P.T.C. 38a (N)
45°

GOVERNMENT OF INDIA
TARIFF COMMISSION

REPORT
ON
The Continuance of Protection to the Ball Bearings Industry

सत्यमेव जयते

BOMBAY 1960

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India, Tariff (——Commission)

Continuance of Protection to the Ball Bearings Industry 1960

PERSONNEL OF THE COMMISSION

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SHRI J. N. DUTTA	*Member*
SHRI R. S. BHATT	*Member*

SECRETARY

DR. RAMA VARMA

सत्यमेव जयते

1—15 T. C. Bom./60

GOVERNMENT OF INDIA

MINISTRY OF COMMERCE AND INDUSTRY

New Delhi, the 8th December, 1960.

RESOLUTION

Tariffs

No. 18(6)-T.R./60.—The Tariff Commission has submitted its Report on the Continuance of Protection to the Ball Bearings 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) Protection to the ball bearings industry should be continued for a further period of two years ending 31st December 1962 at the existing rates of duty. Parts of ball bearings and adapter ball bearings upto 2″ bore diameter should also be liable to the same rate of protective duty.

(2) The Indian Standards Institution should expedite the formulation of standard specifications for ball bearings.

(3) The records of costs at present maintained by National Engineering Industries Ltd. should be further expanded and improved so as to facilitate the determination of costs with accuracy.

(4) National Engineering Industries Limited should adopt suitable measures to make its after-sales-service more effective.

(5) The request of the industry for duty free imports of tubes cannot be supported.

2. Government accept recommendation (1). The necessary legislation will be introduced in the Parliament in due course.

3. Government have taken note of recommendation (2) for suitable action to the extent possible.

4. The attention of the National Engineering Industries Limited is invited to recommendations (3) and (4).

5. The attention of the industry is drawn to recommendation (5).

ORDER

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

K. R. F. KHILNANI,

Joint Secretary to the Government of India.

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APPENDICES

1	2	3	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	Rs.
Bearings (with races produced from Tubes).						
1	125	1·080	1·903	2·983	0·724	3·707
2	130	1·536	2·221	3·757	0·891	4·648
3	135	2·176	5·741	7·917	1·983	9·900
4	140	2·676	6·187	8·863	2·208	11·071
5	325	1·613	2·233	3·846	0·904	4·750
6	330	2·311	5·988	8·299	2·079	10·378
7	335	3·136	6·651	9·787	2·415	12·202
8	340	4·084	7·228	11·312	2·816	14·128
9	345	5·991	9·489	15·480	3·702	19·182
10	350	7·563	10·146	17·709	4·207	21·916
11	UT140	14·805	14·769	29·574	4·974	34·548

13.4. The high cost of ball bearings in the country is due to several causes among which must be counted some special features of the situation such as the type of raw materials available, the age and type of the machinery in use, working of three shifts and unavailability of surplus capacity which does not permit sufficient respite for preventive maintenance and overhaul etc. Nevertheless, we feel that with the recent and proposed additions to the machinery and better inspection the factory should be able to make a further reduction in the present high percentages of scrap etc. When the new units and capacity already sanctioned come into existence, it would be desirable to explore how far rationalisation of types and sizes is possible among them so that as in Europe the relatively small sizes of the units need not be a reason for failure to achieve the utmost economies of production.

13.5. For determining the quantum of protection, we have worked out the fair ex-works price on the basis of the actual cost of production during the costed period. This is a departure from our usual practice of estimating the future costs for the period for which protection is to be recommended. In this particular case, we found it difficult to estimate the future costs with reasonable accuracy due to various causes. The capacity of the unit is at present 9 lakh bearings on single shift. During the actual costed period there was a strike for about a month. The actual production for the remaining 11 months was 1,832,829 bearings. From March-June 1960 the company has produced bearings working three shifts and if it continues production at that rate it may

to forward a detailed memorandum on the progress made by the industry since the last inquiry. The Development Commissioner, Small Scale Industries, was requested to send a detailed memorandum on the small scale sector of the industry. The Director General of Supplies and Disposals, the Iron and Steel Controller and the Indian Standards Institution were addressed for information on specific issues relevant to the inquiry. Memorandum on the present position of the industry was invited from the Chief Secretary to the Government of Rajasthan, Jaipur. Letters were also addressed to the Chief Secretaries to other State Governments requesting them to intimate their views to the Commission. Data regarding c.i.f. prices and landed costs of imported ball bearings were sought from the Collectors of Customs at various ports. A list of those to whom the Commission's questionnaires/letters were issued and from whom replies or memoranda have been received is given in Appendix I.

3.2. Shri K. R. P. Aiyangar, Chairman, Dr. S. K. Muranjan and Shri R. S. Bhatt, Members, visited the factory of National Engineering Industries Ltd., Jaipur, on 25th August 1960 and Shri J. N. Dutta, Member, visited the factory on 23rd April 1960. The Chairman and the Members accompanied by the Secretary visited the small scale factory of Dhirajlal & Co., Lonavla, on 5th September 1960. Shri Hari Bhushan, Technical Director (Engineering & Metallurgy) visited the Jaipur factory on 17th June 1960 and Shri A. K. Banerji, Assistant Cost Accounts Officer, examined the costs of production of ball bearings at the Jaipur factory from 14th to 24th June, 1960.

3.3. A public inquiry into this industry was held on 8th September 1960 at the Commission's office in Bombay. A list of persons who attended the public inquiry is given in Appendix II.

Scope of the inquiry

4. The present scheme of protection covers ball bearings mentioned in I.C.T. items 72(35) and 72(36) and adapted bearings covered by I.C.T. 72(37). The representatives of the Mill Gin Stores Merchants Association, Bombay, pointed out at the public inquiry that item 72(37) should cover adapted *'ball'* bearings only and not adapter *'roller'* bearings as the latter are not at present being produced in the country. The matter was discussed at the public inquiry and it was agreed that this suggestion should be accepted.

