—Including everything. One mill has actually imported it.

*President.*—So, it might come to Rs. 33 to Rs. 38 lakhs.

*Mr. Pudumjee.*—It will come to about Rs. 42 lakhs. We have got to have large digesters as well.

*President.*—You have given a figure of Rs. 35 lakhs.

*Mr. Pudumjee.*—There are other items not included for instance, digesters, digester house, boilers for producing boiling steam, recovery plant, etc. All that would cost a lot more.

*President.*—What figure would you give then?

*Mr. Pudumjee.*—Rs. 42 lakhs.

*Mr. Rahimtoola.*—That is rather high, I should think.

*Mr. Pudumjee.*—I should put it at something more than Rs. 42 lakhs.

*President.*—I see you are taking 1935-36 costs. Why have you not taken the latest costs?

*Mr. Pudumjee.*—If we worked upon the figures obtained in 1936-37 we would have to use a quantity of rags, etc., which it was not possible for us to obtain. So we have based on the quantity that it was possible to get—the quantity actually now used of rags, hemp, etc. To supplement Indian materials we have taken more wood pulp.

*President.*—The cost of fuel would be rather different, in 1936-37.

*Mr. Pudumjee.*—We have taken the cost of fuel as for 1936-37.

*President.*—This is really a combined figure.

*Mr. Pudumjee.*—Yes, as far as power, labour, etc., are concerned. All materials other than rags and pulp are on the basis of 1935-36.

*President.*—You think that owing to the distance the raw materials cost Rs. 6 a ton more.

*Mr. Pudumjee.*—Yes, on the average.

*Mr. Rahimtoola.*—Rs. 255 would be the cost for 1936-37. This includes the reduction which you have shown in the latter part of the page, taking Rs. 6 per ton as the additional cost of the raw material.

*Mr. Pudumjee.*—Yes.

*President.*—What do you think would be the normal cost under present conditions? It is not really 1935-36 figure. It is a sort of combination figure.



*Mr. Pudumjee.*—This shows what would be possible under the circumstances. We have taken into consideration the reduction which is possible under coal, labour, etc. and the higher cost we would have to pay for rags. All quantities except rags and pulp are on the basis of 1935-36 figures.

*Mr. Rahimtoola.*—There may be a rise in the first portion.

*Mr. Pudumjee.*—Yes, and a reduction in the latter portion.

*President.*—We want to go into the question of tinted badami that is coming.

*Mr. Pudumjee.*—We mean paper tinted differently from badami and buff. The United Provinces Government have asked for tenders for the supply of tinted paper either pink or blue, distinctly specifying that the colour is to be different from badami and the paper is to contain more than 70 per cent. mechanical pulp. I do not know how the Customs will consider that. Importers say they can get this paper duty free. The classification is not very clear so far as this is concerned.

*President.*—How would you suggest that the classification should be changed in order to get over it?

*Mr. Pudumjee.*—I should say any tinted paper, if it is hard sized or sufficiently sized for writing purposes, should be included under writing paper, I mean papers of substances not less than 27 grammes.

*President.*—The classification Tariff Board suggested "Papers, including all machine glazed papers, stereo, all coated papers except art paper, all deep blue papers, all unglazed thin news up to substance 35.5 grammes per square meter except white and buff or badami above substance 26.6 grammes per square meter, all sorts not otherwise specified." What do you suggest should be the wording?

*Mr. Pudumjee.*—We would say hard sized tinted paper: we would not restrict it to buff or badami and white but any tinted paper which is hard sized and is suitable for use as writing paper.

*Mr. Rahimtoola.*—We have asked the Collector of Customs, Bombay and have sent up these very suggestions of yours in order to know how this paper is at present assessed. Personally I think all hard-sized paper is protected. Mr. Lalvani when giving evidence before us told us that at this was the furnish it would not pay protective duty.

*Mr. Pudumjee.*—Yes. The very fact that the United Provinces Government have given this specification for substituting their usual requirements of badami paper shows that in their opinion it can avoid the protective duty. They have gone to the length of specifying it exactly so as it might avoid the duty.

*President.*—You will have to say 'except white, buff or badami or similar tinted paper not hard sized'?

*Mr. Rahimtoola.*—We have put here white, buff or badami above substance 26.6 grammes per square metre.

*President.*—Supposing we say 'except paper sized suitable for writing above substance 26.6 grms. per square metre'.

*Mr. Pudumjee.*—Yes, that will cover the case.

*Mr. Rahimtoola.*—Suppose we say 'except white or tinted papers above substance 26.6 grammes per square metre'?

*Mr. Pudumjee.*—Yes.

*Mr. Rahimtoola.*—Will not that have the effect of bringing some tinted printings under protection?

*Mr. Pudumjee.*—These tinted printings are scarcely imported hard sized; they are generally soft sized because they are cheaper, and used for printing only.

*Mr. Rahimtoola.*—What I am afraid of is that if we say 'all tinted papers', those tinted papers which have got a different furnish will come under protection?

*Mr. Pudumjee.*—These papers are never written upon. They need not be hard sized. The moment they are hard sized they are writing paper and will be above that substance.

*Mr. Rahimtoola.*—So that substance is an indirect protection?

*Mr. Pudumjee.*—Yes and the sizing should be protection as well.

*President.*—Real printing paper should be below 26.6 grammes?

*Mr. Pudumjee.*—I mean the class of printings used for printing leaflets come in as unsized mechanical, and are mostly 26 grammes substance.

*President.*—You are not sure of the Customs practice?

*Mr. Pudumjee.*—We are not; we could not get any definite information on this point.

*President.*—In regard to question 55 (a) about the effect of the removal of the revenue surcharge, you have taken the year 1935-36: why not 1936-37?

*Mr. Pudumjee.*—We have got it ready with us, for 1936-37, figured out on the same basis as the Calcutta mills have done (handed in). The mode of calculation in our previous statement is different; in this statement we had not given any allowance for badamis.

*Mr. Rahimtoola.*—Since 1936 badami paper is paying protective duty.

*Mr. Pudumjee.*—Just so. But the imported quantity is not so large as to affect us. I think the latest figures are more representative of the cost than our original statement.

*President.*—The position in 1937-38 will not be quite the same.

*Mr. Pudumjee.*—It will not be so bad.

*President.*—The realised price will be higher?

*Mr. Pudumjee.*—Yes.

*President.*—What works expenditure would you take? Suppose you took it at Rs. 255?

*Mr. Pudumjee.*—It will be Rs. 8,54,000 so that the deficit comes to Rs. 2,52,360.

*President.*—We will work out on the surcharge. Instead of 9,44,082 you will have to take 8,54,016.

*Mr. Pudumjee.*—It is Rs. 90,000.

*President.*—I do not understand why you have included interest on loans; that is part of your capital cost surely?

*Mr. Pudumjee.*—These are not mentioned in the works cost, so we have had to add it to the total cost of manufacture.

*President.*—Interest on loan is presumably part of capital expenditure.

*Mr. Pudumjee.*—It is loan taken for working capital, and for additional machinery.

*Mr. Rahimtoola.*—We always differentiate between recurring expenditure and capital expenditure. What is the working capital you have allowed?

*Mr. Pudumjee.*—May I refer you to Form V. Under the item overhead charges we have got interest on working capital; this is the interest we have to pay on our total loans.

*Mr. Rahimtoola.*—Is that for working capital?

*Mr. Pudumjee.*—It provides for working capital as well as cost of the extra machinery and plant purchased during the period under review.

*Mr. Rahimtoola.*—How much for machinery?

*Mr. Pudumjee.*—About Rs. 18,850 would be allocated to the cost of the machinery, etc.

*Mr. Rahimtoola.*—So that it comes to Rs. 60,156—Rs. 18,850=Rs. 41,306.

*Mr. Pudumjee.*—Yes, that would be the interest on the working capital.

*Mr. Rahimtoola.*—What rate of interest do you allow?

*Mr. Pudumjee.*—The average is  $7\frac{1}{2}$  per cent.

*Mr. Rahimtoola.*—Are you really paying so high a rate?

*Mr. Pudumjee.*—We, I mean the Agents, have given our own money as fixed deposits at 6 per cent. The co-operative bank has given us loans on finished paper and materials at 7 per cent.

*Mr. Rahimtoola.*—I am afraid it is not possible to allow this rate when the Reserve Bank rate is 3 per cent.

*Mr. Pudumjee.*—As I have said, our own deposits amounting to about Rs. 2,50,000 are at 6 per cent.

*Mr. Rahimtoola.*—Instead of Rs. 9,23,000 I have put down Rs. 8,50,000: that means there will be a surplus of about Rs. 75,000. From Rs. 1,60,000 I am deducting Rs. 18,000 which is equal to Rs. 1,42,000 and therefore the deficit will be Rs. 67,000 out of which I have deducted Rs. 13,000 so that the deficit will be Rs. 54,000.

*Mr. Pudumjee.*—Yes, if you take the works cost at Rs. 255.9.

*President.*—You have not allowed here for imported pulp?

*Mr. Pudumjee.*—We have allowed for it on the original statement, but not in this because the Calcutta mills have not.

*Mr. Rahimtoola.*—When did you import this?

*Mr. Pudumjee.*—In 1935-36.

*Mr. Rahimtoola.*—What is the 1936-37 figure?

*Mr. Pudumjee.*—997 tons. We have to multiply  $997 \times 11.4$ . We will take it at Rs. 11,000.

*Mr. Rahimtoola.*—So that it will be reduced to Rs. 43,000.

*President.*—In 1937-38 that deficit would probably a *plus* figure.

*Mr. Rahimtoola.*—What is the realised price approximately: will it be about 0-2-6?

*Mr. Pudumjee.*—A large quantity is being supplied to Government at the old price. We will send you the exact figures. We may perhaps realise 2 pies more per lb. more.

*Mr. Rahimtoola.*—I think this will be 0-2-6.

*Mr. Pudumjee.*—I do not think it will be even 2 pies, because we do not get the advantage of the rise on our Government contracts. These are about 30 per cent. of our production, we are losing on these contracts because of the high price of imported pulp.

*President.*—But your contracts for 1937-38 are more favourable?

*Mr. Pudumjee.*—About 4 pies higher.

*Mr. Rahimtoola.*—2 annas 6 pies would be a nearer figure. If I take 2 annas 6 pies, it will be an increase of Rs. 32 per ton.

*Mr. Pudumjee.*—The cost shown here will not be possible unless the cost of pulp has gone down.

*Mr. Rahimtoola.*—That means a lakh of rupees more. If instead of one lakh of rupees receipt, it will be Rs. 2 lakhs. If we deduct from Rs. 2 lakhs Rs. 1,42,000, that will leave a balance of Rs. 58,000. To that if Rs. 13,000 is added, it comes to Rs. 71,000. We have also to add a further sum of Rs. 11,000. That leaves a surplus of Rs. 82,000.

*Mr. Pudumjee.*—In calculating the future cost, we have taken the price of imported pulp same as for 1936-37, i.e., at £11-10 for the bleached quality. This is only possible if the cost of pulp goes down to the original level.

*President.*—You are now using a good deal of imported pulp which would raise the price somehow.

*Mr. Pudumjee.*—We shall work out the figures and let you know.

*President.*—You give your figures of cost of production of bleached pulp.

*Mr. Pudumjee.*—Yes.

*President.*—You don't make unbleached pulp?

*Mr. Pudumjee.*—No.

*President.*—We are trying to work out figures for both bleached and unbleached. The question is what reduction should be made for unbleached. The difference between the price of imported unbleached and bleached is about £2 or Rs. 26.

*Mr. Pudumjee.*—It saves us the cost of bleaching powder.

*President.*—And labour.

*Mr. Pudumjee.*—Yes and there is a loss of 4 per cent. in bleaching.

*Mr. Rahimtoola.*—How much would that amount to?

*Mr. Pudumjee.*—About Rs. 20.

*President.*—That works out not very far from the difference between the cost of bleached and unbleached pulp.

*Mr. Pudumjee.*—Yes.

*President.*—That difference in price would not be a bad guide. It is somewhere between Rs. 20 and Rs. 25.

*Mr. Pudumjee.*—With regard to bamboo or grass it would be slightly more.

*President.*—Actually the figures given are less. Can you give us later figures of prices of bleached and unbleached imported pulp?

*Mr. Pudumjee.*—Yes.

*President.*—In Appendix A you have given actual quotations. Can you give us figures for 1937-38?

*Mr. Pudumjee.*—The unbleached pulp we are using is not a bleachable pulp, so the cost is less than the cost of easy bleaching pulp.

*President.*—You might give us figures for 1937-38 later on.

*Mr. Pudumjee.*—Yes.

*President.*—And the prices have gone up considerably presumably.

*Mr. Pudumjee.*—They have.

*President.*—With the auxiliary materials given in Form IV we have already dealt.

*Mr. Pudumjee.*—Yes.

*President.*—Have the Bombay Government increased their orders from you for 1937-38?

*Mr. Pudumjee.*—The Governments are taking 10 per cent. more as allowed in their agreements. Generally speaking they used to take about 10 per cent. less in previous years, but the next year's tender rates are higher, and it is to their advantage to take up the whole quantity, and perhaps 10 per cent. more.

*Mr. Rahimtoola.*—I think the tendency is to provincialise. You may get more orders now from the Bombay Government.

*Mr. Pudumjee.*—In that respect yes. About 40 tons used to be allotted to the other mills. The Government have now asked us if we could supply a similar quality at the same price and we have agreed.

*President.*—Your main difficulty is in regard to power and fuel which is very high compared to the other mills.

*Mr. Pudumjee.*—They get a superior quality of coal at a much cheaper rate than the C. P. coal.

*President.*—Your rent, rates and taxes figure seems to be rather high.

*Mr. Pudumjee.*—Our Bombay mill is rented. We have to pay about Rs. 700 as rent. That takes the figure up. Besides water charges.

*Mr. Rahimtoola.*—In Bombay water charge is also high.

*Mr. Pudumjee.*—Yes, here at Poona the net cost of water comes to about Rs. 150 a month.

*President.*—You have allowed depreciation only at one per cent.

*Mr. Pudumjee.*—We cannot afford to give more.

*President.*—Strictly speaking if you take the statutory rates, you will work at a loss.

*Mr. Pudumjee.*—Yes.

*President.*—Interest on working capital is 7½ per cent.

*Mr. Rahimtoola.*—Personally I should think it is rather high. It works out to Rs. 18 per ton.

*Mr. Pudumjee.*—As I have said it includes the interest on the cost of the new plant and machinery.

*Mr. Rahimtoola.*—Even then the rate is high.

*Mr. Pudumjee.*—The deposits are being renewed and we are now reducing the rate.

*Mr. Rahimtoola.*—In Annexure E you have given the total amount borrowed as Rs. 5,39,413.

*Mr. Pudumjee.*—Yes.

*Mr. Rahimtoola.*—That can't work out to Rs. 60,000 per annum.

*President.*—Your interest on working capital is too high, whereas your depreciation is too low.

*Mr. Pudumjee.*—Yes.

*President.*—What does 'miscellaneous' include? It is rather a high figure.

*Mr. Pudumjee.*—Telegrams, telephone, law charges, printing, advertising, sundries, postage stationery, etc.

*Mr. Rahimtoola.*—That comes to Rs. 14,000. It is rather a heavy bill.

*Mr. Pudumjee.*—Water charges are not included in the miscellaneous.

*President.*—Water charges ought really to come under works cost. More appropriately it should come under item 9.

*Mr. Pudumjee.*—Yes.

*President.*—You might send us the details later on.

*Mr. Pudumjee.*—Yes.

*President.*—Your Head office expenses and managing agents' commission, what does that include?

*Mr. Pudumjee.*—That includes Head office expenses, remuneration to the Secretaries which includes the management of the mill. The Agency is allowed 10 per cent. commission, but not until the declared profits amount to 5 per cent.

*President.*—Has that actually been drawn?

*Mr. Pudumjee.*—No.

*President.*—In any year?

*Mr. Pudumjee.*—Not during the last six years.

*Mr. Rahimtoola.*—That is a legitimate expenditure. Suppose the Company makes 5 per cent., how much would the Managing Agents' commission amount to?

*Mr. Pudumjee.*—About Rs. 5,000.

*Mr. Rahimtoola.*—As regards the question of packing, with the increase of production, packing charges have gone down. What is that due to?

*Mr. Pudumjee.*—We do not pack all our paper in bales. They are only so packed for Government. We are sending several wagon loads of paper to Agra, Delhi and various other places in unbaled reams. Packing charges vary according to the quantity baled and the quantity sent out without being baled. I may mention in this connection recently we have been sending paper by motor lorry to Bombay in unbaled reams.

*Mr. Rahimtoola.*—Is that not more expensive?

*Mr. Pudumjee.*—It comes to almost the same as rail freight.

*Mr. Rahimtoola.*—The amount of the paid up share capital ranking for dividend is Rs. 9,24,000.

*Mr. Pudumjee.*—Yes.

*Mr. Rahimtoola.*—What is the present block value—not the replacement value? The figure given in answer to question 41, is that the present block value?

*Mr. Pudumjee.*—We have made a mistake here. Depreciation has not been written off. We have shown the total block of Rs. 13,92,057. Depreciation taken so far is Rs. 3,68,000.

*Mr. Rahimtoola.*—That will be roughly how much?

*Mr. Pudumjee.*—Rs. 10½ lakhs will be roughly our block capital.

*Mr. Rahimtoola.*—If we add the cost of recent machinery, by how much will the amount go up?

*Mr. Pudumjee.*—It has been included.

*President.*—Having been through your representation, we might state the general position in regard to protection. The Tariff Board has to consider first of all whether protection should be continued at all and secondly on the assumption that a case for the continuance of protection has been made out what the measure or rate of protection should be and also for what classes of paper protection should be given—whether it should be extended or restricted. That is apart from the special question of surcharge with which we have already dealt. We need not refer to that again. Perhaps you would like to give us your general views.

*Mr. Pudumjee.*—As regards protection, I would suggest, to arrive at a figure.

*President.*—We know what the usual practice of the Board is. The only question is whether the Board should take the realised price or the c.i.f. price of similar qualities of paper.

*Mr. Pudumjee.*—I don't think that it would make much difference either way. If we take the lowest c.i.f. price it will very nearly tally with the realised price. As a matter of fact the realised price is dependant upon the lowest c.i.f. price.

*President.*—That is the usual procedure adopted by the Tariff Board.

*Mr. Pudumjee.*—Then, the lowest c.i.f. price should be taken into account otherwise it will upset the result.

*President.*—Not necessarily. In the case of unremunerative prices, the dumping clause can be invoked. You might take the main level of protection and if prices fall below a certain level, the dumping clause can be invoked.

*Mr. Pudumjee.*—In that case, would we have to refer to the Government of India or to the Board?

*President.*—Government can do it themselves. The case might arise particularly about the Japanese paper. Not much of that paper is coming. Suppose protection is granted: it cannot be based on a small quantity of imported paper. You can provide against it under the dumping clause.

*Mr. Pudumjee.*—I am referring to the Continental price. If you take the lowest Continental price, that will be all right for our purpose. I would suggest the same basis for calculation as was adopted by the Tariff Board on the previous occasion on pages 90—91 of their report.

*Mr. Rahimtoola.*—Can you work them out?

*Mr. Pudumjee.*—Yes.

*Mr. Rahimtoola.*—What figure have you taken for the works cost?

*Mr. Pudumjee.*—They have given their works cost as Rs. 309.3.

*Mr. Rahimtoola.*—That is Titaghur's figure.

*Mr. Pudumjee.*—Yes, I have taken Titaghur's figures because this is a representative mill, working on the sulphate process. New mills are also all going to work on the sulphate process. There is only one mill here which works on the sulphite process. It is realising about 2 pice less per lb. than similar product put on the market by the Titaghur mills. Moreover Titaghur Mills turn out nearly half the total quantity made by the Indian mills. I take the Titaghur mill therefore as more representative than any other mill. Even if we take the figures of the India Paper Pulp Company, I think it will not make much difference.

*President.*—What about Bengal?

*Mr. Pudumjee.*—Bengal is making a considerable quantity of inferior kinds of paper. Its figures would not be representative. Its cost of production is not representative unless figures for bleached qualities are given separately. I think that the Titaghur mill is the best for our purpose.

*Mr. Rahimtoola.*—Suppose we take Titaghur's figures.

*Mr. Pudumjee.*—Their anticipated savings is Rs. 9.5, so their works cost will be Rs. 299.7.

*Mr. Rahimtoola.*—Say Rs. 300.

*Mr. Pudumjee.*—Depreciation should be calculated at 6½ per cent. on Rs. 800.

*Mr. Rahimtoola.*—They want Rs. 800 per ton as replacement value. It is rather high.

*President.*—Let us take Rs. 700.

*Mr. Pudumjee.*—Then, depreciation will be Rs. 43.75. Interest on working capital at 5 per cent. will be Rs. 8. Agency commission is Rs. 11. So, the total comes to Rs. 62.75.

*President.*—That is overhead.

*Mr. Pudumjee.*—Yes. As regards profit, can you give us 3 per cent?

*President.*—Other mills want 6 per cent.

*Mr. Pudumjee.*—Then at 6 per cent. it amounts to Rs. 42. Therefore the works cost, plus overhead and profit, comes to about Rs. 405.

*President.*—That is the fair selling price.

*Mr. Pudumjee.*—Yes. The realised price is Rs. 418 and the duty Rs. 175. The difference between the two is Rs. 243. This is about the same as the lowest imported price, viz., £18. Therefore practically there is not much difference, whether the realised price or the lowest c.i.f. price is taken for basis of calculation.

*President.*—We shall probably examine it from both points of view.

*Mr. Rahimtoola.*—You must make some allowance for the imported pulp.

*Mr. Pudumjee.*—Yes, supposing there is no duty on imported pulp, this allowance will come to about Rs. 12.

*Mr. Rahimtoola.*—That would not be quite correct.

*Mr. Pudumjee.*—If there was no duty on pulp their cost of manufacture would be reduced by about Rs. 12, the quantity of pulp actually used by them being about 23 per cent.

*Mr. Rahimtoola.*—Suppose you want protection for 7 years.

*Mr. Pudumjee.*—Yes. Let us suppose for the present there will be no duty on pulp. Later a compensatory figure may be added if necessary. Therefore, according to my calculation, the protective duty on paper should be Rs. 149-5, if there is no duty on pulp.

*Mr. Rahimtoola.*—Approximately Rs. 150 per ton.

*Mr. Pudumjee.*—Yes, or 1 anna 0-75 pies, per lb., plus a compensatory figure. If there is a duty on pulp. I don't think that even if we take the figures given by the India Paper Pulp Company, it will make much difference because their cost of production is less, and their realised price is also less by about 2 pies per pound.

*President.*—Part of the reason for that is that the cost of grass pulp is more and therefore the realised price is more.

*Mr. Rahimtoola.*—Let us take the India Paper Pulp Company's figures. Their works cost is Rs. 285 and you want to add Rs. 63 and Rs. 42. The total will be Rs. 390 per ton.

*Mr. Pudumjee.*—Yes, that is the fair selling price.

*Mr. Rahimtoola.*—Their realised price is Rs. 415 per ton. Accordingly I find that if there is no duty on pulp you would require a duty of Rs. 138 per ton or about an anna a pound.

*Mr. Pudumjee.*—Then it would not be fair to take their figures.

*President.*—The last Tariff Board thought one anna was sufficient.

*Mr. Pudumjee.*—At that time the Indian Pulp and Paper Mills figures were taken by the Board because it was the only mill working on bamboos. The sulphite process is slightly cheaper. The new mills are adopting the sulphate process and their cost of manufacture will be a little higher. I am sure they will not arrive at the India Paper Pulp Co.'s figure if they shall do so, not for some time at least after they start. They have got up-to-date plant at Titaghur, and it will take the other mills a few years I think, before they arrive even at Titaghur's anticipated figure.

*President.*—Their recovery is very very low.

*Mr. Pudumjee.*—For this reason they have already allowed a reduction in their future costs of about Rs. 9 per ton. To the figure arrived at for protection we have to add a compensatory duty, on the same lines as was calculated by the Board on the previous occasion, if there is to be a duty on pulp.

*Mr. Rahimtoola.*—What are your views on the duty on pulp?

*Mr. Pudumjee.*—There should be no duty on pulp.

*President.*—Then every one would go back to the use of imported pulp.

*Mr. Pudumjee.*—I don't think so. Titaghur has shown that their cost of manufacture of bamboo pulp is about Rs. 150.

*Mr. Rahimtoola.*—It will drop down to Rs. 140. Bengal Paper is less; Naihati is very much less.

*Mr. Pudumjee.*—We will take the higher figure. The lesser the better for me. I will take the higher figure of Rs. 150. There will be the anticipated reduction of about Rs. 9 per ton and the cost will drop down to Rs. 140.

*Mr. Rahimtoola.*—Let us take Rs. 140. The last Tariff Board took £10 for easy bleaching sulphite; that roughly would be Rs. 135; add to that Rs. 6 clearing charges.

*Mr. Pudumjee.*—That is Rs. 140

*Mr. Rahimtoola.*—If the imported pulp was available at the same price at which the manufactured article is obtainable in India then the new mills putting up in India would prefer to have imported pulp; they won't put up pulp plant.



*Mr. Pudumjee.*—I hold that for several years pulp will not reach that figure. The lowest has almost been reached, and it is £13.

*Mr. Rahimtoola.*—The Titaghur mills themselves say that the average will be £11 per ton.

*Mr. Pudumjee.*—I differ from that: I will say it will stabilise at about £12. Let us however take £11; that is equivalent to Rs. 145; add Rs. 6. There is therefore a margin of Rs. 11 in favour of the domestic pulp.

*Mr. Rahimtoola.*—Personally I do not agree with you.

*Mr. Pudumjee.*—If you take the Bengal Paper Mill's figure the margin will be perhaps much as Rs. 20.

*Mr. Rahimtoola.*—As far as the Titaghur Mill on which you want the Tariff Board to base its costs is concerned, the company will have to go into liquidation.

*Mr. Pudumjee.*—Then, if their costs are likely to be lower there will be no reason for the new mills to use imported pulp.

*Mr. Rahimtoola.*—New mills will use imported pulp and will rather not have any pulp machinery at all. You may argue that the present duty is too high but I think the removal of the duty altogether may only benefit you or people who use rags!

*Mr. Pudumjee.*—Excuse me please if I say that putting up a duty on pulp will not now help the bamboo industry any more. There is already a marked difference between the two, the cost of bamboo pulp and the price of imported pulp.

*Mr. Rahimtoola.*—Today the price of easy bleaching pulp is £13; that works out to Rs. 180 per ton.

*Mr. Pudumjee.*—Therefore the difference is nearly Rs. 40 and I hold that the price of pulp will not be appreciably lower than Rs. 180 during the next seven years.

*Mr. Rahimtoola.*—What is the period for which you want protection?

