GOVERNMENT OF INDIA
TARIFF COMMISSION

REPORT ON
The Continuance of Protection to the Electric Motor Industry

BOMBAY, 1958

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PERSONNEL OF THE COMMISSION

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SECRETARY

DR. RAMA VARMA

GOVERNMENT OF INDIA

MINISTRY OF COMMERCE AND INDUSTRY

New Delhi, the 29 *Nov.* 1958.

RESOLUTION

Tariff

No. 11(1)-T.R./58.—The Tariff Commission has submitted its Report on the continuance of protection to the Electric Motor Industry on the basis of an inquiry undertaken by it under Sections 11(e) and 13 of the Tariff Commission Act, 1951. Its recommendations are as follows :—

(1) The existing protective duty of 15 per cent. *ad valorem* on electric motors should be continued for a further period of three years ending 31st December, 1961.

(2) The existing protective duty of 20 per cent. *ad valorem* on component parts of electric motors, excluding control gear, should be continued for a further period of three years ending 31st December, 1961.

(3) Positive steps should be taken to encourage the indigenous manufacture of motors of ratings of 100 h.p. and above by requiring indentors of electric motors to estimate their requirements sufficiently in advance and plan their orders on domestic manufacturers. The Development Wing should before recommending the issue of a licence satisfy itself that the applicant had taken adequate measures to obtain these requirements from indigenous sources.

(4) The manufacturers of electric motors should publish the list prices of 1 to 15 h.p. in English and regional languages every half year, notifying every change in the list price and take positive steps to see that every dealer of their motors in the above categories displays the list prices at his premises in a conspicuous manner.

2. Government accept recommendations (1) and (2) and the necessary legislation will be undertaken in due course.

3. Government have taken note of recommendation (3) and steps will be taken to implement it as far as possible.

4. The attention of the manufacturers of Electric Motors is invited to recommendation (4).

ORDER

ORDERED that a copy of the Resolution be communicated to all concerned and that it be published in the *Gazette of India.*

S. RANGANATHAN,

Secretary to the Government of India.

CONTENTS

REPORT ON THE CONTINUANCE OF PROTECTION TO THE ELECTRIC MOTOR INDUSTRY

Previous tariff inquiries

1.1. The electric motor industry was first granted protection in 1948. Subsequently there were two tariff inquiries in 1949 and 1955. The Tariff Board in its report (1949) recommended that a protective duty of 15 per cent. *ad valorem* should be levied for a period of three years from 1st April, 1950 on imports of electric motors up to 20 h.p., including factional h.p., as well as on such of their component parts as were specially designed and had been given special shape or size for the purpose. Government accepted the recommendation that protection should be extended up to 31st March, 1953 but did not consider it necessary to increase the duty from 10 to 15 per cent. *ad valorem*. Subsequently in consultation with the Commission, the period of protection was extended up to 31st December, 1955.

1.2. In our report of 1955 we recommended that—

(a) protection to the industry should be continued for a further period of three years, that is, up to 31st December, 1958, and protective duty at the rate of 15 per cent. *ad valorem* should be levied on imports of squirrel cage motors of brake-horse-power not exceeding 100 but not less than one quarter of one brake-horse-power and slip ring motors of brake-horse-power not exceeding 100 but not less than one brake-horse-power excluding flame proof motors and variable speed commutator motors; and

(b) protective duty should be levied at the rate of 20 per cent. *ad valorem* for a further period of three years, *i.e.*, up to 31st December, 1958 on component parts of electric motors specified in (a) above, but excluding control gear for the same, provided that only such articles should be deemed to be component parts as are essential for the working of the electric motors and have been given for that purpose some special shape or quality which would not be essential for their use for any other purpose.

Government accepted these recommendations by Ministry of Commerce and Industry Resolution No. 11(1)-T.B./55, dated 7th September, 1955 and the enhanced rates of protective duties were brought into force with immediate effect. By the Indian Tariff (Second Amendment) Act, 1955, protection to the industry was continued for a period of 3 years, *i.e.*, up to 31st December, 1958.

Present inquiry

2. Protection granted to the electric motor industry is due to expire on 31st December, 1958. The present inquiry was undertaken by us in pursuance of Section 11(e) read with Section 13 of the Tariff Commission Act, 1951, which empowers us to inquire into and report on any further action

required in relation to the protection granted to an industry with a view to its increase, decrease, modification or abolition according to the circumstances of the case.

Method of inquiry

3.1. On 23rd May, 1958, a press communique was issued inviting persons, bodies and associations interested in the electric motor industry to obtain copies of questionnaires and to furnish replies. Questionnaires were issued to producers, importers and consumers. The Development Wing was requested to furnish a memorandum on the industry with particular reference to its present position and plans for future expansion. Directors of Industries of Bombay, Madras, Mysore, West Bengal, Punjab and Uttar Pradesh were requested to forward memoranda on the progress made by the industry in their respective States since the last inquiry. Information regarding c.i.f. prices and landed costs was asked for from Collectors of Customs in Bombay, Madras, Calcutta and Cochin. The Director-General of Supplies and Disposals, New Delhi, was addressed for information regarding Government purchases of electric motors. The Development Commissioner, Small Scale Industries, New Delhi, was approached for data regarding capacity and production of small scale manufacturers of electric motors, quality of motors produced by them and supply position of raw materials. Prospective producers of electric motors were asked to furnish information regarding location of factory, probable date of commencement of production, capacity and estimated production. Letters were also sent to manufacturers of raw materials such as electrical stampings, enamelled wire, ball bearings and insulating materials regarding their availability, quality and prices. A list of those to whom questionnaires and letters were issued and from whom replies or memoranda were received is given in Appendix I.

3.2. Dr. S. K. Muranjan and Shri R. S. Bhatt, Members, visited the factories of Bharat Bijlee Ltd., and National Electrical Industries Ltd., Bombay, on 11th September, 1958. They also visited the factories of Crompton Parkinson (Works) Private Ltd., and Sankey Electrical Stampings Private Ltd., Bombay, on 15th September, 1958, Shri R. S. Bhatt, Member, visited the factories of Kirloskar Electric Co. Ltd., Bangalore and Jyoti Ltd., Baroda on 4th July, 1958 and 20th September, 1958 respectively. Shri B. R. Sehgal, Director (Investigations), visited the factory of Bharat Bijlee Ltd., Bombay on 8th August, 1958 and the factories of Crompton Parkinson (Works) Private Ltd. and Sankey Electrical Stampings Private Ltd., Bombay on 15th September, 1958.

3.3. Cost investigations of three factories were undertaken, the details of which are given below:—

Sl. No.	Name of the factory	Name of the Cost Accounts Officer	Date of cost investigation
1	2	3	4
1	Motor and Machinery Manufacturers Ltd., Calcutta.	Shri P. M. Menon, Cost Accounts Officer.	29th July, 1958 to and August, 1958.

1	2	3	4
2	Jyoti Ltd., Baroda . .	Shri E. S. Natarajan, Asstt. Cost Accounts Officer.	18th to 26th August, 1958.
3	Kirloskar Electric Co. Ltd., Banglore.	Shri V. S. S. Rajan, Asstt. Cost Accounts Officer in the Office of the Chief Cost Accounts Officer, Ministry of Finance, New Delhi.	1st September, 1958.

3.4. A public inquiry into this industry was held on 23rd September, 1958 at the Commission's office in Bombay. A list of those who attended the inquiry is given in Appendix II.

Implementation of Commission's recommendations in its last report

4. In our last report (1955) we made several recommendations on matters other than tariffs. The extent to which these recommendations have been implemented is briefly indicated below:—

4.1. "So long as import control has to be maintained on balance of payments grounds, Government should give due consideration to such factors as the capacity of the indigenous industry, its production and the demand in the country in regulating imports of electric motors."

Government have informed us that the considerations mentioned in the Commission's recommendation were kept in view while formulating the import control policy from time to time.

4.2. "Government should arrange with the Collectors of Customs and the Director-General of Commercial Intelligence and Statistics to record separately the total number and value of electric motors under each of the following categories:—

(i) Squirrel cage induction motors less than 1 b.h.p.

(ii) Squirrel cage inductions motors of 1 to 50 b.h.p.

(iii) Squirrel cage inductions motors of 51 to 100 b.h.p.

(iv) Squirrel cage induction motors of 101 to 200 b.h.p.

(v) Squirrel cage induction motors above 200 b.h.p.

(vi) Slip ring motors of 1 to 50 b.h.p.

(vii) Slip ring motors of 51 to 100 b.h.p.

(viii) Slip ring motors of 101 to 200 b.h.p.

(ix) Slip ring motors above 200 b.h.p.

(x) All other fractional h.p. motors below 1 h.p. not covered by the above classification.

(xi) All other motors of integral h.p. not covered by the above classification."

Government accepted its recommendation. With effect from 1st October, 1955, statistics of imports of electric motors in quantity and value have been recorded separately under each of the headings mentioned above by the Director-General of Commercial Intelligence and

Statistics, Calcutta. Since 1st January, 1957, imports are, however, recorded under the following categories in the 'Monthly Statistics of the Foreign Trade of India':—

(1) A.C. Single phase f.h.p. motor up to quarter h.p.
(2) A.C. Single phase f.h.p. motor above quarter h.p.
(3) A.C. Single phase motors except f.h.p.
(4) A.C. Squirrel cage induction motors of 3 PHS up to 20 h.p.
(5) A.C. Squirrel cage induction motors of 3 PHS 21 to 50 h.p.
(6) A.C. Squirrel cage induction motors of 3 PHS 51 to 100 h.p.
(7) A.C. Squirrel cage induction motors of 3 PHS above 100 h.p.
(8) A.C. Slip ring motors below 10 h.p.
(9) A.C. Slip ring motors from 10 to 50 h.p.
(10) A.C. Slip ring motors from 51 to 100 h.p.
(11) A.C. Slip ring motors above 100 h.p.
(12) Other types of A.C. motors up to 50 h.p.
(13) Other types of A.C. motors above 50 h.p.
(14) D.C. motors up to 50 h.p.
(15) D.C. fractional horse-power motors.
(16) D.C. motors not elsewhere specified.
(17) Universal motors all types.
(18) Electric motors not elsewhere specified.

4.3. "The Indian Standards Institution should consider the feasibility of evolving dimensional standards for electric motors suitable for conditions in India as early as possible."

The Indian Standards Institution has informed us that Indian Standard on dimensions of three phase induction motors has been finalised and is now under print.

4.4. "To enable manufacturers of electric motors to satisfy the purchasers regarding the quality of motors, we recommend that facilities should be provided by Government for type testing as well as testing under actual working conditions and for issue of certificates embodying the results of testing by the Institute carrying out such tests."

We are informed by the Development Wing that the Government Test House at Alipore, Calcutta, is being equipped for carrying out such tests.

4.5. "Arrangements for testing flame proof motors should be made by Government at the Fuel Research Institute, Dhanbad, or at any other suitable place as early as possible."

We understand that the matter is still under consideration. None of the producers has yet developed the manufacture of flame proof electric motors in the country.

4.6. "Imports of synthetic enamelled wire should be allowed until semi-synthetic enamelled wire produced in the country has been tested and found satisfactory by the electric motor industry."

We are informed by the Development Wing that as new units, which have recently been established, have gone into production of synthetic enamelled wire, the supply of the product from indigenous sources has been satisfactory. The manufacturers of electric motors have found the quality of indigenous wire to be satisfactory. Two more units for the manufacture of this material have been licensed. We deal with this matter in paragraph 8.3.

4.7. "Imports of special types of varnishes should be allowed until such types are developed by indigenous manufacturers."

We are informed that these varnishes have been developed in the country and the supply position is satisfactory.

4.8. "Manufacturers of electric motors should obtain all their requirements of ball and roller bearings from National Bearing Company Ltd., and only when the latter are unable to supply bearings of any size required by the manufacturers within a reasonable period, they should apply for licences to import them."

The Development Wing has stated that the above policy is being followed and import of ball and roller bearings is being allowed to manufacturers of electric motors only to the extent and in types that National Engineering Industries Ltd. (Bearing Division), formerly National Bearing Co. Ltd., is unable to supply.

4.9. "Since some of the manufacturers of electric motors have already been producing slip rings in the country, we suggest that efforts should be made by other manufacturers to obtain their supplies of slip rings from indigenous sources."

The Development wing has stated that most of the manufacturers are obtaining their requirements of slip ring assemblies from indigenous sources. Certain sizes of slip rings for larger motors are, however, being allowed to be imported.

4.10. "Efforts should be made by paint and varnish manufacturers in India to produce the enamel base required for synthetic enamelled wire."