Recommendations made in 1956 Report and their implementation.

5.1. *Recommendation No. 1 :*

"Imports of aircraft bearings covered by air-worthiness affidavits or release notes should be exempted from the payment of so much of the duty leviable thereon as is in excess of the rate specified under I.C.T. Item 76."

Government accepted this recommendation and added that apart from airworthiness affidavits or release notes, the customs authorities were free to insist on any further independent evidence to make sure

that the imported bearings in question are of a type which is exclusively used in aircraft. There have been no complaints that users of aircraft bearings are in any way inconvenienced by the present tariff arrangements.

5.2. *Recommendation No. 2:*

"High carbon chromium steel required for the manufacture of ball bearings should be assessed to duty at the concessional rate applicable to special steels imported for the manufacture of small tools."

After Government's resolution on our report was issued, the Finance Ministry by Notification No. 69, dated 20th August 1956, exempted from customs duty the articles falling under Item 63(30) of I.C.T. which include high carbon chromium steel bars and rods. In 1957 the National Engineering Industries made a representation that tubes also should be exempted from customs duty. This matter is further dealt with in paragraph 9.2.

5.3. *Recommendation No. 3:*

"The National Bearings Company has estimated its annual capacity at 480,000 bearings per shift. The Development Wing in the Ministry of Commerce and Industry should, however, make a fresh assessment of the capacity under the present operating conditions."

The Development Wing reassessed the capacity of this unit in July 1957 at 510,000 bearings on single shift.

5.4. *Recommendation No. 4:*

"Some liberalisation of import control policy with respect to the types and sizes of bearings not produced in the country is possible, without serious detriment to the interests of the domestic industry, Government should draw up a list of the types and sizes which are likely to serve as substitutes for those produced in the country and allow imports of such types and sizes only to the extent needed to meet the genuine requirements of the consumers. Imports of other types and sizes which are not produced in the country should, subject to exigencies of foreign exchange, be licensed liberally."

Government accepted this recommendation and while liberalising imports of the bearings in question have taken steps to prevent import of bearings which with adaptations could be used as substitutes for the protected types. Further, bearings with special features which could be altered to take the place of restricted types were also placed in the restricted category which itself is being periodically reviewed.

5.5. *Recommendation No. 5:*

"The quality of the N. B. C. bearings is acceptable to consumers generally, but they require improvement to give noiseless performance, which is desirable particularly in the case of fans."

The sole producer claims to have introduced more rigorous control over production and has installed electronic equipment for study of noise and vibrations.

5.6. *Recommendation No. 6:*

"The company should introduce a proper system of costing as early as possible."

In their Resolution Government had stated that they viewed with extreme disfavour that the company had not introduced a proper system of accounting and advised it to take necessary steps to implement the Commission's recommendation. This matter which still needs implementation is further discussed in para 13.1.

5.7. *Recommendation No. 7:*

"The company should endeavour to maintain reasonable stocks of the various sizes of ball bearings normally required by its regular customers."

In 1957, the shortage of supplies during the first half of the year was remedied during the second half. Further observations on this subject particularly in regard to the recent position are made in paragraph 15.4.

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5.8. *Recommendation No. 8:*

"The company should immediately review its prices and effect necessary reduction to bring them in fair relation to its costs."

Government accepted this recommendation and the company published a price list on 18th October 1956 on the basis of a formula indicated by the Ministry of Commerce and Industry. The subject is further discussed in paragraph 15.5.

Present position of the industry.

6.1. At the time of our last inquiry (1956) there was only one large scale unit, National Bearing Co. Ltd., Jaipur, which has now changed its name to National Engineering Industries Ltd. Three more licences were granted under the Industries (Development and Regulation) Act since the last inquiry but one of them was revoked owing to the licencee's inability to take effective steps. The second licencee, Kamala Shankar P. Joshi & Co., Bombay,

which was authorised a single shift capacity of 8 lakh pieces per shift is reported to be negotiating foreign collaboration. On the facts placed before us, it does not seem likely that this unit will be in a position to start production even in 1962. Indian S.K.F. Manufacturing Co. Ltd., an enterprise of Investment Corporation of India Ltd., has been licensed a two shift capacity of 15 lakhs for ball bearings and 9 lakhs for tapered roller bearings and is to work in collaboration with the well-known S.K.F. Co. of Sweden. A tentative draft of collaboration agreement is now before Government for its approval and the unit expects to start production in the latter half of 1962. Pioneer Bearings, Coimbatore, with a single shift capacity of 4·2 lakhs for ball bearings including thrust bearings and 2·4 lakhs for roller bearings has received a licence and is likely to go into production in 1962.

6.2. A small unit Dhirajlal & Co. (Lonavla) with a double shift capacity of 25,000 bearings has commenced production and assembly of thrust bearings early in 1960. It has also applied for expansion under the Industries (Development and Regulation) Act. Apart from Dhirajlal & Co., the Development Commissioner for Small Scale Industries has reported to us the existence of 28 small scale units in the Punjab having a capacity of 448,000 pieces.

6.3. For all practical purposes, therefore, National Engineering Industries Ltd. still remains the only large scale unit in the field. Besides ball bearings, it fabricates steel balls, spindle inserts for textile machinery and axle boxes for railways. Since the last inquiry the company has installed considerable additional equipment for improving the accuracy and finish of its products. Orders have been placed for (i) universal measuring machines which will be utilised for the caliberation of inspection gauges and (ii) a Jhonson and Lamsonoptical projection for use in the manufacture of complicated contoured tools and gauges.