*Mr. Pudumjee.*—Seven years. I think during the period the price of pulp will go up instead of going down.

*Mr. Rahimtoola.*—Suppose it goes down to the figure which was expected by the last Tariff Board what do you think should be a reasonable margin to allow?

*Mr. Pudumjee.*—There need be no margin because the last Tariff Board had based both on equality.

*Mr. Rahimtoola.*—But the price of Indian pulp was high as compared to wood pulp.

*Mr. Pudumjee.*—There is now a difference of nearly 30 to 40 rupees in favour of bamboo pulp. Therefore a duty on pulp will be unnecessarily penalising mills like ours.

*Mr. Rahimtoola.*—Protection was granted to the bamboo as raw material.

*Mr. Pudumjee.*—It has served its purpose, because it has made a difference in price in favour of the domestic pulp.

*President.*—The moment the difference on pulp is removed you will increase your proportion.

*Mr. Pudumjee.*—We improve our quality and increase our production. So long as it does not harm the development of the bamboo industry, I submit, there should be no duty on pulp, as, it is penalising those mills which are using other materials, than bamboo.

*President.*—They might say it would be a good thing to force you to use bamboo pulp.

*Mr. Pudumjee.*—Then, if you put a duty on pulp there will have to be a compensatory duty on paper on the same basis, as worked out on the last occasion.

*Mr. Rahimtoola.*—That is right. Last time we calculated 19.16 as the additional duty for the pulp on paper and we brought up the realised price to Rs. 484 instead of Rs. 464 per ton. The other point you have raised in answer to question 51 is that if a duty is put, it should be fixed on the air dry basis.

*Mr. Pudumjee.*—We import pulp on the air dry basis, that is to say 10 per cent. moisture is allowable. But it very often happens that when pulp is sent out by the makers it contains 13 per cent. moisture or even more. The whole consignment is tested for moisture by accredited agents in Europe, and the value is assessed according to the quantity of moisture the pulp contains. They send us a moisture certificate along with each consignment. Supposing the moisture is higher than 10 per cent. which is allowable they give us a corresponding reduction in the price. But here on arrival we have to pay duty just the same on the extra water which is imported. In certain circumstances the allowable moisture has been exceeded 5 per cent.

*Mr. Rahimtoola.*—Supposing the duty was on one ton of pulp?

*Mr. Pudumjee.*—To bring pulp cent. per cent. dry is not possible, but the Customs say that for the matter of duty we might bring pulp cent. per cent. dry.

*President.*—Should not there be a different duty on bleached and unbleached pulp?

*Mr. Pudumjee.*—Theoretically there should be but it would be rather difficult to assess.

*President.*—We know the difference is about £2.

*Mr. Rahimtoola.*—Will the Customs people be able to distinguish between bleached pulp and unbleached pulp?

*Mr. Pudumjee.*—Easy bleaching is coming in as 'unbleached'. There is another variety which is unbleached and which cannot be bleached. This is called strong sulphite, or simply unbleached sulphite. There is a difference of about £1 between the two. The strong unbleached is the kind we are importing, and that will perhaps create some administrative difficulty.

*President.*—No, if the distinction is only between bleached and unbleached.

*Mr. Pudumjee.*—It would be very rational to have a different duty on bleached and unbleached pulp, as the difference between the two is £2. Then in that case it will be better for us to bring in easy bleaching pulp. We save £2 per ton and bleach it ourselves at less cost.

*President.*—That would give so much more employment in India, and it will enable mills to use more Indian material when the new chemical mills come into existence.

*Mr. Pudumjee.*—Looking to the figures arrived at now I submit that it requires very little duty on pulp.

*Mr. Rahimtoola.*—The other mills do not even want the revenue surcharge to go. They say that it should be maintained as a measure of protection.

## 15. Gujarat Paper Mills, Limited, Ahmedabad.

### A.—WRITTEN.

(1) *Letter No. 2006/37-38, dated the 31st January, 1938.*

We beg to enclose herewith four copies of replies to questionnaire, four copies of Balance-Sheets\* for the year 1935-36, four copies of Balance-Sheets\* for the year 1936-37 and four sets of samples.

#### REPLIES TO QUESTIONNAIRE ISSUED BY THE TARIFF BOARD.

1. (a) The Gujarat Paper Mills Limited is a Public Limited Company registered under the Company's Act, 1913.

(b) Our Company is registered in India and its entire capital is rupee capital.

(c) All our shareholders are Indians and all the shares are held by Indians. In the beginning there was only one European shareholder and he held twenty shares of Rs. 100 each.

(d) All the Directors at present are Indians and take active part in the superior management of the Company. There was one European Director on the Board when the Company was registered but he has since then resigned his post.

2. (a) The Pulp section of our mills is not yet erected though a major part of the required machinery is lying at our mill premises at Barejadi. Barejadi is not the proper site for erecting a pulp mill and that question is under our considerations at present. We have in view to build up a pulp mill of the capacity sufficient to feed our Paper Machine.

We are at present working a small rag plant and we are able to make monthly about 15 tons of rag pulp.

(b) The total capacity of our Paper Mills is 8 tons of finished paper per day of 24 hours or approximately 2,500 tons per year.

3. The actual output of paper manufactured in the year 1936-37 amounts to 758 tons.

Our Mill began working in May, 1935, and upto March, 1936, we made about 450 tons of paper.

4. We beg to state below the chief classes of papers made during the year 1936-37.

	Tons.	Per cent. of the whole.
Writing . . . . .	401	52.9
White Printings . . . . .	60	8.0
Badami . . . . .	208	27.4
Cover papers . . . . .	25	3.2
Browns . . . . .	64	8.5
	<hr/> 758	<hr/> 100.0

We do not think that there is any possibility at present of making other classes of papers than those stated above.

\* Not printed.

5. Actual figures for the first year of our working (i.e., 1935-36) are not available. We beg to submit below the amounts of Primary Raw Materials consumed during the year 1936-37.

	Tons.
Imported Bleached Pulp . . . . .	221
Waste Paper . . . . .	638

6. For making one ton of paper the following quantities of Primary Materials will be required.

	Tons.
Bleached Wood Pulp . . . . .	1.18
Waste Paper . . . . .	1.18
Rags, old . . . . .	2.00

7. *Bamboo*.—We have to depend upon the Forester's calculations regarding the approximate quantity of bamboos available in Indian forests. So far as reports are published, the sustained yield bamboo is so vast that it can supply any demand. Beyond doubt, the Indian forests are rich enough to meet the requirement when scarcity of Pulp Wood is visible.

But apart from the natural growth of bamboo and its supply on a 4-5 years rotations basis, there exist possibilities of tremendous potential supply by way of regular plantation of the plant. The soil and climatic conditions are particularly suitable for this purpose and thousands of acres of land, now lying idle, around the Peninsula may be utilized for plantation purposes.

The suitability of bamboo for the manufacture of Paper Pulp is now an established fact. The pioneer research work carried out in the Forest Research Institute, Dehra Dun, is commendable in this respect and the execution of their theories into practice has been successfully carried out on commercial basis by the larger Indian Paper Mills. Both the acid and the alkali processes are suitable for bamboo digestion with certain variations in the quality of the ultimate yield.

Bamboo as a suitable raw material for paper-making has the greatest advantage over any other fibrous raw material including coniferous wood because of its natural growth. Bamboo requires 3-4 years to grow in striking contrast with Pulp Woods which take 30 years to be ripe for paper-making. In a small area a large number of shoots grow into a clump; this gives the advantage of obtaining substantial weights from small area, which will save considerable carting expenses. Again the natural structure of bamboo is such that a single bamboo tube weighs several pounds. These three factors place bamboo in the position of the cheapest paper-making raw material of the world. May the shortage of Pulp Wood be experienced, whenever it will be in future, bamboo fibre will be substituted as Pulp Wood had been, in the nineteenth century, when the chemical processes for wood cellulose were invented and an immediate want of paper was felt.

*Grass*.—Sabai grass is available in very large quantities in Indian forests. The collection of this plant is bound to be very expensive on account of its poor natural structure, and as the species grow mixed with one another. Though grass fibres give a harder and more bulky sheet than bamboo, it requires to be used in admixture with other fibres such as sulphite pulp or bamboo. Hence the suitability of Sabai grass is limited.

*Rags*.—New rags are freely exported and their supply is meagre. Old rags, too, are not available in great bulk and their fibres are very weak for the paper-maker, as they enter the paper mills worn out to the last stage.

*Paper cuttings.*—The demand created for this material, since the recent rise in pulp prices, is increasingly felt and particularly by mills of our type. We think that the supply of paper cuttings has reached its highest level and any further competition will still unduly enhance the prices.

10. Owing to increased freight and surcharge on C. P. Coals since January, 1932, the manufacture of paper has been considerably affected. We estimate that the power cost has been increased by Rs. 3-5 per ton of finished paper at Rs. 2-3 per ton of coal. We have taken no action in this respect. We give below a statement showing how the rates have increased since 1935.

		Per ton.	
		Rs. a.	
1935—			
Hirdagarh	. . . . .	7 0	Surcharge 12½ per cent.
Junardeo	. . . . .	7 0	Surcharge 12½ per cent.
Bengal	. . . . .	11 11	Re. 1 per ton in Bengal.
1936—			
Hirdagarh	. . . . .	7 0	12½ per cent.
Junardeo	. . . . .	7 0	12½ per cent.
Bengal	. . . . .	11 11	Re. 1 per ton in Bengal.
1937—			
Hirdagarh	. . . . .	7 0	12½ per cent.
From 1st April, 1937, the rates are as under.			
Junardeo	. . . . .	7 8	12½ per cent.
Bengal	. . . . .	11 11	Re. 1 per ton.

11. We boil our rags with lime or Caustic Soda.

12. (a) We imported in the year 1936-37 about 280 tons of Prima Bleached Sulphite Pulp.

(b) Sweden, Norway and Austria.

(c) Bhavnagar, Port Okha and Bombay.

(d) The c.i.f. price was between £11-5 to £15-10 per ton.

(e) Nil.

(f) Seven to eight rupees per ton.

(g) Rupees eight to rupees twelve per ton.

14. We do not add any pulp to our Badami paper, which is almost a woodfree paper and it comes in direct competition with imported mechanical Badami.

15. The price of wood pulp went up towards the middle of 1937. The prices were low upto that time only because of the general slums in commodity prices in the cycle of the trade depression. It is well-known that the pulp manufacturers could hardly make any profits for the last many years. Their condition was really one of distress. The prices of wood pulp rose up as commodity prices also went up. The unstable world political condition is partly responsible for soaring up of prices. The exporters at this time tried to hold up the whole position of prices in their hands and Prima Bleached Sulphite Pulp was quoted as high as £25-10 towards the end of 1937. Later on the price again eased and now the same quality stands at about £18-10 per ton. The scarcity of

Pulp Wood is not at all the ground for the rise in price level. Curtailment in production of pulp also cannot be accounted for the recent rise. Though there is no reason as to why the prices should not go down, it is expected that they will rather rise than fall.

16. As the prices of imported Wood Pulp increased, we developed our rag pulp plant and are at present making about 12 to 15 tons of rag pulp per month. We are still trying to increase this production and hope that our arrangements in this connection may be completed within the next year.

17. Form IV is submitted herewith duly filled in. The following auxiliary materials are required to make one ton of finished paper.

Caustic Soda . . .	3 to 4 per cent. on the weight of rags.
Bleaching Powder . . .	5 to 7 per cent. on the weight of rags.
Rosin . . . . .	0.028 tons per ton of finished paper.
Alum . . . . .	0.07 tons per ton of finished paper.
China Clay . . . . .	0.86 tons per ton of finished paper.

18. We were in the beginning importing English China Clay but are now using Indian Clay and Chalk. We are also using local Alum for Badamis and Wrappers. For White Paper Barejadi Alum is not suitable as it contains iron. Most of our sizing materials, i.e., Rosin, Silicate, Glue and Cassein comprise wholly of Indian products and we find them quite suited to our purpose. Caustic Soda, Bleaching Powder and Dyestuffs are all imported.

*China Clay.*—English China Clay was more expensive than local one. The c.i.f. price of the first quality was £4-18 and that of the second quality £4-11 per ton which is equivalent to Rs. 86 and Rs. 74 per ton f.o.r. Barejadi. At present Ramsipur China Clay costs us Rs. 51 f.o.r. Barejadi per ton and Jaipur French Chalk is delivered at Rs. 50 per ton f.o.r. Barejadi.

The Sulphate of Alumina supplied by Messrs. Ramco Chemical Works, Barejadi, is not exactly to our standard requirement. They are trying to bring it to that standard but their factory being recently started, it will take them some time. We have not tried alums made by other Chemical Factories as their price will be much higher due to railway freights.

Present rates of auxiliary materials are as under:—

	Per ton.
	Rs.
Caustic Soda . . . . .	220
Bleaching Powder . . . . .	120
Rosin . . . . .	280
Alum . . . . .	90
China clay . . . . .	51
French chalk . . . . .	50
Silicate . . . . .	90
Starch . . . . .	200
Cassein . . . . .	500

20. We cannot reply to this question exactly. We, however, roughly calculate from our experience in Bombay that about 250 men per day will be required for collection and sorting out of waste papers and rags.

21. We beg to give below the details of men employed in our mill.

Foremen or Departmental Heads . . . . .	9
Trained Assistants . . . . .	51
Coolies . . . . .	117
Boys and Girls . . . . .	12
Clerks . . . . .	7
Chowkidars . . . . .	5
Sweepers . . . . .	2
<b>Total . . . . .</b>	<b>203</b>

Salaries paid during the year 1936-37 amount to Rs. 48,296-7.

22. From the very beginning of our mill, we have employed Indians only. Even the erection of our building and machinery was done by Indian under the supervision of our Manager who is also an Indian. At present Indians are working in charge of Beaters, Paper Machine, Finishing and Engineering Departments and we find them all quite suitable for their individual jobs. We had employed one apprentice and had placed him on the Beaters but he left after a few months service. We always give first-hand facilities to our workmen and train them in such a way that they should be capable of holding the jobs assigned to them.

23. We have at present only fifteen permanent and ten temporary quarters in the mill premises. We have also hired some rooms for some members of our staff. Cooly labourers, being mostly local, have their houses in the neighbourhood and even if quarters were provided for them, they would better live in their homes.

The services of an experienced compounder have been engaged and he regularly attends the mills twice a day.

We have in view to promote the welfare of our labourers in all possible directions in course of time.

24. (a) We have installed a 265 B.H.P. Diesel Engine and one 100 B.H.P. Steam Engine. The Diesel Engine drives the Beaters, the Kneading Machine. Pumps, and the constant part of our Paper Machine. The Steam Engine is erected for the variable drive of the Paper Machine.

(c) Our consumption of fuel per ton of finished paper works out as follows:—

	<b>Tons.</b>
Coal per ton of finished paper . . . . .	1.57
Burmah-Shell Diesel Oil A . . . . .	0.25

25. (1) We have no correct estimate of the total Indian production of paper but it might be about 52,444 tons during the year 1936-37.

(2) The total imports of protected and unprotected papers including old newspapers, according to Sea-borne Trade Returns, amount to 135,878 tons.

The Indian Mills make 47,514 tons of the protected qualities and 4,930 tons of unprotected qualities.

Imports of protected papers amount to 11,839 tons and those of unprotected papers to 124,039 tons.

Therefore, the Indian demand for protected qualities of paper works out at 59,353 tons and that for unprotected ones at 128,969 tons.

26. (a) There already exists a market for Indian made pulp to the extent of the quantity of imported wood pulp. If the prices of indigenous pulp were lower than those of imported wood pulp there is every reason to believe that the Indian production of paper might be increased to the fullest capacity of the mills. For instance, if our mill had a regular supply of pulp, we should be in a position to increase our output to over 2,400 tons per year. This is more or less true of other mills also.

It is probable that smaller units of paper mills may come into existence at important commercial centres due to the heavy burden of railway freights payable by mills of larger dimensions to carry their finished product over very long distances. It is, therefore, possible that pulp mills will find a future market for their product.

(b) The market for Indian pulp in foreign countries will naturally depend upon considerations of price. And the problem of price is likely to be soluble if pulp is manufactured to a certain economic production unit—say, about 100 tons per day in a single mill.

The views of the Board at the time of their last inquiry still hold good to-day and the bamboo pulp industry must be allowed to look for itself.

Research work in connection with mechanical pulp from bamboo must be undertaken and adequate facilities be given in this direction.

27. (a) The effect of the protective duty on imported pulp has given an impetus to the Indian mills to use more of indigenous raw materials. The Calcutta Paper Mills are already making Bamboo Pulp and the Board's expectations are being fulfilled in this matter. But on the whole the duty on Wood Pulp is detrimental to the advancement of the Paper Industry. Recent enhanced prices of wood pulp have had a terrible effect on the Indian mills. Not only was their production curtailed but sometimes mills were actually stopped for want of pulp. In future also the import duty will be disadvantageous to the Paper Mills who do not make their own pulp and who have mainly to depend upon imported pulp. The advanced prices of pulp will compel the Calcutta mills to continue their activities to manufacture more of bamboo pulp, as they have already remodelled their plants for the use of bamboo. Therefore, the fundamental aims for which protection is granted will not be violated.

As already stated we expect that the prices of wood pulp will rise and the condition of our mill will be much more precarious if the Board recommends the continuation of the pulp duty.

	Rs. A.
28. The c.i.f. price of Cream laid paper had been	
£18-10 per ton in 1936-37 which is equivalent	
to . . . . .	262 7
Landing charges . . . . .	5 0
Import duty . . . . .	175 0
Total . . . . .	442 7
<hr/>	
The c.i.f. price of mechanical Badami which	
competes with our Badami had been £10-10	
per ton in the year 1936-37, and this is	
equivalent to . . . . .	142 1
Landing charges . . . . .	5 0
Import duty . . . . .	175 0
Total . . . . .	322 1
<hr/>	



The c.i.f. prices of Antiques and White Printings had been during that year £20-10 and £18-5 per ton respectively.

29. A comparative statement showing the mileage and freights to commercial centres where imported papers compete with our own is attached in Appendix "A".

30. The prices realized by our mills during the year 1936-37 are given below:—

	Per lb.	
	As. P.	As. P.
White Printing . . . . .	2 10	to 2 11
Cream laids . . . . .	3 0	„ 3 1
Badami . . . . .	1 9	„ 1 11
Cover papers . . . . .	2 4	„ 2 6
Kraft . . . . .	1 10	„ 1 11
Browns . . . . .	0 9	„ 1 0

31. The prices realized in the vicinity market and in those of up-country centres after deducting freights generally correspond with each other but we sell better in the up-country centres. The following statement will prove the validity of our argument:—

		Per lb.
		As. P.
Vicinity markets—		
(1) Baroda:—		
Selling price for Cream laid . . . . .		3 0
Less freight . . . . .	0-5	
Commission . . . . .	2-88	
		<hr/> 0 3-38
Net realization		<hr/> 2 8-62
(2) Ahmedabad:—		
Selling price for Cream laid . . . . .		3 3
Less freight . . . . .	0-5	
Commission . . . . .	2-31	
		<hr/> 0 2-81
Net realization		<hr/> 3 0-19
Up-country market—		
Delhi-Agra-Cawnpore:—		
Selling price for Cream laid . . . . .		3 7
Less freight . . . . .	2-5	
Commission . . . . .	4-3	
		<hr/> 0 6-8
Net realization		<hr/> 3 0-2

32. The prices realized by us are generally 12 per cent. lower than the imported papers and this includes an allowance of 5 per cent. for inferior quality of our paper.

33. Foreign manufacturers do sell their papers in Indian markets below the cost of production or with a very small margin. This position is true. The reason for this is that many paper mills in Europe have curtailed their production and reports are published in technical magazines that some mills have been totally stopped on account of keen competition and general trade depression. Prices realized in home markets are more remunerative than abroad as those foreign markets are approached by a number of mills competing with one another, the result being that prices are cut more and more.

34. The competition is keenest in Kathiawar and Bombay.

35. Bamboo paper is sold a bit lower than grass paper but the difference is not due to the inferiority of the former to the latter. Bamboo paper is newly introduced on the market and the buyer always feels a bit nervous with a new product. Grass paper—it is not always really a whole-grass paper—is harder and more bulky but we think that it is the middle-man and the bazaar who make the best use of the quality difference and handle the situation as they like.

36. Our quality has been affected on account of the recent rise in pulp prices. We have been obliged to use more of our own rag pulp but the quality has still suffered for want of pulp.

We have supplied about 54 tons of White Writing papers to the Baroda State at As. 2 8'62 p. per lb.

40. We have under consideration a scheme to install our Pulp Plant but the final decisions are not yet arrived at.

41. The block value as standing in the accounts on 31st March, 1937, is as under:—

	Rs. A. P.
(a) Leases and concessions . . . . .	Nil.
(b) Lands . . . . .	5,662 13 3
(c) Buildings . . . . .	64,177 8 2
(d) Plant and machinery . . . . .	1,91,684 3 11
(e) Other assets—	
Furniture . . . . .	Rs. A. 876 9
Tools and Spares . . . . .	3,424 0
Electric fittings . . . . .	1,126 8
	5,427 1 0
<b>Total</b> . . . . .	<b>2,66,951 10 4</b>

42. The cost of erecting a mill of 8 tons daily production would amount to Rs. 10,00,000.

43. Our mill has started working very recently and owing to profits being insufficient,

(1) nothing has been written off for depreciation, as per Directors' report for the year 1936-37, the amount of Rs. 3,500 has, however, been laid aside towards depreciation fund, out of the profits for that year.

(2) no reserve fund either from profits or by any other way has been created.

44. (a) The paid-up share capital of our Company amounts to Rs. 1,51,900.

(b) No amount has been distributed as dividend but as per report of the Directors, a sum of Rs. 7,632-8 has been set aside for distribution on ordinary shares of Rs. 100 each.

(c) This amount of dividend works out to 5 per cent. on the paid-up share capital of the Company.

45. We beg to enclose copies of Balance-Sheets for the years 1935-36 and 1936-37.

46. Our Company has not raised any loan by way of debentures, but the Managing Agents have advanced to the Company the sum of Rs. 1,28,023-12-7.

47. The Forms V and VI relating to the cost of manufacture are attached duly filled in as desired.

48. The cost of chemicals for sizing and the cost of labour charges will be reduced in the ensuing year. There will be considerable reductions in all the items of cost when full output is attained.

49. At an average the Company holds stocks to the value of Rs. 80,000 inclusive of primary raw materials, auxiliary materials, stores and finished products.

The average outstandings in respect of goods sold remain at about Rs. 23,000.

50. The working capital is at present provided by the Managing Agents as per requirements.

51. Neither Bamboo nor Grass is used in our mills and hence our case for demanding continuation of protection is weak; but we have had certain experience in one branch of the industry and have now to look after the other, i.e., the Pulp side. The present protection has helped the Paper industry considerably to stand foreign competition and its continuation alone can help it to work its plants and to complete the contemplated extensions.

(i) The principal recommendations set forth by the Board at their first inquiry and the decisions taken by the Legislative Assembly and the Government of India and the same as amended from time to time upto the year 1936 should, in our opinion, stay for a further period of 10 years. We mean, that the principle of protection, namely, specific duties for White Printing, Writing and Badami papers and *ad valorem* duties for other classes, should not be altered at this stage.

(ii) The rates of protective duties should be continued as they rule at present. We beg to submit that the surcharge of 25 per cent. should not be eliminated from the Customs Schedules. The primary conditions as laid down by the Fiscal Commission are fulfilled in case of the Pulp and Paper making Industries.

(a) The Paper Industry possesses the natural advantages in case of abundant supply of Bamboo and Sabai Grass.

(b) Sufficient supply of labour already exists in India.

(c) The Home markets for paper are very large. Development of education and industries and Self-Government are slowly progressing, consequently the demand for paper must increase. The *per capita* consumption of India is very poor in comparison to other countries and this shows that there are possibilities of expansion of the Home market. The increased production of the Indian mills and gradual increment in imported paper amply prove the validity of the statement.

(d) The disadvantage of long distances between Bamboo and Coal fields is only a partial one and can be made good by the relative cheap price of primary raw material and cheap labour.

(e) If protection were not continued the development of the Paper Industry will stop and the labour and money poured in the Industry will be wasted against the interest of the country.

(f) The protection must be continued further for a period of 10 years, during which time the Paper Mills will try their best eventually to be able to stand world competition after the protection was withdrawn.

The opponents of protection advocate that by increasing the duty on Paper, the Printing Industry will naturally suffer and the ultimate burden on the tax-payer will be increased. For the development of national

Industry some sacrifice must be made. The Industry makes good this sacrifice by other ways such as partial removal of unemployment, increment in Government Revenues, opportunities for investment of new capital, the training of the country's youths and new resources for national wealth. On account of internal competition between Ifome Mills the prices will be, to some extent, cut down and the effect of extra duties will not be so severely felt by the printer and the consumer.

The gradual exhaustion of the coniferous wood forests in Europe and Canada is a fact. Enormous productions in Europe and America prove that paper-making timber is being used up faster and therefore Bamboo paper has a tremendous future. The Board at their first inquiry found that the exploratory work in case of Bamboo should be completed before development of the Industry can begin. This work has considerably progressed but is not yet completed altogether.

The Paper Industry is a Basic Industry and has a great national importance and its development cannot therefore, be overlooked.

The importance of this Industry in times of war is incalculable to the Government of the country.

The recommendations of the Board and the support they received from the Legislature and the Central Government are sufficient indications that the Industry deserves continued protection until the exploratory work is completed.

The Mills have tried to adapt themselves to the latest conditions in their internal organization. They have tried and are still doing so to bring down their costs. Increased use of Bamboo and other indigenous raw materials proves the enthusiasm of the Mills to deserve protection.

A number of new Mills are starting and the expansion of the Industry is taking place as expected. Qualities such as Kraft paper, which are not made in India upto this time, may be introduced and new avenues for paper manufacture may be opened from technical point of view.

52. Our Mill having been recently started we cannot show any improvement in (1) reduction in cost and (3) improvement in the quality of paper. As regards (2) we can say that we have constructed a gravity filter to catch up a great portion of the fibres from our waste waters and we are trying to make out of it thick boards, fibre-bags and some other suitable articles. We quite see the limitations of such a recovery but hope that it will establish a small Cottage Industry.

As we have said in our reply to Question No. 48, the costs for labour and chemicals will be reduced and we beg to say that we shall naturally see that they are reduced under other heads also.

We hope the Board will realize that the period of two and half years of our working is too short for improvements desired to deserve protection.

53. We do not suggest any modifications on the classifications proposed by the Board in the year 1936.

54. We have already given our views regarding this point in our reply to Question No. 51 and have elaborated the same in the next reply.