The Development Wing has informed us that unit named Dr. Beck & Co. (India) Private Ltd., has been established for the manufacture of super-synthetic enamels required for the manufacture of wires. The solvents and synthetic resins which are the main raw materials for making enamel base have to be imported. We have been informed by the firm that its annual rated capacity for the manufacture of enamels is 240 tons on single shift. It commenced production in July 1957 and the actual production in 1957-58 (July-June) was 39 tons. The Company is at present in a position to meet only 50 per cent. of the indigenous demand for super-synthetic enamel owing to difficulty regarding imports of raw materials.

4.11. "Sankey Electrical Stampings Ltd., Bombay., should examine further the suggestion that they should charge prices for electrical stampings on the basis of the actual wastage incurred in making stampings required by an electric motor manufacturing firm for each order placed by it, and that if there are no serious difficulties, a trial should be given to this method of charging prices for stampings."

Sankey Electrical Stampings Private Ltd., Bombay, has stated that it introduced a revised price schedule for motor stampings in 1956. This price schedule split up motor stampings into sizes based on their outside diameter and reflected the raw material usage by their relationship to the multiples of standard widths of electrical steel. Besides, a standard price and bulk rebate structure was established for all customers of motor stampings. As regards stampings outside the standard ranges, the Company has informed us that each order is assessed individually and prices are determined in consultation with the customer.

4.12. "Tata Iron and Steel Company Ltd. should re-examine the question of price of their electrical steel sheets and make them available to the electric motor industry at the lowest possible price."

Tata Iron and Steel Co. Ltd. has informed us that it has been its policy to charge the electric motor industry the lowest possible price. Since the last tariff inquiry in 1955, however, it had to revise the prices of electrical steel sheets on three occasions in view of rising costs and with a view to providing extra capital expenditure for augmenting production of dynamo grade sheets.

4.13. "The quality of indigenous motors is generally satisfactory, but special case is necessary in the manufacture of electric motors which are required for heavy duty or for work in special atmospheric and other conditions."

The Development Wing has informed us that whenever electric motors are required for heavy duty and for work in special atmospheric and other conditions, it is normally the practice for the indentor to specify his requirements to the manufacturer and the motors are produced to his specification. Some of the individual manufacturers have informed us that they have complied with this recommendation and have been taking particular care to maintain the quality of their products.

4.14. "The Indian Electrical Manufacturers Association should get in touch with Associations of Textile Mills etc., and arrange with them for supply of indigenous motors in cases in which foreign motors need not be imported as integral parts of machinery."

Some of the manufacturers have stated that they have supplied large quantities of their motors to textile mills. In special cases, the types of motors which could not be supplied by indigenous producers were allowed to be imported.

4.15. "It is essential that the industries using electric motors should specifically state their requirements (including special conditions in which motors have to work) to the indigenous manufacturers and that the latter should take care to remove all defects and exercise strict supervision at every stage of manufacture and carry out adequate tests before motors leave the factory."

The manufacturers who are on the register of the Development Wing have stated that they exercise supervision at every stage of manufacture and carry out tests before motors are despatched.

Scope of the inquiry

5.1. At the last inquiry the scope was extended to cover squirrel cage induction motors of brake-horse-power not exceeding 100 including fractional brake-horse-power, slip ring motors of brake-horse-power not exceeding 100 but excluded flame-proof motors and variable speed commutator motors. The scope also included all component parts of electric motors but excluded control gear. In connection with the present inquiry the Development Wing has expressed the view that though the production of electric motors at present consists mostly of the smaller ratings up to 30 h.p. the scope of the inquiry may be extended up to 200 h.p. because a few schemes have been licensed for the manufacture of motors of higher ratings.

5.2. We have given the matter our careful consideration. The pattern of production of the units borne on the register of the Development Wing from 1955 up to 1958 (January-June) shows that the number of motors of 100 h.p. and above manufactured by them was 13, 25, 27 and 9 in 1955, 1956, 1957 and 1958 (January-June) respectively. There has been progressive diversification of production and some of the major producers (A.E.I., Kirloskar and Jyoti) have undertaken manufacture of motors above 100 h.p.; but their production is not appreciable. These motors are expensive and are manufactured only against specific orders. It has not been possible for us to make an accurate assessment of demand for motors of higher ratings but we have reasons to believe that it is substantial and that the bulk of it is met by imports. Considering that they are in the nature of capital goods, it is desirable that they should be available to industrial users at reasonable prices. As long as the indigenous industry is not meeting a significant portion of demand, it will not be proper to extend the scope of tariff protection to embrace motors of ratings higher than 100 h.p. We have accordingly decided that the scope of the present inquiry should not be enlarged at this stage beyond what is already included in the present scheme of protection.

Progress and present position of the industry

6.1. At the time of the last inquiry there were 12 units engaged in the manufacture of electric motors with a total annual capacity of 340, 545 h.p. per annum. According to the information furnished by the Development Wing there are at present 15 units manufacturing electric motors with a total annual capacity of 359, 100 h.p. Of these, 6 are in West Bengal, 3 in Madras, 4 in Bombay and 1 each in My-

sore and Punjab. The Develpoment Commissioner, Small Scale Industries, has informed us that there are 31 small scale units registered with him which are engaged in the manufacture of electric motors. He has estimated the combined annual capacity of these units at about 130,000 h.p. In addition, there are several small scale units in Bombay and other centres which are assembling electric motors as well as manufacturing a few parts. Such units are registered neither with the Small Scale Industries Directorate nor with the Development Wing. The total production of the units registered with the Development Wing during 1955, 1956, 1957 and 1958 (January-June) was as follows:—

Year	No. of Units	Production	
		No.	H.P.
1955	12	41,915	251,915
1956	14	59,742	359,062
1957	15	76,014	475,215
1958 (January-June)	15	47,444	296,699

6.2. The proportion of different ratings in the total production stated above was as under:—

	1955	1956	1957
Up to 10 h.p.	60%	62%	62%
Above 10 and up to 30 h.p.	30%	28%	30%
Above 30 and up to 50 h.p.	6%	6%	4%
Above 50 h.p.	4%	4%	4%
TOTAL	100%	100%	100%

It will be observed that indigenous production was confined mainly to the manufature of electric motors of 1 to 30 h.p. including fractional motors, which constituted 92% of the total production in 1957. A few producers such as Kirloskar Electric Co. Ltd., Crompton Parkinson (Works) Private Ltd., and Jyoti Ltd., have manufactured motors of larger ratings but the rest have produced motors only of smaller ratings. Since the last inquiry there has been some diversification in the pattern of production. Crompton claims having produced motors for cranes, multi-speed motors, special spinning frame motors, acid proof motors and class B insulated motors for use in very high temperatures. Statements showing the present annual installed capacity and actual production during 1955, 1956, 1957 and 1958 (Jan.-June) as furnished by the Development Wing are given in Appendix III.

6.3. The Development Wing has informed us that 27 schemes for the manufacture of electric motors of the aggregate capacity of 775,190 h.p. per annum have been licensed under the Industries (Development and Regulation) Act for expansion in the existing units as well as for establishment of new units. When these schemes are completed there will be a total annual capacity of the order of 1.13 million h.p. as shown below:—

	H.P.
Capacity of the 15 existing units	359,100
Expansion in the capacity of existing units	602,340
Capacity of 16 new units to be established	172,850
TOTAL .	1,134,290

A statement showing the present capacity and plans for future expansion as furnished by producers and the Development Wing is given in Appendix IV. It will be seen that there is a difference in the figures of capacity reported by the manufacturing units and those furnished by the Development Wing. At the public inquiry this was explained by the fact that some of the units have partially implemented their programmes of expansion but the expanded capacity has not yet been incorporated in the records of the Development Wing. We understand that the Development Wing proposes to revise shortly the capacities of individual units in the light of progress made by them in their respective schemes of expansion. Further, some of the new units which were granted licences have already gone into production but have not been registered with the Development Wing. We understand from the Development Wing that if the capacities which are brought into operation by the expansion of the existing units and the establishment of 5 new units are taken into account, the total annual capacity at present would be about 600,000 h.p. A statement showing names of the new units licensed together with their sanctioned capacities is given in Appendix V.

Domestic demand

7.1. In our last report (1955) we estimated the then domestic demand for A. C. electric motors at about 317,000 h.p. and expected it to increase annually by 10 per cent. in the next three years. The pattern of demand assumed then was that about 187,000 h.p. represented largely the demand for motors from 1 to 30 h.p. and the balance of 130,000 h.p. was the aggregate demand for fractional motors, motors of 31 h.p. and above and special types of motors. The bulk of the demand for motors up to 30 h.p. was met by indigenous production and almost the entire requirements of fractional motors, motors of special types and motors of 31 h.p. and above were met by imports. In connection with the present inquiry we have received a few estimates of current and future demand for electric motors. Among producers, Jyoti Ltd.

has estimated the current demand for electric motors at 500,000 h.p. The Indian Electrical Manufacturers Association, Calcutta, has estimated the demand by taking into account the production of motors in the country and import of electric motors in 1956 and 1957. On this basis the Association has calculated the demand for electric motors of below 1 h.p. and up to 200 h.p. at 489, 316 h.p. in 1956 and 601, 124 h.p in 1957. It has assumed that the demand for electric motors will go up by 10 per cent. per year in the next three years. The Planning Commission in its Programmes of Industrial Development (1956-61) is of the view that the requirements of electric motors up to 200 h.p. may be of the order of 600,000 h.p. per annum by 1960-61. The Development Wing has informed us that the Development Council for Heavy Electrical Industries has now estimated a production of 650,000 h.p. during the year 1958-59 and according to the Council the pattern of production is likely to remain the same. It has estimated a target of 800,000 to 1,000,000 h.p. as the demand for 1960-61 and has suggested that in order to realise it a capacity of the order of 1.25 million h.p. per annum should be established. This target has been arrived at after taking into consideration the likely increase in generation of electrical power during the Second Five-Year Plan and its pattern of utilisation. Account has also been taken of the demand for motors that may arise from heavy industrial projects that are being planned during the Second Plan Period. It is possible to make an estimate of the domestic demand by taking into account indigenous production and imports. The production of electric motors of units registered with the Development Wing was 475,215 h.p. in 1957 and is sustained at the level of about 600,000 h.p. in the current year. It is estimated that the production of the small-scale sector was about 50,000 h.p. in 1957. The Director-General of Commercial Intelligence and Statistics has been forwarding to us monthly statements showing the number and value of imports of electric motors of specified types. On the basis of this information we have prepared a statement showing the number of motors of specified types produced in the country as well as those imported in 1956, 1957 and 1958 (Jan.-June). This statement is given in Appendix VI. Since the figures furnished by the Director-General of Commercial Intelligence and Statistics do not relate to horse power, we have not attempted to work out the aggregate horse power of the imported motors of specified categories. It will be seen, however, that there has been a progressive rise in demand for motors of all types but the largest increase is registered in the category of 1 to 50 h.p. As a result of increase in indigenous production, the bulk of the country's requirements for motors up to 50 h.p. was met from within.

7.2. From the information available to us, it would appear that the current level of production of all manufacturers, including those registered with the Development Wing, new units which have recently gone into production and the small scale sector, is in the neighbourhood of 650,000 h.p. If imports of items permissible under the current licensing period are taken into account, we believe that the present demand for electric motors in the country would aggregate to about 750,000 to 800,000 h.p. Judging by the short-term delivery periods

quoted by manufacturers recently, it would seem that the supply position of motors is adjusting itself to demand at present. As regards future demand, it is not possible to make a precise assessment of the requirements of electric motors of different types and of different ratings. The general view of the interests concerned was that the target of 800,000 to 1,000,000 h.p. estimated by the Development Council as the demand for 1960-61 may be adopted. We agree with this estimate.

Raw materials

8.1. The principal raw materials required by the industry are (i) electrical steel stampings, (ii) synthetic enamelled wire, (iii) ball bearings, (iv) insulating materials, (v) pig iron, (vi) steel rods and bars and (vii) paints and varnishes. While most of the raw materials are available from indigenous sources, insulating materials and special types of bearings which are not produced in the country have to be imported. Since the last inquiry the percentage of usage of indigenous raw materials in the manufacture of electric motors has increased considerably and among the major manufacturers it ranges from 70 per cent. to 94 per cent. The present position regarding availability, quality and prices of raw materials mentioned from (i) to (vi) above is briefly given below. As regards paints and varnishes, the supply position is satisfactory.