6.4. As indicated in paragraph 5 the Development Wing reassessed the capacity of National Engineering Industries Ltd. in July 1957 at 510,000 bearings per annum on single shift. In arriving at this assessment, the Development Wing assumed a working of 300 days per annum and indicated that the actual production must vary according to the types and sizes of ball bearings produced from time to time. Since then over the period 1957-58 to 1959-60 the company has obtained machinery worth about Rs. 40 lakhs for replacement and expansion and now claims that as a consequence its capacity has increased to 900,000 bearings per shift. When additional machinery including 2 Gridleys and 2 grinders already ordered by the company is received, the single shift capacity of the company may well exceed 900,000 pieces. We are informed by the company that it has been granted additional licence for 15 lakhs bearings on single shift and that it hopes to complete this expansion by 1962. This would mean that its capacity by the end of 1962 will be 24 lakhs per shift or 48 lakhs on double shift of which 36 lakhs will be for ball bearings of protected categories.

6.5. The figures of the present capacity (1960) and the expected capacity in 1962 along with capacity in 1957 for protected categories of ball bearings on a double shift basis are given below:

——	1957	1960	1962
Large scale			
National Engineering Industries . . .	1,020,000	1,800,000	3,600,000
Indian S.K.F. Mfg. Co. Ltd. . . .	..	..	1,500,000
Pioneer Bearings	..	..	8,40,000
Small scale			
Dhirajlal & Co.	..	25,000	25,000
	1,020,000	1,825,000	5,965,000

If we add the capacity of small scale units in the Punjab, the figure for 1962 will be 6,413,000.

Production

7.1. The production of National Engineering Industries for the years 1956 to 1960 (January-June) is given below:

	Production				
	1956	1957	1958	1959	1960
			(January-June)		
I. *Ball Bearings*					
(*a*) Upto 1″ bore diameter.	905,299	1,294,149	1,720,465	1,278,410	954,182
(*b*) Above 1″ and upto 2″ bore diameter.	121,615	281,316	389,911	411,753	321,414
TOTAL . .	1,026,914	1,575,465	2,110,376	1,690,163	1,275,596
II. *Adapter Bearings*					
Upto 2″ bore diameter.	10,359	17,947	12,853	6,031	9,401
TOTAL OF I & II .	1,037,273	1,593,412	2,123,229	1,696,194	1,284,997

It will be observed that production was increasing steadily upto 1959 when it received a set-back on account of labour unrest. The production of January-June 1960 works to an annual rate of about 2·5 million bearings. The unit produced bearings of 46 sizes in 1952, 119 sizes in 1956, 137 sizes in 1959 and 106 sizes in 1960 (Jan.-March).

7.2. As regards the production by the small scale units in the Punjab, it is reported to be 106,100 pieces in 1957, 168,000 in 1958 and 246,200 in 1959.

Domestic demand

8.1. In our last report we estimated the domestic demand for ball bearings upto 2″ bore diameter for 1956 at 1·6 million and expected it to rise to 2·5 million by 1960-61. These estimates were framed on the basis of production targets of industries which are principal consumers of ball bearings and an allowance of 20 to 25 per cent was added for purposes of replacement.

8.2. In connection with the present inquiry we have received estimates of demand from the Development Wing, producers, importers, and important consuming industries. The Development Wing has estimated the current demand at 4 million bearings a year and expects it to increase to 11·68 million by 1965-66. We are informed that these estimates have been prepared on the basis of the targets of production in industries using bearings fixed for the Second and Third Five Year Plans and include the demand both for original equipment and replacement. The National Engineering Industries, Jaipur, has estimated the current demand at about 3·45 million and expects it to increase to 5·96 million by 1963. S.K.F. Ball Bearing Co. has estimated the current demand at 2·56 million bearings. The estimates of current demand given by the importers range from 1·20 million to 3·47 million. The Fan Makers' Association has placed the requirement of the fan industry at 1·85 million. Indian Electrical Manufacturers Association has placed the current demand for bearings for electric motors at 0·2 million. On the basis of the sales of bearings in the country and the imports, the apparent consumption was 2·36 million in 1957, 2·50 million in 1958 and 2·34 million in 1959.

8.3. The above estimates of current demand and actual consumption were discussed at the public inquiry. It was considered appropriate to estimate the demand for bearings as original equipment on the basis of production targets for the various consuming industries. In so far as replacement demand is concerned, it was suggested that the estimate of replacement needs for any year should be based on the average life of ball bearings and the number of ball bearings installed as original equipment in the year corresponding to the year of estimate. It was generally agreed that the average life of ball bearings would be 7 years.

Adopting the above basis we have estimated the domestic demand for ball bearings during 1960-61 at 4·5 million with the following break-up:

	(in thousands)
Electric fans	1,800
Electric motors	234
Pumps	177
Mchine tools	27
Cotton textile machinery (Ring frames, carding-engines.	378
Automobiles	600
Replacement and miscellaneous industries (*e.g.* sugar, chaff-cutters, flour mills).	1,300
TOTAL	4,516

4·5 milion (say)

8.4. The accuracy of the above estimate may be checked by adopting another procedure. The indigenous production and estimated imports for 1958, the latest normal year, add up to 2·62 million pieces. To this may be added 10 per cent of the availability *i.e.* 0·26 million as the measure of starvation of the market and 20 per cent a year *i.e.*, 1·16 million, as the increase in requirements over the years 1959 and 1960. In 1960, therefore, the demand should be in excess of 4·04 million that is near the estimate of 4·5 million. These estimates are on the conservative side.

8.5. Regarding future demand we have received widely divergent estimates for 1963 which vary from 3·50 million given by Jyoti Ltd. on behalf of consumers to 8·40 million given by Joshina & Thakar Engineering Stores which represents importers' views. National Engineering Industries places the demand for 1963 at 5·96 million. The Engineering Association of India has placed the demand for 1965-66 at 5·35 million. The Development Wing proceeding on the basis of production targets arrives at an estimate of 11·68 million for 1965-66. The projection of demand for the future involves some difficulties. The growth of new industries and significant changes in existing patterns of production which are likely to arise during the Third Five Year Plan should affect any estimates which could be made at present. The estimate of the Development Wing given above includes a number of industries which have grown up recently. The use of bush bearings for noiseless running of table fans must affect considerably the requirements of that industry. The production of electric motors of higher horse power and of other types which have to be equipped with both ball and roller bearings is another factor which must be taken into account. These and other

relevant factors were discussed at length at the public inquiry. It was generally accepted that the estimate of the Development Wing which proceeds on the basis of production targets of Third Five Year Plan could be adopted for the future. On this estimate of 11·68 million pieces for the year 1965-66 the demand for the year 1963 was placed at 8·5 million to 9 million pieces.