55. If revenue duties were imposed at the present rates, i.e., if protective duties were withdrawn, the position of the Paper Industry will be precarious. The competition by foreign Mills will be severe and the profits accrued by Indian Mills will be meagre. In short, the withdrawal of protection will put the Indian Mills in the position of foreign Paper Mills who are at present either working in loss or on only a small margin. Consequently production of the Indian Mills will be curtailed and some Mills may be totally closed. New Mills which are already being erected and those who are about to do so will find it very difficult to work on sound footing. The result of all this will be disastrous on the finances of the Paper Industry in general.

Even when protection is in force, we could not have shown any profit for the year 1936-37, provided, the Managing Agents had charged their share of commission and full depreciation were calculated. Under the circumstances, it would be very difficult to raise additional capital in order to promote the proposed establishment of the Pulp Section of our Mill.

No doubt, there are disadvantages in the system of specific duty. When prices rise full protection will not be enjoyed by the Mills, on the other hand if prices fall protection may be proved to be high. We believe that the present level of the prices will rise before very long when the degree of protection will be low.

Revenue duties may be introduced instead of specific protective duties in order that the degree of protection should be precise. The difficulties to collect revenue duties are obvious. There are constant occasions of dispute between the Customs Officials and the importer about fixing of the value of goods. False declarations amounting to fraud are generally made by unscrupulous merchants to evade the assessment which accelerates the position of foreign paper being sold cheaper than inland paper.

We beg to point out that the c.i.f. prices of White Printing and Writing Papers ruling about the year 1932 were somewhere near £29-0 per ton whereas they had gone down to £17-10 per ton or even lower, which meant a reduction of more than 33 per cent. This shows that the consumer's burden was very much minimised. If we consider the price levels of Japanese imports of protected classes of papers during the year 1935 to 1937, it is almost impossible for an Indian Paper Mill to compete, even if rates of protection were doubled.

The effect of this low level of prices on the Paper Manufacturer was quite adverse. The Indian Mills are getting about 25 per cent. lower prices now than what they were doing during 1932 and though the rate of protection of one anna specific duty plus three pice surcharge appears to be high on present prices, it is not at all excessive for the Indian Mills. Had it been so the Mills ought to have acquired huge profits, which is not the case.

#### FORM I.—Primary Materials.

	1936-37.
	Tons.
<i>Bamboo—</i>	
(1) Quantity of material used . . . . .	<i>Nil.</i>
(2) Quantity of finished paper which material represents . . . . .	<i>Nil.</i>
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	<i>Nil.</i>
<i>Grass.—</i>	
(1) Quantity of material used . . . . .	<i>Nil.</i>
(2) Quantity of finished paper which material represents . . . . .	<i>Nil.</i>
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	<i>Nil.</i>
<i>Waste Paper and Paper Cuttings—</i>	
(1) Quantity of material used . . . . .	633
(2) Quantity of finished paper which material represents . . . . .	534.8
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	74.5%
<i>Other indigenous materials—</i>	
(1) Quantity of material used . . . . .	<i>Nil.</i>
(2) Quantity of finished paper which material represents . . . . .	<i>Nil.</i>
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	<i>Nil.</i>

	1936-37. Tons.
<i>Total indigenous materials—</i>	
(1) Quantity of material used . . . . .	<i>Nil.</i>
(2) Quantity of finished paper which material represents . . . . .	<i>Nil.</i>
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	<i>Nil.</i>
<i>Imported Pulp—</i>	
(1) Quantity of material used . . . . .	221
(2) Quantity of finished paper which material represents . . . . .	187.2
(3) Percentage of (2) on the total quantity of paper manufactured . . . . .	24.7%

## FORM IV.—Auxiliary Materials.

	1936-37.	Price Rs. per ton.
	Tons. cwts.	
<i>Pulp-making material—</i>		
Quantity of material used—		
(a) Indian . . . . .	<i>Nil.</i>	<i>Nil.</i>
(b) Imported . . . . .	<i>Nil.</i>	<i>Nil.</i>
<i>Bleaching material—</i>		
Quantity of material used—		
(a) Indian . . . . .	<i>Nil.</i>	<i>Nil.</i>
(b) Imported . . . . .	<i>Nil.</i>	<i>Nil.</i>
<i>Loading materials—</i>		
Quantity of material used—		
(a) Indian . . . . .	<i>Nil.</i>	<i>Nil.</i>
(b) Imported . . . . .	67 10	80
<i>Sizing Material.—</i>		
Quantity of material used—		
(a) Indian—		
Rosin . . . . .	30 10	250
Alum . . . . .	52 0	110
(b) Imported—		
Alum . . . . .	38 0	110
Caustic Soda . . . . .	3 15	250
<i>Any other auxiliary material—</i>		
Quantity of material used—		
(a) Indian . . . . .	7 11	<i>Nil.</i>
(b) Imported . . . . .	6 0	<i>Nil.</i>
<i>Total auxiliary materials—</i>		
Quantity of material used—		
(a) Indian . . . . .	90 1	...
(b) Imported . . . . .	115 5	...

## FORM V.—Total expenditure incurred on the production of Paper.

1936-37.

Rs. A. P. Per cent.

*Manufacturing expenses—*

## 1. Primary materials—

Tons. cwt. lb. qr.

Waste paper . . .	633 17 1 2	51,991 8 8	18.40
2. Imported pulp . . .	221 0 0 0	45,765 3 6	16.20
3. Auxiliary materials—			
China Clay . . .	67 10 0 0	5,400 0 0	1.91
Rosin . . .	30 10 0 0	7,345 8 0	2.58
Caustic Soda . . .	3 15 0 0	937 8 0	0.32
Alum . . .	90 0 0 0	9,900 0 0	3.50
Others . . .	...	5,805 4 2	2.04
4. Power and Fuel . . .	1,186 0 0 0	33,043 5 2	11.68
5. Current repairs and maintenance . . .	...	8,457 8 9	1.22
6. Labour . . .	...	46,271 11 0	12.83
7. Supervision and establishment—			
(a) Salaries of technical staff . . .	...	7,900 0 0	2.89
(b) Salaries of non-technical staff . . .	...	1,200 0 0	0.42
8. Packing . . .	...	6,711 0 0	2.37
9. Any other items in cost of manufacture . . .	...	5,298 6 2	1.87

Total	...	2,21,026 15 5	78.23
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*Overhead charges—*

10. Selling expenses . . .	...	12,466 14 3	4.41
11. Insurance . . .	...	1,268 15 4	0.44
12. Rents, rates and taxes (excluding income-tax) . . .	...	933 9 9	0.32
13. Depreciation at the following rates . . .	...	17,388 0 0	6.23
14. Interest on working capital . . .	...	9,661 2 2	3.40
15. Head Office expenses and Managing Agents' commission . . .	...	19,215 4 0	6.76
16. Miscellaneous . . .	...	601 14 6	0.21

Total	...	61,535 12 0	21.77
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Grand total	...	2,82,562 11 5	100.00
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Total output of paper for the year in tons . . . 758

Rates at which depreciation have been calculated.

	Per cent.
Machinery . . . . .	7½
Buildings . . . . .	5
Furniture . . . . .	5
Tools and spares . . . . .	5
Electrical Fittings . . . . .	7½

Form VI.—Works cost per ton of finished paper.

1936-37.

	Tons.	Rs. per ton.
<i>Manufacturing Expenses—</i>		
1. Primary materials		
Waste Papers . . . . .	836	68.59
2. Imported Pulp . . . . .	291	60.37
3. Auxiliary materials—		
China clay . . . . .	089	7.12
Rosin . . . . .	044	10.92
Alum . . . . .	119	13.06
Others . . . . .	...	7.66
4. Power and fuel . . . . .	1,569	43.59
5. Current repairs and maintenance . . . . .	...	4.56
6. Labour . . . . .	...	47.85
7. Supervision and establishment—		
Salaries of technical staff . . . . .	...	10.43
Salaries of non-technical staff . . . . .	...	1.58
8. Packing . . . . .	...	8.87
9. Other items in cost of manufacture . . . . .	...	6.99
Total . . . . .	...	291.59
<i>Overhead charges—</i>		
10. Selling expenses . . . . .	...	16.44
11. Insurance . . . . .	...	1.67
12. Rents, rates and taxes (excluding income-tax) . . . . .	...	1.24
13. Depreciation . . . . .	...	22.94
14. Interest on working capital . . . . .	...	12.74
15. Head Office expenses, and Managing Agents' commission . . . . .	...	25.36
16. Miscellaneous . . . . .	...	0.79
Total . . . . .	...	81.18
Grand total . . . . .	...	372.77

Total output of paper for the year in tons . . . . . 758

N.B.—Depreciation is calculated at rates given in Form V



## APPENDIX "A"—(Qn. 29.)

*A comparative statement showing milcage and freights to commercial centres where foreign paper competes with our own.*

Name of Port.	Marketing Centre.	Miles from Port.	Rate per mile per maund.	Miles from Barejadi to Marketing Centre.	Rate per maund from Port.	Rate per maund from Barejadi.	Rate per mile per maund.
					Rs. A. P.	Rs. A. P.	
Navlakhi .	Ahmedabad .	174	0.33	11	0 5 1	Motor trans- port. Do.	Nil.
Okha .	Ahmedabad .	310	0.35	11	0 8 7		Nil.
Karachi .	Delhi .	1,054	0.29	550	1 9 8	1 0 7	0.36
Karachi .	Cawnpore .	1,039	0.295	709	1 9 8	0 15 7	0.26
Bombay .	Bombay .	Nil	Nil	311	Nil	0 8 9	0.33
Bombay .	Nagpur .	520	0.29	585	0 12 10	1 5 10	0.45

The transport facilities in India are very meagre and it affects considerably industries of our type. Railway Companies do not attend to the question to apply conference rates which also are higher. It could be seen from the above statement that only the B. B. & S. I. Railway has granted special concessions through compulsion on account of competition, irrespective of the distances.

(2) *Letter No. 297/38-39, dated the 28th May, 1938.*

With reference to the oral evidence given by me on the 14th March, 1938, before the Board at Bombay and the copy of the same sent herewith and Mr. Rahimtoola's suggestion to send revised figures as appearing on the page 3 of the second lot in the typewritten report I beg to submit as under:—

If unprovided depreciation at 6½ per cent. of Rs. 17,000 and managing agents' commission of Rs. 13,000 at 5 per cent. on sale proceeds of Rs. 2,63,619 provided the total comes to about Rs. 39 per ton on a production of 758 tons. After deducting Rs. 39 from the cost of Rs. 372 as shown the cost comes to Rs. 339. When selling average is of Rs. 349 it is natural that the profit is Rs. 16 per ton and consequently Rs. 12,128 which is approximate to the figure shown in the profit and loss account of our company which is Rs. 12,331.

(3) *Letter No. 298/38-39, dated the 28th May, 1938.*

With further reference to our replies to the questionnaire of the Tariff Board and consequent upon the discussions taken place at the time of the visit of the President to our mills at Barejadi and our oral evidence at Bombay, we beg to send this revised statement.

*Question No. 51, reply (II).*—We beg to submit the following statement which will amply elucidate the adverse effect of removing the present surcharge of 3 pies per lb. on the financial position of our company:—

*Statement showing the effect of removing surcharge on the finance of the company based on our latest figures.*

Average selling price 1936-37 . . . . .	Rs.	349 per ton.
Surcharge . . . . .	"	35 "
<hr/>		
Price realizable at Protective duty of one anna per lb. . . . .	"	314 "
<hr/>		
Total output 1936-37 . . . . .		758 tons.
Total receipts at 314 . . . . .	Rs.	2,38,012
Deduct works expenditure 1936-37 . . . . .	"	2,21,026
<hr/>		
Surplus . . . . .	"	16,986
<hr/>		
Depreciation at 6½ per cent. blocks as at March 1937—Rs. 2,66,951 . . . . .	"	16,684
Interest at 6 per cent. on loans of Rs. 1,60,000 . . . . .	"	9,661
<hr/>		
Deficit . . . . .	"	9,359

Managing agents' commission of Rs. 13,000, *plus* selling charges of Rs. 12,466 *plus* insurance charges of Rs. 1,268, rent, rates and taxes, Rs. 993, miscellaneous Rs. 601 would add to this loss making total to Rs. 37,697. There is no possibility to declare dividend to shareholders.

*(4) Letter, dated the 29th May, 1938.*

With reference to my oral evidence I beg to submit as follows sending samples separately:—

*Re. coloured glazed printing papers.*—In my oral evidence I said that coloured glazed printing papers containing even 70 per cent. and up mechanical pulp should be protected from substance 35 grams and up. I am sending you samples of such papers made in our mills from waste papers and in my opinion papers made from half-bleached bamboo pulp could be well substituted for these imported grades if they are classified under protected classes.

*Re. unbleached coloured kraft papers, etc.*—I am sending samples of pink and green coloured kraft papers which are generally used for printing advertising matters, etc. These papers which ought to have been classified under protected classes are now imported under revenue duty. The coloured kraft pulp cannot be said mechanical pulp and a revision in this respect is necessary. Such papers do not only come against genuine Indian manufacture of coloured papers but also papers like Badami which are used as writing papers. If the sample sent of foreign make is watched carefully and a sample of Badami of Indian make it would be found that imported paper can be substituted and in fact it is substituted.

*Re. wrappings and cover papers.*—One side glazed M. G. cover papers owing to containing mechanical pulp more than 70 per cent. are imported in India under revenue duty and directly affect Indian manufacture of tinted cover papers. Indian mills are in a position to meet with cover paper needs and they are solely used for printing purpose. The question of putting M. G. cover papers is very important in protected class. Buyers buy M. G. papers only on account of cheapness which is mainly due to less duty.

Our mill make red brown wrapping papers as per sample and if you will see the enclosed sample of foreign M. G. red brown you will find that our papers could be substituted for them. In fact they are sold now but manufacture of it is prohibitive owing to foreign competition. The market of these papers is very limited and our mills could well meet with Indian demands if they are classified under protected grades.

**Evidence of Messrs. JAYANTILAL MUTILAL PATEL, KRISHNALAL MAGANLAL and MAHOMED UMAR ABDULLABHAI**  
**recorded at Bombay on Monday, the 14th March, 1938.**

**B.—ORAL.**

*President.*—We understand you have got a plant for manufacturing pulp from bamboo?

*Mr. Patel.*—Yes, but it is not a complete plant.

*President.*—Are you contemplating using bamboo in the near future?

*Mr. Patel.*—Yes.

*President.*—When do you expect to do it?

*Mr. Patel.*—It will take about two to three years.

*President.*—And you think you have sufficient quantities of bamboo available within reasonable distance?

*Mr. Patel.*—Yes.

*President.*—At what price do you think you will be able to obtain it delivered at mill?

*Mr. Patel.*—About Rs. 20.

*President.*—At what distance?

*Mr. Patel.*—About 100 to 165 miles. It is somewhere near Surat and in the northern side of Gujarat.

*President.*—Your present output is about 758 tons?

*Mr. Patel.*—Yes, in 1937 it will be about 1,000 tons.

*President.*—Is your year financial year or calendar year?

*Mr. Patel.*—Financial year, upto 31st March.

*President.*—The materials you are using are waste paper and rags?

*Mr. Patel.*—Yes.

*President.*—Can you give us an idea of the qualities of waste paper you are using?

*Mr. Patel.*—We are generally buying waste paper in four to five grades—white No. 1, white No. 2, white No. 3 and then art paper. Then there are certain classifications for badami—mixed grades.

*President.*—What does white No. 1 represent?

*Mr. Patel.*—Pure white paper, No. 2 is pure white paper but a little darker in shade, No. 3 white paper but slightly mechanical mixed and No. 4 is art paper, and then badami which will be wrappers and other sort of papers.

*President.*—What will be the average price of the different qualities?

*Mr. Patel.*—The average that we have worked out comes to about Rs. 85 per ton.

*President.*—What will be the highest and the lowest?

*Mr. Patel.*—The highest comes to about Rs. 140 and the lowest quality would be about Rs. 25 a ton.

*President.*—The variations are between Rs. 140 and Rs. 25 according to quality?

*Mr. Patel.*—Yes.

*President.*—In regard to rags, in how many qualities do you buy?

*Mr. Patel.*—We buy practically in two qualities: these are old rags and we sort these in three to four grades, and then there are new rags.

*President.*—What would be the price of new rags?

*Mr. Patel.*—The average comes to about Rs. 270 per ton.

*President.*—And old rags?

*Mr. Patel.*—The rate vary from Rs. 50 to Rs. 70 a ton.

*President.*—What other materials do you use?

*Mr. Patel.*—Up till now we have not made many experiments. We are using certain quantity of yarn waste for which we are paying Rs. 25 to Rs. 30 per ton.

*President.*—You are using no other materials?

*Mr. Patel.*—Yes.

*President.*—You have made some experiments with grass; is that a success?

*Mr. Patel.*—No.

*President.*—You are using imported pulp. It is bleached or unbleached?

*Mr. Patel.*—We are using bleached pulp.

*President.*—Is it more economical to use bleached pulp than unbleached pulp?

*Mr. Patel.*—We had no bleaching arrangements, so we had no option but to use bleached pulp.

*Mr. Rahimtoola.*—What proportion of imported pulp are you using at present?

*Mr. Patel.*—Not much. We are now solely using rags in place of imported pulp on account of the higher price. Last year we used more than 40 per cent.

*Mr. Rahimtoola.*—You started the mill two years ago?

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—With what object did you start when raw materials were not available?

*Mr. Patel.*—There was the possibility of a good market on this side. Besides we hoped to be able to manufacture in sufficiently large quantities to meet the demand of Gujarat from the raw materials we are at present using and we have also in mind to start a bamboo pulp mill. We have some spare machinery with us and as soon as we are able to erect them we shall take up the question of manufacture of bamboo pulp.

*Mr. Rahimtoola.*—All that machinery would be able to produce 2,500 tons?

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—What was the price of the machine?

*Mr. Patel.*—Rs. 30,000 delivered at Assam.

*Mr. Rahimtoola.*—What would be the present-day cost?

*Mr. Patel.*—Five lakhs of rupees delivered in Gujarat.

*Mr. Rahimtoola.*—Is it Continental or British?

*Mr. Patel.*—Continental.

*Mr. Rahimtoola.*—The capital you have shown for mills and buildings is about Rs. 3 lakhs? You have paid Rs. 30,000 for machinery.

*Mr. Patel.*—That includes erection, power plant, buildings, railway freight and other charges. Cutting machine was not included in this machinery, so we had to import it: the digester was not there and we had to get it.

*Mr. Rahimtoola.*—You say the price of wood pulp is between £11 and £15. Is that bleached pulp?

*Mr. Patel.*—Yes. Easy bleaching sulphite is something between £9 and £11: to-day it is £12 to £14.

*President.*—And the present price of bleached pulp?

*Mr. Patel.*—It is quoted from £16-10 to £17 c.i.f.

*Mr. Rahimtoola.*—I understand the price is £13 c.i.f.

*Mr. Patel.*—No.

*Mr. Rahimtoola.*—Shall we take it at about £15?

*Mr. Patel.*—It may be for some inferior grade. The qualities which we received are not below £16-10 for the better stuff.

*Mr. Rahimtoola.*—When did the price rise?

*Mr. Patel.*—In September, 1936.

*Mr. Rahimtoola.*—And the price of paper?

*Mr. Patel.*—Rose simultaneously, on the Continent.

*President.*—We have been told that the price rise occurred in the middle of June, 1937.

*Mr. Patel.*—Indian mills began increasing from January, 1937.

*President.*—We were told the highest price of pulp was reached about the middle of 1937 and after that there was a fall.

*Mr. Patel.*—Yes.

*President.*—In regard to your auxiliary materials, you are importing caustic soda, bleaching powder and dye-stuff.

*Mr. Patel.*—Yes, all others are Indian products.

*President.*—In regard to your labour you have not provided any quarters for it?

*Mr. Patel.*—We have got quarters for superior labour: ordinary labour come from nearby villages and they like to live in their own homes.

*President.*—Do you provide any medical aid?

*Mr. Patel.*—We generally give free medical treatment to all workers.

*President.*—Have you got a Doctor?

*Mr. Patel.*—We have one but he is not a qualified doctor but he knows his job and attends regularly.

*President.*—Do you provide any other amenities for your labour?

*Mr. Patel.*—We have an idea but it is a difficult problem for us in the present circumstances. We give sickness benefits to our labourers.

*President.*—You were present when we discussed this question of imports of tinted badami with the Collector of Customs, Bombay. Have you experienced any difficulty of this kind?

*Mr. Patel.*—We have seen certain papers coming via Karachi port for Cawnpore—purely mechanical badami, tinted. Similar type of paper is imported at Madras.

*President.*—It is imported as printing but is used as writing?

*Mr. Patel.*—Yes.

*President.*—Of course if it is hard-sized the Customs people ought to class it as writing paper and charge it the protective duty. Have you seen any paper similar in texture to badami but coloured pink?

*Mr. Patel.*—Yes, certain kinds of envelope paper. They are made from unbleached stuff and imported into India for making envelopes and things like that.

*Mr. Rahimtoola.*—With regard to your costs you have said that Rs. 372 is the total cost of production inclusive of overhead charges but in your reply to one of the questions you state that in the profit shown in 1936-37 a sum of Rs. 17,000 for depreciation and managing agents have not been included.

*Mr. Patel.*—This Rs. 372 is the cost including depreciation and managing agents' commission.

*Mr. Rahimtoola.*—If I exclude these two items, will that give me the total cost? Depreciation per ton 22.94 and Head Office expenses 25.36. I want to know whether the total of these two items have been excluded.

*Mr. Patel.*—No. The actual commission to managing agents amounting to Rs. 13,000 has been excluded from the Head Office expenses. See Form V, Item No. 15—Rs. 19,215. Out of this Rs. 13,180 has not been set aside. That means that this 19,215 includes Rs. 13,180.

*Mr. Rahimtoola.*—That means Head Office expense you should have charged as Rs. 19,215 but you have charged on in profit and loss account only Rs. 6,035. What was this Rs. 19,215 based on?

*Mr. Patel.*—5 per cent. on net sales; of Rs. 2,63,619; and Ahmedabad Head Office charges of Rs. 6,035.

*Mr. Rahimtoola.*—What is the rate for depreciation?

*Mr. Patel.*—6½ per cent.

*Mr. Rahimtoola.*—How much you have allowed for depreciation?

*Mr. Patel.*—We have allowed this year Rs. 3,500; out of gross profit of Rs. 12,331.

*Mr. Rahimtoola.*—And the other is Rs. 6,035 for Head Office expenses.

*Mr. Patel.*—Yes.

*President.*—Do your selling expenses include freight?

*Mr. Patel.*—No. These are the actual selling expenses incurred.

*Mr. Rahimtoola.*—If you take Rs. 17,000 as depreciation and Rs. 19,000 for Head Office expenses, the total comes to Rs. 36,000 and if we deduct Rs. 10,000 from that, it leaves a balance of Rs. 26,000 which works out to Rs. 35 per ton. If I exclude Rs. 35 from Rs. 372, it comes to Rs. 337.

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—Your realised price is Rs. 329.

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—How can you make a profit?

*Mr. Patel.*—I don't follow.

*Mr. Rahimtoola.*—If you look at the additional statement submitted by you, it is written that the average price realised is Rs. 329.

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—Whereas your cost without profit comes to Rs. 337.

*Mr. Patel.*—Yes, if we provide for all these things.

*Mr. Rahimtoola.*—You told me that if I include Rs. 17,000 and Rs. 19,000, your cost comes to Rs. 372. If you look at Form V and Form VI, you will be able to understand. In Form VI you have given the actual works cost per ton of finished paper including overhead as Rs. 372.

*Mr. Patel.*—Yes, including Depreciation and Head Office expenses.

*Mr. Rahimtoola.*—If I give you Rs. 372 per ton, Head Office expenses and depreciation come to Rs. 36,000.

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—You say instead of Rs. 36,000, you are providing (Rs. 7,000 plus Rs. 3,000) Rs. 10,000. Rs. 26,000 has to be excluded in order to arrive at the actual cost.

*Mr. Patel.*—I don't quite follow. Our cost comes to Rs. 372.

*Mr. Rahimtoola.*—If I exclude Rs. 26,000, your cost per ton is Rs. 372 minus Rs. 35.

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—Your total production is 758 tons. That means your cost of production exclusive of profit is Rs. 337.

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—Whereas your average realised price is Rs. 349. So you have made a loss and not a profit.

*Mr. Patel.*—I don't follow you.

*Mr. Patel.*—We have not charged Rs. 13,000 for the Managing Agency commission.

*Mr. Rahimtoola.*—I am taking Rs. 10,000 instead of Rs. 36,000. In the light of what I have pointed out to you, you might send us your revised figures.

*Mr. Patel.*—Yes.

*President.*—In answer to question 2(a) you say the pulp section of your mills is not yet erected.

*Mr. Patel.*—That is so.

*President.*—Not erected to your full capacity. That means you are not making any pulp.

*Mr. Patel.*—We are already making pulp from rags, but not from bamboo or grass. The pulp section for bamboo or grass is not yet erected.

*President.*—That machinery you have already got.

*Mr. Patel.*—Yes.

*President.*—I think Rs. 5 lakhs is a low price. What will be the cost for a new plant?

*Mr. Patel.*—Rs. 10 lakhs.

*President.*—So that Rs. 10 lakhs worth of machinery you have got.

*Mr. Patel.*—The paper making machinery is worth Rs. 5 lakhs which we purchased for Rs. 80,000.

*President.*—Working capital is provided by the Managing Agents.

*Mr. Patel.*—Yes.

*President.*—And they charge 6 per cent.?

*Mr. Patel.*—Yes.

*President.*—With regard to the prices you have given here, are they recent prices in answer to question 23?

*Mr. Patel.*—These are prices for 1936-37. The recent prices are about £25 to £26.

*President.*—When was this price?

*Mr. Patel.*—Between 1936-37.

*President.*—If you say September, 1937, prices began to rise.

*Mr. Patel.*—March, 1937.

*President.*—Were they £18?

*Mr. Patel.*—No.

*President.*—That is what I say.

*Mr. Patel.*—Owing to the German barter system at that time prices went as low as that or even lower.

*President.*—We were told it went as low as £16.

*Mr. Patel.*—Yes.

*President.*—I think these prices are not recent?

*Mr. Patel.*—Yes.

*President.*—We want to know the prices of badami which we want to check. We want to know for each month. You have got those prices?

*Mr. Patel.*—Yes.

*President.*—Rs. 329 works out to 2 annas 4 pies per lb.

*Mr. Patel.*—Because in the year 1936-37 we were up against competition.

*President.*—How does your paper compare with the imported paper in regard to quality? You mention only writing. Are your writing as good as cream laid?

*Mr. Patel.*—Certainly.

*President.*—Your selling expenses look to me rather high. Rs. 12,000 for 758 tons is a very high figure.

*Mr. Patel.*—In these selling expenses we don't charge anything by way of extra commission or Managing Agents' remuneration or salaries. They are pure net sales commission. Besides, Managing Agents themselves manage sales and everything. There is no other organisation.