8.2. *Electrical steel stampings:*

8.2.1. Sankey Electrical Stampings Private Ltd., Bombay, produces stampings of various sizes and designs required by different manufacturers of electric motors. It supplies the bulk of the industry's requirements though some of the producers manufacture their own stampings. Bharat Bijlee Ltd., Kirloskar Electric Co. Ltd. and Eastern Electrical Co. Ltd., complained of the inadequate supplies of stampings. Sankey stated that except for local or temporary shortages the industry was adequately supplied with stampings. During the past two years supplies of electric steel sheets were below their requirements and indigenous supply had to be supplemented by imports. The Development Wing informed us that shortage of electric steel sheets developed as a result of the closing down of the sheet mill of the Tata Iron and Steel Co. Ltd. for overhaul in the latter part of 1957 and again due to labour strike in the middle of the current year. Sankey has stated that from the total available supply of sheets from indigenous sources and imports, a portion has to be allocated to other manufacturers of stampings for self-consumption in 1956, 1957 and 1958 (Jan.-Aug.) as indicated below:—

(In tons)

	Indigenous Supply	Import	Sold to others	Quantity available for Sankey
1956	6,913	1,386	1,796	6,503
1957	6,915	1,589	1,532	7,962
1958 (January-August) . . .	6,715	3,246	1,421	8,540

year. When this plant is put into commission, it is expected that supply of stampings to electric motor manufacturers in the South v become regular. Sankey claimed that it has endeavoured to meet needs of small-scale units numbering about 300 and the proportion motor stampings supplied to them has increased considerably.

8.2.2. It is estimated that the current requirements of the coun for electric steel sheets are of the order of 18,000 to 20,000 tons a ye We are informed that the production of Tata Iron and Steel Co. L has gone up from 350 tons a month in 1955 to 1,100 to 1,200 ton month in 1958 and it is likely that it may increase to 1,500 ton month by the end of the current year. It would, therefore, appear t at the present level of production, Tata Iron and Steel Co. Ltd. wo be in a position to meet the bulk of the requirements of the coun There are, however, various schemes of expansion of the existing u in progress and new units which have been licensed are going i production. When these schemes are implemented the requirements electric steel sheets will go up considerably and it was estimated t the demand for these sheets in the country may increase to 30,(tons a year. The representative of TISCO stated at the public inq that there was no likelihood in the near future of its being able to s up its production beyond 1,200 to 1,500 tons a month. While, the fore, in the next two years the gap between domestic production a demand may have to be met from imports, we are of the opinion t in view of the importance of the electric motor industry and ot industries consuming electric steel sheets, Government should plan p duction of this type of steel in one of the plants in the public sec so that the progressively rising demand for this important raw mate may be adequately met in future.

8.2.3. On the question of standardisation of electrical steel star ings, it was contended by representatives of the electric motor indus that it was not feasible to adopt uniform specifications for stampir as each unit in the industry has its own designs and specificatic However, small-scale manufacturers who have no special designs specifications get their requirements of stampings of standard dim sions. Sankey has developed certain standard stampings for spec categories of motors and they have been accepted by small-sc producers.

8.2.4. Prices of electrical steel stampings continued to remain hi especially in respect of stampings required for electric motors of hig ratings. Sankey contended that while the price of dynamo steel sh had gone up by 38 per cent., the price of stampings had risen only 9 per cent. As the cost of steel sheets forms the bulk of the c of production of stampings, it would appear that at the same le of output some rise in the price of stampings would take place. It however, observed that the production of Sankey has trebled in the p three years and the wastage in the manufacture of stampings has p gressively diminished from 3 tons to 2.5 tons of electric steel sh to make 1 ton of stampings. In view of these factors we feel t there is scope for reduction in the prices of Sankey's stampings.

8.3. *Synthetic enamelled wire:*

The position regarding the supply of synthetic enamelled wire from indigenous sources has considerably improved since our last inquiry. There was no complaint regarding the quality of indigenous product. Indian Cable Co. Ltd., Calcutta, commenced production of semi-synthetic wire on a commercial scale in January 1957. Its annual capacity is 440 tons and it produced 328 tons in 1957 and 270 tons in 1958 (January-June). The annual capacity of Electrical Industries Corporation, Calcutta, is 840 tons and it produced 106 tons of wire in August-December 1957 and 306 tons during 1958 (January-June). The firm has informed us that it has established a plant for the manufacture of enamel base for its own use. The third unit, *viz.*, Devidayal Cable Industries Private Ltd. has also gone into production; its annual capacity is 520 tons and its production was 100 tons in 1958 (January-June). We are informed by the Development Wing that two additional units for the manufacture of winding wires have recently been licensed. They are: (1) Hindustan Wire Products, Patiala, with an annual capacity of 600 tons and (2) Hindustan Transmission Products, Bombay, with an annual capacity of 426 tons. The main complaint from the producers of electric motors was that the supply of synthetic enamelled wire was inadequate and protracted. The representatives of wire manufacturing units contended that they did not receive adequate supplies of copper wire and enamel base for regular production. When the two new units go into production the annual capacity of wire manufacturing units will amount to 2,826 tons. It would, therefore, appear that if essential raw materials like copper wire and enamel base are made available in sufficient quantities, the wire manufacturing industry should be in a position to supply the requirements of the electric motor industry and other industries using synthetic enamelled wire. As stated earlier, Dr. Beck and Co. has developed the production of suitable enamel base and has been meeting approximately 50 per cent. of the requirements of the wire manufacturing industry. The Company claims that if the raw materials, *viz.*, solvents and synthetic resins are imported in adequate quantities it would be in a position to meet the entire requirements of the industry.

8.4. *Ball bearings:*

There were complaints from various manufacturers of electric motors about shortage of supplies, quality and high prices of ball bearings supplied by National Engineering Industries Ltd. (Bearing Division), Jaipur, which is the only manufacturer of bearings in the country. At the public inquiry the representative of the Company stated that the supplies became irregular as a result of the labour strike in its factory in June 1956 which affected its programme of production adversely. Since April 1957, the factory has been working on three shifts and its volume of production has increased. The producers of electric motors generally agreed that the supply position has improved in 1958. We understand that two more units have been recently licensed for the

manufacture of bearings. Regarding prices, we were informed by th representative of the Company that it was selling its products in accord ance with the list prices which were based on the fair ex-works price indicated in our report (1956) on the ball bearings industry. He state that the prices were finalised in consultation with the Ministry c Commerce and Industry in October 1956 and that the Company ha been charging these list prices ever since. We would point out in thi connection that the fair ex-works prices as estimated by us in 195 were computed on the basis of the estimated volume of productio and related to only a few representative sizes of bearings. The prc duction of ball bearings in this unit has gone up considerably and thi factor should ordinarily bring about reduction in its cost of produc tion. There were also a few complaints about the quality of bal bearings supplied by this unit. One of the manufacturers stated tha the outside diameter of the bearings generally falls below the lowe limit of the specified variations. The result is that the bearings produc looser fit in the bearing house. The Indian Electrical Manufacturer Association has suggested that facilities should be provided for impor of bearings which are not manufactured in the country or the produc tion of which is not sufficient to meet the country's demand. W understand that the electric motor manufacturers are given licences t import such bearings as are not manufactured in the country.

8.5. *Insulating materials:*

The insulating materials which are generally used in the manu facture of electric motors are leatheroid, vulcanised fibre, varnishe cambric cloth, varnished cotton sleeving, micanite sheets and cotto tape. With the exception of micanite sheets and cotton tape all othe materials are at present imported. We understand from Kirloska Electric Co., Ltd., that Bells Electrical Corporation Ltd., Calcutta, ha just started manufacuring empire sleevings; and Rohtas Industries Ltd Dalmianagar, has taken up the manufacture of leatheroid. The Deve lopment Wing has informed us that Commercial Bureau, Calcutt proposes to manufacture empire tape shortly.

8.6. *Pig iron:*

The Indian Electrical Manufacturers Association has stated tha the industry experienced considerable difficulty in procuring pig iro in 1957 and during the first half of the current year. Since then, how ever, the position has considerably improved. We are informed by th Iron and Steel Controller that the supply position has now improve and there would be no difficulty in obtaining pig iron during the latte half of this year and thereafter.

8.7. *Steel rods and bars:*

Both these materials are available from indigenous sources. Bu the production of steel during the past two years has been far les than the requirements of the country. The Indian Electrical Manufac turers Association has stated that manufacturers of electric motors ge

a quota certificate for their requirements of steel and orders against this quota certificate are planned on the producers, but the producers are unable to execute them. We were informed by the representative of Tata Iron and Steel Co. Ltd., that the planning of orders is in excess of production and further, even after planning, priority is given to the requirements of railways and, therefore, for some time to come the electric motor manufacturers may not be able to get all their requirements of C and D class steel. In view of this, it would seem that the requirements of C and D class steel for electric motors will, to some extent have to be met from imports until such time as indigenous production goes up very considerably.

Quality of indigenous electric motors

9.1. From the evidence received by us, there seems to be general agreement that the quality of indigenous electric motors is satisfactory. The indigenous manufacturers produce motors according to the Indian Standard Specification No. ISS-325/1951 which was amended in 1956 under ISS-325/1956. As the standard specifications for electric motors have been modified in several countries, we understand that suitable revision of the Indian Standard Specification is under consideration. The dimensional standards have also been finalised and are now in print. We are informed by Hindustan Electric Co. Ltd., Faridabad, and National Electrical Industries Ltd., Bombay, that they have obtained from the Indian Standards Institution the Certification mark for motors manufactured by them. We understand that Crompton Parkinson (Works) Private Ltd. has also applied for the Certification mark.

9.2. While the performance of indigenous electric motors in the organised sector is stated to be generally satisfactory, a few complaints exist regarding certain imperfections in the motors. The Ahmedabad Millowners' Association has stated that ball bearings used in the motors last for hardly two years while those in imported ones are not required to be replaced for five years. Balancing of rotor is usually done by means of bolts, nuts, and washers and the bolts sometimes get loosened and make noise while the motor is working. We, however, understand that as soon as these defects were brought to the notice of the individual manufacturers concerned, they took steps to remove them.

9.3. As regards motors manufactured by the small-scale sector of the industry, we were informed by the Development Commissioner, Small Scale Industries, that some of the units have testing facilities and take care to ensure that their products are tested. However, many small producers have no testing equipment and their products do not give satisfactory service. We would, therefore, suggest that the Small Industries Service Institutes should render necessary technical assistance to enable the small producers to manufacture electric motors in conformity with the Indian Standard Specification.

Existing rates of duty

10. Electric motors and component parts thereof excluding control gear are assessed to duty under Item No. 72(14) of the first Schedule to the Indian Tariff Act, 1934. The relevant extract from the Schedule is given below :—

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of duty
				The United Kingdom	The British Colony	Burma	
72(14)	(a) The following electric motors, namely, squirrel cage induction motors of a brake-horse-power not exceeding 100 but not less than one-quarter of one brake-horse-power and slip ring motors of a brake-horse-power not exceeding 100 but not less than one-brake-horse-power, excluding flame-proof motors and variable speed commutator motors.	Protective.	15 per cent *ad valorem*.	..	..	Free .	December 31st, 1958.
	(b) Component parts of electric motors as defined in Item 72(14) (a), but excluding control gear for the same, provided that only such articles shall be deemed to be component parts as are essential for the working of the electric motors and have been given for that purpose some special shape or quality which would not be essential for their use for any other purpose.	Protective.	20 per cent. *ad valorem*.	..	..	..	December 31st, 1958.

Import control policy and imports

11.1. *Import control policy.*—The import control policy for electric motors and parts thereof is covered by Serial No. 32(a), (b), (c), (d) and (e) of Part II of the Import Trade Control Schedule. Details of the policy during the various licensing periods since the last tariff inquiry are given in the following statement below :—

Statement showing details of import control policy for electric motors and parts thereof since the licensing period July–December, 1955.

Licensing period	Fractional h. p. motors including motors up to one h.p. suitable for D.C. supply or single phase.	A. C. 3 phase, squirrel cage motors up to 30 h.p. conforming to details of construction and design as given below and slipring motors from 10 to 30 h.p. (i) Type-Standard/High Torque (including loom motors/smooth acceleration. (ii) Voltage—200-550. (iii) Spindle—Horizontal or vertical. (iv) Enclosure—Screen protected/drip-proof totally enclosed (including fan cooled).	Motors of the types mentioned in (b) but from 31 h.p. to 50 h.p.	Other types of motors	Parts of motors
	(a)	(b)	(c)	(d)	(e)
July-December, 1955.	Established importers were granted a quota of 100 per cent. for imports from soft currency areas. Up to 40 per cent. of the face value of the quota licence could be utilized for imports from the dollar area. Actual users and new comers were also eligible to apply for licences.	A. No licences were granted. Applications from persons and firms who had imported during the basic period (i) motors as component parts of other machinery and (ii) motors falling under the prohibited categories (b) and (c), but who were unable to establish their quotas for imports under (a) and (d) were considered on an *ad hoc* basis. These established importers who had been granted *ad hoc* licences for permissible types of motors during	No licences were issued except for imports as integral parts of plant and machinery.	Established importers were granted a quota of 100 per cent. for imports from soft currency areas. Not more than 50 per cent of the face value of licences granted could be utilised for import of slipring and squirrel cage motors up to 75 h.p. Actual users and and new comers were also eligible to apply for licences.	Established importers were granted a quota of 100 per cent. for imports of parts or alternatively a quota of 10 per cent. of the value of imports of complete motors from dollar and soft currency areas.