8.6. This estimate of demand of 8·5 to 9 million for the year 1963 may well be compared with our previous estimate of the likely double shift capacity of the industry in 1962, namely, 59,65,000 pieces. If the actual consumption turns out to be as estimated, the present shortage must continue for a considerable time in future unless fresh capacity is developed.

Raw materials

9.1. The principal raw materials for the manufacture of ball bearings and components are given below:—

Raw materials	*Parts manufactured*
H. C. l. steel bars and tubes	Inner & outer races.
H. C. l. steel wires	Steel balls.
M. S. bars, plates, tubes	Nuts, locking plates and sleeves for adapter bearings.
M. S. wire	Rivets for cage.
Brass strips or rods	Cages.

H.C.l. steel bars, tubes and wire are mainly imported. A small quantity of bars is, however, rolled from steel billets purchased from Metal and Steel Factory, Ichhapur. This accounted in terms of value for about 13 per cent of supplies in 1959. The company reports that on account of the limited number of foreign suppliers of raw materials supplies are difficult to obtain particularly regarding tubes in the case of which the overseas suppliers meet the requirements of local manufacturers of bearings on a priority basis. To maintain continuous production, the producer has to plan in advance and hold large stocks of steel. It would take a few more years before high carbon chromium steel is manufactured in the country. The other items of raw materials mentioned above are available indigenously.

9.2. As stated in paragraph 5.2 high carbon chromium steel bars and rods obtained a general exemption from import duty applicable to Item 63(30) of the I.C.T. Subsequently, when the company began to use high carbon chromium steel tubes as raw material it applied for similar exemption from duty on tubes also. Government did not extend the concession of duty free import to tubes as it was considered necessary that this matter should be examined in detail by the Commission. The producer submitted to us that tubes are a more suitable raw material for sizes above 1″ bore diameter and that it was desirable to

lower the prices of these sizes. We have examined the relative costs of production from rods and tubes. In the case of ten out of eleven sizes of ball bearings for which costs have been worked out both on the basis of bars and tubes, it was found that the overall economy of the use of tubes is such that it results in a lower cost of production even after payment of a higher price and import duty on tubes. After duly weighing all circumstances including the relative quality of the ball bearings and the high protective duty thereon we feel that the case for duty-free imports of tubes cannot be supported.

Quality and Standards

10.1. We have invited the views of the various consuming industries regarding quality of indigenous ball bearings specifically on the improvements noticed after our last inquiry. Among those who replied to us National Electrical Industries, Bombay, which complained about bearings on the grounds of noise and inadequate inspection at the last inquiry has now reported definite improvement and has expressed satisfaction at the willingness of the producer to replace faulty bearings. Kirloskar Electric Co. maintains that the domestic product still suffers with regard to dimensions, tolerances, noise, life etc. but is satisfied that the manufacturer is taking steps in the right direction to effect improvement. Jay Engineering Works adheres to its unfavourable view of the domestic product particularly in regard to life and noise. Jyoti Ltd., Baroda, has stated that there is no improvement in quality but admits that complaints are attended to promptly. It has also expressed dissatisfaction with tolerances and play between the balls and tracks. G.E.C. of India has not noticed any significant improvement since 1956. Among the consumers who have expressed satisfaction are National Electrical Industries, Tata Iron & Steel, Air India International, Hind Cycles, Simpson & Co., Automobile Products of India, Praga Tools, Northern and Eastern Railways, etc. We understand that the producer has initiated several measures to improve quality and introduced statistical quality control. He has installed expensive electronic machines for the analysis of bearing noise, checking of roundness and shape of races, sphericity of balls, surface finish and vibrations, etc. The above instruments have been installed recently and their full benefit is yet to be known. The company has also purchased an electronic machine for pairing of races for assembly. Although quality of indigenous bearings has shown some improvement, there is still a large scope for further improvement. The company is manufacturing a high precision product and no care bestowed on testing and grading of the product can be excessive.

10.2. It was brought to the notice of the Commission that very recently the company has placed on the market ball bearings from which the letters N.B.C. are erased. These bearings are available in packages which are marked X quality. The producer explained that such inferior ball bearings are suitable for furniture and non-precision machinery like that of chaff-cutting, cycle rickshaws, etc. and that it was his intention that this quality should not find its way into other uses. In view of the continued shortage of ball bearings in the country

it was agreed after a good deal of discussion that the producer may market such bearings but should mark them as of second quality so that the buyer is not misled about price or quality.

10.3. *Indian Standard Specifications.*—The National Engineering Industries claims that it is guided at present by British standard specifications. In regard to Indian standards, it appears that Indian Standards Institution has not made much progress beyond formulating glossary of terms, identification code, etc. Not much progress is reported about performances, tests, etc. In view of the fact that the question of quality continues to be a matter of great imporance at every tariff inquiry, we recommend that the Indian Standards Institution should expedite the formulation of standard specifications.

Imports and import control policy.

11.1. Imports of ball bearings are recorded in terms of weight (cwts.) and value in the 'Monthly Statistics of the Foreign Trade of India'. Data regarding imports during 1957, 1958, 1959 and 1960 (January-March) are given in the following statement. Particulars of country-wise imports during these years are given in Appendix III.