*President.*—You are spending Rs. 12,000 as sales expenses—Form V?

*Mr. Patel.*—These include discounts, rebates and all these things. If there is any claim for inferiority, or any claim for shortage or some other charge, they will come under this head.

*President.*—How can you put that under selling expenses? How do you sell your things?

*Mr. Patel.*—We sell at a fixed rate.

*President.*—Is that on commission basis?

*Mr. Patel.*—No.

*President.*—Have you got your own shops?

*Mr. Patel.*—No, we sell at a fixed rate.

*President.*—Customers go and buy at your mills.

*Mr. Patel.*—We directly approach the customers.

*President.*—Don't you give discount?

*Mr. Patel.*—Yes.

*President.*—What is the rate of discount?

*Mr. Patel.*—It depends on the market. On an average we are giving 9½ per cent.

*President.*—What approximately additional amount is paid in the shape of rebate?

*Mr. Patel.*—When there is a question of shortage, we entertain their claims.

*President.*—It generally happens?

*Mr. Patel.*—Yes.

*President.*—What percentage would you put it at?

*Mr. Patel.*—I have not worked that out.

*President.*—What is the rate of interest?

*Mr. Patel.*—6 per cent.

*President.*—Insurance?

*Mr. Patel.*—The charges vary.

*President.*—Is this sum actually paid?

*Mr. Patel.*—This is the sum actually paid.

*Mr. Rahimtoola.*—On one lakh of rupees.

*Mr. Patel.*—On Rs. 3 lakhs.

*Mr. Rahimtoola.*—For insurance of plant and buildings, Rs. 2,60,000?

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—You keep a margin of Rs. 40,000.

*Mr. Patel.*—Sometimes rolling stock increases and so we keep that margin.

*Mr. Rahimtoola.*—This includes stocks?

*Mr. Patel.*—Yes.



*Mr. Rahimtoola.*—What is this other item in the cost of manufacture '—Rs. 5,298?

*Mr. Patel.*—It includes bank commission, Directors' fees, Auditors' fees, advertising, travelling expenses, medical aid and registration fees.

*Mr. Rahimtoola.*—What does 'Miscellaneous' include?

*Mr. Patel.*—Discounts.

*Mr. Rahimtoola.*—On how much capital?

*Mr. Patel.*—This Rs. 600 is for a temporary loan which was raised.

*Mr. Rahimtoola.*—Is this interest on loan?

*Mr. Patel.*—No. When we borrow, we pay *adath* and that is what it is.

*Mr. Rahimtoola.*—It is not interest, but commission.

*Mr. Patel.*—Yes.

*President.*—The answer you have given in reply to question 51, as I stated verbally, is based on 1936-37 prices.

*Mr. Patel.*—Yes.

*President.*—Since then realised prices have risen.

*Mr. Patel.*—Yes.

*President.*—In 1937-38 your position is better?

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—What is the realised price this year? Have you been able to find out?

*Mr. Patel.*—I shall send it to you later on.

*President.*—Roughly speaking what has been the increase in price. Can you give us any rough idea of what the rise in the realised price has been per lb.?

*Mr. Patel.*—About 3 pies. I shall be able to give you correct figures for March.

*Mr. Rahimtoola.*—You might give us a rough idea for March.

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—Are you making handmade paper?

*Mr. Patel.*—Yes. There is a limited market for handmade paper.

*Mr. Rahimtoola.*—We are told that your Government are patronising handmade paper to a certain extent.

*Mr. Patel.*—Yes.

*President.*—When I inspected the mill, I understood you were going to get bamboo at Rs. 17 to Rs. 18.

*Mr. Patel.*—Thereafter I made further detailed enquiries and found that it was not possible to get it at less than Rs. 22.

*President.*—Are these revised figures then?

*Mr. Patel.*—Yes.

*President.*—Are there any points which you would like to raise with the Board?

*Mr. Patel.*—I want to draw the attention of the Board to the imports of Japanese printing papers which are competing with Indian papers more than any other imported paper.

*President.*—I think you promised to give us some samples.

*Mr. Patel.*—I have brought them (shown).

*President.*—Is this paper also used for writing?

*Mr. Patel.*—It can be used.

*Mr. Rahimtoola.*—It is a glazed one.

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—It is not a very good paper.

*Mr. Patel.*—The strength of this paper is less.

*Mr. Rahimtoola.*—Is it really competing with the Indian paper?

*Mr. Patel.*—Yes, in 1936-37.

*Mr. Rahimtoola.*—What is the price to-day of this paper?

*Mr. Patel.*—2 to 3 pies higher. It used to be sold in the Bombay market upto 3 annas a pound less 3 per cent. This includes middlemen's commission of at least 3 per cent.

*Mr. Rahimtoola.*—3 annas per pound is equal to Rs. 420 per ton. If you exclude the duty of Rs. 175, it leaves a balance of Rs. 245 per ton.

*Mr. Patel.*—Yes, you must also deduct Rs. 8 for landing and other charges.

*Mr. Rahimtoola.*—It comes to £18.

*Mr. Patel.*—That is the selling rate.

*Mr. Rahimtoola.*—If I exclude the duty, it comes to £18.

*Mr. Patel.*—It comes to £15-10. At the present rate, it will be £18. This paper was sold by a Japanese firm in Bombay at 1 anna 6 pies per pound c.i.f. or Rs. 210 per ton c.i.f.

*Mr. Rahimtoola.*—Exclusive of other charges?

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—This is puro c.i.f.

*Mr. Patel.*—If Rs. 210 is converted into sterling, it comes to £15-10.

*Mr. Rahimtoola.*—Is this the lowest price which has been touched?

*Mr. Patel.*—It even went lower. I have heard of this paper being sold at a lower price. It was even sold at 1 anna 5 pies through one middleman.

*President.*—Is that paper more or less of the quality which you showed us?

*Mr. Patel.*—That is the correct sample.

*Mr. Rahimtoola.*—Is it coming in large quantities? I am told that the price has now gone up.

*Mr. Patel.*—I do not know exactly the figures of imports. Still it is available in the Bombay market in sufficient quantities—somewhere about a pie more or less. If I am allowed to say the main importers are Messrs. Mitsui Bussan Kaisha, Ltd. They are selling through Messrs. . . . . Very recently I have seen certain mechanical cream laid imported paying a duty of 1 anna 3 pies.

*Mr. Rahimtoola.*—This paper is at present paying a duty of 1 anna 3 pies.

*Mr. Patel.*—I want to give you an idea of the competition that has been going on.

*Mr. Rahimtoola.*—Can you tell us the economies in the cost of manufacture which you are likely to effect in future?

*Mr. Patel.*—When we reach full production, I hope that we will be making 2 per cent. saving in raw materials, about 4 per cent. in labour, 2 per cent. in chemicals, 2 per cent. in selling expenses and 1 per cent. in Managing Agents' commission and Head Office expenses.

*Mr. Rahimtoola.*—Your full production is 2,500 tons.

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—When do you hope to reach that?

*Mr. Patel.*—Within 2 to 3 years.

*Mr. Rahimtoola.*—That need not necessarily be of bamboo or grass.

*Mr. Patel.*—That is a question which has still to be considered. If we do not get the full requirements of waste paper, we will have to go in for bamboo or grass.

*Mr. Rahimtoola.*—At present there is no difficulty in selling your present production.

*Mr. Patel.*—We find it difficult. Still our organisations are not yet complete. We think we shall be able to collect more, that is to say, things which ought to be collected are not still collected.

*President.*—Have you any idea of the export of rags?

*Mr. Patel.*—Yes, especially from Ahmedabad new rags are being exported to foreign countries for paper making. That is the reason why we have to pay a higher rate.

*Mr. Rahimtoola.*—From which port are they exported?

*Mr. Patel.*—From Bombay. That is the reason why we have to pay Rs. 5 per maund at Ahmedabad for new rags.

*President.*—You have dealt with the Japanese competition. What other points have you?

*Mr. Patel.*—There is the question of coloured printings. There are various classes of printings which are substituted for white printings, for printing papers which could be made in India: coloured printings like these (shown).

*Mr. Rahimtoola.*—They are thin papers.

*Mr. Patel.*—Yes. On account of the fact that they contain a very high percentage of mechanical pulp, they are imported into India at the ordinary tariff rate. If they are put in the protected class, it will be helpful.

*Mr. Rahimtoola.*—What are the prices of these printing papers?

*Mr. Patel.*—At present it is £14-10.

*President.*—Your proposal is to leave white printing containing 70 per cent. mechanical pulp as it is subject to revenue duty and make coloured printings subject to protective duty. Is that the idea?

*Mr. Patel.*—Yes.

*President.*—You are not proposing a duty on white printings.

*Mr. Patel.*—There ought to be a protective duty on white printings.

*President.*—I am talking of the 70 per cent. mechanical pulp paper which is not made in India.

*Mr. Patel.*—White printings containing 70 per cent. mechanical pulp should be assessed at the protective duty.

*President.*—That quality of paper is not made in India.

*Mr. Patel.*—Cheaper kinds of paper can be made in India.

*President.*—Not of that cheapness. It is not made in India at present.

*Mr. Patel.*—If these classes of paper are protected, people will try to manufacture cheaper classes of paper.

*President.*—Mechanical pulp is not made in India. Therefore, how can they make that class of paper?

*Mr. Patel.*—Protection will make them manufacture mechanical pulp.

*President.*—That is rather problematic. However, your point is that you want protection for coloured printings apart from white printings.

*Mr. Patel.*—Yes.

*Mr. Rahimtoola.*—Coloured printings upto what substance?

*Mr. Patel.*—50 grammes.

*Mr. Rahimtoola.*—Do you mean that papers (i.e., coloured printings) above 35 grammes substance are to be protected?

*Mr. Patel.*—Paper of 12 lbs. demy is imported at the ordinary revenue duty.

*Mr. Rahimtoola.*—You had better look into this question again. We have specified unglazed thin news.

*Mr. Patel.*—Glazed mechanical printings containing more than 70 per cent. mechanical pulp.

*Mr. Rahimtoola.*—At present they are not protected.

*Mr. Patel.*—Yes.

*President.*—Your contention is that you can make papers somewhat similar to that quality.

*Mr. Rahimtoola.*—They cannot make glazed papers.

*Mr. Patel.*—Why not?

*Mr. Rahimtoola.*—Are machine glazed papers made in India?

*Mr. Patel.*—They could be made in India.

*Mr. Rahimtoola.*—They are not made in India. M. G. papers are not at present made in India. If you want M. G. papers, posters and so on to be protected, you will have to give us your cost of production. You cannot expect protection without first making those papers in India.

*Mr. Patel.*—These are the papers (shown) glazed on both sides which we can make.

*Mr. Rahimtoola.*—Are they made?

*Mr. Patel.*—We made them and sold them. Unfortunately as there was no prospect of getting a better price, we had to abandon their manufacture.

*Mr. Rahimtoola.*—If you could give us your costs of manufacture, we would consider that question. If there are samples with you, you can send them also.

*Mr. Patel.*—Yes. As regards bleached kraft, there is a certain quality imported into India as fully bleached. We can make similar paper in India.

*Mr. Rahimtoola.*—How does that compete with your paper?

*Mr. Patel.*—It is white paper. It could be used as printing paper.

*Mr. Rahimtoola.*—Kraft paper could never be used for printing?

*Mr. Patel.*—White kraft could be used. We have very recently imported bleached kraft pulp. That was like sulphite kraft pulp. It could be converted into pure white printing paper. Similarly, it could be converted on the Continent into kraft paper and imported into India.

*Mr. Rahimtoola.*—Surely that would come in as printing paper.

*Mr. Patel.*—It can be termed bleached kraft paper and can be used as white printing paper.

*President.*—The Customs people would assess it as printing paper.

*Mr. Rahimtoola.*—The moment it is called kraft paper, it has to come under the tariff valuation because it is not protected.

*President.*—Otherwise they would refuse to treat it as kraft paper.

*Mr. Patel.*—If there is a distinction in the Tariff Schedule it would be rather better.

*President.*—You mean that it ought to be made plain in the Tariff Schedule. The Customs practice is not what you want.

*Mr. Patel.*—Coloured papers (pink, green, blue, etc.) should be treated similarly.

*President.*—Will 'mechanical tinted papers' cover your point?

*Mr. Patel.*—Kraft is not made of mechanical pulp.

*President.*—Kraft is different.

*Mr. Patel.*—Paper even tinted manufactured from kraft pulp could be used as printing paper.

*Mr. Rahimtoola.*—So long as it does not contain any mechanical pulp, any paper coming in as printing paper can be protected.

*Mr. Patel.*—Can they not be assessed as coloured kraft paper?

*Mr. Rahimtoola.*—If it is real kraft paper, according to the Collector of Customs, it will be assessed under the tariff valuation. If anybody says the coloured paper is kraft paper, the Collector has to satisfy himself on that point.

*Mr. Patel.*—Unbleached brown kraft paper only should be assessed as kraft and nothing else.

*President.*—Only brown kraft should be treated as kraft. White or other coloured must be protected.

*Mr. Patel.*—Yes.

*President.*—These are interesting points.

*Mr. Patel.*—Brown wrappings which are imported and which we can conveniently make are assessed at the ordinary tariff.

*President.*—Can you make brown wrappings?

*Mr. Patel.*—We are now making them.

*Mr. Rahimtoola.*—What price are you getting?

*Mr. Patel.*—One anna six pies to two annas.

*Mr. Rahimtoola.*—What quantities are you making?

*Mr. Patel.*—Uptill now we have not made much.

*President.*—Are the two sides glazed?

*Mr. Patel.*—Yes.

*President.*—It is sometimes called casing paper?

*Mr. Patel.*—Yes. A similar kind of paper imported from foreign countries is reddish brown with one side glazed. Similarly there are other grades, blue, black, and so on, so that the intention of protecting the wrappings is not fully achieved.

*Mr. Rahimtoola.*—Wrapping and packing papers are not protected. If anybody is manufacturing them to-day the Board can consider the question of protecting them. We have been told that at present these are not manufactured on a commercial scale. If you can submit a note on the subject, the Board will be glad to consider the question.

*Mr. Patel.*—We will.

*President.*—The only application we have received so far is for what is called casing paper, that is wrapping paper glazed on both sides.

*Mr. Patel.*—We will give you the cost of manufacture and quality with our suggestion.

## 16. The Andhra Paper Mills Co., Ltd., Rajahmundry.

### A.—WRITTEN.

Letter No. nil, dated the 9th February, 1938.

We have pleasure in submitting herewith in quadruplicate our replies to your questionnaire for the paper enquiry.

1. (a) The Andhra Paper Mills Co., Ltd., is a public registered firm under the Indian Companies Act of 1913 as amended in 1937.

(b) The Company is registered in India and the capital is in rupees.

(c) All the shareholders are Indians.

(d) All the Directors are Indians. In the superior management of the Company all the officers are Indian except for the Mechanical Erector that have been sent by the manufacturing firms on contract works who are Germans.

Since 1931-32 there has not been any change either in the registration of the Company or in the shares held by the Indians or the extent of the representation of Indians in the superior management of the Company.

2. The capacity of the Mills as at present equipped for pulp and paper is 10 tons of bamboo and ten tons of paper. The original capacity of the Mill in 1931 is ten tons of bamboo pulp and four tons of paper. The paper machine section has now been enlarged and *pari passu* the auxiliary plants and power section, etc., to suit the enlarged capacity of the firm.

3. As the Company has not been working since the last Taluk Board Enquiry there has not been any type in the paper mills since 1932. We hope to restart the manufacture of bamboo pulp and paper before the end of May 1938.

4. So far our arrangements have been to manufacture all kinds of writings and printings. Occasionally we propose to manufacture blottings, banks and wrappers. There are possibilities of manufacturing M. G. paper on account of the Yankee cylinder, that is, drying cylinders of the paper machine. There are no possibilities of manufacturing any other variety of paper.

5. As there has been no manufacture of pulp and paper since 1931, we regret we cannot supply the information as in Form No. I regarding the quantity of materials (Primary) but in our estimate we take that the following quantities are required for the manufacture of pulp and paper:—

	Per cent.
Bamboo . . . . .	75 to 85
Waste paper and cuttings . . . . .	2½ „ 5
Rags and tailor cuttings . . . . .	2½ „ 5

	Per cent.
Total indigenous materials . . . . .	90
Imported wood pulp . . . . .	10

6. As shown in the above Question No. 5 the primary materials required would be as under:—

	Tons.
Bamboo . . . . .	2.16
Wood Pulp . . . . .	0.10
Waste Paper . . . . .	0.025
Tailor Cuttings . . . . .	0.025

The estimate of loss of fibre in the conversion of pulp into paper is about 10 to 25 per cent. on the total weight of paper according to the raw materials used and their condition.

7. Regarding the availability of bamboo and its suitability for the manufacture of paper we beg to submit that there is no bamboo forest around Rajahmundry. So difficulty arises only in the conveyance of materials from the forest to the mills. Bamboo of the first quality is available in Gokabaram and Rampa forests but the possibility of conveying it to the mills by crafts is a proposition beyond the possibilities of business. As it is not economical to convey bamboo from Rampa or Gokavaram forests by carts. The company under the advice of Mr. J. A. Master formerly Deputy Conservator of Forests, have taken on lease the Rekapalle forests, Pulusamamandi range to see whether sufficient bamboo is for the mill can be extracted therefrom. According to the official figures quoted the following yields has been found since last so many years. (See separate table enclosed).

We presume that we would be able to have sufficiently stout and long bamboo from this forest so that the total quantity required for the mill can be tapped therefrom. But unfortunately our experience has not been very favourable on this direction. We had taken on lease the above forests and we had to work them so far by Sub-Contractors. Over the Sub-Contractors, we have appointed one Forest Officer to be on the spot to control the forest operations according to the Forest Regulations and Acts. In spite of this bamboo is now being exploited and rafted down the river and stored in the mills is not of the type we anticipated. But from this bamboo and its physical conditions and also its weight, we feel that this forest alone will not be sufficient to supply what all we need *for the manufacture of pulp in our mills...* And we might have to go out into other forests for the balance of our requirements. It might be possible that we might go into the question of better exploitation and try if this forest alone can give us sufficient bamboo for our purposes.

Regarding the suitability of bamboo for the manufacture of paper, we are of the opinion that bamboo has come to stay and is an established raw material for most of the kinds of paper that are manufactured in India. Bamboo has also been tried for the manufacture of mechanical pulp and the chemical pulp has proved itself beyond doubt that it is equal to if not superior to most other materials in the country.

8. We are unable to answer this question, as the mills have not yet started the manufacture of pulp and paper and we are making arrangements with the Railway authorities and with other departments that are concerned in the matter of transport and collection. The forest department has again to be approached for further concessions if the present rate of exploitation is not found economical. Regarding the Railway freights we are always appealing to the Railway authorities and they too are trying their best to do what all is in their power. We do not expect all their favours at a time but gradually we hope to win them to our side in order to economise our cost of production.

9. As the bamboo forest is given under contract, we are not able to give you details regarding the various headings as required but we are paying the following charges for bamboo delivered into the mill's site:—

Rs. 46 for 1,000 bamboos delivered at the mill river ghat.

Rs. 5 for 1,000 bamboos for lifting the same to the mill's site.

Rs. 10 for 1,000 bamboos at Royalty.

Re. 1 for 1,000 bamboos as Supervision.

10. The reply to this question has been answered by the Indian Paper Makers Association.

11. (a) There are so far three processes for the manufacture of pulp from bamboo:—

- (1) The soda process,
- (2) The Sulphate process,
- (3) The Sulphite process.

In (1) Caustic Soda is used for disintegrating the cellulose from bamboo. In (2) process, the boiling of bamboo with Caustic Soda is changed by the addition of certain percentage of a milder alkali Sodium Sulphide, as the action of Caustic Soda is found to be very drastic. This chemical Sodium Sulphide is produced by the reduction of Sodium Sulphate in the process recovery in the smelting kilns, by concentrating the washed digestion liquors. This process is supposed to give greater yield of pulp and also better colour. No. (3) process makes the bamboo being treated by a solution of Magnesium or Calcium Bi Sulphite and this helps for easy disintegration of the fibrous matter yielding a better quality of pulp especially in colour than in the above two processes. But it has not yet been utilised by all the mills as the fibre in this process is supposed to be not as strong a fibre as the fibre obtained by the above two processes.

(a) Without going more minutely into the merits of each process we beg to inform you that as the soda pulp requires a very high bleach consumption and so we have changed our process from Soda to Sulphate, we are of opinion that the cost of pulp making according to the Sulphate method is cheaper than the other processes and this is to be verified on practical working.

(b) The total capacity of the mill is 10 tons of bamboo pulp per day.

(c) There has been no output of bamboo pulp since 1931-32.

(d) The whole mill was altered to suit the Sulphate process as far as pulp making is concerned. The following are the main alterations in the factory:—

1. *The wood room.*—The old chipper being found to be of a very low capacity, a new bigger chipper, a roller screen and a special conveyor are being installed for the production of better and more clean bamboo chips than before.

2. *One spare digester* has been erected to avoid any trouble in the continuous production of pulp in case the only existing digester happen to be under repair.

3. The washing plant is completely overhauled with the addition of a preliminary screen. A special washing engine has been constructed besides a large capacity storage tank.

4. The bleaching towers have been enlarged by the construction of a third bleacher of double the capacity to cope with the efficient production of 10 tons of bleached bamboo pulp.

5. New arrangements for the handling of materials like lime, etc., have been added on to the causticising tanks. Special arrangements are in progress for the sedimentation tanks for the lime sludge, as this sludge has always been a great source of trouble for many pulp mills.

6. In the chemical room relating to the paper section, we have installed a most modern size plant and a new China clay dissolver and two large mechanically driven alum tanks have been added on to the existing arrangements which have been found to be very inadequate for the manufacture of very clean chemicals for paper manufacture.

7. In the Beater House, there were only two small beaters as has been reported to you by us in the previous Tariff Board and they have been found to be too small for the purpose and so completed the erection of one half finished beater of bigger capacity and then erected another big of



the same capacity and a third beater of the same capacity is still under erection.

8. As there is no sufficient capacity for pulp storage before the manufacture of paper, we constructed another big machine chest.

9. In the paper machine hall the length of the paper machine has been increased from 11,000 mm. to 18,000 mm. and the drying cylinders which were three in number before have now been increased to eleven to cope up with the increased capacity of the machine to ten tons of paper per day from its original capacity of four tons of paper per day. The five rolls of the callender of the paper machine have been increased to seven rolls and two of the rolls have been specially steam filled to impart better gloss to the paper. We have also increased the capacity of the cutters by the installation of another modern type cross cutter and this would eliminate the difficulty of insufficient cutting machines.

10. On the water supply side, the old pump and the portable engine are replaced by the installation of a bore hole type pump which is now arranged to be worked by electric power and the capacity of the pump has also been increased to 1,000 gallons per minute.

11. On the power side we have scrapped all the engines in the Power House and the pulp mill and the two steam engines that were running the paper machine have been kept on. A new Steam Turbine (Brown Boveri type) is ordered and is now on its way of erection and it is expected to be finished within the next few weeks. A new boiler sufficient for the increased capacity of steam in the mill is ordered and it is hoped that the old Nielausse Boilers would act as standy and the present arrangement would in our view solve the deficiency of steam power and also help us for the reduction of coal consumption.

12. All other arrangements for this increased capacity of the mills and the various alterations have been attended to and the whole mill is electrically driven by the installation of new motors.

(e) The total expenditure incurred on all the above modifications is Rs. 12,00,000 approximately.

(f) We have made as far as it is in our power all the possible arrangements for the increased supply of bamboo from the Pulusumamidi Range, Rekapalli Forest and we hope that this forest would be able to supply the required quantity of bamboo as has been certified by the Forest Department and in particular by Mr. J. A. Master, who was specially deputed by the Madras Government to study and report on this question of the supply of bamboo from this forest.

In case there is any shortage of material in this forest, we are confident that there are enough other bamboo forests within near locality of the East Godavari District which have got sufficient bamboo which has not been tapped much enough till now. But the only fear is that if bamboo is exploited from the Rampa and other forests, the transport on road is very costly and this makes the cost of production very high.

(g) We estimate that bamboo with extensive arrangements for exploitation and easy convenience would cost us at about Rs. 15 to Rs. 18 per ton.

(h) With the increased efficiency of the power plant we anticipate that the actual consumption may be possible to be reduced to slightly less than 4 tons of coal per ton of paper.

(i) The cost of chemicals cannot be possibly reduced under the existing conditions of the trade in the world unless the new companies that are now floated in India with a view to manufacture Caustic Soda, Bleaching Powder and Soda Ash can supply us at cheaper rates than before.

(j) The quantity of paper would surely be improved with all the additions made so far.

## SUB-HEADING (d).

## Item No. II.

Details of Boiler	17,000 lbs. steam per hour. 250 lbs. pressure. 660 degrees superheat complete with Economiser Chain grate stoker, Forced and induced draft fan.
Details of the Turbine	Brown Boveri Type. 1080 K.W. Turbo Alternator 440 Volts A.C. Bleeding 40 lbs. pressure steam.

Forms II and II are not filled as they cannot be filled by us as there has been no manufacture of pulp since 1931.

12. (a) As we have not been working since 1931-32 we are unable to give you the total quantity of imports of wood pulps by us. Last year we have imported 400 tons of wood pulp under the following:—

200 tons of easy-bleaching Nyhamn wood pulp.

200 tons of easy-bleaching Bocksholm wood pulp.

(b) The pulp is imported from Norway.

(c) Coconada.

(d) & (e) c.i.f. price quoted by the supplier is £10 per ton.

(f) The landing charges amount to ten per cent. on the c.i.f. cost of the pulp.

(g) Transport charges of pulp from the station to the Mills cost from Re. 1 to Rs. 1-8 per ton.

13. We wish to import wood pulp to the tune of 10/25 per cent. of the total quantity of paper that is manufactured

We feel that this amount of wood pulp is necessary to give greater strength to the paper and also to stand certain specifications of supply of paper to our customers.

14. All kinds of printings and ordinary writings can be made without any mixture of imported pulp and entirely from bamboo. But in the question of comparison of papers manufactured with 100 per cent. bamboo and with bamboo mixed with wood pulp we are informed that there is not much difference and on the other hand bamboo paper takes a better print than the paper made from wood pulp.

15. The variations in prices of wood pulp are due to the conditions of business and warfare in countries wherefrom wood pulp is imported, like Norway, Sweden, Finland, and Japan. We are also informed that owing to the economic conditions and the reduced outputs of the pulp mills in the above countries the prices of wood pulp are varying. The recent and extraordinary rise in prices on wood pulp from £10 per ton to £20 per ton for a certain quality of wood pulp is phenomenal, and is due we are told not only to the controlled productions of the pulp in each mill but also due to the shortage of wood in the various forests on which the mills are dependent for their supply of wood as raw material for the manufacture of wood pulp.