	(a)	(b)	(c)	(d)	(e)
July-December, 1955 (*contd.*)		January-June, 1955 were, on application, granted 'repeat' licences on the basis of licences issued during that licensing period. B. Prohibited types of motors specified in items (b) and (c) were allowed clearance if imported as integral parts of plant and machinery. C. Applications from pump manufacturers requiring vertical spindle hollow shaft motors of ratings not produced in the country were considered on an *ad hoc* basis.			
January-June, 1956.	Same as for July-December, 1955. Additional licences were also granted on an *ad hoc* basis to those established importers who had past imports of banned types of motors.	Same as for July-December, 1955. Applications for import of A. C. 3 phase, 50 cycles, squirrle cage motors 3 to 10 h.p., 1500 R. P. M. (Syn) from actual users and established importers having past imports were considered on an *ad hoc* basis.	Same as for July-December, 1955.	Same as for July-December, 1955 with the stipulation that not more than 25 per cent. of the face value of licences granted could be utilised for import of slipring and squirrel cage motors up to 75 h.p.	Same as for July-December, 1955.
July-December, 1956.	Same as for January-June, 1956.	Same as for July-December, 1955. Applications from actual users were considered on an *ad hoc* basis.	Same as for July-December, 1955.	Same as for January-June, 1956.	Same as for January June, 1956. Licences were not valid for import of spare parts such as ball bearings, etc.

January-June, 1957.	The quota granted to established importers for import from soft currency areas was reduced to 66⅔ per cent. Only the actual users were eligible to apply for licences.	Same as for July-December, 1955. Applications from established importers were considered on an *ad hoc* basis to meet the requirements of agriculturists subject to such conditions as the licensing Authority may impose. actual user applications from textile mills were also considered on *ad hoc* basis.	Same as for July-December, 1955.	Established importers were granted a quota of 66⅔ per cent. for imports from soft currency areas. Not more than 25 per cent. of the face value of licences granted could be utilised for import of slipring and squirrel cage motors up to 75 h.p.but this restriction was not applicable to (a) slipring motors below 10 h.p. and (b) flame-proof/ explosion-proof motors of all ratings. Only the actual users were eligible to apply for licences.	Same as for July-December, 1956.
July-September, 1957.	No licences were issued.	No licences were issued	No licences were issued.	No licences were issued.	No licences were issued.
October, 1957-March, 1958.	Established importers were granted a quota of 20 per cent. for imports from soft currency areas. Licences were not valid for imports of second-hand machinery though requests for such imports by actual users were considered on an *ad hoc* basis.	Same as in January-June, 1957. Actual user applications from collieries were considered on an *ad hoc* basis.	Same as in July-December, 1955.	No licences were granted. Applications from actual users were considered on an *ad hoc* basis. Applications from established importers for import of spare parts against their imports of complete machinery were considered by the licensing authorities and licences were granted on a quota of	Established importers were granted a quota of 50 per cent. for imports of parts or alternatively 5 per cent. for imports of complete motors from dollar and soft currency areas. Licences were not valid for import of spare parts such as ball bearings etc. Although licences were

	(a)	(b)	(c)	(d)	(e)
October, 1957-March, 1958 (*contd*).				2 ½ per cent. of half of their best year's imports in the basic period subject to the same conditions/restrictions as applied to licences issued under (e).	granted on the basis of past imports of parts of motors and parts of generators, they could be utilised for import of any or all articles falling under these categories subject to the conditions/restrictions stipulated.
April-September, 1958.	Same as above except that the established importers were granted a quota of 25 per cent. for imports from soft currency areas.	Same as above except that no mention was made of actual user applications from agriculturists and textile mills. Actual user applications from collieries for flame-proof motors conforming to B. S. S. 741 of 1937 or its equivalent were considered on an *ad hoc* basis. Applications from actual users other than collieries for import of flame-proof motors conforming to B.S.S. 741 of 1937 or its equivalent were also considered by the J.C.C.I., Calcutta, in consultation with the Development Wing.	Same as in October, 1957-March, 1958. Applications from actual users for imports of only flame-proof motors conforming to B.S. S.741 of 1937 or its equivalent were considered.	Same as in October, 1957-March 1958 except that applications from actual users for imports of only flame-proof motors conforming to B. S. S. 741 of 1937 or its equivalent were considered.	Same as for October, 1957-March, 1958.

11.2. *Imports.*—Imports of electric motors were recorded only in value up to December 1956 in the published Trade Accounts. With effect from January 1957, however, imports are classified under different types of motors in the "Monthly Statistics of the Foreign Trade of India" in terms of numbers and value. The following table gives the quantity and value of imports:—

Year	Quantity (Nos.)	Value (Rs.)
1955	..	1,44,20,191
1956	..	1,95,48,363
1957	63,755	4,50,85,958
1958 (Jan.-June)	19,023	2,28,57,979

A detailed statement showing countrywise imports under different categories of electric motors during 1957 and 1958 (January-June) is given in Appendix VII. The bulk of imports came from the United Kingdom, U.S.A., West Germany and Switzerland. In respect of the protected categories of electric motors it was represented to us that imports were very heavy in 1957 and that even persons totally unconnected with the trade in electric motors obtained licences for import of electric motors under the import licences conversion facilities permitted by Government. It was also alleged that considerable advantage was derived by traders by importing motors which fell under the prohibited category by describing them as 'flame-proof' motors which are non-prohibited. The representative of the Development Wing explained that some electric motors were imported from West Germany, which, under West German Specifications, were described as 'flame-proof' but did not conform to British specifications of motors of that type. Though they were described as 'flame-proof' motors, they could not be used in mines. They were used instead in textile mills, rayon or chemical plants, where such flame-proof motors are not required. We understand that this issue has been carefully examined by Government and necessary precautions are being taken against such imports.

11.3. Electric motors of high ratings of 100 h.p. and above are manufactured only against specific orders. Partly because of reluctance in the initial stages to try indigenous products and partly because of lack of advance planning on their part, domestic consumers indented for such motors only when the need for them became urgent and as prompt deliveries were not available from indigenous manufacturers, imports were allowed. As adequate capacity for the manufacture of such motors to specifications is available in the country, there is no reason why we should spend our scarce foreign exchange resources on imports of motors that can be produced locally. We, therefore, recommend that positive steps should be taken to encourage the indigenous manufacture of motors of ratings of 100 h.p. and above by requiring indentors of electric motors to estimate their requirements sufficiently in advance and plan their orders on domestic manufacturers. The Development Wing should, before recommending the issue of a licence, satisfy itself that the applicant had taken adequate measures to obtain his requirements from indigenous sources.

C. i. f. prices and landed costs

12. We have obtained information from the Collectors of Customs and some of the importers regarding c.i.f. prices and landed costs of recently imported motors Quotation of c.i.f. and f.o.b. prices were also received from importers in regard to motors of U.K. origin. While comparing the prices, account has to be taken of the fact that motors in the United Kingdom are at present being manufactured in accordance with British Standard Specification: 2613 wherein a temperature rise of 55°C is permitted as against 40°C which is the prescribed limit in the Indian Standard Specification and followed by indigenous manufacturers. It would, therefore, appeal that c.i.f. quotations of motors of U.K. origin according to the revised specification would not be strictly comparable with the fair ex-works prices of the corresponding motors of indigenous manufacture. There is no means, however, of ascertaining the price differential arising as a result of the change in specification in motors of U.K. origin. At the public inquiry, it was indicated that British motor manufacturers have reduced their prices by about 15 per cent. after the new specification was adopted. For the purpose of comparison with the fair ex-works prices of indigenous electric motors, we have adopted c.i.f. prices furnished by the Collector of Customs, Bombay. As regards items for which relevant c.i.f. prices were not available, we have adopted the c.i.f. quotations furnished by Batliboi & Co., Bombay. All items are of U.K. origin excepting 15 and 20 h.p. squirrel cage screen protected motors which are of West German origin.

Estimates of costs of production and fair exworks prices

13.1. We selected three units, *viz.*, Kirloskar Electric Company Ltd., Bangalore, Motor and Machinery Manufacturers Ltd., Calcutta and Jyoti Ltd., Baroda for cost examination. Our Cost Accounts Officers have examined the costs of production of electric motors at the factories of Kirloskar Electric Co. Ltd., and Motor and Machinery Manufacturers Ltd. for their financial years 1956-57 and of Jyoti Ltd. for 1957. In addition to electric motors Kirloskar Electric Co. Ltd.. manufactures power transmission transformers and C. I. castings and Jyoti Ltd. manufactures pumps, switch gear and switch boards. Motor and Machinery Manufacturers Ltd. concentrates only on the manufacture of electric motors.

13.2. As adequate cost data were not available for preparing future estimates of fair ex-works prices of electric motors manuaftcured by Jyoti Ltd., we have not adopted them for comparison with the c.i.f. prices of imported motors. Motor and Machinery Manufacturers Ltd. has been manufacturing motors only of small ratings up to 15 h.p. while its production of motors of above 20 h.p. is very small. The Company received a licence from Government in December 1956 for expanding its capacity by 42,000 h.p. per annum on single shift basis which is being implemented in three stages and the total capacity of 60,000 h.p. per year is expected to be achieved by 1959. In view of this the future estimates based on their cost of production in 1956-57 would not be realistic. The factory of Kirloskar Electric Co. Ltd. is working to capacity and has diversified its production to include motors of

higher ratings. We have, therefore, decided to take Kirloskar Electric Co. Ltd., as the representative unit for the purpose of comparison of fair ex-works prices for the future of certain types of electric motors produced by them with the landed costs without duty of corresponding types of imported motors.

13.3. The future costs of production of 23 different types of electric motors were estimated by us and 17 of them have been selected for purposes of comparison of which 8 ranging from 3 to 50 h.p. belong to squirrel cage screen protected (drip proof) type, 6 ranging from 3 to 20 h.p. to totally enclosed fan colled type and 3 ranging from 20 to 50 h.p. to slip ring type.

13.4. The estimates were discussed with the representative of the Kirloskar Electric Co. Ltd. As the Company has desired that details of cost of production and estimates should be kept confidential we are forwarding the report of the Cost Accounts Officer as a separate enclosure to this report.

13.5. The following statement gives the estimates of fair ex-works prices for the future of motors of certain types and h.p. manufactured by Kirloskar Electric Co. Ltd. made by us after discussion with its representative :—

Type	Squirrel Cage Screen Protected Drip Proof							
				(4 Poles)				(6 poles)
Horse Power	3	5	7·5	10	15	20	50	20
1	2	3	4	5	6	7	8	9
Details	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Net material cost .	184.46	232.73	317.06	377.12	530.53	683.93	1075.27	893.09
2. Conversion charges .	26.68	32.32	41.93	48.54	88.67	110.83	197.29	133.72
3. Painting and packing cost . .	6.84	8.71	11.86	13.52	19.60	24.85	42.37	32.00
4. Royalty . .	8.45	10.70	13.19	16.21	21.17	26.46	48.22	30.87
5. Cost of production .	226.43	284.46	384.04	455.39	659.97	846.07	1363.15	1089.68
6. Return on capital employed . .	13.00	16.10	22.10	26.00	37.00	48.00	78.80	61.50
7. Fair ex-works price .	239.43	300.56	406.14	481.39	696.97	894.07	1441.95	1151.18
SAY .	239	301	406	481	697	894	1442	1151

Totally Enclosed Fan Cooled						Slip Ring		
(4 Poles)						(6 Poles)		
3	5	7·5	10	15	20	20	25	50
10	11	12	13	14	15	16	17	18
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
232.41	308.56	367.28	433·46	690.96	769.76	784.14	874.16	1420.64
38.39	46.64	57.85	77·46	126.89	138·38	177·04	192.36	241·68
9.69	11.93	14.56	17·59	25.93	28·49	32·05	35.83	53·89
9.84	12.76	16·33	20·09	28·13	34·99	37·44	43·02	66·64
290·33	379.89	456·02	548·60	871·91	971.62	1030·67	1145·37	1782·85
16·30	21.80	26.70	31·90	52.30	57.40	58·20	65.20	101·10
306·63	401.69	482.72	580·50	924.21	1029.02	1088·87	1210.57	1883·95
307	402	483	581	924	1029	1089	1211	1884

13.6. We have taken the following factors into account in arriv at the above estimates.

(a) *Production.*—We have assumed that the Company will prod 25,500 motors equivalent to a total h.p. of 200,000 per annum on sir shift working. This represents an increase of about 65 per cent. c the actual production in 1956-57.

(b) *Raw Materials.*—Based on actual consumption during the riod 1956-57, costs of raw materials have been worked out by tak into account the latest prices. As regards cast iron castings, the c of production in the Company's own foundry has been estimated on basis of the current levels of production and expenses. Similarly stampings produced by the Company in its works for medium s motors the costs have been determined after taking into account increase in the production estimated for the future.