Specification	1957		1958		1959		1960 (Jan.-March)	
	Qty. (Cwt.)	Value (Rs.)	Qty. (Cwt.)	Value (Rs.)	Qty. (Cwt.)	Value (Rs.)	Qty. (Cwt.)	Value (Rs.)
1. Adapter Bearings upto 2" bore.	531	3,50,621	619	3,91,690	537	2,93,950	142	67,604
2. Ball Bearings upto 2" bore for motor vehicles.	9,683	48,08,266	2,019	18,82,900	1,216	12,82,123	596	4,66,573
3. Ball Bearings upto 1" bore N.E.S.	2,526	13,16,548	1,800	11,55,077	1,416	9,86,219	531	3,81,779
4. Ball Bearings over 1" to 2" bore N.E.S.	7,896	35,61,489	5,466	26,82,421	4,294	22,66,440	1,380	8,80,660
GRAND TOTAL	20,636	100,36,924	9,904	61,12,088	7,463	48,28,732	2,649	17,96,616

11.2. A summary of the import control policy in respect of ball bearings (Sl. No. 19 of Part II of Import Control Schedule) for the different licensing periods from January-June 1956 to April-September 1960 is given in statements (i), (ii) and (iii) of Appendix IV. It will be

seen that the quotas for restricted sizes of ball bearings have been reduced over the last three years. As against the quota of 10 per cent allowed during the licensing period January-June 1957, the quotas since April-September 1958 have been 2½ per cent in the case of ball bearings upto 1″ bore diameter, 5 per cent in the case of sizes above 1″ and upto 2″ and 7½ per cent in the case of sizes above 2″. The quota for non-restricted sizes have been more or less steady, namely, 40 per cent in the case of sizes upto 1″, 50 per cent in the case of sizes above 1″ and upto 3″ and 100 per cent in the case of sizes above 3″. At the public inquiry, a reference was made to remarks (g) against serial No. 19(I)(i) of Part II of the Import Trade Control Schedule according to which quota licences would not be valid for import of bearings Hoffman Nos. 110, 112, 115, 117, 120, N1025, U110, LS7, S8 and S9 or equivalent sizes of other makes. It was stated that as the domestic producers were not producing these bearings in adequate quantity, the market has been starved and acute scarcity conditions have been prevailing notably in sizes 110 and 115. We examined the quotations in the Bombay market and found that the bearings were quoted at many times the list prices. A remedy for this situation may lie in the domestic producers raising their production of these items or permitting such bearings to be imported within the overall quota fixed from time to time for the serial No. 19(I)(i) referred to above. We suggest that Government should give early consideration to this matter.

Existing rates of duty

12. The protected items of ball bearings and adapter bearings are assessed to duty under Items No. 72(35), 72(36) and 72(37) of the Indian Customs Tariff. The rate of duty on bearings under the three items is 95 per cent *ad valorem*. The relevant extract from the First Schedule to the Indian Tariff Act, 1934 is reproduced 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	A British Colony	Burma	
1	2	3	4	5	6	7	8
72(35)	Ball bearings of all kinds not exceeding 2″ bore diameter adapted for use as parts and accessories of motor vehicles other than motor cycles and motor scooters.	Protective	95 per cent *ad valorem*	..	..	..	December 31st, 1960

1	2	3	4	5	6	7	8
72(36)	Ball bearings of all kinds not exceeding 2″ bore diameter not otherwise specified.	Protective	95 per cent *ad valorem*	..	..	..	December 31st, 1960
72(37)	Adapter bearings not exceeding 2″ bore diameter which are specially designed for use exclusively with power driven machinery.	Protective	95 per cent *ad valorem*	..	..	..	December 31st, 1960

Commission's estimates of cost of production and fair ex-works prices of indigenous bearings.

13.1. In its Resolution on our last report, Government had declared that it viewed with extreme disfavour the failure of the company to introduce a proper system of cost accounts. The company has since evolved a costing system in consultation with the Senior Cost Accounts Officer of the Commission. It was observed, however, that although the cost data now recorded indicated some improvement, the unit has not yet got an adequate system of costing which would enable one to work out the costs of various products manufactured by it with accuracy. Among the several deficiencies noted, the following require immediate attention. The company is maintaining the first operation cards but due to various discrepancies and defects in upkeep, these cards could not be utilised in the determination of costs. There were cards in which drawal of materials was recorded but no production was entered whereas in some cards the production was noted but there was no corresponding issue of materials. The consumption of materials shown in the cards for similar sizes of bearings indicated wide variations from period to period but no reasons for such variations were traceable in the cards. Since a summary of the consumption of materials shown in the cards was not available, reconciliation with the total issues shown in the ledger could not be made. The stock taking report on the basis of which the work-in-progress and the rejections for the year were determined was not preserved, to facilitate verification of the figures adopted by the company. The system of pricing materials on the weighted average basis was not introduced. The system of recording rejections at the various stages of manufacture was not adequate and data showing the abnormal losses, if any, due to bad materials were not kept. The standard manufacturing time was made the basis for the determination of the conversion charges as the actual manufacturing time was not recorded. The company pointed out various difficulties in keeping the actual manufacturing time but unless such actual time is kept, it is not possible

to determine correct costs. Details of working on the basis of which the periodical costs were built up were not entered in permanent records to verify the periodical costs determined by them. We recommend that records at present maintained should be further expanded and improved so as to facilitate the determination of costs with accuracy.

13.2. The latest financial year *viz.* 1959-60 was selected for cost examination and the unaudited expenses for that year were adopted for the determination of costs. The factory worked three shifts most of the time in 1959-60. The number of sizes of bearings produced during 1959-60 was 137. Out of the protected categories of bearings, 38 sizes were costed which represented 88 per cent in terms of numbers and 79 per cent in terms of standard production time in relation to the total production of bearings.

13.3. The following statement gives the fair ex-works prices of a few representative sizes of ball bearings below 1″ bore diameter, between 1″ and 2″ diameter and adapter ball bearings. In working out fair ex-works prices, we have allowed depreciation at normal income-tax rates and return at 12% on employed capital.