16. As we have not manufactured paper since 1931-32 we are unable to answer this question. However our mill is equipped for the manufacture of pulp entirely from bamboo excepting for a small plant wherein we intend to carry out experiments to manufacture pulp from other indigenous materials, like Nanel grass, etc. But we feel regarding quality, bamboo pulp will give better pulp than the other indigenous materials, like grasses as above stated Nanel type, etc. As for Sabai grass, other paper mills in India would be able to give you a better idea of the same as the grass is being used extensively in their mills, as a staple raw material for the manufacture of pulp.

17. Form IV cannot be filled up as there has been no manufacture of pulp and paper since 1931, but we beg to enclose an estimate for the manufacture of one ton of bamboo paper as in Question No. 47.

The auxiliary materials required for one ton of finished paper are:—

	Tons.
Sulphate . . . . .	0.2
Lime . . . . .	0.2
Bleaching Powder . . . . .	0.3
Caustic Soda . . . . .	0.075
Alum . . . . .	0.075
China Clay . . . . .	0.15
Rosin . . . . .	0.03
Dyes . . . . .	0.003

18. There is not much difference regarding the availability of auxiliary materials available in India since 1931-32 except for the dyes the caustic soda, all other materials are available in India. Even for caustic soda there is the hope that it is going to be manufactured in India. We are glad to inform you that our Managing Agents, Messrs. Dayaram & Sons, have started another concern under the name of Mettur Chemical and Industrial Corporation, Ltd., and we propose to manufacture caustic soda and bleaching powder. We are also informed that The Imperial Chemicals and Industrials are arranging to erect a big factory in Northern India to manufacture caustic soda. As soon as these factories come into operation we are sure that no more imported materials need be used as auxiliary materials for the manufacture of pulp and paper. Prices, of course, will be reduced in the matter of the chemicals.

Regarding China clay the price of imported clay from Germany or from Cornwall greatly differs from China clay and as we are not manufacturing such high-class papers that might necessitate the use of clays other than Indian clays, we do not find any need to compare the prices of these clays.

19. In the manufacture of pulp it is possible to recover most of the chemicals in the recovery room. It is estimated that about 80 per cent. of the recovery can be effected in soda, but so far we are informed that the experiment of the Indian mills has been only up to 60 per cent.

The recovery room we had before is of the soda process consisting of one double effected reversible (Badger and Webra) type evaporators with one Rotary Incinerator.

As it has been advised that the introduction of sulphate process helps in the reduction of the cost of manufacture, we are able to completely remodel the whole recovery plant by removing the old evaporators and installing in their place three entirely new evaporators and in the place of the Rotary Incinerator we have now erected two smelting kilns to deal with the recovery of the sulphate liquors and raised the old incinerator from its position to suit its relation to the smelting kilns. The whole plant, the smelting kilns and the new incinerator are now lined with special quality soap stone bricks, which have been imported at a great cost from Norway.

20. Labour employed in the extraction and collection of primary materials:—About 200 coolies are employed in the extraction of bamboos from Rekapalle forest, Pusalamamandi range. As the work is being done by a sub-contractor, we are unable to give you definite figures on this point. We have however employed our own officer to supervise the work of the sub-contractor in the felling of bamboos. This work has been undertaken by us only from this year.

21. As we have not yet started the manufacturing of paper, we are unable to give details of labour employed. The salary bill for the present labour so far employed is Rs. 3,000 per month and this is only during the erection period. We expect it would be Rs. 8,000 to Rs. 10,000 as the Salary Bill when the mill is in full swing.

22. Our policy has so far been to employ only Indians for all kinds of technical labour and supervision. As far as possible we never tried to import any labour from outside India. We have given all facilities to the Indian workmen to learn the technology of Paper. We have given training to three apprentices sent to us from the Mysore Paper Mills Company and two more are receiving training by us. Besides we have two apprentices undergoing training with us and if they are found suitable after the training period their services would naturally be retained by the company.

23. As our mill is situated at the town of Rajahmundry there is not much difficulty regarding the housing of labour as many houses are available in the parts of the city adjoining the mills at low rates of rent. However we have built quarters suitable for about 20 families of the workmen and are always giving all other facilities regarding water supply, medical attendance and recreation. As for education of the labourers there are institutions in the town that are catering for this side of development and as soon as the mill starts work we hope that our men would be well trained in the technology of paper in the various departments.

24. Regarding the supply of power the old power plant has been found to be absolutely inadequate for the increased capacity of the mill from 4 tons to 10 tons of paper per day and we have advised to change the whole power into that of electricity and drive all machines by separate motors which would ultimately reduce the cost of our maintenance. The old Nordberg engine and the Tandem engine have been put out of condition and in its place a small Beliss and Morecom engine and generator set has been purchased and installed. We have also ordered a new Turbine for the same.

Cost of power is estimated to be annas per ton of paper and the consumption is

25. The reply to this question has been answered by the Indian Paper Makers Association.

26. Regarding the question of possibilities of developing the market for Indian made pulp, we are of the opinion that they are very great. Each mill so far, as they are existing to-day, are manufacturing pulp sufficient for their own consumption. No one has ever dared to manufacture pulp more than what is required for themselves as they have not made sufficient investigations into the possibilities of selling their pulp. The reason for this is not far to seek. Bamboo pulp as it stands to-day has not yet arrived into that stage as to make it completely reliable in the matter of its cost of production. Only one mill has been manufacturing pulp on the sulphite process while we were previously contemplating to manufacture soda pulp from bamboo. Now other mills have changed their process from soda to sulphate. We have also converted our pulp mill from soda process to the sulphate process. As soon as manufacture of sulphate pulp from bamboo is made successful and economic in its cost of production, it is easily possible to think of starting large pulp mills on the same style as are existing in Canada, Norway and Sweden and supply pulp to all the paper mills. It may be that the existing paper mills may not be in a position to purchase pulp beyond what they are manufacturing but there are other mills that are not manufacturing all the pulp they need. There are also other mills outside India which would surely purchase bamboo pulp, provided the price of it is not higher than the cost of imported wood pulp. Besides we are very optimistic regarding the utilisation of bamboo cellulose for the manufacture of artificial silk and we are informed that a big company is under contemplation in Calcutta, and that would necessarily increase the possibilities of the manufacture of bamboo pulp in India.

Regarding the possibility of manufacturing chemical pulp, so far the methods that are in vogue to-day for the manufacture of bamboo pulp cannot be utilised as bamboo is completely different from wood in its physical formation and structure. However some experiments are being conducted to attempt to manufacture pulp from bamboo. The results are yet awaited.

27. The protective duty on wood pulp has been very useful inasmuch as it has given room for a few mills to spring out to manufacture bamboo pulp alone and the utilisation of pulp made from indigenous raw materials as the imports figures show wood pulp is imported into India in lesser quantities. These give greater scope for larger exploitation of bamboos from the forests, give employment for many workmen. Had it not been for the protective duty on the wood pulp the possibilities of developing pulp manufacture in India could not have been attempted to so well. The paper industry has developed very well, each mill now trying to work to its highest capacity.

Regarding the development of any other industry we can state that as more paper is manufactured in India on account of the protective duty imposed on wood pulp greater chances are given for the formation of chemical companies in India to manufacture the required chemicals like bleaching powder and caustic soda.

28. The reply to this question has been answered by the Indian Paper Makers Association.

29. As we have not been manufacturing any paper, we are unable to give you the comparative railway freights paid by the importers from the ports to selected upcountry markets as against the railway freights on the paper manufactured by us.

30. As we have not yet started the manufacture of paper we are unable to furnish this information.

31. We regret we are unable to give this information as the mill has not yet started the manufacture of paper. In this connection we beg to submit that the area in which we sold our products was limited to districts within 300 miles radius from the factory and as our sales during the time of our manufacture in 1930-31 were confined to only f.o.r. destination basis, we are sorry we could not have the possibility to compare the prices realised as it is the same whether in the vicinity of the factory or within the radius of 300 miles from the factory. We could not get into the upcountry market in view of the very high railway freights.

32. for the reason stated in answer to Question No. 31 above, we are unable to furnish the information.

35. Between the paper manufactured entirely from bamboo and paper manufactured from grass and other materials indigenous to India there is the difference of the strength of paper. Bamboo paper has been found to be very strong and has sometimes surpassed the strength which wood pulp would give. In proof of this we would quote the experiments of Dr. Harsson and from that it is clear that bamboo paper is quite different from the grass paper and would naturally fetch higher price. But in the consideration of bulk grass paper has been found to be better and one would prefer this sometimes in view of the greater bulk for the same weight, while in the case of bamboo paper it has been found that for the same weight it would appear very thin.

Regarding the treatment during the process of pulp manufacture bamboo requires more drastic treatment than what grass requires. It has been the experience of the Indian paper maker that when compared with paper made from wood pulp bamboo has stood the test. But it is in many ways superior to the grass paper.

36. Since 1931-32 we have not been able to restart the manufacture of paper and hence we are sorry we are unable to furnish any information on this subject.

38. This company in its starting had only the idea to manufacture 10 tons of bamboo pulp. Later on the addition of a 4-tons paper mill was made to manufacture 4 tons of paper from straw. Later on this idea was dropped and we were advised by Mr. W. Raitt to run the pulp mill only to its half capacity and manufacture bamboo paper to the extent of 4 tons of paper per day. This was attempted to and found not economic and so it was decided to raise the capacity of the paper machine to 10 tons of bamboo paper per day.

As we have taken up the management of this company, we would that in enlarging the capacity of the paper machine we had to increase *pari passu* the auxiliary plant and also enlarged and installed the chemical plant connected with the paper section.

On going through the pulp section we found it necessary that there should be sufficient machines and tanks to warrant the production of 10 tons of bamboo pulp per day and so the whole pulp mill had to be remodelled by the installation of a new chipper, roller screen, an extra digester, one washing engine, preliminary screen, sand draughts storage tank and a third bleacher.

More important than all, we undertook to change the then existing soda method of pulp making to sulphate method and now our recovery department is installed completely new and the same is guaranteed by the manufacturers to have an efficiency of 80 per cent. recovery.

39. The following amounts were spent by us on extensions and alterations of plant and machinery for pulp since 1931-32:—

(a) Rs. 99,777-11-4.

(b) Rs. 1,75,000.

The whole sum of Rs. 99,777-11-4 under (a) is for special requirements of bamboo pulp:

40. We have so far enlarged, altered and remodelled the whole factory in its pulp, paper, power and water sections. We are unable to say at the present moment what other replacements or extensions have to be made. But at the present time we have in view the extension of the storage shed and also the construction of a godown for storing all miscellaneous raw materials and chemicals. We also propose to construct a special godown for the storage of paper as soon as the mill starts working. A research laboratory equipped with all modern testing machines is in our view. We also hope to construct some more dwelling quarters for the workmen as soon as we restart manufacture of pulp and paper. We also propose to enlarge the workshop by getting in improved machines like duffing machine, etc., and the workshop too would therefore be extended in due course.

41. The following is the block value of our property as it stood in the books of the company as on 31st March, 1937:—

	Rs.	A.	P.
(a) and (b) Lands leases and concessions	18,742	9	0
(c) Buildings . . . . .	4,75,620	14	11
(d) Plant and Machinery . . . . .	8,41,440	15	7

(e) Other assets—

	Rs.	A.	P.
(a) Water Works . . . . .	31,098	13	3
(b) Miscellaneous . . . . .	17,307	10	4

42. Our mill is only a one-machine mill with all the installations for the manufacture of bamboo pulp. To erect a mill of the same capacity we have had to spend so far nearly Rs. 34 lakhs but as this amount has been spent in successive stages, first in the erection of a particular capacity mill and later in the alteration of certain parts and connections in raising

its original capacity we had to spend so much. Otherwise it is not very difficult to construct a mill of this capacity with the following capital:—

	Rs.
Buildings . . . . .	5,00,000
Pulp Machinery . . . . .	9,00,000
Paper Machinery . . . . .	10,00,000
Power Section . . . . .	5,00,000
Water Section and other . . . . .	5,00,000

The expenses of erection would be about Rs. 5,00,000 thus totally to Rs. 40,00,000.

This estimate is based on a rough and average idea of all the machines that are to-day imported from the Continent. If, one would go in for British Machinery, the cost would be about 25 to 30 per cent. more.

43. The following are the amounts written off for depreciation during 1935-36 and 1936-37, since we took up the management of the company in September, 1935:—

		Rs. A. P.	Rs. A. P.
Value of Buildings C. P. M.	1,02,347	0 7	...
Depreciation . . . . .	23	6 7	23 6 7
Plant and machinery . . . . .	5,28,809	5 1	...
1935-36 Depreciation . . . . .	3,449	4 2	3,449 4 2
Water works . . . . .	28,310	14 8	...
Furniture . . . . .	1,690	0 5	...
Depreciation, 1935-36 . . . . .	1,286	14 1	...
Depreciation, 1936-37 . . . . .	362	1 2	1,648 14 3
Furniture and fittings—			
Depreciation, 1935-36 . . . . .	36	10 5	...
Depreciation, 1936-37 . . . . .	34	13 2	71 7 7
Motor Cars—			
Depreciation, 1935-36 . . . . .	2,058	0 0	...
Depreciation, 1936-37 . . . . .	734	9 4	2,992 9 4
Tools and implements—			
Depreciation, 1935-36 . . . . .	365	10 3	...
Depreciation, 1936-37 . . . . .	154	11 1	540 5 4

44. (a) The amount of the paid up share capital ranking for dividend:—

	Rs. A. P.
1931-32 . . . . .	11,38,007 13 4
1932-33 . . . . .	11,38,462 15 4
1933-34 . . . . .	11,40,507 13 4
1934-35 . . . . .	11,40,647 13 4
1935-36 . . . . .	11,41,067 13 4
1936-37 . . . . .	11,42,402 9 4

(b) Nil.

45. We enclose herewith copies of our balance sheet for each year since 1931-32.

46. On the 28th September, 1935 the company raised a debenture loan of Rs. 6,00,000 bearing interest at 7 per cent.

The outstanding debenture loan as on 31st March 1937 is Rs. 6,00,000.

## FORM VI.

## 47. Works cost per ton of finished paper—

	Rs.
Bamboos . . . . .	35
Wood pulp (10 per cent.) . . . . .	36
Paper Cuttings (2½ per cent.) . . . . .	3
Rags (2½ per cent.) . . . . .	7
Coal . . . . .	52
Sulphato . . . . .	20
Lime . . . . .	8
Bleaching Powder . . . . .	30
Caustic Soda . . . . .	15
Alum . . . . .	7
China Clay . . . . .	7
Rosin . . . . .	9
Dyes, etc. . . . .	1
Finishing, etc. . . . .	30
Labour and supervision . . . . .	35
Repairs . . . . .	35
Renewals . . . . .	35
Dressings . . . . .	35
Total . . . . .	400

(Rupees four hundred only).

Form V could not be submitted as there has been no manufacture of paper since 1931.

49. As we are now beginning the reconstruction period we will not be able to give you definite ideas regarding the future possible reductions in the cost of manufacture of paper that can be made but as far as our present financial position is permissible we have made all the necessary arrangements for a very economical production paper and we hope that we have eliminated as far as possible with our limited finances all waste and have attended to all points where economies can be effected. However, if, the existing conditions continue to be normal and a full output of paper is assumed, we feel that there are some more places where economies can be effected as far as funds are available.



The first and primary consideration for effecting economies is the situation where we are and the distance of the factory from the goods station. We hope to make proper arrangements for the conveyance of materials from and to the mills by running modern conveyances after getting the necessary funds and also the permission from the Municipality for plying motor-vehicles on the roads that should give us cheaper rate of transport and thus reduce the cost of production.

In due course we are also arranging to have a first class and economical conveyance of bamboo from the river Godavary to the mills either by overlead cranes or some other mechanical handling of the material which would eliminate a very large amount of waste of money what is being now spent for conveying bamboo from the river ghats to the mill side.

Next important is the question of bleach cost. We are not unmindful of the extra cost of bleaching by using bleaching powder solution for the purpose in preference to the production of bleaching liquor by electro methods. But the present arrangement so far existing in the mill would not give us sufficient scope to attend in that direction and as time goes on we wish to economise in that direction as well. We also wish to arrange in due course mechanical contrivances for the handling of materials within the mill premises, which would enable us to lessen labour and the cost of maintenance.

Regarding the cost of bamboo we are anxious to reduce it further after having had sufficient experience in the exploitation of bamboo from the Rekapalle forests. Other mills we hear, are expecting bamboo at a far cheaper rate and as such we feel that with judicious manner of working the bamboo forests we would be in a position to bring down the cost of bamboo lower than what it is to-day. More than all the very high cost of coal we have to reduce further by our application to the authorities concerned and see if anything can be done in that direction as it is vital point that controls the cost of manufacture, being a very big sum in the cost of production.

50. As for the working capital we have based all our arrangements on the credit, the Managing Agents have in the market besides the financial stability of the firm. Having realised that a certain period of time has to be granted to the customers, for honouring our bills we have already arranged for stocking bamboo and as for supplies of other materials like coal, chemicals and dressings, we are arranging to have long term credits with the various firms and we hope that our arrangements would prove successful, and we will not be in a bad position for the working capital.

51. According to the joint memorandum submitted to the Tariff Board we wish to make it clear to the Board that protection is essential and is a necessity at the present time. As has been already pointed out in our general memorandum huge capital is now being sunk in this country for the starting of new paper mills and we feel that at a time when the country is going to reap the benefits of protection it will be very unfortunate if protection is withdrawn. At a time when other nations are trying to compete with each other to capture the Indian market it would only be giving rooms for the importers to fight more and be responsible to bring the Indian paper industry to a stand still by dumping in paper into this country at very cheap rates and sometimes on unremunerative basis just to gain the market. We therefore feel that in view of the world conditions of trade and strive and in view of the huge capital that is sunk in this country for this industry protection should not be withdrawn at this juncture.

The Tariff Board might feel that 7 years of time have been granted and still the Indian Paper Mills could not take advantage of this protection and could not manage to derive the benefits and establish themselves on secure and sound business basis. But we beg to refer the Tariff Board to the various developments that have taken place so far in the country. The main consideration of the basis of this Tariff Board investigation and the

very recommendation of the Fiscal Commission is to increase the utility of bamboo for purposes other than those for which it is now being utilised. To argue that bamboo pulp manufacture has a definite and assured future it the ground upon which this Act was passed and the protection is given mainly for the increased manufacture of bamboo pulp. Various methods have been tried by the various mills for the manufacture of pulp from bamboo, soda, sulphate and sulphite. Economies are being effected from time to time in reducing the cost of production and trying to improve the quality of pulp. But as every industry would require this highly chemical industry requires still longer time before it can be called perfect and dependable. Still various methods are being devised and obtained for more economic production of bamboo pulp. Till to-day the advantage derived by this protection can be seen in the attempt of the Punalur Paper Mills to manufacture bamboo pulp and also in the Northern India Paper Mills having converted all the plants in the bamboo pulp plant. Apart from the existing mills new mills like The Mysore Paper Mills, the Orient Paper Mills and others are all started with the idea of manufacturing pulp entirely from bamboo. If protection is continued these mills would be in a position to work out their schemes to a perfection and assure to the world that bamboo pulp has come to stay and would in the near future be the real staple raw material for the manufacture of paper in the world itself, in view of the impending shortage of wood pulp in the world.

Further it is very unsafe and uncertain to depend on the imported wood pulp whose prices are fluctuating beyond ordinary limits. We therefore request the Tariff Board to recommend for the continuance of this protection, for a further period of 7 to 10 years and by that time all the new mills that have been started will be in their full swing and would be deriving the benefits of protection to the fullest extent. We therefore request you that the existing duties and surcharges may be continued in the same form and at the same rate and also for the same class of paper. In this connection we beg to draw your attention to our answer to Question No. 53.

*Statement showing the quantities of paper of all descriptions imported into British India by sea from foreign countries during the 3 years ending 1935-36.*

	Quantity.		
	1933-34.	1934-35.	1935-36.
	Cwts.	Cwts.	Cwts.
<i>Paper—</i>			
Packing and wrapping paper kraft including imitation kraft . . . . .	...	...	190,879
Brown wrappings, other sorts . . . . .	...	...	13,568
Coloured machine glazed pressings . . . . .	...	...	10,651
Manilla machine glazed or unglazed and sulphite envelope . . . . .	...	...	37,032
Fancy including embossed paper . . . . .	...	...	2,493
Other sorts . . . . .	...	...	150,872
Total packing and wrapping paper . . . . .	250,263	313,644	405,495

	Quantity.		
	1933-34.	1934-35.	1935-36.
	Cwts.	Cwts.	Cwts.
<i>Printing paper—</i>			
Machine glazed poster paper	...	...	33,646
Litho paper . . . . .	...	...	2,542
White printing paper other than machine glazed poster and litho . . . . .	...	...	...
News printing . . . . .	...	...	686,555
Others . . . . .	...	...	85,636
Other sorts . . . . .	...	...	205,957
News printing . . . . .	511,112	549,825	...
Other sorts . . . . .	259,470	208,756	...
Total printing paper . . . . .	770,582	758,581	1,014,336
<i>Writing paper and envelopes—</i>			
Azure Laid or Wove and Ledger . . . . .	...	...	6,244
Cream . . . . .	...	...	23,464
Other sorts of writing paper	...	...	105,367
Writing pads . . . . .	...	...	2,355
Boxed stationery . . . . .	...	...	9,793
Writing paper in large sheets	133,064	113,858	...
Note and letter paper and envelopes . . . . .	5,744	5,013	...
Envelopes imported separately	12,547	14,010	...
Total writing paper and envelopes . . . . .	151,355	132,881	117,223
Blotting paper . . . . .	...	...	6,050
Old newspaper in bales and bags . . . . .	947,241	1,159,390	1,151,667
Other kinds of paper . . . . .	96,580	107,004	70,878
Paper manufactures . . . . .	30,538	46,788	40,375
Total paper . . . . .	2,246,564	2,518,288	2,836,024

52. We are very sorry we are unable to answer this question by actual and practical experience of the manufacture of paper, as the mill has been set down since 1931. As has been pointed out before we have now tried to reduce the cost of production of pulp by the introduction of the sulphate process removing the old soda process and this we presume would give us a reduced cost of pulp manufacture.

Regarding the manufacture of paper and the possible reductions thereon the installation of modern machinery for the manufacture of size for the mixing up of China clay and for the making of alum solution we hope that we would get a cleaner and a better sheet of paper than before, thus the loss by Retrei paper and thus helping us to reduce the cost of manufacture of paper.

Since 1931 we have changed the old save-all flat bottomed tanks and now constructed fibre recovery funnel which in our opinion would save nearly 5 per cent. of the loss which we would be sustaining by the loss of pulp through the paper machine effluent and this would naturally reduce the cost of the manufacture of paper.

In the process of manufacture we have eliminated all steam-engine and have also removed the shaftings which were all over the mill before and by the installation of motors for all machines we expect that the running and maintenance costs would be cut down to a great extent.

As paper was not well-glazed before an account of one stack of five chilled iron calender role, we improved the same by adding two more roles and also making two of the roles steam-filled, it would give a better gloss than what it was before. In order to eliminate the possible trouble by the condensation of vapour coming out of the drying cylinder felts, etc., we are arranging to have a system of vapour absorption apparatus installed in the roof of the paper machine wall and this would naturally improve cleanliness of paper and hence the quality.

54. After the lapse of seven years of protection granted to us by the Government of India we feel that we have amply justified the grant of protection by the tremendous enthusiasm that is shown by the new companies that have been formed and trying to exploit bamboo and increase the manufacture of pulp. It is therefore necessary that the Government should be taken into consideration the spade work that has been so far done by the pioneers in the bamboo pulp and paper industry and to-day we feel that this industry has passed the stage of laboratory experimentation before 1931 and now has passed the stage of proving to the world that it is a commercial success. When the industry is entirely chemical and when the proper and efficient running of paper and pulp mill requires the help of highly qualified technical men and skilled workmen, it is very difficult to think that capital would rush forth immediately and hence the investing public have been very much averse to starting new concerns in view of the circumstances of business in the continent as well as in India with special reference to paper that they were very unwilling and very slow to respond to the advantages of protection granted to this industry. To add to this the price of wood pulp has fallen down so low that to think of manufacturing bamboo pulp at a very high cost when imported wood pulp equal to bamboo pulp in many respects is available at cheaper rates, it would be very difficult to invest the required money. Now that the condition of wood pulp market has changed and the price have risen up favourably, it is left to the Indian public to take advantage of this situation and have therefore rushed in the short space of two years we invest nearly 3 to 4 crores of rupees in floating new paper and pulp mills in spite of the discouraging reports published in the newspapers regarding the possible over-production of paper in this country and the impossibility of finding a ready market for paper thus manufactured. We beg to enclose herewith the statistics of imports of paper of all descriptions to show to the Board the possibilities of stopping foreign paper imports and how much paper which is still imported can easily be manufactured.

List of tabular statements enclosed.

However the new companies that have been started have so well arranged their scope of manufacture that each mill is trying to manufacture a different quality of paper from the other. This would not only tend to reduce the imports of the different qualities of paper but also increase the possible employment of hundreds of families to be engaged in the manufacture of pulp and paper.

Under these circumstances all the new companies that are floated and in the possible industrial advancement of the country and greater exploitation of bamboo for better purposes and in view of the great progress so far shown in the manufacture of the different paper from bamboo, we request the Tariff Board to recommend to the Government of India for the continuance of the existing surcharges of pulp and paper and also to make the Tariff Schedule altered according to our representation in Question No. 51. This will necessarily make the toddling industry steadfast and within a next few years it would be able to stand on its own legs provided other conditions in business also prove useful and helping.

## INDIAN IMPORT STATISTICS.

*Total paper and Board Imports (1929-30 to 1933-34).*

Year.	Quantity.	Value.
	Tons.	Rs.
1929-30 . . . . .	137,020	3,72,31,138
	3,537	30,47,593
1930-31 . . . . .	114,692	2,86,74,329
	3,661	27,06,931
1931-32 . . . . .	109,535	2,50,24,106
	1,872	14,59,321
1932-33 . . . . .	131,977	2,86,44,624
	1,296	7,83,089
1933-34 . . . . .	128,180	2,63,18,972
	1,267	8,19,470

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*Total value of pulp, Paper, Board and Paper—Stationery.*

Year.	1929-30.	1930-31.	1931-32.	1932-33.	1933-34.
	Rs.	Rs.	Rs.	Rs.	Rs.
Pulp . . . . .	44,94,910	42,06,706	35,98,541	22,08,879	27,09,736
Paper, Board, and Paper Stationery.	4,77,37,518	3,67,98,832	3,18,26,606	3,58,80,944	3,29,40,997

## GOVERNMENT PAPERS IMPORTS.

(1929-30 to 1933-34).