(c) *Labour and Other Manufacturing Expenses.*—In estimat the wages cost, annual increments have been provided. The increa efficiency of labour due to the introduction of production and inc tive bonus schemes and the resultant saving in labour costs have b taken into consideration. Necessary adjustments for increase in pri of consumable stores and variation in consumption factor for the creased output have been made. Suitable adjustments have been m in other items of overhead expenditure, and this element spread o the increased future production worked out to 75 per cent. of that 1956-57.

(d) *Depreciation.*—Depreciation has been allowed at normal come-tax rates on the value of the plant and machinery existing as 30th June, 1958.

(e) *Return on Capital Employed.*—We have provided a return 10 per cent. on the capital employed as assessed by us.

Comparison of the fair ex-works prices of indigenous electric motors with landed costs without duty of imported motors

14.1. The following statement gives a comparison of the fair works prices of indigenous electric motors certain types and ratings with landed costs w out duty of similar types and ratings of impor motors.

Description of Electric Motors	Squirrel Cage Screen Protected Drip Proof								Totally Enclosed Fan Cooled						Slip Ring		
	(4 Poles)							(6 Poles)	(4 Poles)						(4 Poles)		
Horse Power	3	5	7·5	10	15	20	50	20	3	5	7·5	10	15	20	20	25	50
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. C. i. f. price . . .	228	281	377	469	485	533	1179	917	240	304	396	475	695	850	960	1040	1580
2. Customs duty @ 15% .	34	42	57	70	73	80	177	138	36	46	59	71	104	127	144	156	237
3. Clearing charges . .	2	3	4	4	6	9	12	9	2	3	4	5	7	9	10	10	16
4. Landed cost with duty (1+2+3) . . .	264	326	438	543	564	622	1368	1064	278	353	459	551	806	986	1114	1206	1833
5. Landed cost without duty (1+3)	230	284	381	473	491	542	1191	926	242	307	400	480	702	859	970	1050	1596
6. Fair ex-works price for future	239	301	406	481	697	894	1442	1151	307	402	483	581	924	1029	1089	1211	1884
7. Difference between 6 and 5	9	17	25	8	206	352	251	225	65	95	83	101	222	170	119	161	288
8. 7 as a percentage of 1 .	3.95	6.05	6.63	1.71	42.47	66.04	21.29	24.54	27.08	31.25	20.96	21.26	31.94	20.00	12.40	15.48	18.23

14.2. It will be seen that the duty required to equate the fair ex-works price with the landed cost without duty in the case of (i) squirrel cage screen protected (drip proof) motors ranges from 1·71 to 66·04 per cent., (ii) totally enclosed fan cooled motors ranging from 20 to 31·94 per cent. and (iii) slip ring motors from 12·40 to 18·23 per cent. We have also worked out separately the weighted average duties required to equate the fair ex-works prices of these three types of motors duly weighted with the actual number of motors produced in each group and h.p. These duties work out to (i) 7·33 per cent. for squirrel cage motors of screen protected (drip proof) 4 poles and 6 poles, (ii) 26·28 per cent. for totally enclosed fan-cooled motors 4 poles and (iii) 15·65 per cent. for slip ring motors 4 poles. The over-all weighted average duty indicated for equating the fair ex-works price with the landed cost without duty in respect of selected items of production of the representative unit works out to 10·54 per cent.

Measure of protection

15. The electric motor industry has enjoyed protection for over 10 years and during this period has achieved considerable progress. The total production has increased from 186,643 h.p. in 1954 to about 500,000 h.p. in 1957 and is running at a level of 650,000 h.p. in the current year. There has been further diversification in the types of motors produced in the country and some of the manufacturers have produced electric motors up to 200 h.p. and above. Most of the essential raw materials are now produced in the country. The quality of indigenous motors of almost all ratings compares favourably with that of the imported motors. While the indigenous manufacturers have been meeting the bulk of demand in motors of smaller ratings, considerable leeway has yet to be made before the industry can meet the requirements of the country for fractional motors of single phase type, special motors and motors of 100 h.p. and above. While the pattern of demand in the country has widened, evidence shows that the indigenous industry continues to confine a large part of its production to motors of smaller ratings up to 30 h.p. Some of the producers having the necessary equipment have manufactured motors of higher ratings up to 200 h.p. and above against specific orders but the volume of such production did not exceed 8 per cent. of the total output in 1957. As the level of output was small, the cost of production was high. In view of the considerable increase in demand for electric motors of all types, the licensed capacity of the industry now amounts to about 1·13 million h.p. We understand that while considering applications for expansion of the existing capacity or establishment of new units for the manufacture of electric motors, no conditions are attached requiring the applicant units to produce motors of specified types and ratings. In view of the present balance of payments position, we consider that at this stage it is essential that manufacturers should be asked to diversify their pattern of production so that the demand for those types and ratings of motors which are still being imported can be met from within. Some manufacturers have taken in hand schemes of production of flame-proof and variable speed as well as fractional motors of single phase type, while others have planned production of motors of higher

ratings up to 500 h.p. These schemes should be implemented as expeditiously as possible. We, therefore, consider that the electric motor industry is still in need of protection in order to be able to diversify its pattern of production and meet the entire requirements of the country of motors of all types as soon as possible. The duty indicated for equating the fair ex-works price with landed cost without duty in respect of items selected from the production of the representative unit is 10·54 per cent. This weighted average of 10·54 per cent. is based mainly on the production of electric motors of the three types mentioned above from 3 to 50 h.p. While the rate of duty indicated for motors of small ratings is low, the industry is faced with keen competition in regard to motors of higher ratings where the rates of duty work out much higher. As the production of motors of ratings above 50 h.p. is still small, their cost of production is high. The quantum of duty required for such motors would, therefore, be much higher than the weighted average of 10·54 per cent. indicated for motors up to 50 h.p. Taking these factors into account, we have come to the conclusion that the present rate of duty of 15 per cent. *ad valorem* would be adequate to protect the industry. We, therefore, recommend that protection should be continued at the existing rate of duty for a further period of three years, *i.e.*, up to 31st December, 1961. As regards component parts, we recommend that protective duty should be continued at the existing level of 20 per cent. *ad valorem* on all parts except control gear up to 31st December, 1961.

Selling arrangements and selling prices

16.1. From the information received by us, we have observed that the indigenous producers have made two types of selling arrangements; (1) producer appoints a sole selling agent who, in turn, appoints distributors and dealers in various parts of the country and (2) producer appoints agents or distributors on a district-wise basis or sells direct to consumers. In both cases the manufacturing company pays (a) a commission or (b) trade discount and over-riding commission, on the sale of motors through its selling agents or distributors. The commission allowed to the sole selling agents ranges from 10 per cent. to 26 per cent. of the value of motors regardless of whether the sales are actually transacted through them. The sole selling agents in turn allow to their dealers discount of varying amounts on the list prices. In cases where the Company markets its products through agents and distributors a trade discount or commission ranging from 10 to 20 per cent. is given. In addition sometimes an annual turn-over bonus up to 10 per cent. is also paid. While the electric motor industry was in a nascent stage, it had to face competition from electric motors of established brand and overcome consumers' resistence by offering inducements to traders to push sales of its products. In the present circumstances, however, when the domestic demand for electric motors is much higher than the level of indigenous production and delivery periods of major producers extend from 4 to 6 months it would appear that there is no need to offer such high commissions for sale of their products. At the public inquiry some of the manufacturers explained that they had entered into long-term arrangements with their selling

agents which had to be honoured equally in times of prosperous as well as depressed conditions of trade. Secondly, selling agencies, which are given fairly high commissions, maintain technical organisations for rendering after-sales service which, alternatively, would have to be maintained by the manufacturers themselves.

16.2. *Selling prices.*—We have received complaints that dealers in electric motors, especially in mofussil centres, have been charging very high prices. We have examined the list prices which the manufacturers have furnished to us from time to time and find that most of them have revised their prices upwards in 1958 from the level obtaining in 1956-57. Industrial consumers like textile mills and engineering establishments, which place bulk orders, normally obtain their requirements at list prices. It is, however, the individual customer like the agriculturist, artisan or small-scale manufacturer, who requires 1 to 2 motors, that is compelled to pay a price higher than the list price. At the public inquiry the representatives of manufacturers stated that the bulk of their products are sold at list prices whether they are sold direct or through their selling agents and distributors. They, however, admitted that it was difficult for them to exercise control at the level of retail dealers and there is every temptation for dealers in mofussil centres to take undue advantage of scarcity and long delivery periods. As the demand for pumping sets is increasing and it is essential that agriculturists should obtain their requirements at reasonable prices, we recommend that the manufacturers of electric motors should publish the list prices of motors of 1 to 15 h.p. in English and regional languages every half year, notifying every change in the list prices and take positive steps to see that every dealer of their motors in the above categories displays the list prices at his premises in a conspicuous manner.

Export control policy and exports

17. Electric motors were freely licensed for export up to 4th September, 1958. Since then no licence is required to export electric motors. A negligible quantity of 14 motors valued at Rs. 5,518 was exported to Pakistan, Afghanistan and Nepal during the 18 months from January 1957. We are informed that some of the units which have entered into agreements with foreign associates are precluded from exporting their products. Secondly, the domestic demand for electric motors has been so brisk that few producers are inclined at present to explore export markets. We understand that one unit *viz.*, Jyoti Ltd. surveyed the prospects of marketing its products in the countries of West Asia but found that it faced with severe competition as the prices of its motors were higher than those of its competitors.

Summary of conclusions and recommendations

18. Our conclusions and recommendations are summarised as under:—

(1) The present domestic demand for electric motors is about 750,000 to 800,00 h.p. The demand for motors in 1960-61 is estimated at about one million h.p.

[Paragraph 7.2]

(2) Positive steps should be taken to encourage the indigenous manufacture of motors of ratings of 100 h.p. and above by requiring indentors of electric motors to estimate their requirements sufficiently in advance and plan their orders on domestic manufacturers. The Development Wing should, before recommending the issue of a licence, satisfy itself that the applicant had taken adequate measures to obtain his requirements from indigenous sources.

[Paragraph 11.3]

(3) The existing protective duty of 15 per cent. *ad valorem* on electric motors should be continued for a further period of three years ending 31st December, 1961.

[Paragraph 15]

(4) The existing protective duty of 20 per cent. *ad valorem* on component parts of electric motors, excluding control gear, should be continued for a further period of three years ending 31st December, 1961.

[Paragraph 15]

(5) The manufacturers of electric motors should publish the list prices of motors of 1 to 15 h.p. in English and regional languages every half year, notifying every change in the list prices and take positive steps to see that every dealer of their motors in the above categories displays the list prices at his premises in a conspicuous manner.

[Paragraph 16.2]

Acknowledgements

19. We wish to convey our thanks to the manufacturers, importers, consumers and the Associations who furnished us with detailed information in connection with this inquiry and to their representatives who gave evidence before us at the public inquiry.

C. RAMASUBBAN,
Chairman.

S. K. MURANJAN,
Member.

J. N. DUTTA,
Member.

R. S. BHATT,
Member.

RAMA VARMA,
Secretary.

BOMBAY;
Dated 16th October, 1958.

APPENDIX I

[*Vide* paragraph 3.1]

List of firms/associations/Government Departments to whom the Commission's estionnaires/letters were issued and from whom replies or memoranda were received

*Indicates those who replied.

†Indicates those who stated that they are not interested.

PRODUCERS :

*1. Argus Engineering Co. Ltd., Peelamedu Post, Coimbatore.

*2. Associated Electrical Industries Manufacturing Co. Private Ltd., Crown House 6, Mission Row, Calcutta-1.

*3. Bharat Bijlee Ltd., Udyog Nagar, Bombay-22.

*4. British India Electric Construction Co. Ltd., 6, Mayurbhan Road, Calcutta-23.

*5. Crompton Parkinson (Works) Private Ltd., Haines Road, Worli, Bombay-18.

*6. Eastern Electrical Co. Ltd., Singanallur P. O., Coimbatore District.

*7. Electric Construction and Equipment Co. Ltd., 9, Kaliprasanna Singhee Road, Calcutta-2.

*8. The General Electric Company of India (Manufacturing) Private Ltd., 58, Taratalla Road, Garden Reach, Calcutta-24.

*9. The Hindustan Electric Co. Ltd., Industrial Area, Faridabad, E. Punjab.

*10. Jyoti Ltd., Baroda-3.

*11. Kirloskar Electric Co. Ltd., Post Box No. 1017, Bangalore-3.

*12. National Electrical Industries Ltd., Industrial Estate, Lalbaug, Bombay-12.

*13. P. S. G. and Sons' Charity Industrial Institute, Peelamedu Post, Coimbatore.

14. Motor and Machinery Manufacturers Ltd., 31, Chittaranjan Avenue, Calcutta-12.

15. Orient General Industries Ltd., 8, Royal Exchange Place, Calcutta.

PROSPECTIVE PRODUCERS :

*1. Jaura Engineering Works Private Ltd., 24, Industrial Area, Chandigarh.