Statement showing costs of Production and fair Ex-works Prices per bearing of Different Sizes

Sl. No.	Bearing Size No.	Raw Material	Conversion charges and depreciation	Total (3) and (4)	Return on capital employed and variable Royalty	Fair ex-works price (5) & (6)
1	2	3	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	Rs.
1	110	0·258	1·519	1·777	0·466	2·243
2	112	0·300	1·570	1·870	0·488	2·358
3	115	0·372	1·619	1·991	0·513	2·504
4	117	0·547	1·570	2·117	0·546	2·663
5	120	0·827	1·761	2·588	0·632	3·220
6	125	1·085	1·982	3·067	0·738	3·805
7	130	1·554	2·304	3·858	0·907	4·765
8	135	2·264	5·951	8·215	2·023	10·238
9	140	2·845	6·412	9·257	2·256	11·513
10	145	3·413	6·699	10·112	2·430	12·542

1	2	3	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	Rs.
11	320	1·055	2·027	3·082	0·744	3·826
12	325	1·635	2·312	3·947	0·918	4·865
13	330	2·478	6·09	8·687	2·126	10·813
14	335	3·370	6·891	10·261	2·470	12·731
15	340	4·968	7·490	12·458	2·914	15·372
16	345	7·287	9·761	17·048	3·826	20·874
17	350	8·338	10·435	18·773	4·301	23·074
18	S·3	0·112	1·752	1·864	0·501	2·365
19	S·8	0·461	1·652	2·113	0·537	2·650
20	S·9	0·693	1·790	2·483	0·616	3·099
21	U110	0·531	2·279	2·810	0·685	3·495
22	U140	5·860	9·220	15·080	3·174	18·254
23	LS·5	0·311	1·564	1·875	0·489	2·364
24	LS·7	0.487	1·636	2·123	0·538	2·661
25	LS·8	0·877	1·788	2·665	0·650	3·315
26	LS·9	0·975	1·989	2·964	0·722	3·686
27	LS·10	1·339	2·344	3·683	0·882	4·565
28	LS·11	1·610	2·446	4·056	0·961	5·017
29	LS·12	2·032	5·856	7·888	1·948	9·836
30	LS·13	3·133	6·592	9·725	2·348	12·073
31	MS·8	1·155	2·153	3·308	0·801	4·109
32	MS·9	1·406	2·338	3·744	0·893	4·637
33	MS·10	1·909	2·615	4·524	1·058	5·582
34	MS·12	3·394	6·875	10·269	2·441	12·710
35	MS·12½	4·234	7·325	11·559	2·753	14·312
36	N·1025	0·125	1·518	1·643	0·441	2·084
37	UT140E	10·594	15·189	25·783	4·792	30.575
38	UT145E	12·424	13·877	26·301	4·825	31·126

1	2	3	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	Rs.
Bearings (with races produced from Tubes).						
1	125	1·080	1·903	2·983	0·724	3·707
2	130	1·536	2·221	3·757	0·891	4·648
3	135	2·176	5·741	7·917	1·983	9·900
4	140	2·676	6·187	8·863	2·208	11·071
5	325	1·613	2·233	3·846	0·904	4·750
6	330	2·311	5·988	8·299	2·079	10·378
7	335	3·136	6·651	9·787	2·415	12·202
8	340	4·084	7·228	11·312	2·816	14·128
9	345	5·991	9·489	15·480	3·702	19·182
10	350	7·563	10·146	17·709	4·207	21·916
11	UT140	14·805	14·769	29·574	4·974	34·548

13.4. The high cost of ball bearings in the country is due to several causes among which must be counted some special features of the situation such as the type of raw materials available, the age and type of the machinery in use, working of three shifts and unavailability of surplus capacity which does not permit sufficient respite for preventive maintenance and overhaul etc. Nevertheless, we feel that with the recent and proposed additions to the machinery and better inspection the factory should be able to make a further reduction in the present high percentages of scrap etc. When the new units and capacity already sanctioned come into existence, it would be desirable to explore how far rationalisation of types and sizes is possible among them so that as in Europe the relatively small sizes of the units need not be a reason for failure to achieve the utmost economies of production.

13.5. For determining the quantum of protection, we have worked out the fair ex-works price on the basis of the actual cost of production during the costed period. This is a departure from our usual practice of estimating the future costs for the period for which protection is to be recommended. In this particular case, we found it difficult to estimate the future costs with reasonable accuracy due to various causes. The capacity of the unit is at present 9 lakh bearings on single shift. During the actual costed period there was a strike for about a month. The actual production for the remaining 11 months was 1,832,829 bearings. From March-June 1960 the company has produced bearings working three shifts and if it continues production at that rate it may

attain an annual production of more than 27 lakhs. The representatives of the company submitted that because of the age of the machinery it would not be possible for the company to maintain production at 27 lakhs for long periods, though the company has in anticipation expanded its establishment and recruited labour to maintain not only the production at the rate of 27 lakhs a year but also to train people for further expansion now in progress. However, the company pleaded that the production for the next three years should be taken at 24 lakhs a year. We found it difficult to allocate labour, establishment, etc. on a reasonable basis on the lower production suggested by the company. In this matter if we had accepted the company's suggestions in regard to allocations the costs would have been unduly inflated as the economies of higher production envisaged with the expanded plant would not be fully reflected in the cost. We, therefore, decided that for determining the quantum of protection, it will be inadvisable to prepare an estimate on the basis of data furnished by the company and that the past years actuals should be adopted. The whole case will have to be re-examined as soon as the present expansion plans are completed.