	1929-30.		1930-31.		1931-32.		1932-33.		1933-34.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Cwts.	Rs.	Cwts.	Rs.	Cwts.	Rs.	Cwts.	Rs.	Cwts.	Rs.
Printings . . . . .	10,626	11,81,056	9,881	11,51,193	5,926	7,12,161	3,282	2,74,474	5,285	4,12,370
Writings . . . . .	15,252	8,17,636	16,081	6,36,026	3,866	2,68,316	2,476	1,46,582	1,841	1,02,862
Other kinds . . . . .	12,379	5,64,741	15,351	4,52,866	11,323	2,68,077	3,971	1,53,160	2,526	1,00,828
Boards . . . . .	32,488	4,84,160	31,915	4,66,846	16,336	2,10,767	16,202	2,08,873	15,686	2,03,410
TOTAL . . . . .	70,745	30,47,593	73,228	27,06,931	37,451	14,59,321	25,931	7,83,089	25,338	8,19,470

## PAPER AND BOARD IMPORTS THAT CAN BE MADE IN INDIA, 1933-34.

Port of Entry.	Paper.		Remarks.	Boards.		Remarks.	Total Paper and Boards.	
	Total Import.	Can be made in India.		Total Imports.	Can be made in India.		Total Import.	Can be made in India.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Calcutta . . . . .	31,342½	5,328	1,269 Packing 3,041½ Printing 714 Writing	5,922	5,323½	3,184½ Straw 2,056 Paper	37,264½	10,000
Bombay . . . . .	35,562½	8,025½	1,660 Packing 3,210½ Printing 2,513 Writing	6,944	6,446	4,609 Straw 1,792 Paper	42,507	14,471½
Sind (Karachi) . . . . .	12,252½	1,352½	172½ Packing 346½ Printing 584½ Writing	678½	624	480 Straw 188 Paper	12,931½	1,976½
Madras . . . . .	21,157½	3,392½	406½ Packing 2,131½ Printing 605 Writing	1,755½	1,245½	786½ Straw 356 Paper	22,913	4,638
Burmah (Rangoon) . . . . .	12,012½	900	243 Packing 230 Printing 231 Writing	551½	515	402½ Straw 104 Paper	12,564½	1,415
TOTAL . . . . .	112,328	19,898½	..	15,852	14,456½	..	128,180	30,000

## INDIAN PAPER IMPORTS (1929-30 TO 1933-34) SHARE OF EACH QUALITY.

	1929-30.		1930-31.		1931-32.		1932-33.		1933-34.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Cwts.	Rs.	Cwts.	Rs.	Cwts.	Rs.	Cwts.	Rs.	Cwts.	Rs.
Packing paper . . . . .	286,850	49,59,234	234,358	36,54,055	204,821	31,81,016	324,807	45,35,100	250,268	31,81,847
News printing . . . . .	485,749	63,29,123	430,819	52,52,131	398,571	44,70,209	456,572	47,50,481	511,112	45,57,768
Other printing . . . . .	319,771	60,01,260	252,394	46,35,243	217,409	35,25,568	222,921	35,50,330	259,470	38,24,844
Total printings . . . . .	805,520	1,23,30,883	683,213	95,87,374	615,980	79,98,775	679,493	88,09,811	770,582	83,82,612
Writing paper . . . . .	213,074	53,95,227	136,540	35,80,877	136,650	32,23,426	128,635	29,62,372	133,064	28,31,266
Note letter paper . . . . .	12,382	5,97,644	6,475	3,72,221	6,663	8,32,821	5,263	2,74,494	5,744	2,72,843
Envelopes . . . . .	19,451	9,14,917	14,305	7,02,851	17,008	7,64,145	15,755	6,84,442	12,547	5,38,837
Total writings . . . . .	244,907	69,07,788	157,320	46,55,449	159,301	44,20,792	149,653	39,21,308	151,355	36,42,946
Old newspaper . . . . .	912,620	45,99,002	822,692	36,88,457	837,331	34,51,608	947,386	42,38,556	947,241	41,29,895
Other kinds . . . . .	89,394	33,59,767	69,739	26,62,308	79,011	24,64,215	93,949	28,35,479	96,530	29,13,576
Paper manufactures . . . . .	23,780	13,35,885	21,047	12,32,219	18,711	9,57,301	24,628	10,90,158	30,538	12,95,412
Total paper . . . . .	2,303,051	3,34,92,059	1,985,308	2,69,80,462	1,915,155	2,24,23,707	2,220,006	2,49,30,412	2,246,564	2,35,46,288
Straw Boards . . . . .	259,825	16,66,500	238,200	14,56,282	197,458	11,68,054	299,794	18,41,087	194,289	9,53,157
Paper Boards . . . . .	10,2617	16,31,711	65,208	10,48,571	70,637	11,02,015	112,614	16,20,307	112,913	14,25,927
Board manufactures . . . . .	14,907	4,40,868	5,093	1,89,014	7,443	3,30,330	7,136	2,52,638	9,840	3,90,600
Total Boards . . . . .	377,349	37,39,079	308,471	26,93,867	275,543	26,00,399	410,543	37,14,312	317,042	27,72,684
Total Paper and Boards . . . . .	2,740,400	3,72,31,138	2,293,840	2,86,74,329	2,190,698	2,50,24,106	2,639,549	2,86,44,624	2,563,606	2,63,18,972



Quantities of Paper and Board imports that could be made in India and the shares of the Ports (1933-34).

Quantity.	BOMBAY.			SIND.			MADRAS.			BURMAH.			TOTAL.		
	Total Imports.	Could be made.	Total Imports.	Total Imports.	Could be made.	Total Imports.	Total Imports.	Could be made.	Total Imports.	Could be made.	Total Imports.	Could be made.	Total Imports.	Could be made.	Per cent.
Packing Paper	Cwt. 84,679	Cwt. 25,390	Cwt. 110,080	Cwt. 11,492	Cwt. (1721) 3,450	Cwt. (4094) 8,130	Cwt. 70,789	Cwt. (243) 4,860	Cwt. (12,513) 250,268	Cwt. (3,7514) 75,030	Cwt. 16,274	Cwt. (25,5554) 511,112	Cwt. (12,513) 250,268	Cwt. (3,7514) 75,030	30
News Printing	132,934	(1,269) N4 T	203,472	63,025	N4	N4	70,789	N4	(25,5554) 511,112	N4	31,286	(25,5554) 511,112	(25,5554) 511,112	N4	N4
Other Printings	88,886	(3,0414) 60,846	98,747	9,923	(3464) 6,930	(2,1214) 42,630	80,900	(280) 5,600	(12,9734) 259,470	(9,079) 181,680	8,015	(12,9734) 259,470	(12,9734) 259,470	(9,079) 181,680	70
Writing Paper	20,441	(714) 14,280	71,805	16,731	(5844) 11,660	(6044) 12,110	17,375	(231) 4,620	(6,453) 133,084	(4,845) 92,960	6,602	(6,453) 133,084	(6,453) 133,084	(4,845) 92,960	70
Note and Letter Paper	1,141	(284) 570	2,302	905	(224) 432	(10) 200	401	(25) 497	(287) 5,744	(1434) 2,870	995	(287) 5,744	(287) 5,744	(1434) 2,870	50
Envelopes	1,439	(36) 719	5,216	1,455	(364) 727	(85) 1,697	3,996	(26) 521	(627) 12,547	(3184) 6,272	1,042	(627) 12,547	(627) 12,547	(3184) 6,272	50
Old News Paper	255,921	N4	179,092	130,795	N4	N4	218,071	N4	(47,362) 917,241	N4	162,702	(47,362) 917,241	(47,362) 917,241	N4	N4
Other kinds of Paper	23,981	(213) 4,760	38,560	9,011	(90) 1,900	(154) 3,050	15,465	(95) 1,900	(4,823) 96,580	(963) 19,260	9,563	(4,823) 96,580	(4,823) 96,580	(963) 19,260	20
Paper manufacture	19,428	N4	5,702	1,070	N4	N4	623	N4	30,538	N4	3,715	30,538	30,538	N4	N4
	(31,3444)	(3,328) T	(35,3625) 711,232	(12,2324) 245,057	(1,3524) T	(8,3924) T	(21,1574) 423,152	(900) T	(112,334) 2,246,564	(19,8944) T	(12,0124) 340,254	(112,334) 2,246,564	(112,334) 2,246,564	(19,8944) T	174
Total Paper	626,843	(3,1844) 63,661	92,185	8,599	(430) 8,599	(7884) 15,734	15,734	(4024) 8,050	(9,7144) 194,286	(9,7144) 194,286	8,050	(9,7144) 194,286	(9,7144) 194,286	(9,7144) 194,286	100
Straw Board	63,091	(2,056) 41,120	44,881	4,726	(188) 3,760	(256) 7,120	8,959	(104) 2,060	(5,6454) 112,013	(4,430) 89,920	2,695	(5,6454) 112,013	(5,6454) 112,013	(4,430) 89,920	80
Paper Board	51,415	(53) 1,857	1,819	246	(16) 123	(103) 2,066	4,112	(84) 174	(492) 6,810	(4,919) 4,919	349	(492) 6,810	(492) 6,810	(4,919) 4,919	30
Board manufacture	3,314	(5,3234) T	138,985	13,371	(634) T	(1,2454) T	35,112	(615) T	(317,042) (15,452) T	(14,4564) T	11,034	(317,042) (15,452) T	(317,042) (15,452) T	(14,4564) T	91
TOTAL BOARDS	118,440	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTAL	746,249	..	850,137	253,023	..	..	468,264	..	..	..	251,298	..	2,563,606	..	..
Paper and Boards	(37,2644) T	(10,6514) T	(42,507) T	(12,9314) T	(1,9764) T	(4,638) T	(22,913) T	(1,415) T	(128,180) T	(34,355) T	(12,5644) T	(128,180) T	(128,180) T	(34,355) T	27

55. As the mills have not manufactured during the last few years it will be difficult to answer the question in the manner the Board wants us to reply but taking the average estimate we have on hand the works cost of one ton of all bamboo paper is Rs. 365 and to it the overhead charges might be added at Rs. 75 per ton and this works out to Rs. 440.

	Rs.
The cost of one ton of bamboo paper is . . . . .	440
Less the present surcharge at Rs. 140 . . . . .	140
	<hr/>
Nett cost of paper . . . . .	300
Add duty at 20 per cent. . . . .	88
	<hr/>
	388
Less for work cost alone . . . . .	365
	<hr/>
Leaving a margin of . . . . .	23
	<hr/>

Total manufacture of paper at Rs. 3,000 per year—Rs. 69,000 out of this a sum of Rs. 42,000 as interest on Debentures had to be paid and the debenture debt instalment—Rs. 50,000.

Thus an expenditure of Rs. 92,000 at least has to be met. For this alone not to speak of the Head Office expenses and other rents, rates and taxes a sum of a minimum of Rs. 30,000 has to be found.

The basis of this estimate is on the a. d. basis.

(2) *Supplementary replies to Question No. 47, handed in on the 15th February 1938.*

Regarding the forms we submitted in answer to Question No. 47, we beg to submit herewith the following forms:—

*The cost of conversion of bleached Bamboo pulp into one ton of bamboo paper.*

	Rs.
Cost of Bamboo Pulp (Bleached) as per estimate submitted . . . . .	197
Power including coal, etc. . . . .	33
Chemicals for paper making including Alum, Clay, Rosin, Starches and Glues, Dyes, etc. . . . .	44
Finishing charges including crating and packing, etc. . . . .	30
Labour and supervision (excluding labour for pulp making) . . . . .	25
Repairs . . . . .	15
Renewals . . . . .	25
Dressings . . . . .	20
	<hr/>
Total . . . . .	389
	<hr/>

This does not include the overhead charges which generally amount to, in our estimation about Rs. 75 to Rs. 80 per ton of paper.

*Estimated Cost for the Manufacture of one ton of Unbleached Bamboo Pulp.*

	Rs.
Bamboo . . . . .	41
Miscellaneous Raw Material . . . . .	10
Coal . . . . .	33
Sulphate . . . . .	20
Lime . . . . .	8
Labour and Supervision . . . . .	10
Repairs . . . . .	20
Renewals . . . . .	10
Dressings . . . . .	15
	<hr/>
Total . . . . .	167
	<hr/>
Bleaching . . . . .	30
	<hr/>
Total . . . . .	197
	<hr/>



**Evidence of Mr. T. VENKAJEE, and Mr. D. JACOB, recorded at  
Calcutta on Tuesday, 15th February 1933.**

B.—ORAL.

*President.*—In what capacities have you come to give evidence before the Board?

*Mr. Venkajee.*—I am the factory Manager and Mr. Jacob is Secretary to the Managing Agents.

*President.*—What is the capacity of the mill?

*Mr. Venkajee.*—Ten tons of paper per day, or about 3,000 tons per annum.

*Mr. Rahimtoola.*—3,000 tons if worked to full capacity?

*Mr. Venkajee.*—Yes, after eliminating such things as stoppages, holidays, etc.

*President.*—In regard to the classes of paper you are manufacturing, are you proposing to manufacture any class of paper which is not classed as protected?

*Mr. Venkajee.*—No. The paper machine as was originally erected before we took up the management this time, had one Yankee cylinder enabling us to manufacture kraft and also writings and printings as we had two extra cylinders installed for the manufacture of white paper. Now that we have increased the capacity of the machine from 4 tons of paper per day to 10 tons of paper, we have installed more cylinders to manufacture printing and writing papers. We do not propose to manufacture kraft except for our own use as wrappings whenever there is need for it.

*Mr. Rahimtoola.*—What about M. G. papers?

*Mr. Venkajee.*—That M. G. cylinder we have taken to the very end in such a manner as to make it ineffective for such a purpose.

*President.*—You are not proposing to manufacture any M. G. paper?

*Mr. Venkajee.*—Not as a class by itself.

*President.*—Bamboo is your primary material?

*Mr. Venkajee.*—Yes.

*President.*—You have got a lease of a forest in the upper Godavari: do you think that would be sufficient to supply your needs?

*Mr. Venkajee.*—The forest that has been given to us is Rekapalli and it is estimated by the forest officer to give us a supply of about 4,000 to 5,000 tons of bamboo per annum. We have taken that lease on the assumption that we shall be able to work it better than the contractors and get more yield out of it. The second point is that the weight of bamboo is a variable factor—from 2½ tons per 1,000 to as much as 9 tons per 1,000. So we have assumed that we will be able to get at least 8,000 tons per year out of that forest. In case it does not yield that amount, we will have to tap some other source for our bamboo.

*President.*—You cannot say at present whether this area will be sufficient?

*Mr. Venkajee.*—We are somehow assured of a supply of about 8,000 tons a year.

*President.*—Have you any idea of using grass at all?

*Mr. Venkajee.*—Our pulp plant is not arranged to suit grass but we have got a rotary spherical digester like those used in grass mills which can be utilised for grass in case we use grass as well.

*Mr. Rahimtoola.*—What other area have you in mind for tapping?

*Mr. Venkajee.*—The Rampa agency which is the biggest forest area. We could not go into that and ask the Government for a concession in that forest because the working plans were not ready, and the Forest Department did not know how much bamboo it would yield. Another difficulty is that it has not got a river frontage, and there are strips of lands belonging to private zamindars and we have to go through these to bring bamboo from the Rampa forest to the river otherwise we have got to bring it by road which will make it very costly. Besides this, the Forest Utilisation Officer who has investigated into the former Forest—the Rekapalli forest area—thinks that that is the only possible area which the Andhra Paper Mills should tap.

*President.*—This is a Government area; you might get lease of some zemindari areas?

*Mr. Venkajee.*—We might, but there is the question of royalty to be paid to the zemindars.

*President.*—In regard to the process, you propose to change over from soda process to the sulphate process?

*Mr. Venkajee.*—Yes.

*President.*—Does that mean some alterations to the original plant?

*Mr. Venkajee.*—The original recovery room had to be completely altered on that account.

*President.*—Your block capital comes to about Rs. 14 to Rs. 15 lakhs?

*Mr. Jacob.*—Yes.

*President.*—Supposing you have to put up a mill now, what would it cost?

*Mr. Venkajee.*—We estimate that it would cost about Rs. 40 lakhs.

*President.*—As regards your recovery you estimate only 60 per cent.

*Mr. Venkajee.*—That is our estimate, but it has to be worked and seen. The manufacturers guarantee 80 per cent. and from what we hear from Indian experience it has been somewhere between 50 and 60 per cent.

*President.*—The modern practice is 80 per cent.

*Mr. Venkajee.*—Modern practice requires 80 per cent. recovery otherwise there is something wrong.

*President.*—At present you have not got many quarters for your staff?

*Mr. Venkajee.*—We need not build more quarters as our mill is adjacent to the town and the quarters built by us are in the Mill premises. The local labourers are living in the town itself. For such staff that requires to be present for all the 24 hours we have bungalows constructed, but for those on shift duty, when they can get quarters in the town for Rs. 3 or Rs. 4 per month we feel we need not go in for buildings for them.

*President.*—In regard to good many questions you have not been able to give answers and your previous experience, I mean the 1931 experience, was not very fortunate.

*Mr. Venkajee.*—We have now changed the process from soda to sulphate.

*President.*—In answer to question 42 you have given an estimate of Rs. 40 lakhs for a 3,000 ton capacity mill.

*Mr. Venkajee.*—That is for a 3,000 to 5,000 ton capacity mill.

*President.*—How much debenture loan did you raise?

*Mr. Venkajee.*—Rs. 6 lakhs.

*President.*—That was for the new machinery and so on.

*Mr. Venkajee.*—Yes.

*President.*—It was used for that purpose?

*Mr. Venkajee.*—Yes.

*President.*—It is not intended as working capital.

*Mr. Venkajee.*—No.

*President.*—In regard to question 47 regarding works costs, have you changed that?

*Mr. Venkajee.*—We have altered the figures and submitted three forms.

*President.*—Take the cost of manufacture of one ton of unbleached pulp. Unbleached pulp you estimate at Rs. 167.

*Mr. Venkajee.*—Yes.

*President.*—What is dressings?

*Mr. Venkajee.*—Wires and perforated sheets for washing tanks and wash pits, etc.

*President.*—Under what headings would you put them?

*Mr. Venkajee.*—Under current repairs and maintenance.

*President.*—It will make a very high figure. It comes to Rs. 47 a ton.

*Mr. Venkajee.*—We have to be prepared for that figure.

*President.*—That is not in accordance with the modern practice in India. The figure is very high.

*Mr. Venkajee.*—There is the deterioration of the perforated sheets that are in the washing tank and wash pits.

*President.*—That is not the experience of mills working already in India and their figure is very much lower.

*Mr. Venkajee.*—It can be reduced.

*President.*—On the other hand your figure for labour and supervision seems to be very low.

*Mr. Venkajee.*—This is distributed to paper and pulp-making.

*President.*—Even that seems to be comparatively low.

*Mr. Venkajee.*—We have calculated on the total salary and wages bill. Probably from the experience of the first year, we might find one is lower and the other higher.

*President.*—I find the cost of lime is not particularly high. Your coal estimate is rather high.

*Mr. Venkajee.*—The price of a ton of coal delivered at Rajahmundry is very high.

*President.*—Where do you get it from?

*Mr. Venkajee.*—From Jharia and Rancegunj coal fields.

*President.*—What is the price of coal per ton delivered?

*Mr. Venkajee.*—Delivered at the mill it comes to Rs. 16 per ton. We are trying to use Singareni coal, but the nearness of the mine to the factory has not been of any advantage to us, because the Singareni coal price is almost controlled by the price of Raniganj coal. It is only a few rupees less. If we can get the benefit of the price of coal at pitsmouth at Singareni, we might be in a position to reduce the cost of coal.

*President.*—On the other hand your cost of bamboo is somewhat less.

*Mr. Venkajee.*—Yes. Rs. 16 is the figure worked out. We have been stocking materials. We have already gone into the forest for exploiting bamboo and so far we have got it at Rs. 16 per ton.

*President.*—We have been told by some mills that the difference between bleached and unbleached pulp is represented only by the cost of bleaching powder.

*Mr. Venkajee.*—Only the cost of bleaching powder is added. The difference between bleached and unbleached pulp is only Rs. 30.

*President.*—Does that represent the cost of bleaching powder?

*Mr. Venkajee.*—Yes the cost of bleaching powder and washing.

*President.*—Finishing charges including creating and packing, etc., is not a very suitable allocation. Packing out to be a separate item.

*Mr. Venkajee.*—Yes.

*President.*—How would you split that up?

*Mr. Venkajee.*—Rs. 20 for sorting and finishing and Rs. 5 for crating and packing.

*President.*—Your labour charges taken together would come to Rs. 35.

*Mr. Venkajee.*—That is the total.

*President.*—That seems rather low. Your Chemicals are rather high.

*Mr. Venkajee.*—It is due to the railway freight that the cost of chemicals is high.

*President.*—Your estimate of power and fuel is on the high side even allowing for the disadvantages. As I say labour seems to be definitely on the low side.

*Mr. Venkajee.*—After one year we might be able to see whether we require more.

*President.*—Current repairs, maintenance and dressings all go together. That comes to Rs. 60. That is almost an impossible figure.

*Mr. Venkajee.*—Do you mean it is too high?

*President.*—Yes. Without disclosing details, I am just giving you an indication. I am simply saying where your costs are high.

*Mr. Venkajee.*—In the first year it would cost a good deal.

*President.*—Because you have an old plant.

*Mr. Venkajee.*—Yes.

*President.*—That might be true in your case, because you have to use a plant which is 15 years old.

*Mr. Venkajee.*—After one or two years' experience, we should be in a position to reduce our charges.

*President.*—And overheads about 75 to 80?

*Mr. Venkajee.*—Yes.

*President.*—That ought to come into the capital account.

*Mr. Venkajee.*—This has to be paid within a particular period of 15 years. That has to be regularly paid. We have included the debenture interest in that.

*President.*—It ought really to have been included in the block capital and the interest ought to be calculated on the whole block.

*Mr. Venkajee.*—That adjustment would reduce this figure a little.

*President.*—On the other hand it would raise the other figures. Rs. 75 to Rs. 80 would include profit? सत्यमेव जयते

*Mr. Venkajee.*—No profit.

*President.*—According to your estimate the total cost including overheads will come to Rs. 464. Do you think you will be able to sell your paper at Rs. 464.

*Mr. Venkajee.*—We could sell.

*President.*—At an average price of Rs. 464?

*Mr. Venkajee.*—The question of profit has to be considered, otherwise the paper is saleable.

*President.*—I am leaving profit out of account. It seems to me that it would be difficult for you to sell at Rs. 464.

*Mr. Venkajee.*—I don't think so.

*President.*—It would leave no margin of profit.

*Mr. Venkajee.*—That has to be added according to the market price. The prices we have put in for bamboo cannot be taken at such a high figure, because next year we may be in a position to work the forests ourselves. The coal consumption is high and something has to be done to reduce that.

*President.*—To what figure do you think you would bring it down?

*Mr. Venkajee.*—It is difficult to say, but we anticipate that it would be possible to reduce it to Rs. 20 to Rs. 30. One difficulty with this mill is that for all repairs and maintenance we have to take into account the delay as well as the high cost of repairs due to the fact that stocks do not come in regularly. Steamers cannot be chartered, because the quantities we require are small.

*President.*—If I remember right Rs. 464 was the fair selling price estimated by the last Tariff Board. Your cost of manufacture is actually higher than that estimated by the last Tariff Board.

*Mr. Venkajee.*—That is for the first year. As we have explained in reply to another question, we hope to bring our costs down in respect of such items as bamboo, repairs and renewals, etc.

*President.*—Even if you reduce it by Rs. 30 or Rs. 40, your cost of production will be higher than what was estimated by the last Tariff Board and since the last Tariff Board reported there have been considerable improvements in the existing mills.

*Mr. Venkajee.*—We have not made any improvement from that time.

*President.*—Supposing protection has to be continued, the Tariff Board can hardly suggest a measure of protection based on uneconomic cost of production.

*Mr. Venkajee.*—As I have submitted our costs will be reduced, but how far they will be reduced after one or two years' working, I can't say. I am sure they will be reduced. Without profit, it will be very difficult for us to pull on.

*President.*—You consider 3,000 ton capacity is an economic unit?

*Mr. Venkajee.*—That is the smallest economic unit.

*President.*—According to your calculation of selling price, you need both the basic protective duty and the surcharge? It comes to 1 anna 3 pies.

*Mr. Venkajee.*—From the figure so far taken as the basis, we need complete protection.

*President.*—1 anna 3 pies per lb.

*Mr. Venkajee.*—Yes.

*President.*—When do you expect to be turning out paper?

*Mr. Venkajee.*—In the month of May.

*President.*—To full capacity?

*Mr. Venkajee.*—It may be a few weeks in getting up to the full capacity. Having renovated all the machines, we do not anticipate any difficulty regarding the question of capacity.

*Mr. Rahimtoola.*—How many foreigners have you got in your service?

*Mr. Venkajee.*—In the technical staff we have only one man to look after the sulphate plant.

*Mr. Rahimtoola.*—He is called the mechanical erector?

*Mr. Venkajee.*—He has not yet arrived. We have only erectors representing the firm that supplied the machines.

*Mr. Rahimtoola.*—How many are there?

*Mr. Venkajee.*—One has come and gone already. He is now working in the Mysore Paper Mills and the boiler erector is in Rajahmundry. The Turbine erector is coming. These men will go away after the machine have been erected.

*Mr. Rahimtoola.*—When do you intend starting?

*Mr. Venkajee.*—This May.

*Mr. Rahimtoola.*—Will everything be ready by then?

*Mr. Venkajee.*—Yes, except the turbine and the boiler which are guaranteed to be finished within 45 days.

*Mr. Rahimtoola.*—This will be the first time you will be working after taking it over.



*Mr. Venkajee.*—Yes.

*Mr. Rahimtoola.*—When did you take it over?

*Mr. Venkajee.*—In September, 1935.

*Mr. Rahimtoola.*—Various costs which you have given are, I suppose, mere estimates.

*Mr. Venkajee.*—About the percentage of bamboo required for its conversion into pulp, that is on our own experience in 1931.

*Mr. Rahimtoola.*—Was the mill worked on Bamboo in 1931?

*Mr. Venkajee.*—Yes. On the question of bamboo we have experience. As regards sulphate and lime the figures are only estimates because we are changing over to a new process.

*Mr. Rahimtoola.*—What about the materials required per ton? Are they based on your experience?

*Mr. Venkajee.*—Yes, except sulphate and lime.

*Mr. Rahimtoola.*—What about primary raw materials?

*Mr. Venkajee.*—The figures are based on our experience.

*President.*—You cannot say very much about your coal consumption till you have got your new turbine.

*Mr. Venkajee.*—That is where we hope to get a good reduction. Since we have not had the experience of what the new power plant would consume, we have put in this figure just for the sake of an estimate.