*2. P. Govindaraj and Sons (Private) Ltd., 44, Sir Theagaraya Road, Madras-17.

*3. Coimbatore Premier Corporation Private Ltd., P. B. No. 210, 34, Avanashi Road, Coimbatore-1.

*4. Sri Ramakrishna Mission Vidyalaya Industrial Section, Sri Ramkrishna Vidyala P. O., Perianaickenpalayam, R. S., Coimbatore District.

*5. Patel Engineering Co. Ltd., United India Building, Sir P. M. Road, Bombay.

6. C. Sundaram, 5-37, Gopalpuram, Coimbatore.

*7. Balasubramania Foundary, Patel Road, Coimbatore.

*8. Vasant Engineering Ltd., Pratapnagar, Baroda.

*9. Ramakrishna Metal and Alloy Industries, Sardar Patel Road, Coimbatore.

*10. Sri Jayachandar Engineering Works, 9/431, Mettupalayam, R. S. Puram, Coimbator

*11. Vijaya Foundry, Pappanaickenpalayam, Coimbatore.

12. Engineering Works of India (Private) Ltd., 20, Ultadanga Road, Calcutta-4.

*13. The India Electric Works Ltd., Diamond Harbour Road, Behala, Calcutta-34.

*14. Government Electric Factory, Post Box No. 579, Mysore Road, Bangalore-2.

*15. Ogale Glass Works Ltd., Ogalevadi, Dist. N. Satara.

*16. Sri Lakshmi Foundry, Patel Road, Coimbatore.

†17. Best and Company Private Ltd., 13/15 North Beach Road, Post Box No. 63, Madras-1

*18. Calcutta Fan Works Private Ltd., 19-B, Chowringhee Road, Calcutta-13.

19. Kasturi Engineers Ltd., 8/4, Avanashi Road, Coimbatore.

C. ASSOCIATION :

*The Indian Electrical Manufacturers Association, India Exchange, Calcutta-1.

D. IMPORTERS :

*1. Associated Electrical Industries (India) Private Ltd., Crown House, 6, Mission Ro Calcutta-1.

*2. Balmer Lawrie and Co. (India) Ltd., 21, Netaji Subhas Road, Calcutta-1.

*3. Batliboi and Co., Forbes Street, Bombay-1.

†4. British Electrical and Pumps Private Ltd., 1/1B, Mission Row, Calcutta-1.

*5. Chemicals and Machinery Private Ltd., Hamam House, Hamam Street, Bombay-

*6. The Crompton Engineering Co. (Madras) Private Ltd., P. O. Box 205, Second Lir Beach, Madras-1.

†7. The East Asiatic Co. (India) Private Ltd., F-2, Clive Building, Netaji Subhas Roa Calcutta-1.

8. Easun Engineering Co. Ltd., 5-7, Second Line Beach, Madras-1.

*9. The English Electric Co. Ltd., D-3, Gillander House, 8, Netaji Subhas Road, Cal cutta-1.

†10. F. and C. Osler (India) Ltd., 12, Old Court House Street, Calcutta-1.

*11. The General Electric Co. of India Private Ltd., Magnet House, Chittaranjan Avenu Calcutta-13.

12. Govindram Bros. Ltd., 139, Medows Street, Bombay-1.

13. Hindustan Export and Import Corporation, 207, Hornby Road, Bombay-1.

14. Jhangianis Ltd., Bombay Mutual Annexe, Gunbow Street, Bombay.

*15. Mather and Platt Ltd., Hamilton House, 8, Graham Road, Ballard Estate, Bombay-1

16. Modi and Modi Linghi Chetty Street, Madras-1.

17. Pednekar and Co. Ltd., 172, Girgaum Road, Bombay-4.

*18. Refrigerators (India) Ltd., 59-C, Park Street, Calcutta.

19. R. S. Mehta and Co. Ltd., Medows Street, Calcutta.

*20. Singer Sewing Machine Co., 207, Hornby Road, Bombay-1.

*21. Greaves Cotton and Crompton Parkinson Private Ltd., 1, Forbes Street, Bombay-1.

E. CONSUMERS :

*1. Ahmedabad Millowners' Association, Navrangpura, Post Box No. 7, Ahmedabad.

†2. Asea Electric India Ltd., Yaffi Building, Goa Street, Bombay.

†3. Ashok Engineering Co., 24, Noble Chambers, Parsi Bazar Street, Bombay-1.

*4. The Atlas Cycle Industries Ltd., Sonepat (Near Delhi).

5. Eastern Electrical Co. Ltd., Coimbatore.

†6. Eastern Electric and Engineering Co. Private Ltd., 127, Mahatma Gandhi Road, Bombay-1.

*7. Firestone Rubber and Tyre Co. of India Private Ltd., Hay Bunder Road, Sewree, Bombay.

8. Hindustan Construction Co. Ltd., Construction Building, Ballard Estate, Bombay.

†9. Indian Oxygen Ltd., Ghatkopar, Bombay-39.

10. Kaycee Industries Ltd., Kamani Chambers, Ballard Estate, Bombay.

*11. Laxmiratan Cotton Mills Co. Ltd., Behari Niwas, Kanpur.

12. Shree Sadul Textiles Ltd., Sri Ganganagar (N. Rly), Rajasthan.

*13. Shri Krishna Ginning, Pressing and Oil Mills, Bhannana Purwa, 87/110, Kalpi Road, Kanpur.

†14. Shri Uma Shankar Sharma, Moholla-Barahi, Hapur (U.P.).

*15. Supercrafts Private Ltd., 163, Kasba Road, Calcutta-31.

*16. Tata Chemicals Ltd. Bombay House, Bruce Street, Bombay.

*17. Tata Oil Mills Co. Ltd., Bombay House, Bruce Street, Bombay.

†18. Trilok Chand and Sons Ltd., Laxmi Building, The Mall, Kanpur.

19. Vidarbha Mills (Berar) Ltd., Ellichpur.

*20. Walchandnagar Industries Ltd., Walchandnagar Posts, Poona District.

21. Western India Spinning and Mfg. Co. Ltd., Chinchpokli, Bombay.

22. Cooper Engineering Ltd., Satara Road, Bombay State.

*23. H. K. Dhanokar, Shegaon District, Buldhana (Vidarbha).

F. RAW MATERIAL PRODUCERS :

*1. Sankey Electrical Stampings Private Lt., Wakefield House, Sprott Road, Bombay

*2. The Tata Iron and Steel Co. Ltd., Bombay House, Bruce Street, Fort, Bombay-1.

*3. The National Insulated Cable Co. of India Ltd., 4, Dalhousie Square East, Calcut

*4. Indian Cable Co. Ltd., 9, Hare Street, Calcutta-1.

5. Devidayal Cable Industries Private Ltd., Gupta Mills Estate, Darukhana, Bombay-1

*6. Electrical Industries Corporation, 33, Brabourne Road, Calcutta-1.

G. GOVERNMENT DEPARTMENTS :

1. Secretary to the Government of India, Ministry of Commerce and Industry, Udy Bhavan, King Edward Road, New Delhi.

*2. The Industrial Adviser (Engineering), Development Wing, Ministry of Commer and Industry, Government of India, Udyog Bhavan, King Edward Road, New Del

*3. The Director, Indian Standards Institution, Manak Bhavan, 9, Mathura Road, Ne Delhi-1.

4. The Chief Controller of Imports and Exports, New Delhi.

*5. The Director General of Supplies and Disposals, Sahjahan Road, New Delhi.

*6. The Collector of Customs, Bombay.

*7. The Collector of Customs, Calcutta.

*8. The Collector of Customs, Madras.

*9. The Collector of Customs, Cochin.

*10. The Director of Industries and Statistics Authority, Old Custom House Yard, Fo Bombay.

11. The Director of Industries, Government of Punjab, Chandigarh.

*12. The Director of Industries, Government of Mysore, Bangalore.

13. The Director of Industries and Labour, Government of Delhi State, Delhi.

14. The Director of Industries, (Commercial Intelligence), Government of Uttar Prades Kanpur.

*15. The Secretary to the Government of Madras, Department of Industries, Labo and Co-operation, Fort St. George, Madras.

16. The Director of Industries, Government of West Bengal, New Secretariat Buildin 1, Hastings Street, Calcutta.

*17. The Development Commissioner, Small Scale Industries, 114, Sunder Nagar, Ne Delhi.

*18. Central Water and Power Commission (Power Wing), Cleremont, Simla-4.

APPENDIX II

[*Vide* Paragraph 3.4]

List of persons who attended the public inquiry on 23rd September, 1958

PRODUCERS AND ASSOCIATIONS OF PRODUCERS :

1. Shri. P. R. Deshpande 2. Shri M. J. Desai 3. Shri A. K. Bose	Representing	Crompton Parkinson (Works) Private Ltd., Haines Road, Worli, Bombay-18.
4. Shri L. P. Shah	,,	The Indian Electrical Manufacturers Association, India Exchange, Calcutta-1; and Electric Construction and Equipment Co. Ltd., 9, Kaliprasanna Singhee Road, Calcutta-2.
5. Shri D. K. Sinha	,,	The Indian Electrical Manufacturers Association, India Exchange, Calcutta-1.
6. Shri V. W. Chemburkar	,,	Jyoti Ltd., Baroda-3.
7. Shri T. V. A. Krishnan 8. Shri P. N. Ramachandran 9. Shri R. C. Shah	,,	The Hindustan Electric Co. Ltd., Industrial Area, Faridabad, E. Punjab.
10. Shri B. P. Poddar	,,	Motor and Machinery Manufacturers Ltd., 31, Chittaranjan Avenue, Calcutta-12.
11. Shri H. B. Carrasco	,,	The General Electric Company of India (Manufacturing) Private Limited, 58, Taratalla Road, Garden Reach, Calcutta-24.
12. Shri P. C. Mehta 13. Shri J. S. Zaveri	,,	Bharat Bijlee Limited, Udyog Nagar, Bombay-22.
14. Shri K. S. L. Rao 15. Shri A. D. Alawani	,,	Kirloskar Electric Co. Ltd., Post Box No. 1017, Bangalore-3.
16. Shri D. W. Kerkar	,,	Associated Electrical Industries Manufacturing Co. Private Limited, Crown House, 6, Mission Row, Calcutta-1.
17. Shri W. P. Karnik 18. Shri B. S. Bhagwat	,,	National Electrical Industries Ltd., Industrial Estate, Lalbaug, Bombay-12.
19. Shri M. J. Naik 20. Shri M. S. Kapadia	,,	Small Scale Electric Motor Manufacturers' Association, C/o. Batliboi and Co., Forbes Street, Bombay-1.

PROSPECTIVE PRODUCER :

21. Shri K. P. Khara	,,	Patel Engineering Co. Ltd., United India Buildings, Sir P. M. Road, Bombay-1.

IMPORTERS :

22. Shri G. R. Deo	,,	Batliboi and Company, Forbes Street, Bombay-1.

23. Shri H. L. Gidwani . . .	Representing	The English Electric Co. Ltd., D-3, Gillander House, 8, Netaji Subhas Road, Calcutta-1.
24. Shri I. C. Thakkar . . .	,,	Mather and Platt Limited, Hamilton House, 8, Graham Road, Ballard Estate, Bombay-1.
CONSUMER :		
25. Shri B. J. Kaka . . .	,,	Tata Oil Mills Co. Limited, Bombay House, Bruce Street, Bombay.
RAW MATERIAL PRODUCERS :		
26. Shri V. S. Deshpande .	,,	Sankey Electrical Stamping Private Limited. Wakefield House, Sprott Road, Bombay-1.
27. Shri N. R. Banerjee . .		
28. Shri K. J. Cleetus . . .	,,	The Tata Iron and Steel Co. Ltd., Bombay House, Bruce Street, Fort, Bombay-1.
29. Shri S. S. Vaze . .		
30. Shri R. C. Funnell . .	,,	Indian Cable Co. Ltd., 9, Hare Street, Calcutta-1.
31. Shri P. D. Bhaiya . . .	,,	National Engineering Industries Limited (Bearing Division), Jaipur.
32. Shri K. K. Aggarwal . .	,,	Devidayal Cable Industries Private Limited, Gupta Mills Estate, Darukhana, Bombay-10.
GOVERNMENT DEPARTMENTS :		
33. Shri K. N. Ramaswamy . .	,,	Development Wing, Ministry of Commerce and Industry, Government of India, Udyog Bhavan, King Edward Road, New Delhi.
34. Lt. Col. O. G. Eapen . .	,,	The Iron and Steel Controller, 33, Netaji Subhas Road, Calcutta-1.
35. Shri S. Nanjundan . . .	,,	The Development Commissioner, Small Scale Industries, 114, Sunder Nagar, New Delhi.
36. Shri N. Das		
37. Shri A. B. Rao . . .	,,	Indian Standards Institution, Manak Bhavan, 9, Mathura Road, New Delhi-1.
38. Shri V. S. Rao	,,	The Director of Industries, Government of Mysore, Bangalore.
39. Shri C. S. Ramu . . .	,,	The Director of Industries, Government of Madras, Madras.
40. Shri D. S. Godbole . . .	,,	The Director of Industries and Statistics Authority, Old Custom House Yard, Fort, Bombay.
41. Shri B. N. Samtani . . .	,,	The Collector of Customs, Bombay.
OTHERS :		
42. Shri P. V. Mehta . . .	,,	Alpha Electric and Engineering Company, 30, Calicut Street, Ballard Estate, Bombay-1.