Measure of protection

14.1. The c.i.f. prices and landed costs of imported ball bearings as furnished to us by the Collectors of Customs and some of the importers are given in Appendix V. For the purpose of assessing the disadvantage suffered by the industry, we have adopted the lowest c.i.f. prices. The following statement gives the comparison between the estimated fair ex-works prices of indigenous bearings with ex-duty landed costs of imported bearings of similar sizes:—

Statement showing comparison of lowest c.i.f. prices and landed costs ex-duty with the fair ex-works prices for the production of bearings

Sl. No.	Bearing Size No.	C.i.f. prices	Clearing charges	Landed cost ex-duty of the imported bearing	Fair ex-works price of the indigenous bearing	Production during 1959-60	Difference between fair ex-works price and landed cost ex-duty as a percentage of c.i.f.
1	2	3	4	5	6	7	8
		Rs.	Rs.	Rs.	Rs.	Nos.	Per cent
1. Ball Bearings.							
(*A*) *Upto 1" bore.*							
1	110	1·100	0·016	1·116	2·243	77,845	102·45
2	112	1·180	0·018	1·198	2·358	1,04381	98·31
3	115	1·240	0·019	1·259	2·504	68,757	100·40

1	2	3	4	5	6	7	8
		Rs.	Rs.	Rs.	Rs.	Nos.	Per cent
4	117	1·350	0·020	1·370	2·663	2,51,094	95·78
5	120	1·640	0·025	1·665	3·220	3,29,167	94·82
6	125	1·410	0·021	1·431	3·805	87,504	168·37
7	320	1·830	0·027	1·857	3·826	35,806	107·60
8	325	2·240	0·034	2·274	4·865	85,268	115·67
9	S-3	1·140	0·017	1·157	2·365	12,287	105·96
10	LS-8	1·800	0·027	1·827	3·315	10,780	82·67
11	LS-10	2·180	0·033	2·213	4·565	13,034	107·89
12	MS-8	2·030	0·030	2·060	4·109	5,784	100·94
13	MS-10	2·550	0·038	2·588	5·582	7,833	117·41
14	N-1025	1·200	0·018	1·218	2·084	54,105	72·17
	AVERAGE	1·496	0·023	1·519	3·070	..	103·68
(B) *Above 1″ and upto 2″ bore.*							
15	140	3·210	0·048	3·258	11·513	31,897	257·17
16	145	2·360	0·035	2·395	12·542	5,922	429·96
17	330	2·850	0·043	2·893	10·813	30,852	277·89
18	335	3·490	0·052	3·542	12·731	33,483	263·30
19	340	4·490	0·067	4·557	15·372	14,041	240·87
20	LS-11	2·210	0·033	2·243	5·017	10,771	125·52
21	LS-13	3·050	0·046	3·096	12·073	10,695	294·33
	AVERAGE	3·201	0·048	3·249	11·625	..	261·67
	AVERAGE (A & B)	1·679	0·026	1·705	3·989	..	136·03

1	2	3	4	5	6	7	8
		Rs.	Rs.	Rs.	Rs.	Nos.	Per cent
2.	*Adapter ball bearings upto 2" bore diameter.*						
22	UT140E	7·600	0·114	7·714	30·575	6,427	300·80
23	UT145E	8·350	0·125	8·475	31·126	1,678	271·27
	AVERAGE	7·755	0·117	7·872	30·812	..	295·81
	AVERAGE (1 & 2)	1·718	0·025	1·743	4·158	..	140·57

14.2. It will be seen that the quantum of duty to protect the domestic industry indicated in the table ranges from 72.17 per cent to 168.37 per cent for ball bearings upto 1" bore diameter, from 125.52 per cent to 429.96 per cent for ball bearings above 1" and upto 2" bore diameter and 271.27 per cent to 300.80 per cent for adapter ball bearings upto 2" bore diameter. The weighted average rates of duty per cent calculated on the relative production of different sizes in each group work out to 103.68 per cent for ball bearings upto 1" bore diameter, 261.67 per cent for ball bearings above 1" and upto 2" bore diameter and 295.81 per cent for adapter ball bearings upto 2" bore diameter. The combined weighted average for ball bearings upto 2" bore diameter works out to 136.03 per cent while inclusive of adapter bearings the weighted average would come to 140.57 per cent. In view of the severe restrictions on imports, however, we do not consider it necessary to increase the present duty of 95 per cent *ad valorem*. Nor are we in favour of extending the protection for a long period, as substantial reduction in costs is expected to be achieved when the expansion programme of the company is completed. We, therefore, recommend that protection to the industry should be continued for a further period of two years ending 31st December 1962 at the existing rate of duty. We further recommend that parts of ball bearings and adapter ball bearings

upto 2″ bore diameter should also be liable to the same rate of protective duty. If our recommendation is accepted, the I.C.T. items No. 72(35), 72(36) and 72(37) should be modified as under:—

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 duty
				The U.K.	A British co-lony	Burma	
72(35)	Ball Bearings of all kinds not exceeding 51 millimetres bore diametr adapted for use as parts and accessories of motor vehicles (other than motor cycles & motor scooters) and parts thereof, not otherwise specified.	Protective	95 per cent *ad valorem*.	..	..	..	December 31st, 1962.
72(36)	Ball bearings of all kinds not exceeding 51 millimetres bore diameter not otherwise specified and parts thereof.	Protective	95 per cent *ad valorem*.	..	..	..	December 31st, 1962.
72(37)	Adapter ball bearings not exceeding 51 millimetres bore diameter not otherwise specified, which are specially designed for use exclusively with power driven machinery and parts thereof.	Protective	95 per cent *ad valorem*.	..	..	..	December 31st, 1962.

Selling arrangements and selling prices

15.1. The company has divided its market into three zones designated as Jaipur, Bombay and Calcutta for which it has nominated one or more distributors. These sole distributors have under them sub-distributors in important industrial centres and stockists in important cities. In 1958, the company appointed as additional sole distributors for the Bombay zone two of its erstwhile dealers. It appears on investigation that the sole distributors are not in any sense specialised in the ball bearings trade but

as a matter of fact engaged in the several miscellaneous trades in no way connected with ball bearings or engineering products. Their function is confined to obtaining supplies from the factory and passing them on to stockists and large scale consumers against cash payment. They do not offer any after sales service nor do they attend to complaints with the result that the customers have to take up their complaints of defective bearings, bad deliveries etc. to the company direct. Government consumers and some manufacturers like Calcutta Fan Works, Tata Iron and Steel and Associated Electrical Industries have expressed satisfaction with the selling system. But there is a chorus of complaints from all others regarding frequent changes of distributors, the refusal of the company to entertain direct orders, the indifference of dealers etc. We discussed these matters at the public inquiry and also separately with the producer's representatives. The representative of the company contended that it is the practice of the company to treat all manufacturers who use ball bearings for original equipment as large consumers. But the sales are actually made through the distributors at company's list prices, the percentages of sales to trade being not more than one-third of the total sales. The figures of percentage sales to large consumers and trade during last three years furnished by the company are given below:—