*Mr. Rahimtoola.*—In reply to question 11, you have given us the total expenditure incurred on modifications as Rs. 12 lakhs.

*Mr. Venkajee.*—Yes.

*Mr. Rahimtoola.*—That is over and above the price you paid for the purchase of the mill.

*Mr. Venkajee.*—As Dayaram & Sons. We did not purchase the mill. We have simply taken over the management of the mill as managing agents.

*Mr. Rahimtoola.*—How did you estimate the block capital?

*Mr. Venkajee.*—The total money spent so far, the value of the mill with its lands, leases and buildings, is taken as the block capital. What we have spent is on the new machinery which we have ordered.

*Mr. Rahimtoola.*—That means the block capital is Rs. 14 to Rs. 15 lakhs.

*Mr. Jacob.*—Yes.

*Mr. Rahimtoola.*—To that you have added Rs. 12 lakhs.

*Mr. Venkajee.*—Yes.

*Mr. Rahimtoola.*—That means Rs. 12 lakhs was necessary to increase your capacity from 4 tons to 10 tons of paper.

*Mr. Venkajee.*—Yes, and to enable us to change over from the soda process to sulphate process.

*President.*—Is there any other point which you wish to raise with the Board?

*Mr. Venkajee.*—No.

## 17. The Mysore Paper Mills Ltd., Bangalore.

### A.—WRITTEN.

(1) *Letter No. G. 11/407, dated the 25th January, 1938.*

**Re: REVENUE SURCHARGE ON THE EXISTING PROTECTIVE DUTIES.**

With reference to question 54 of the questionnaire, in regard to the existing surcharge on the Protective and Revenue Duties, we beg to state that even apart from the effect on the Paper Industry of the removal of the existing surcharge on the protective duties, we consider that the removal of surcharge on paper and pulp alone while it continues to be levied on other products would have reactions, the consequence of which cannot be estimated in advance. We urge that the paper and pulp industry alone may not be deprived of the adventitious benefit which industries in general receive even from a purely revenue measure.

We beg to submit therefore that the existing surcharge on Paper and Pulp may be continued so long as surcharge forms part of the scheme of Indian Tax Revenue.

(2) *Letter No. G. 11/579, dated the 4th February, 1938.*

**Re: REPLIES TO THE QUESTIONNAIRE.**

We beg to enclose herewith our Representation with our replies to the Questionnaire (with four spare copies), as desired in your letter No. 22, of the 6th January, 1938. We trust that this will reach you in good time.

We look forward the visit of the Board to our Mills at Bhadravati.

We request that the Board may kindly arrange for our oral evidence being taken after they have visited our Mills.

### REPRESENTATION TO THE TARIFF BOARD.

In sending enclosed our replies to the Questionnaire of the Tariff Board, the statements and other information as called for, we beg to make it clear that our Mill is still under erection, and we have not yet started manufacturing operations. In the circumstances, the data furnished are necessarily estimates, and do not represent the results of actual working.

Our Mill is designed and equipped for manufacturing several kinds of high-class writing, printing and typewriting papers from Bamboo locally available. It therefore fulfils the main condition for grant of protection, viz., the utilization of indigenous raw material for paper industry. The enterprise holds forth promise of the eventual establishment of this important industry in South India, capable of turning to good account local resources not now utilised to any appreciable extent.

The ownership is entirely Indian. But for the technical European personnel required in the initial stages, the staff is also entirely Indian. Already a start has been made in the direction of training Indian Staff by sending selected candidates with University qualifications for training in European Mills in the Chemical, Mechanical and Electrical sections. The Electrical Engineer has already returned after training. Six other graduates are now under training in England and on the Continent.

It is estimated that, when the factory starts work, it will provide subsistence for 800 families and that the Forest Department will employ 600 families on the extraction and transport of bamboos.

Our Mill has a surplus capacity of pulp up to a maximum of 600 tons a year, which can be disposed of to other mills. This surplus can also be used for investigating the possibilities of staple fibre or rayon industry.

The forests commanded by our Mills have a surplus of bamboos beyond our present requirements and also several species of soft wood and grasses

now going to waste. The possibilities of mechanical pulp and of Kraft Paper can also be investigated and developed when our mill is established.

The successful establishment of this industry further provides a means of utilising other waste materials. Rags and waste paper have already acquired value in the State and in the Southern Maratha country. By conserving rags and waste paper and selling them to the paper mill, every householder in this area will have an opportunity of helping himself and helping the Mills. The inculcation of the habit of conserving waste for production of wealth, which the Mills are trying to effect in citizens of all ages from school children upwards, will provide a valuable education in civic consciousness the benefits of which will be readily appreciated.

The stability of paper industry provides a stimulus for the local manufacture of several of the chemicals used in the industry. In Mysore, for instance, two Companies have been newly floated for the manufacture of chemicals, viz., The Mysore Chemicals & Fertilizers, Ltd., which will manufacture the basic chemicals, and The Mysore Chemical Manufacturers' Ltd., for the manufacture of industrial chemicals. Travancore is actively engaged in exploiting the China Clay resources of the State to meet the demand for increased supplies of China Clay for the paper mills. The Mettur Chemicals, Ltd., will benefit from the demands for chemicals by the paper industry.

We beg to urge some particular difficulties we are faced with, in the sure hope that they will receive the sympathetic consideration of the Board:—

We are newcomers in the field of paper manufacture, and have to withstand competition from long-established Indian Mills. We have no experienced Indian staff. We have necessarily to employ costly European technical staff in the initial stages. We are situated at great distance from Ports, the present sources of supply of chemicals and coal. The railway freight on auxiliary materials like coal, chemicals, China Clay, is a very considerable addition to our cost in the initial stages. We hope, however, that several of our initial handicaps will disappear in the course of the next seven or eight years.

We have nearly 5,000 shareholders on our Books, drawn from all classes throughout India. To the end that their hopes may materialise, and that the Mills may play a worthy part in providing fruitful occupation to thousands of people, and in turn inspire the steady growth of industries in India, we pray that the Tariff Board may make special note of the difficulties we are faced with, and grant a generous measures of protection to this important industry.

#### REPLIES TO QUESTIONNAIRE FOR MANUFACTURERS.

1. (a) Public Company.
- (b) Registered in the Mysore State on 20th May, 1936. Rupee Capital.
- (c) All the shareholders are residents of India except 51 who are residents of Burma. Ninety-nine European residents in India hold 17,387 shares of the face value of Rs. 1,73,870.
- (d) The composition of the Board of Directors is wholly Indian. The General Manager is an European expert. It is proposed to appoint 5 others in the initial stages from Europe. The rest are Indians.
2. (a) 17 tons pulp, and
- (b) 15 tons paper daily.
4. Fine white wood-free writings and printings, and Badami paper, are proposed to be manufactured for the present. Our full programme includes:—

*Fine and Medium Papers M. G.—M. F. Calendered.—Watermarks, Writings, Banks, Bonds, Posts, Ledgers, Typewritings, Copyings, Duplicators, Printings, Books, Lithos, Offsets, Cardboards, Cartridges, Covers, Envelopes, Badamis.*

7. Bamboo supply is plentiful. Small quantities of rags and waste paper are available.

9. The Government of Mysore have promised supply of bamboo to the Mills at the rate of Rs. 12 per ton, f.o.r. Mill sidings for the first five years.

10. The freight on coal is unduly heavy and adds materially to our costs. We urge that special freight (all railway route) on the basis of telescopic rates applied by railways in Northern India be extended to Southern India also.

11. (a) Sodium Sulphate process.

(c) Rags pulp with lime and soda.

Form II is not filled up as manufacturing operations have not yet commenced. In Form III our estimates for the initial stages are given. [Not printed.]

20. About 600 at present in respect of bamboo.

21. Staff proposed to be employed when operations commence is as follows:—

University trained	42
Other technical	35
Other educated	45
Labour (Direct)	550
Labour (Contractors)	150

23 (1) Quarters,

(2) Protected water supply,

(3) Electric lighting,

(4) Medical attendance,

(5) Public Health and Sanitary arrangements,

(6) Educational facilities, and

(7) Co-operative Society,

have been provided. Recreation facilities will be provided.

29. (We shall submit our reply in a further communication).

41. (a) to (c) Plant is still under erection.

47. Form V is not filled up as manufacturing operations have not yet commenced. The figures shown in the enclosed statement, Form VI are only estimates for our initial stages.

51. Protection in the present form to be continued. Further the duty should be extended to Kraft Paper (all kinds) and wrappers which can be made in India.

(3) Letter No. G. 4/1386, dated the 25th March, 1938.

Re: PAPER SECTION OF THE FOREST RESEARCH INSTITUTE, DEHRA DUN.

#### Contribution.

With reference to your letter No. 252, dated the 5th March, 1938, to the Secretary, Indian Paper Makers' Association, Calcutta, on the above subject, a copy of which the Association have kindly forwarded to us, I am desired to state, for the information of the Board, that the authorities of the Forest Research Institute, Dehra Dun, approached us for a suitable contribution towards the Paper Section of the Institute, stating that other paper mills were sending such contributions to them.

In view of the useful work the Institute was carrying on, we have paid a sum of Rs. 500 as our contribution to the Institute, for the year 1937-38.

(4) *Letter No. B. 15—4/1411, dated the 26th March, 1938.*

*Re: TESTING OF LOCAL SOFT WOOD FOR MECHANICAL PULP IN THE FOREST RESEARCH INSTITUTE, DEHRA DUN.*

As promised by our Chairman at Poona on the 18th March, 1938, I am sending for the information of the Board the following brief note giving the latest details available here.

*Note.*

The local Soft Wood referred to *Kydia Calycina*. The Utilization Officer of the Forest Research Institute, Dehra Dun, wanted information regarding the availability of this wood and also the cost compared with the bamboos.

He was informed that the supply from the forests near Bhadravati is estimated at 160,000 c.ft. a year, on a felling cycle of 20 years and an exploitable girth of 2½ feet, and that the cost of the material is expected to be 10 per cent. less than that of bamboos.

The Utilization Officer of the Forest Research Institute, Dehra Dun, has written to the effect that an experiment as to the suitability of *Kydia Calycina* for the production of mechanical or chemical pulp would be taken up during 1938-39 and requested a supply of about 150 c.ft. of small billets during March, 1938.

Arrangements are being made by the Mysore Forest Department for the despatch of the quantity of the wood this month.

(5) *Letter No. 372, dated the 5th/6th April, 1938, from the Tariff Board, to the Mysore Paper Mills Co., Ltd., Bangalore.*

I am directed to request you to be good enough to supply the Board with an explanatory note regarding loss in wastage costs shown in your Form VI under overheads and to let them know why different commercial costs of pulp have been taken to calculate the cost of primary materials instead of the works costs.

2. I am also to request you to be so good as to send in the Form VI duly filled in again showing the details separately as asked for by the Board.

(6) *Letter No. G. 11/1668, dated the 12th April, 1938.*

We beg to acknowledge the receipt of your letter No. 372 of the 5th/6th April, 1938, asking us for an explanatory note regarding "loss in wastage costs" shown in our Form VI and certain other information and also asking us to send a fresh Form No. VI duly filled in showing the details separately as asked for by the Board.

As regards the "loss in wastage costs" we send enclosed an explanatory note. It will be seen from it that the figure represents the difference between the cost to the Mills and the salvage value of the finishing room waste. We regret that we entered it in item 16 instead of entering it as a separate item numbered 17 and separating it by a line from item 16.

As regards the different commercial costs of the pulp supplied by us instead of works costs, we beg to state that we tried to fill up your Form III to the best of our ability. And in our Form VI we took for primary materials the costs arrived at in our Form III for the different "half-stuffs". We have now filled up a fresh Form VI, as far as possible in exact accordance with your requirements, entering in it the figure of Rs. 15 for the Selling Expenses and Re. 1 for rent, rates and taxes, as indicated by the Chairman of the Tariff Board during our examination at Poona.

We have also shown under 13 and 14 the depreciation on our capital at statutory rates and the interest on working capital on the basis of the Tariff Board's recommendations in 1931.

We have omitted "Loss in waste costs" so as to avoid any disparity between the Form VI now submitted and similar forms that might have been received from other mills.

The Board will notice that these adjustments have resulted in a slight variation in the final cost which stands at Rs. 366-2-4 against Rs. 367-11-8 (on air dry basis), previously supplied.

We trust that we have furnished all the information that the Board require.

### The Mysore Paper Mills, Ltd., Bangalore.

#### FORM VI.

#### Works cost per ton of Finished Paper—(Writing Paper).

	Rs.	A.	P.
<b>Manufacturing Expenses—</b>			
1. Primary materials ( <i>N.B.</i> —Expenditure on each material to be shown separately as well as the quantity of each used)—			
2-35 tons Bamboo @ Rs. 15 per ton . . . . .	35	4	0
0-21 tons Rags @ Rs. 90 per ton . . . . .	18	14	5
0-01 tons Waste paper @ Rs. 80 per ton . . . . .	0	12	9
2. Imported Pulp . . . . .	..		
3. Auxiliary materials ( <i>N.B.</i> —Expenditure on each principal material to be shown separately as well as the quantity of each used)—			
0-244 tons Glauber Salt @ Rs. 110 per ton . . . . .	26	13	5
0-280 tons Quicklime @ Rs. 34 per ton . . . . .	9	8	4
0-052 tons Chlorine gas @ Rs. 347-8 per ton . . . . .	18	1	0
0-032 tons Rosin @ Rs. 300 per ton . . . . .	9	9	7
0-0527 tons Alum @ Rs. 110 per ton . . . . .	5	12	8
4. Power and fuel . . . . .	83	3	2
5. Current repairs and maintenance . . . . .	30	12	0
6. Labour			
7. Supervision and establishment—			
(a) salaries of technical staff	}	38	10 8
(b) salaries of non-technical staff			
8. Packing . . . . .	17	0	0
9. Any other items in cost of manufacture (Transport siding) . . . . .	4	0	0
<b>TOTAL</b>	<b>298</b>	<b>6</b>	<b>0</b>
<b>Overhead Charges—</b>			
10. Selling expenses . . . . .	15	0	0
11. Insurance . . . . .	5	0	0
12. Rents, rates and taxes (excluding income-tax) . . . . .	1	0	0
13. Depreciation at statutory rates . . . . .	42	0	8
14. Interest on Working Capital . . . . .	12	0	0
15. Head Office Expenses, and managing agents' commission . . . . .	12	0	0
16. Miscellaneous . . . . .	..		
<b>TOTAL</b>	<b>87</b>	<b>0</b>	<b>8</b>
<b>GRAND TOTAL BONE DRY</b>	<b>385</b>	<b>6</b>	<b>8</b>
<b>AIR DRY</b>	<b>366</b>	<b>2</b>	<b>4</b>
<b>Total output of paper for the year in tons . . . . .</b>	<b>4,500</b>	<b>tons</b>	

*N.B.*—If depreciation is calculated at rates different from the statutory rates, please state the rates.

**Evidence of Messrs. A. V. RAMANATHAN, R. A. MARONNE,  
M. L. NARASIMHA IYENGAR and D. RAJA RAO recorded  
at Poona on Friday the 18th March, 1938.**

**B.—ORAL.**

*President.*—Naturally you are not in a position to answer a good many questions put in the questionnaire as you have not yet begun manufacturing. Of course the Board realise any figures you give will only be estimates.

*Mr. Ramanathan.*—Yes.

*President.*—First of all we had better get down the position you hold in the company?

*Mr. Ramanathan.*—I am the Chairman of the Mysore Paper Mills and I shall be assisted by Mr. R. A. Maronne, General Manager, Mr. M. L. Narasimha Iyengar, Secretary at the Works and Mr. D. Raja Rao, Secretary at the office.

*President.*—In the initial stages I gather you will have European staff consisting of one General Manager and 5 other persons.

*Mr. Ramanathan.*—Yes.

*President.*—How long do you anticipate that they will remain with you?

*Mr. Ramanathan.*—Mr. Maronne's term is for 3 years from the commencement of operations. That is the contract we have given him and others have not yet been engaged. We are just in correspondence with the selected persons and the term depends upon what we are able to get them for.

*President.*—You have already sent some young Indians for training in the various departments.

*Mr. Ramanathan.*—Yes.

*President.*—Have any of you been to Dehra Dun?

*Mr. Ramanathan.*—The Chief Chemist was at Dehra Dun and three other apprentice Chemists were at Dehra Dun and they have come back. Two are working in the Deccan Paper Mills and one at Rajahmundry.

*President.*—Are they going to join you later on?

*Mr. Ramanathan.*—They are under agreements with us that they must serve us not less than three years.

*President.*—They are only employed in these mills temporarily?

*Mr. Ramanathan.*—They are under training in these various mills.

*President.*—When do you expect to begin the manufacture of paper? What is your estimate?

*Mr. Ramanathan.*—1st of June.

*Mr. Maronne.*—End of summer.

*Mr. Ramanathan.*—By the end of July we will be able to begin manufacture. All the machinery is in site and erection is proceeding rapidly and we are now in the last stages of construction.

*President.*—You speak of having a surplus capacity of pulp.

*Mr. Ramanathan.*—Yes.

*President.*—Have you any idea of selling that to any other mill?

*Mr. Ramanathan.*—I cannot commit myself straightaway. If we could come to some reasonable arrangement, we would like to help others. Yesterday our friend of the Deccan Mills was enquiring already about it. If there is some way for developing this business, we may be able to sell as I have indicated in the reply to our questionnaire. There are also ideas of developing other industries in which pulp could be used.

*President.*—Such as staple fibre.

*Mr. Ramanathan.*—Yes, artificial silk and things like that.

*President.*—You have that definitely in view?

*Mr. Ramanathan.*—I would not say we have definitely that in view, but we have other materials necessary for it. In Bhadravati we have methylalcohol and we could make formaldehyde. That is the proposition that we have been having for a long time. I am in correspondence with the European machinery manufacturers for the purchase of a formaldehyde plant and also for an acetic acid recovery plant direct from the pyroligneous liquor. If they fructify, it would be advantageous to use the extra pulp in the initial stages of experiment and later on increase the pulp capacity both for sale in India and also for use in other industries.

*President.*—You speak about the conservation of rags and waste paper. That is a very important matter. You are no doubt aware that the collection of rags is a regular industry in foreign countries.

*Mr. Ramanathan.*—I have taken some steps to advertise it within Mysore by the insertion of newspaper articles, correspondence and so on.

*President.*—It is quite possible that it may develop—it is already developing—into a big industry—I mean the collection of rags and waste paper.

*Mr. Ramanathan.*—Yes.

*President.*—You speak about the Mysore Chemicals and Fertilisers, Limited. Are they likely to make any chemicals useful to you?

*Mr. Ramanathan.*—Glauber's salt is one of their items. There is also another which immediately we may not be able to produce—Titanium dioxide.

*President.*—For colouring?

*Mr. Ramanathan.*—Yes. I understand that it may be costly. We have gone into it with the General Manager. It is costly for ordinary paper. It will be very useful for feather weight paper and air mail paper. That will only come in by experience.

*President.*—Air mail paper may not be so important in future. About Mettur Chemicals, Limited, what chemicals are they going to make which will be used by the industry?

*Mr. Ramanathan.*—Unfortunately they have not yet announced their details of manufacturing programme, but my idea was that they would be able to give heavy chemicals which we now get from distant places. We make our own bleaching liquor. I was envisaging other chemicals that might be useful. I indicated it in a general way. Not knowing their manufacturing programme, definitely, I would not venture to say anything.

*Mr. Rahimtoola.*—When are they likely to manufacture?

*Mr. Ramanathan.*—I saw an advertisement a week ago in the *Hindu* in which they have called for applications from apprentice engineers, apprentice chemists and I understood that they have placed orders for machinery. I expect as a shareholder of that concern that they would start at least a year hence.

*President.*—You have no doubt seen the advertisement of the new company at Calcutta.

*Mr. Ramanathan.*—Yes. I am interested in it. I am the Chairman of the Mysore Chemicals and Fertilisers, Limited. The Imperial Chemical Industries concern in Northern India affects me. I have seen it.

*President.*—They specially speak of chemicals required by the Paper industry.

*Mr. Ramanathan.*—Yes.

*President.*—Do you expect to get your raw materials at Rs. 12 a ton? Is that delivered at the mill?

*Mr. Ramanathan.*—Yes.

*President.*—What is your estimate of cost of coal per ton?

*Mr. Ramanathan.*—We have taken it at Rs. 26 a ton.

*President.*—That is bringing it from where?

*Mr. Ramanathan.*—From Bengal.



*President.*—Does it come by rail?

*Mr. Ramanathan.*—In the Iron works till now we have been getting it *via* Murmagoa by sea and then we have a special freight to bring it to Bhadravati from Murmagoa. We are now in correspondence for an all rail rate. We find that the charge for an all rail rate will come to Rs. 26. If it is Rs. 5-8 per ton *ex*-colliery, the all rail rate is Rs. 20 and other charges 8 annas making a total of Rs. 26. Even at Bangalore we are paying Rs. 26-11 for first class steam coal. That is the Mysore S. P. C. contract. I understand that, since we prepared this estimate, the price of coal, has gone up slightly.

*President.*—It has gone up in 1937-38.

*Mr. Ramanathan.*—Not merely that. Within the last week it has gone up by a rupee or two. I am speaking subject to correction. A friend who came to seek the coal contract told me that the price of coal had gone up. That is the information he gave me. I cannot vouch it.

*President.*—Do you intend to employ sodium sulphate process?

*Mr. Ramanathan.*—Yes.

*President.*—Have you got a recovery plant?

*Mr. Ramanathan.*—We have a soda recovery plant for the black liquor. We have to have another salt and caustic soda recovery plant for the liquor that comes from cathode end in the electrolyser plant. The General Manager has given a proposition for that. We have asked for data regarding the performance of such a plant. That would cost another Rs. 50,000 to Rs. 75,000. That is the additional cost that we shall have to go in for.

*President.*—You have already got your soda recovery plant?

*Mr. Ramanathan.*—Yes, for the black liquor.

*President.*—What percentage do you expect to recover?

*Mr. Ramanathan.*—The suppliers have guaranteed recovery.

*President.*—What is their guarantee?

*Mr. Ramanathan.*—80 per cent. is the utmost we could get. Guarantee is 70 per cent. I do not know how long it will take for us to get it.

*President.*—You may not get it at the start. With regard to bleach, do you propose to manufacture your own bleach?

*Mr. Ramanathan.*—We have placed an order for an electrolytic plant which is under erection. We manufacture our own bleach from common salt.

*President.*—Where do you get your salt from?

*Mr. Ramanathan.*—We are in correspondence with Tuticorin and Negapatam. We tried to get it from Konkan coast. But we did not succeed. We have not yet placed orders for the salt. Probably we will get it from Tuticorin.

*President.*—Is the Indian salt suitable for the purpose?

*Mr. Ramanathan.*—It has been found suitable. We have got samples which we find satisfactory.

*President.*—As regards the quarters for your staff, I presume you have provided quarters for all your superior staff.

*Mr. Ramanathan.*—Yes and also for Overseers, for the clerical staff, for some of the maistry class and for some of the cooly class. For the present we have in addition to the salaried staff quarters 40 for the maistries class and 80 coolies, working class.

*President.*—What about the remaining coolies?

*Mr. Ramanathan.*—There are villages round about and they can house themselves. We can give sites and building materials. Eventually if we are prosperous, we hope to have quarters just as we have in the Iron works.

*President.*—In regard to question 9, you will send a later communication about railway freights paid by importers.

*Mr. Ramanathan.*—I have collected some information, but being not yet in the trade, I do not know whether it is of any use. I would place myself in the hands of the Indian Paper Makers' Association.

*Mr. Rahimtoola.*—Are you a member of the Association?

*Mr. Ramanathan.*—Yes.

*President.*—They have supplied us with some information which I think will be sufficient for our purpose.

*Mr. Ramanathan.*—We have collected some information from the railway tables. I don't think it would be of any use.

*President.*—Can you tell us what the block capital is going to be? If necessary we will treat the information as confidential.

*Mr. Ramanathan.*—The position is this: according to the prospectus our idea was that we were going to have the whole plant for Rs. 21 lakhs. Our estimate was far too conservative. According to the commitments at present exclusive of the salt recovery plant that I mentioned and without putting in the Save all tank which formed part of the original idea and which we deferred for want of capital and some other additions which may be necessary, it comes to 32½ lakhs.

*President.*—That is for a designed capacity of how much?

*Mr. Ramanathan.*—4,500 tons of paper and an additional capacity of 600 tons of pulp.

*President.*—You have got an extra pulp capacity.

*Mr. Ramanathan.*—Yes, 600 tons a year.

*President.*—That is excluding salt recovery plant.

*Mr. Ramanathan.*—Yes, about Rs. 75,000 and the Save all tank, costing about Rs. 25,000.

*President.*—Roughly speaking, the two together will be 1 lakh.

*Mr. Ramanathan.*—Yes. There is one other thing, and that is on the basis of our future experience we may have to go in for some expenditure in regard to the effluent because the effluent now goes into the Bhadra river. For the moment, we think of storing it by earth bund and letting it go after aeration. But we have been advised that it may not be all right. We may find some other treatment to be necessary. I am not providing for it now because I have no data on which I could say how much it would cost to treat the effluent before it reaches the river.

*President.*—Would you like this information to be kept confidential?

*Mr. Ramanathan.*—For the moment I would like to keep it confidential.

*President.*—We need not publish it in that case.

*Mr. Ramanathan.*—We may not mind it after July because by that time we will ourselves publish it. We have now approached the Government for additional capital and the question is under their consideration.

*President.*—In regard to works cost per ton of bleached bamboo pulp, naturally we compare your estimates with the actuals as given by the existing mills and without disclosing what their costs are, we shall indicate in a general way where your figures seem to be high or low or open to question. Your chemical costs seem to be rather on the high side—the three items together.

*Mr. Ramanathan.*—The difficulty is that as regards Glauber's salt and common salt for chlorine. Freight plays an important part. I shall just give you some idea as to how much it means. I have already mentioned about coal. Coal is one of our very heavy items. There we have made a representation which if you will permit me, I shall explain a little more clearly. The coal freight, for example, from coal sidings to Poona *via* Shalimar (1,375 miles) is Rs. 14—Rs. 13 *plus* Re. 1 (surcharge). For Bhadravati which is about the same distance (1,624 miles) *via* Waltair, Madras and Bangalore, the freight is Rs. 20. It is Rs. 6 more though the distance is about the same. Similarly in respect of China Clay also until we develop our own deposit we find we have to pay freight at least

from Madras where we are able to get a satisfactory quality. From Trivandrum whence we hoped to get it, we have not yet received a quotation. As regards common salt, our cost is Rs. 25, out of which freight is Rs. 11 from Tuticorin to Bhadravati. The something applies to Glauber's salt, which we have to get either from Bombay or from outside. The freight in this case is heavy. Similarly with regard to Alum. We have to get 180 tons of alum. We have placed a contract for rosin with the Government of India factory in Northern India. There we pay freight from the Punjab. If our chemical cost is high, it is because we are so badly placed. The so-called apparent advantage in bamboo is more than covered up by these freights.