APPENDIX III

[*Vide* Paragraph 6·2]

Statements showing the present annual installed capacity and actual production during 1955, 1956, 1957 *and* 1958 (*January-June*)

A—NAMES OF PRODUCERS AND THEIR INDIVIDUAL CAPACITY

	H. P.
1. Crompton Parkinson (Works) Private Ltd., Haines Road, Worli, Bombay-18.	80,000
2. Associated Electrical Industries Manufacturing Co. Private Ltd., Crown House, 6, Mission Row, Calcutta-1.	35,000
3. National Electrical Industries Ltd., Industrial Estate, Lalbaug, Bombay-12	20,000
4. Kirloskar Electric Co. Ltd., Post Box No. 1017, Bangalore-3 . .	62,000
5. P. S. G. and Sons Charity Industrial Institute, Peelamedu Post, Coimbatore	12,000
6. British India Electric Construction Co. Ltd., 6, Mayurbhanj Road, Calcutta-23.	10,000
7. Electric Construction and Equipment Co. Ltd., 9, Kaliprasanna Singhee Road, Calcutta-2.	3,000
8. Bharat Bijlee Limited, Udyog Nagar, Bombay-22	18,000
9. Jyoti Limited, Baroda-3	15,000
10. The General Electric Co. of India (Mfg.) Private Ltd., 58, Taratalla Road, Garden Reach, Calcutta-24.	20,000
11. Motor and Machinery Manufacturers Limited, 31, Chittaranjan Avenue, Calcutta-12.	24,000
12. The Hindustan Electric Co. Ltd., Industrial Area, Faridabad, E. Punjab	32,600
13. Argus Engineering Company Limited, Peelamedu Post, Coimbatore .	6,000
14. Eastern Electrical Co. Ltd., Singanallur P. O., Coimbatore District .	1,500
15. Orient General Industries Ltd., 8, Royal Exchange Place, Calcutta .	20,000
TOTAL .	359,100

B. (i)—PRODUCTION FIGURES OF

Sl. No.	Name of the firm	Below 1 h.p.		1 to 5 h.p.		Above 5 to 10 h.p.		Above 10 to 20 h.p.	
		H. P.	Nos.	H.P.	Nos.	H.P.	Nos.	H.P.	Nos.
1	2	3	4	5	6	7	8	9	10
1	Crompton Parkinson (Works) Private Ltd., Bombay .	470	820	27,169	8,197	25,968	2,946	14,801	939
2	Associated Electrical Industries Mfg. Co. Private Ltd., Calcutta	62	82	8,016	2,315	7,458	834	6,547	388
3	National Electrical Industries Ltd., Bombay . . .	298	522	4,987	2,098	4,199	496	1,600	107
4	Kirloskar Electric Co. Ltd., Bangalore	138	210	18,066	5,446	10,891	1,263	13,970	880
5	P. S. G. and Sons Charity Industrial Institute, Coimbatore .	23	45	3,817	966	1,529	189	846	52
6	British India Electric Construction Co. Ltd., Calcutta .	..	..	3,588	1,040	1,805	216	920	60
7	Electric Construction and equipment Co. Ltd., Calcutta .	1	2	2	1	..	..	..	..
8	Bharat Bijlee Ltd., Bombay .	166	305	3,012	1,147	2,345	262	1,362	126
9	Jyoti Ltd., Baroda . . .	302	678	1,796	711	2,597	287	8,068	546
10	The General Electric Co. of India (Mfg.) Private Ltd., Calcutta	369	506	7,325	2,323	2,334	272	1,985	123
11	Motor and Machinery Manufacturers Ltd., Calcutta . .	15	20	8,569	2,467	3,452	442	2,093	143
12	Eastern Electrical Co. Ltd., Coimbatore	..	..	383	107	245	31	..	..
	TOTAL .	1,844	3,190	86,730	26,818	62,823	7,238	52,692	3,364

B. (ii)—PRODUCTION FIG URES OF

1	2	3	4	5	6	7	8	9	10
1	Crompton Parkinson (Works) Private Ltd., Bombay . .	501	850	29,085	9,027	26,599	3,091	15,839	1,006
2	Associated Electrical Industries Mfg. Co. Private Ltd., Calcutta	1	2	7,965	2,256	8,598	970	5,451	332
3	National Electrical Industries Ltd., Bombay	714	930	4,000	1,462	3,558	417	2,174	151
4	Kirloskar Electric Co. Ltd., Bangalore	93	145	36,501	9,638	16,986	2,007	23,589	1,540
5	P. S. G. and Sons Charity Industrial Institute, Coimbatore .	7	15	5,581	1,300	1,538	187	651	43
6	British India Electric Construction Co. Ltd., Calcutta .	..	..	8,448	2,213	5,680	667	3,462	215
7	Electric Construction and Equipment Co. Ltd., Calcutta .	..	..	..	..	..	..	..	..
8	Bharat Bijlee Ltd., Bombay .	90	159	4,518	1,968	4,192	453	2,904	205
9	Jyoti Ltd., Baroda . . .	88	332	3,445	1,205	2,645	328	11,980	824
10	The General Electric Co. of India (Mfg.) Private Ltd., Calcutta	189	252	14,244	4,315	3,813	445	6,009	369

ELECTRIC MOTORS FOR 1955

Above 20 to 30 h.p.		Above 30 to 50 h.p.		Above 50 to below 100 h.p.		100 to below 200 h.p.		200 h.p. and above		Total	
H. P.	Nos.	H.P.	Nos.	H. P.	Nos.	H.P.	Nos.	H.P.	Nos.	H.P.	Nos.
11	12	13	14	15	16	17	18	19	20	21	22
7,425	274	4,547	113	120	2	..	..	..	..	80,500	13,291
2,164	83	1,025	23	..	..	..	..	..	..	25,272	3,725
25	1	..	..	..	..	..	..	..	..	11,109	3,224
7,047	253	8,998	221	8,660	130	1,435	11	..	..	69,205	8,414
..	..	..	..	..	..	..	..	..	..	6,215	1,252
75	3	320	8	..	..	..	..	..	..	6,708	1,327
..	..	..	..	..	..	..	..	..	..	3	3
300	11	200	5	..	..	..	..	..	..	7,885	1,856
980	37	935	23	150	2	..	..	540	2	15,368	2,286
2,195	81	200	5	110	2	..	..	..	..	14,518	3,312
375	15	..	..	..	..	..	..	..	..	14,504	3,087
..	..	..	..	..	..	..	..	..	..	628	138
20,586	758	16,225	398	9,040	136	1,435	11	540	2	251,915	41,915

ELECTRIC MOTORS FOR 1956

11	12	13	14	15	16	17	18	19	20	21	22
6,125	225	3,050	74	55	1	..	..	..	..	81,254	14,274
3,260	122	2,992	66	485	7	..	..	..	..	28,752	3,755
150	6	..	..	..	..	..	..	..	..	10,596	2,966
9,491	348	11,080	269	8,452	118	2,747	21	..	..	107,939	14,086
..	..	..	..	..	..	..	..	..	..	7,777	1,545
1,655	61	1,190	30	..	..	..	..	..	..	20,435	3,186
..	..	..	..	..	..	..	..	..	..	..	..
601	22	145	4	..	..	..	..	..	..	12,450	2,811
2,060	76	1,475	37	500	8	350	3	280	1	22,823	2,814
2,060	77	2,485	54	..	..	..	..	..	..	28,800	5,512

1	2	3	4	5	6	7	8	9	
11	Motor and Machinery Manufacturers Ltd., Calcutta . .	147	280	22,420	6,390	7,127	718	1,350	
12	The Hindustan Electric Co. Ltd., Faridabad	..	..	930	203	2,240	251	..	
13	Argus Engineering Co. Ltd., Coimbatore . . .	..	..	917	210	248	28	102	
14	Eastern Electrical Co. Ltd., Coimbatore . . .	..	..	2,192	551	563	70	..	
	TOTAL . .	1,830	2,965	139,246	40,733	83,787	9,632	73,511	4,

B. (iii)—PRODUCTION FIGURES

1	2	3	4	5	6	7	8	9	1
1	Cromption Parkinson (Works) Private Ltd., Bombay . .	488	825	29,768	9,674	32,672	3,717	15,163	
2	Associated Electrical Industries Mfg. Co. Private Ltd., Calcutta	45	60	9,125	2,722	8,179	903	8,499	
3	National Electrical Industries Ltd., Bombay . . .	798	873	3,383	1,235	1,893	235	1,135	
4	Kirloskar Electric Co. Ltd., Bangalore	351	468	33,986	10,528	22,189	2,546	37,521	2,
5	P. S. G. and Sons Charity Industrial Institute, Coimbatore .	2	3	13,685	3,206	4,144	530	614	
6	British India Electric Construction Col. Ltd., Calcutta .	..	..	13,270	3,515	9,153	1,059	8,338	
7	Bharat Bijlee Ltd., Bombay .	734	194	4,966	2,041	4,789	499	4,950	
8	Electric Construction and Equipment Co. Ltd., Calcutta .	..	..	..	..	..	..	..	
9	Jyoti Ltd., Baroda . . .	363	1,040	7,926	2,457	6,579	754	13,628	8
10	The General Electric Co. of India (Mfg.) Private Ltd., Calcutta	396	576	8,455	2,878	7,735	899	6,282	3
11	Motor and Machinery Manufacturers Ltd., Calcutta .	247	391	14,663	5,302	14,322	1,575	7,108	4
12	The Hindustan Electric Co. Ltd., Faridabad . . .	18	24	8,520	1,999	11,463	1,452	..	
13	Argus Engineering Co. Ltd., Coimbatore . . .	..	..	1,016	374	835	91	280	
14	Eastern Electrical Co. Ltd., Coimbatore . . .	..	..	2,925	780	2,390	285	..	
15	Orient General Industries Ltd., Caclutta (June-December) .	30	239	5,595	1,119	..	..	..	
	TOTAL .	2,811	4,693	157,283	47,830	126,343	14,545	103,518	6,5

B. (iv)—PRODUCTION FIGURES (

1	2	3	4	5	6	7	8	9	10
1	Associated Electrical Industries Mfg. Co. Private Ltd., Calcutta	22	30	4,867	1,414	6,216	695	4,664	2
2	Crompton Parkinson (Works) Private Ltd., Bombay . .	392	716	14,223	4,398	20,222	2,284	11,905	7

11	12	13	14	15	16	17	18	19	20	21	22
..	..	..	..	..	..	..	..	..	..	31,044	7,473
..	..	..	..	..	..	..	..	..	..	3,170	454
..	..	..	..	..	..	..	..	..	..	1,267	245
..	..	..	..	..	..	..	..	..	..	2,755	621
25,402	937	22,417	534	9,492	134	3,097	24	280	1	359,062	59,742

ELECTRIC MOTORS FOR 1957

11	12	13	14	15	16	17	18	19	20	21	22
7,419	272	3,001	79	..	..	..	..	..	..	88,511	15,508
6,034	225	1,178	25	70	1	480	4	..	..	33,610	4,453
50	2	..	..	..	..	..	..	..	..	7,259	2,422
14,212	523	17,676	431	11,785	168	740	6	..	..	138,460	17,115
..	..	..	..	..	..	..	..	..	..	18,445	3,774
4,050	152	1,715	43	..	..	..	..	..	..	36,526	5,270
830	31	290	8	..	..	..	..	..		15,898	3,129
..	..	..	..	..	..	..	..	..	..	..	..
2,175	83	2,055	50	870	13	2,190	17	..	..	35,786	5,238
5,610	210	2,605	61	185	3	..	..	..	..	31,268	5,009
..	..	..	..	..	..	..	..	..	..	36,340	7,714
..	..	40	1	..	..	..	..	..	..	20,041	3,476
..	..	..	..	..	..	..	..	..	..	2,131	483
..	..	..	..	..	..	..	..	..	..	5,313	1,063
..	..	..	..	..	..	..	..	..	..	5,625	1,358
40,380	1,498	28,560	698	12,910	185	3,410	27	..	..	475,215	76,014

ELECTRIC MOTORS FOR 1958 (JANUARY-JUNE)

11	12	13	14	15	16	17	18	19	20	21	22
660	24	1,375	31	748	10	120	1	..	..	18,672	2,485
4,515	164	2,255	56	180	3	..	..	..	..	53,692	8,377