*President.*—Power and fuel you have already explained.

*Mr. Ramanathan.*—We have tried to keep that cost down. It would not have been possible to think of a paper mill at Bhadravati had it not been for the fact that we would be able to get two-thirds of our electrical power from Government. If we had to do it from coal, it would not have been possible at all.

*President.*—You will have an electric drive for your machines.

*Mr. Ramanathan.*—Yes. We have a steam turbine also because we superheat the steam and generate some electricity and then desuperheat it and use it for our factory.

*President.*—Part of your electricity will be obtained from Government and part of your electricity will be generated.

*Mr. Ramanathan.*—We shall generate about one-third and get from Government two-thirds. That is why the capital estimate is lower.

*President.*—This estimate for bleached pulp is rather difficult because there are some allocations to be made under overhead.

*Mr. Ramanathan.*—We have here a sheet showing the works cost per ton of bleached pulp. The difference is not much. Chlorine gas is Rs. 18-14-6. If you deduct this and the cost of 1 ton of bamboo, the remainder is the cost of unbleached pulp.

*President.*—What is the difference?

*Mr. Ramanathan.*—Roughly 10 per cent. It will be Rs. 187-10-10 against Rs. 208-1-4 and if it is to be on the air dry basis it will be Rs. 168-14-6 as against Rs. 187.

*President.*—Actually the difference between the prices of imported bleached and unbleached pulp is in the neighbourhood of £2 a ton and your difference is about Rs. 20.

*Mr. Ramanathan.*—It is not comparable with the price of imported pulp because I have not added here the head office expenses and managing agents commission.

*President.*—I am pointing out only the difference in price between bleached and unbleached pulp. It is about £2.

*Mr. Ramanathan.*—I have not made my point clear. The comparison must be between the price at which I could afford to sell unbleached pulp and the price at which unbleached pulp could be imported.

*President.*—I am afraid you have missed the point. The difference in price between the imported bleached and unbleached pulp is £2.

*Mr. Ramanathan.*—I am sorry I missed the point. We have taken here the price of chlorine gas as Rs. 18-14-6. A portion of unbleached pulp will be lost in bleaching. According to the quotations that we have received the price of bleached sulphite pulp is £16-5 and the price of unbleached sulphite pulp or easy bleaching is £13-10.

*President.*—We have got many quotations. The difference in price between the two kinds of pulp is about £2. Of course it varies from year to year.

*Mr. Ramanathan.*—I am sorry I made a mistake. I was comparing the import price with our price.

*President.*—I don't think we need bother you about rag or waste paper pulp. After all, they are all minor items. We might now pass on to the question of works cost per ton of finished paper which after all is the most important thing. Do you propose to use any imported pulp?

*Mr. Ramanathan.*—As I have said, I have prepared the statement on the basis that we would do without imported pulp. My evidence is not worth anything because I am not yet manufacturing paper. We do hope to manufacture paper with pure bamboo pulp. Our General Manager thinks that it is possible to do so.

*President.*—Without any imported pulp?

*Mr. Ramanathan.*—We hope to do without imported pulp.

*President.*—You will mix it with rags and waste paper.

*Mr. Ramanathan.*—Yes.

*President.*—They will be your subsidiary materials.

*Mr. Ramanathan.*—Yes. I merely say that this is the idea we want to work up to.

*President.*—Your overhead statement is not complete. You have not given selling expenses. Something has to be added on that account.

*Mr. Ramanathan.*—Yes.

*President.*—As regards rents, rates and taxes, would we have to add anything?

*Mr. Ramanathan.*—We may have to add sanitary and other taxes for our colony. The reason why we omitted to put a figure is that we thought that the Board might be able to work out a figure.

*Mr. Rahimtoola.*—How could the Board do it? "Rents, rates and taxes" is a local thing.

*Mr. Ramanathan.*—So far as rents, rates and taxes are concerned, we shall have to pay either the normal municipal taxes or a lump sum to the new Sanitary Committee that has been appointed for that area which would otherwise come as a tax.

*Mr. Rahimtoola.*—What would be the approximate amount?

*Mr. Ramanathan.*—I am unable to give it for this reason that it is still developing. The Committee itself was appointed only 6 months ago.

*President.*—It would be less than a rupee per ton in any case.

*Mr. Ramanathan.*—It might be more because the sanitary arrangements will cost a lot.

*President.*—Surely it would not go beyond Rs. 4,500.

*Mr. Ramanathan.*—One Sanitary Inspector and 10 scavengers would cost more than Rs. 300 per month.

*President.*—A rupee a ton would not be very far out. How much would be the selling expenses?

*Mr. Ramanathan.*—The only guidance we have is that one very big paper selling company which wanted to be our selling agents expected a commission of 2 per cent. plus 5 per cent. plus 5 per cent., that is, the cash discount, dealers' discount and their agency commission. That information came to me after I had prepared the statement and submitted it to the Board. I do not know if that comes anywhere near.

*Mr. Rahimtoola.*—That means 12 per cent. altogether.

*Mr. Ramanathan.*—Yes, on the selling price.

*President.*—That is rather very high.

*Mr. Rahimtoola.*—The selling price will include that commission.

*Mr. Ramanathan.*—Yes. It is added in such a way that it is 12 per cent. on the selling price.

*President.*—It is not likely to exceed more than Rs. 15 per ton at the most.

*Mr. Ramanathan.*—12 per cent. would work out very much higher.

*President.*—I have mentioned the figure of Rs. 15, judging by what it costs other mills. I don't suppose that it would cost you any more than it would cost other mills.

*Mr. Ramanathan.*—I am in your hands.

*President.*—For the purpose of argument we shall take it as Rs. 15. Depreciation you have given at statutory rates.

*Mr. Ramanathan.*—Depreciation at statutory rates will be slightly higher because this was taken on the figures which the General Manager had worked out at that time, but the present figure is Rs. 32½ lakhs, including water supply and other things. It would be roughly 6½ per cent. on an average. We will have to add another Rs. 3-8 to the total of depreciation under pulp as well as paper.

*President.*—Take Rs. 20 as depreciation in round figures?

*Mr. Ramanathan.*—Yes.

*President.*—Regarding interest on working capital, your figure is rather low?

*Mr. Ramanathan.*—The figure is based on Rs. 5 lakhs working capital at 5 per cent. interest. Five lakhs we based on three months production. We have followed the prospectus in this respect. There again there is the experience of other companies rather than our hopes to go on. At the time I prepared it I had to go on some basis, and I went on the basis of what the founders of the Company had originally put it. But it is on the low side. I am not sure that I can realise it in the working unless my sales organisation is so perfect that from the machine the paper goes direct to the market.

*President.*—You have no managing agents?

*Mr. Ramanathan.*—No.

*President.*—That item represents what?

*Mr. Ramanathan.*—Office expenses, Secretary's salary and a portion of my salary that is debited to this Company. There is no agency commission or anything like that.

*President.*—Under "Miscellaneous" you have put down "Loss in waste cost"?

*Mr. Ramanathan.*—In the process a certain amount of fibre is lost.

*President.*—Surely that ought to come in your works cost?

*Mr. Ramanathan.*—The justification is that in respect of the fibre loss also we have incurred all this expenditure. Our Manager takes it at a percentage of the total of all the previous items. It is not an overhead. It is an addition that is made after all other items are totalled.

*President.*—Surely it ought to go under manufacturing expense? Rs. 329 is your cost of manufacture, if any allowance has to be made for losses, they ought to go there and not under overheads. There is no loss in the overheads. The loss is in the works. It ought to go in under your manufacturing expenses: your figure ought to allow for wastage. You lose so much waste paper. That is not the usual way of accounting.

*Mr. Ramanathan.*—In the previous enquiry one of the three mills gave "per ton of pulp" the cost of conversion of pulp into paper, and the other two had given per ton of paper. Ours is somewhat like per ton of pulp. The Board will see that we have taken one ton of pulp as our material. What we should have done was to increase the raw material by 10 per cent. . . . .

*President.*—Your waste in conversion from pulp to paper would not be Rs. 20 a ton? The loss would not be as much as that in the actual conversion?

*Mr. Maronne.*—It is 5 per cent.

*Mr. Ramanathan.*—He takes the price of paper at Rs. 367 and such portion as goes to waste is recovered back and used at Rs. 104. The net loss on waste is the difference of Rs. 260 per ton. He has shown that as loss due to wastage in conversion.

*President.*—There would not be that waste in the conversion.

*Mr. Maronne.*—In case you have only 5 per cent. waste between the paper machine and the despatch of the paper you save that 5 per cent. If it is 10 per cent., it is charged as overhead. Every work that is needed for converting it into paper has been incurred, but because it is cuttings and trimmings therefore it goes as waste but is put back at a value of Rs. 104 in the process again.

*President.*—You have not allowed credit for that?

*Mr. Maronne.*—Yes, Rs. 104.

*President.*—That is not credit, that is debit.

*Mr. Maronne.*—It is debit to "cost of paper" but credit to "waste". It is debited to writing paper and credited to the other costs shown: a ton of waste paper costs Rs. 80 and after conversion it is Rs. 104. If we had purchased that waste paper and converted it we would have to pay Rs. 104 which we do not pay. It is somewhat like the double entry system. The debit in this sheet is for the finished writing paper only. The mill as such does not pay Rs. 104.

*President.*—If it does not pay why do you charge?

*Mr. Maronne.*—I have given the market price of waste paper cuttings. Take 10 per cent. of the prime cost and 10 per cent. of the market price; that is Rs. 21 the difference in value of my own paper because I must recover my 10 per cent. waste.

*President.*—Supposing you bought your waste paper, what would it cost you?

*Mr. Ramanathan.*—Waste paper would, as I show in Form III (c), cost Rs. 80. I will have it worked out the other way. I will take 1.1 ton of raw material and arrive at 1 ton of paper at the end and work out these figures. I will have a statement submitted by the evening: I will give just what the Board wants.

*President.*—At any rate this does not affect the total cost. Leaving that point on one side and making these additions on account of selling expenses, extra amount of depreciation and so on, your total cost would come to Rs. 387 in round figures?

*Mr. Ramanathan.*—Yes.

*President.*—The total cost arrived at by the previous Tariff Board was Rs. 400. Your figure is Rs. 13 below that.

*Mr. Ramanathan.*—Yes.

*President.*—What rate of profit would you consider reasonable?

*Mr. Ramanathan.*—I would merely say that I would be in the hands of the general industry. Not being yet in production, I am not in a position to hazard any answer. But I would submit to the Board what hopes we had when we issued the prospectus—Rs. 4 lakhs a year thinking that we could keep within Rs. 25 lakhs!

*President.*—That is a very ambitious thing; they were very optimistic! What was the cost of production given in the prospectus?

*Mr. Ramanathan.*—Rs. 250 a ton. We would make mints of money if we could do that!

*President.*—You have now got up to Rs. 387?

*Mr. Ramanathan.*—As I said, we went wrong as regards capital costs: buildings themselves went up very high and we had not understood that the beaters and chests themselves would cost nearly a lakh of rupees. Then there is the water supply. We had not anticipated that we would have to put up a plant which would pump as much water as the Mysore City water supply plant does.

*President.*—Before we come to the general question of your claim for protection and so on, my colleague may like to ask you some questions.

*Mr. Rahimtoola.*—I want to draw your attention to your prospectus on which the previous remarks were based. I have got a copy of the prospectus, *Mr. Lalvani* had made those remarks in view of what is stated in it. It is quite clear that your company can do without protection if the cost is what is stated. As it concerned your company I had to make those remarks.

*Mr. Ramanathan.*—I thought so and I wanted to submit my explanation.

*Mr. Rahimtoola.*—You say here Rs. 250 as the cost of production per ton of paper.

*President.*—You don't need any protection at all.

*Mr. Rahimtoola.*—*Mr. Lalvani* having a copy of the prospectus with him was referring evidently to the Mysore Paper Mills.

*Mr. Ramanathan.*—Yes. I saw this information in the *Times of India*. I wanted to mention straightaway our position without being asked about it.

*Mr. Rahimtoola.*—Have you taken any trouble to inform the subscribers that the position has subsequently changed.

*Mr. Ramanathan.*—Yes, in the previous statutory meeting. In our last balance sheet we have an indication of the position. The present information will be sent round shortly as soon as Government have decided on this.

*Mr. Rahimtoola.*—Your capital is fully subscribed.

*Mr. Ramanathan.*—Yes.

*Mr. Rahimtoola.*—On the basis of prospectus?

*Mr. Ramanathan.*—Yes. I presume it must be on the basis of this prospectus.

*Mr. Rahimtoola.*—You say you will have a surplus of 600 tons of pulp. Supposing we exclude that, how much of the capital would be reduced thereby? Suppose you were to turn out the pulp to meet all your requirement for paper.

*Mr. Ramanathan.*—You mean if we take away the capital cost of the rag pulp plant? Subsequently we added a rag pulp plant with a capacity of 2½ tons a day.

*Mr. Rahimtoola.*—How much would that be?

*President.*—The rag pulp plant will be less expensive any way.

*Mr. Ramanathan.*—Yes, it is less expensive than the other thing. We can work out from this the cost of the bamboo pulp plant.

*Mr. Rahimtoola.*—You can send it on to us later.

*Mr. Ramanathan.*—Yes.

*President.*—It would not do to say that as 4,000 ton capacity plant cost so much, 3,400 ton plant would cost proportionately less.

*Mr. Ramanathan.*—No. I shall look that up from the point of view of rag pulp thing. Our investment on rag pulp is Rs. 1,62,000.

*Mr. Rahimtoola.*—Roughly it would be about Rs. 30 lakhs.

*Mr. Ramanathan.*—It would be Rs. 31 lakhs.

*Mr. Rahimtoola.*—What is the maximum capacity?

*Mr. Ramanathan.*—4,500 tons.

*President.*—Suppose you put up a second paper machine?

*Mr. Ramanathan.*—We will have to put up another pulp plant.

*Mr. Rahimtoola.*—What I have been given to understand is that with this capacity one machine would be able to produce 6,000 tons.

*Mr. Maronne.*—4,500 tons is the average maximum.

*Mr. Rahimtoola.*—These costs are based on the maximum.

*Mr. Ramanathan.*—What he means by average maximum is that there may be certain easier papers which can be turned out at 18 tons a day and more difficult papers at 12 tons a day. If I make 6 lbs., I would get 15 tons.

*Mr. Rahimtoola.*—Do you expect to produce 4,500 tons a year from the very first year?

*Mr. Ramanathan.*—Yes, in about two months after the commencement of manufacture.

*President.*—In the first two or three months you would not be running to your full capacity.

*Mr. Maronne.*—No.

*President.*—In the first year your total production would be a little less.

*Mr. Maronne.*—Yes.

*Mr. Rahimtoola.*—As regards the possibility of manufacturing mechanical pulp and kraft paper, what kinds of woods are available and whether any experiments have been made.

*Mr. Ramanathan.*—The present position is that certain quantities of soft wood have been sent by the Forest Department to Dehra Dun for experiment. They asked the Forest Department for quantities available before making the experiment. Unfortunately I have not got the latest correspondence between the Forest Department and the Dehra Dun Institute.

*Mr. Rahimtoola.*—Could you send it to us, because it is a very important point?

*Mr. Ramanathan.*—I will make sure in what stage it is and let you know.

*President.*—The Mysore Government have not yet replied to our questionnaire.

*Mr. Ramanathan.*—I was given to understand that they have sent it in the course of last week. They have sent me a copy of their reply (shown).

*President.*—Kraft pulp is made in a different way from mechanical pulp.

*Mr. Ramanathan.*—Yes.

*Mr. Rahimtoola.*—Do you propose to manufacture kraft paper?

*Mr. Ramanathan.*—In our programme as published in the prospectus imitation kraft is put in, but as regards the regular kraft our present idea is to manufacture paper, acquire experience and then go in for it.

*Mr. Rahimtoola.*—In reply to question 51 you are asking for protection in regard to kraft paper.

*Mr. Ramanathan.*—To be frank that is because we know that Dehra Dun is working at that proposition and at the request of a sister mill and not because it is immediately in our programme.

*Mr. Rahimtoola.*—What proportion of your paper would be badami?

*Mr. Maronne.*—Small proportion.

*Mr. Rahimtoola.*—About 10 per cent. shall we say?

*Mr. Maronne.*—According to the demand of the Government.

*Mr. Rahimtoola.*—As regards the cost of manufacture of a ton of paper, it depends upon the percentage of low grade paper which you manufacture. If you don't manufacture low grade paper, your cost will be high. So I wanted to know whether you had taken a proportion of badami or low grade paper into consideration.

*Mr. Maronne.*—Only high class paper.

*Mr. Rahimtoola.*—If you manufacture badami, your cost will be lower.

*Mr. Ramanathan.*—Yes, and our price will also go lower. We want merely to feel our way through. Our cost of production is not based on a definite lay out of so much per cent. for this and so much for that. It is a provisional cost sheet as to what we expect it would cost to make a ton of paper.

*Mr. Rahimtoola.*—You mean per ton of bleached papers.

*Mr. Ramanathan.*—For the purpose of giving some estimate of what we hope to work at, we gave one class of paper. It is not based as I pointed out on what the price of this would be on a certain lay out of writing,



printing, wrapping, badami and how it would vary with a different lay out. Our figure is not dependable for that purpose.

*President.*—Your figure mainly assumes writing paper.

*Mr. Ramanathan.*—If all our production went into writing paper based on the proportion of bamboo pulp, rag pulp and waste cuttings, it would cost so much.

*Mr. Rahimtoola.*—The auxiliary materials that you have mentioned are the only ones that you intend to use.

*Mr. Ramanathan.*—We have not included dyes in that for instance. That would be a small cost. In the absence of experience there is no object in adding on. You will also find that we have not referred to the loading of clay on the basis of what the Board on previous occasions said.

*President.*—What classes of wood have been sent?

*Mr. Ramanathan.*—Unfortunately I have not brought that particular file. It is known as *Bende*. That is the wood which is available in large quantities and which is going into waste. The mere possibility of it is not enough. The General Manager has been telling me that the grinding drums must be so big and the quantity has to be so enormous that it may not be feasible. Still we want just to try. It would not have been considered possible for us if we had to depend upon coal, but the Government have now definitely taken the idea of *Gersoppa water falls* electric scheme and when they develop it, there will be plenty of power that we could use and it will be even cheaper. As it is, we are not quite hopeful. When I was at Delhi last month the Supply Officers Committee of the Defence Department asked me this question. Kashmir is thinking of a scheme. With their large quantity of soft wood and cheap electric power, they will probably be the only people than can do it. Still we don't want to give it up.

*President.*—Before we pass on to the general question of protection to the industry, are there any other points which you would like to raise?

*Mr. Ramanathan.*—Not being in operation I might be talking merely hypothetically and I should not mislead the Board with any of my assumed grievances. In general matters I would be in the hands of people who have been able to give the Board definite data. All I have tried to do is to supplement with such local data as we can give to the best of our lights.

*President.*—We will pass on to the general question. The Tariff Board has first of all got to consider whether there is any case for the continuance of protection at all, but assuming there is a case, what measure of protection should be given. The attention of the Board has also been specially directed to this question of the present revenue surcharge. It is open to the Board to make advance recommendations in regard to that surcharge. I have already mentioned that on the last occasion the total cost less profit estimated by the previous Tariff Board was Rs. 400. On that basis the Tariff Board recommended a protection of one anna per lb. specific duty plus 15 per cent. *ad valorem* in the case of certain papers. We shall leave out of account the specific duty of one anna a lb. based on the cost of production of Rs. 400. Of course there is no secret about it. Since then the existing mills have reduced their cost of production very considerably. Possibly you have seen something of the evidence given in the newspapers. There is no question about that.

*Mr. Ramanathan.*—In the papers I have not found anything regarding costs.

*President.*—It was published, for instance, in the Calcutta papers. It is below 3 annas a lb.

*Mr. Ramanathan.*—I have missed it.

*President.*—Your estimate comes to Rs. 387. First of all as your estimate of cost of production is below the figure given by the previous Tariff Board, are you in a position to claim the continuance of the surcharge?

*Mr. Ramanathan.*—As regards the surcharge with the concurrence of my Board of Directors, I have submitted a letter to the Board that we have no data on which we could discuss that question separately, but our feeling was only that the removal of surcharge available for one industry, while surcharge as a scheme of taxation remains, may have effects which we are unable to foresee.

*President.*—The surcharge has been removed in the case of several protected industries.

*Mr. Ramanathan.*—I was about to say that I was able to get a copy of the Calcutta Import Trade Association's representation in which they say that as surcharge was removed in most other industries, it could also be removed here. That I was not aware of then. Subject to that general representation which I have submitted with the concurrence of my Board, I don't want to enter into it. I shall leave it entirely in the hands of more experienced people who have made representations to the Board.

*President.*—Supposing protection is continued to the industry, what measure of protection do you think is necessary?

*Mr. Ramanathan.*—In respect of that I have one submission to make. In the light of what the Board has indicated to me about the lower costs of the established mills, the point that I would like to emphasise on behalf of my mill is that we hope to try out bamboo out and out and fully. I am not now in a position to be able to say how the established mills stand with reference to the use of imported pulp.

*President.*—There is no secret about that. You probably know that there are two mills using bamboo only as their main material and two mills using grass and bamboo in more or less equal proportion. The maximum amount of imported pulp used in any mill is about 25 per cent. and the lowest about 10 per cent. You may take it that it is between 10 and 25 per cent.

*Mr. Ramanathan.*—I am glad to know that for this reason because from the previous Tariff Board's report I gathered that it was the burden of complaint of those who opposed protection that under the guise of protection, they were importing pulp.

*President.*—We can leave that out of account now.

*Mr. Ramanathan.*—The point that I am anxious about is that in view of the special position of this mill firstly in regard to its attempt to make bamboo its sole source of pulp and paper-making material and secondly the development of a hitherto undeveloped area, that is the South Indian bamboo area, the Board may consider the need for continuing the protection—for the moment I am not referring to the rate—for an adequate period to enable this mill and any other mills like the Hyderabad mill that is coming off to get a footing and establish beyond doubt the development of bamboo pulp resources both for this and for other industries. That is the only point I want to submit. As regards the extent of protection, there again, as my cost sheet itself is only an estimate, I am not on firm ground in saying that such and such figure is indisputably necessary. I am conscious that whatever representations I make would be tested in the light of the experience and performance of other mills. But my prayer is that the rate which is to be settled may be fixed on the basis of an adequate facility for the development of backward mills and new mills and not merely on the basis of what the long established mills may either say is enough or their figures may seek to establish. The reason why I am submitting this special request is that the development not merely of the Indian paper industry but of the Indian pulp industry from indigenous materials in the hands of entirely Indian management is as much a matter of consequence for ordered industrial development as from the national point of view. More I do not want to say. As regards the rate also I would not venture to submit any representation. I am entirely in the hands of the Board.

*Mr. Rahimtoola.*—You have made a statement which requires to be further explained. It is rather a vague statement but probably because your costs are all hypothetical or theoretical. But I do not quite follow when you say about the Indian management. The Indian managed mills are I think rather on the low side under overheads. What exactly do you mean when you want to differentiate them?

*Mr. Ramanathan.*—As beginners we are under a handicap both in respect of manufacturing and of establishing ourselves. So during this period the Board should try and assess the facility that a beginner needs even though the industry as such might be considered as not new.

*Mr. Rahimtoola.*—You want special protection to be given to those who are now starting afresh.

*Mr. Ramanathan.*—I would not put it that way. I would say that this factor also might be kept in mind in assessing the protection the Board consider necessary. It would not be separate for this or for that. I do not advocate a scheme of protection for one mill at one rate and for another mill at a different rate. What I want to suggest, as I have already tried to indicate in the written representation, to the Board is that there are certain initial handicaps which a mill of this kind and probably other mills have. With that before you, the Board should come to a decision on that point.

*Mr. Rahimtoola.*—Your position is different. For instance, you have got your full subscribed ~~capital~~ on a definite basis and now you find that all your figures have gone wrong. The people who have subscribed have no voice in the matter at the present moment. You want us to base our protection on costs which appear to be rather high. After having enjoyed protection on an experimental basis for 5 or 6 years, the industry has been enjoying real protection for the last 7 years. Now the question is whether protection should be further continued. If protection is granted, the three established mills which are turning out 75 per cent. to 80 per cent. of the total production of Indian paper will derive more benefit if protection is based on the costs of new mills. I am only explaining the position. The Board has not made up its mind. The point is this. Suppose the mills turning out 80 per cent. of the production deserve 1 anna per lb. You want us to give 1 anna and 3 pies protection in consideration of the new mills which are going to come into being and whose costs are definitely higher.

*Mr. Ramanathan.*—The reason why I am putting it in this vague manner is that I am at a disadvantage because I do not know what their cost of production is. I cannot therefore say whether their costs will be maintained or whether we will be able to attain those costs in the course of the next two or three years. Not knowing their costs . . . . .

*Mr. Rahimtoola.*—One mill's costs were published. Their realised price is 2 annas 9½ pies. Probably you have not seen it.

*President.*—You may take Rs. 350 as their cost of production.

*Mr. Maronne.*—That is ex-works.

*Mr. Ramanathan.*—I am obsessed by two things. I do not want to be unfair to any person who might get injured by my saying something and I do not want to hazard *obiter dicta* on matters with which I am not conversant. These are my two difficulties. I would prefer to leave it in the manner in which I have put it because I would be unfair to other people and because I am not competent to proceed further not having definite data but it will be our business as people in charge of the industry to try and work up to any particular limit of protection which the Board feel is just and proper to give in the circumstances. Of course, there are other things which a mill at Bhadravati might claim from the national point of view. From the defence standpoint the position of a mill like this near a place where we can get acetone and formaldehyde is quite different. In India I am not sure that there are many places other than Bhadravati which the Government of India can rely upon and make use of to the fullest extent in case of emergency.

*President.*—As regards the cost of raw material the rate which you give is Rs. 12. Is it a subsidised rate?

*Mr. Ramanathan.*—Since Mr. Raitt made a report in 1916 they have been anxious to develop the bamboo resources and establish a paper mill there. Till recently they could not think of it because they could not get hydro-electric power and developing power from coal was a costly thing. So when the position improved, as a part of the facility to develop this industry, Government have given it only for a short period—for the first five years. You may take it as a subvention. But without this kind of guarantee it would have been difficult to establish a mill. They have given us permission to take water from the river and there is no question of paying anything.

*Mr. Rahimtoola.*—This is only for a period of five years?

*Mr. Ramanathan.*—Yes. Here is the Government order sanctioning the concessions (handed in).