1	2	3	4	5	6	7	8	9
3	National Electrical Industries Ltd., Bombay . . .	274	312	1,961	707	1,025	110	640
4	Kirloskar Electric Co., Ltd., Bangalore	617	828	21,452	6,433	16,827	1,917	20,3[illegible]
5	The General Electric Co. of India (Mfg.) Private Ltd., Calcutta	111	171	6,637	1,679	5,208	597	6,797
6	Jyoti Limited, Baroda . .	609	1,090	5,047	1,596	3,888	445	4,914
7	Motor and Machinery Manufacturers Ltd., Calcutta . .	234	393	7,329	2,720	6,045	683	5,270
8	P. S. G. and Sons Charity Industrial Institute, Coimbatore .	..	..	10,023	2,389	2,275	285	375
9	Bharat Bijlee Ltd., Bombay .	55	228	4,677	1,691	2,681	291	3,718
10	Eastern Electrical Co. Ltd., Coimbatore . . .	..	..	1,275	339	1,090	119	..
11	Electric Construction and Equipment Co. Ltd., Calcutta .	..	..	945	189	..	..	..
12	British India Electric Construction Co. Ltd., Calcutta .	..	..	7,514	1,919	4,930	572	4,875
13	Argus Engineering Co. Ltd., Coimbatore . . .	..	..	676	151	613	64	442
14	The Hindustan Electric Co. Ltd., Faridabad . . .	10	14	6,727	1,821	7,951	1,020	..
15	Orient General Industries Ltd., Calcutta	39	307	5,589	1,351	..	..	..
	TOTAL .	2,763	4,089	98,952	28,797	78,921	9,082	63,9

11	12	13	14	15	16	17	18	19	20	21	22
50	2	..	..	..	..	..	..	..	..	3,950	1,177
9,840	356	9,565	229	8,795	119	530	4	..	..	87,984	11,230
2,505	94	2,000	45	..	..	..	..	..	..	23,258	2,984
1,120	44	2,015	49	655	10	600	4	..	..	18,848	3,562
..	..	..	..	..	..	..	..	..	..	18,878	4,111
..	..	..	..	..	..	..	..	..	..	12,673	2,699
822	31	330	8	..	..	..	..	..	..	12,233	2,494
..	..	..	..	..	..	..	..	..	..	2,365	458
..	..	..	..	..	..	..	..	..	..	945	189
3,395	133	360	9	..	..	..	..	..	..	21,074	2,917
..	..	..	..	..	..	..	..	..	..	1,731	246
..	..	80	2	..	..	..	..	..	..	14,768	2,857
..	..	..	..	..	..	..	..	..	..	5,628	1,638
22,907	848	17,980	429	10,378	142	1,250	9	..	..	296,699	47,444

APPENDIX IV

[*Vide* Paragraph 6·3]

Statement showing the present capacity and plans for future expansion as furnished by the Development Wing and producers

Name of the producer	Capacity as reported by the producer		Capacity as furnished by the Development Wing		Plans for expansion of capacity as reported by the producer		Expansion of capacity for which licences have been granted by the Development Wing	
	H.P.	Nos.	H.P.	Nos.	H.P.	Nos.	H.P.	Nos.
1	2	3	4	5	6	7	8	9
1. Jyoti Ltd., Baroda	60,000	12,000	15,000	N.F	84,000	18,000	84,000	N.F.
2. Associated Electrical Industries Mfg. Co. Private Ltd., Calcutta	48,924	4,392	35,000	,,	97,848	8,784	48,920	,,
3. Kirloskar Electric Co. Ltd., Bangalore	132,000	18,000	62,000	,,	216,000	21,600	118,000	,,
4. Crompton Parkinson (Works) Private Ltd., Bombay	94,200	14,400	80,000	,,	192,000 to 216,000	24,000 to 27,000	136,000	,,
5. The Hindustan Electric Co. Ltd., Faridabad	21,000	3,500	32,600	,,	44,000	N.F.	32,600	,,
6. Argus Engineering Co. Ltd., Coimbatore	15,000	1,200	6,000	,,	..	..	..	..
7. Electric Construction and Equipment Co. Ltd., Calcutta	24,000	4,800	3,000	,,	60,000	..	36,000	N.F.
8. P. S. G. and Sons Charity Industrial Institute, Coimbatore	72,500	8,400	12,000	..	78,00	..	..	..

10. National Electrical Industries Ltd., Bombay .	14,400	4,800	20,000	,,	..	..	..	..
11. British India Electric Construction Ltd. Calcutta	2,690	375	10,000	,,	..	..	16,320	N.F.
12. Bharat Bijlee Ltd., Bombay	30,000	6,000	18,000	,,	6,000	..	18,000	,,
13. The General Electric Co. of India (Mfg.) Private Ltd., Calcutta	45,000	4,500	20,000	,,	80,000	8,000	60,000	,,
14. Motor and Machinery Manufacturers Ltd., Calcutta	24,000 (as per Cost Report)	..	24,000	,,	..	..	42,000	,,
15. Orient General Industries Ltd., Calcutta . .	N.A.	N.A.	20,000	,,	..	..	..	..
TOTAL .	588,914	83,327	359,100		857,848 to 881,848	80,384 to 83,384	602,340	..

N. A.=Not available.
N. F.=Not furnished.

APPENDIX V

[*Vide* Paragraph 6·3]

Statement showing names of new units licensed together with their sanctioned capacities

	H.P
1. Calcutta Fan Works Private Ltd., 19-B, Chowringhee Road, Calcutta-13	3,00
2. Kasturi Engineers Ltd., 8/4, Avanashi Road, Coimbatore . . .	12,00
3. Sri Lakshmi Foundry, Patel Road, Coimbatore	3,50
4. P. Govindaraj and Sons Private Ltd., 44, Sir Theagaraya Road, Madras-17	6,00
5. Coimbatore Premier Corporation Private Ltd., P. B. No. 210, 34, Avanashi Road, Coimbatore-1	9,00
6. Sri Ramakrishna Mission Vidyalaya Industrial Section, Sri Ramakirshna Vidyalaya, P.O. Coimbatore District	5,00
7. Patel Engineering Co. Ltd., United India Building, Sir P.M. Road, Bombay	36,00
8. C. Sundaram, 5-37, Gopalapuram, Coimbatore	6,75
9. Ogale Glass Works Ltd., Ogalevadi, (District N. Satara) . . .	60
10. Balasubramania Foundary, Patel Road, Coimbatore	3,00
11. Vasant Engineering Ltd., Pratapnagar, Baroda	3,00
12. Ramakrishna Metal and Alloy Industries, Sardar Patel Road, Coimbatore	3,00
13. Sri Jayachandar Engineering Works, 9/431, Mettapalayam, R. S. Puram, Coimbatore	3,00
14. Vijaya Foundry, Pappanaickenpalayam, Coimbatore	9,00
15. Engineering Works of India Private Ltd., 20, Ultadanga Road, Calcutta-4	50,00
16. Best and Co. Private Ltd., 13/15, North Beach Road, Post Box No. 63, Madras-1.	20,00
TOTAL .	172,85

[*Vide* Par

Statement showing countrywise imports of electric motors of differer

Item	1957											
	U. K.		Switzerland		Germany		U.S.A.		Others		Total	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
1	2	3	4	5	6	7	8	9	10	11	12	13
A. C. Squirrel Cage Induction Motors, 3 phase :												
(i) Up to 20 h.p. . .	7647	35.73	1572	8.61	1367	7.74	272	2.49	358	1.84	11216	56.41
(ii) 21 to 50 h.p. . .	205	6.66	10	0.17	65	1.44	28	1.91	56	0.25	364	10.43
(iii) 51 to 100 h.p. .	167	7.16	34	0.59	53	2.23	23	1.92	35	1.18	312	13.08
(iv) Above 100 h.p. .	92	10.53	4	0.53	31	4.87	39	15.38	9	2.10	175	33.41
A. C. Slip Ring Motors :												
(i) Below 10 h.p. . .	134	1.60	..	..	72	0.90	31	0.14	8	0.03	245	2.67
(ii) From 10 to 50 h.p.	136	6.03	10	0.23	33	1.16	10	0.32	9	0.63	198	8.37
(iii) Above 50 to 100 h.p.	461	23.33	59	2.69	108	4.78	..	..	105	3.78	733	34.58
(iv) Above 100 h.p. .	68	7.20	36	5.27	110	11.10	1	11.48	26	4.29	241	39.34
A.C. Single Phase Motors :												
(a) Fractional h.p. Motors —												
(i) Up to ½ h.p. . .	6153	5.23	1	0.01	418	0.83	311	0.40	1120	1.51	8003	7.98
(ii) Above ½ h.p. . .	8542	10.99	5	0.02	652	3.28	193	0.47	5879	6.30	15271	21.06
(b) Other motors . .	913	2.09	..	..	180	0.30	14	0.35	843	1.10	1950	3.84
Other Types of A.C. Motors :												
(i) Up to 50 h.p. . .	345	2.79	293	11.70	1032	9.82	16	0.24	457	2.53	2143	27.08
(ii) Above 50 h.p. .	24	5.45	62	0.62	27	5.32	7	2.86	29	9.91	149	24.16
D.C. Motors :												
(i) Fractional h.p. .	3399	4.23	..	..	20	0.06	67	0.59	498	0.46	3984	5.34
(ii) Up to 50 h.p. . .	1395	9.38	4	0.06	23	0.41	104	15.49	27	1.88	1553	27.22
(iii) Others . . .	100	6.58	..	..	6	0.31	157	78.83	507	0.69	770	86.41
Universal motors all types .	412	0.47	79	1.85	4	0.53	7	0.03	5	0.05	507	2.93
Electric motors not elsewhere specified	13511	13.83	399	7.40	458	7.95	155	3.68	1418	13.67	15941	46.53
TOTAL .	43704	159.28	2568	39.75	4659	53.03	1435	136.58	11389	52.20	63755	450.84

APPENDIX VI

[*Vide* Paragraph 7·1]

Statement showing the number of motors of specified types produced in the country as well as those imported in 1956, 1957 *and* 1958 (*January-June*)

(In numbers)

Type of motor	1956			1957			1958 (Jan.-June)		
	Indigenous Production	Imports	Total Availability	Indigenous Production	Imports	Total Availability	Indigenous Production	Imports	Total Availability
1	2	3	4	5	6	7	8	9	10
Fractional Motors (Below 1 H. P.) . .	2,965	39,577	42,542	4,693	29,208	33,901	4,089	9,896	13,985
Motors from 1 to 50 H. P. . . .	56,618	9,844	66,462	71,109	15,719	86,828	43,204	7,101	50,305
Motors from 51 to 100 H. P. . . .	134	2,038	2,172	185	1,194	1,379	142	492	634
Others	25	6,986	7,011	27	17,634	17,661	9	1,534	1,543
TOTAL .	59,742	58,445	118,187	76,014	63,755	139,769	47,444	19,023	66,467

DIX VII

graph 11·2]

types and ratings during 1957 *and* 1958 (*January-June*)

(Quantity in Nos.; Value in Lakh Rs.)

1958 (January-June)											
U. K.		Switzerland		W. Germany		U. S. A.		Others		Total	
Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
14	15	16	17	18	19	20	21	22	23	24	25
3684	17.59	497	1.80	606	7.36	27	0.57	1154	2.90	5968	30.22
166	2.58	9	0.26	11	0.45	1	0.11	16	0.66	203	4.06
67	4.49	2	0.05	24	1.00	5	0.46	13	0.74	111	6.74
12	3.06	..	..	23	2.93	13	9.78	2	0.21	50	15.98
94	0.73	15	0.23	10	0.10	1	..	42	0.45	162	1.51
108	2.76	6	0.13	25	0.77	1	0.05	14	0.28	154	3.99
166	7.01	..	..	39	2.17	..	..	141	4.19	346	13.37
50	6.54	4	0.39	60	4.82	3	11.25	53	4.08	170	27.08
1444	1.30	..	..	13	0.03	57	0.08	2991	2.84	4505	4.25
1848	2.38	128	0.54	43	0.18	15	0.04	879	0.88	2913	4.02
1066	1.92	..	..	34	0.09	10	..	105	0.14	1235	2.15
74	1.97	75	3.16	78	3.19	1	0.04	21	1.45	249	9.81
12	0.63	..	..	2	0.07	4	3.36	17	0.97	35	5.03
1169	1.46	1	..	38	0.01	10	0.02	25	0.04	1243	1.53
326	6.75	..	..	8	0.21	25	4.58	6	0.20	365	11.74
42	11.88	3	0.06	4	0.20	29	65.00	1	0.20	79	77.16
420	2.49	..	..	..	..	..	..	..	..	420	2.49
126	1.65	92	1.59	220	1.65	32	0.50	345	1.06	815	7.45
10874	77.19	832	8.21	1258	25.23	234	95.84	5825	22.11	19023	228.58