	1957-58		1958-59		1959-60	
	Nos.	%	Nos.	%	Nos.	%
Sales to large consumers	1,212,472	72·70	1,232,827	67·61	1,455,993	74·04
Sales to Trade .	455,281	27·30	590,705	32·39	510,546	25·96
TOTAL	1,667,753		1,823,532		1,966,539	

The company has given us an undertaking that large consumers will in future be given priority in the matter of supplies. It will facilitate implementation of this undertaking if consumers take steps to keep the producer informed of their annual requirements in advance and the orders they place from time to time with the distributors or stockists and we suggest that consumers should take suitable action accordingly.

15.2. The company claims to have highly specialised engineers to advise customers and attend to complaints. But many prominent consumers informed the Commission that the technical and after sales service is insufficient and not always available. We recommend that the company should adopt suitable measures to make its after sales service more effective.

15.3. The following statement gives the percentages of sales by National Engineering Industries Ltd. according to (a) types of bearings and (b) consuming industries during the last four years.

(a) *Sales according to types of bearings.*

Types and sizes	1956	1957	1958	1959	1960 (Jan.-March)
	%	%	%	%	%
Ball Bearings.					
(i) Upto 1″ bore diameter	85·38	83·00	79·67	77·96	79·82
(ii) Above 1″ and upto 2″ bore diameter	13·69	16·23	19·70	21·47	20·02
Adapter Bearings.					
Upto 2″ bore diameter	0·93	0·77	0·63	0·57	0·16

(b) *Sales according to consuming industries.*

Industry	1956	1957	1958	1959	1960 (Jan.-Mar.)
	%	%	%	%	%
1. Electric Fans .	57·01	49·80	36·83	38·63	42·68
2. Electric Motors .	7·53	7·88	6·02	6·03	8·00
3. Pumps . .	4·37	8·18	6·35	7·42	10·12
4. Machine Tools .	0·54	0·39	0·91	0·44	0·20
5. Textile . .	1·23	1·10	0·12	0·74	0·18
6. Automobiles .	5·15	5·02	5·05	7·24	5·56
7. Cycle Rikshaw .	0·64	0·55	1·36	0·87	0·82
8. Chaff Cutters .	3·32	4·62	5·27	2·01	4·12
9. Miscellaneous .	20·21	22·46	38·09	36·62	28·32

It will be seen that four fifths of total sales are accounted for by sizes of ball bearings upto 1″ bore and sales of adapter bearings upto 2″ bore do not amount to more than 1 per cent. While the electric fans industry continues to be the largest consumer, its relative share in total sales has fallen from more than 50 per cent in 1956 to 39 per

cent in 1959. This is not due to any reduction in supplies to electric fan industry. The actual quantity supplied to the fan industry has increased from 5.9 lakhs in 1956 to 7.4 lakhs in 1959 and about 2 lakhs in Jan.-March 1960. Miscellaneous industries like sugar machinery, flour mills, diesel engines etc. improved their relative share from 20 per cent of sales in 1956 to 37 per cent in 1959.

15.4. In our last report, we recommended that the company should maintain reasonable stocks of all sizes of ball bearings required by its regular customers. The company agreed that three months' requirements may be regarded as a reasonable level for stocks. From the statistics of stocks for different years submitted by the company, it appears that total stocks of all types and sizes upto 2" diameter showed a mounting trend till 1958, declined in 1959 and again rose in the early months of 1960. The stock position for 1959 indicates that actual stocks of popular sizes tend to be much below what the company itself has accepted as reasonable. In view of the general shortage of available supplies, however, the position of stocks can hardly be expected to approximate to normal expectations.

15.5. In our last report, we recorded that in the case of 23 costed sizes of ball bearings, the weighted average of selling prices was 55.56 per cent above the corresponding fair ex-works price and advised the company to review its prices. The company issued a revised price list in October 1956 on the basis of a formula prescribed by the Ministry of Commerce and Industry. The Ministry invited the opinion of the Commission on this price list but as the price list covered 124 types of ball bearings and the costing data before the Commission did not cover more than 23 sizes only, the Commission expressed its inability to express any opinion. The Commission, however, undertook a price survey in 1958, and came to the conclusion that in the case of direct sales to industrial consumers which accounted for the bulk of sales, the prices charged to them accorded with list prices and that, by and large, the prices charged for ball bearings etc. were well within the limits set by the formula of the Commerce and Industry Ministry. There has not been any increase in the company's selling prices to large consumers. On the other hand, the prices of a few sizes had been reduced during the last year. A statement showing the company's selling prices in 1956 and at present is given in Appendix VI.

16. A summary of our conclusions and recommendations is given below:—

Summary of conclusions and recommendations.

(i) The domestic demand for ball bearings during 1960-61 is estimated at 4.5 million pieces.

[Paragraph 8.3.]

(ii) The demand for ball bearings for the year 1963 is placed at 8.5 million to 9 million pieces.

[Paragraph 8.5.]

(iii) The request of the industry for duty free imports of tubes cannot be supported for the reasons mentioned in paragraph 9.2.

[Paragraph 9.2.]

(iv) The Indian Standards Institution should expedite the formulation of standard specifications for ball bearings.

[Paragraph 10.3.]

(v) The records of costs at present maintained by National Engineering Industries Ltd. should be further expanded and improved so as to facilitate the determination of costs with accuracy.

[Paragraph 13.1.]

(vi) Protection to the ball bearings industry should be continued for a further period of two years ending 31st December 1962 at the existing rates of duty. Parts of ball bearings and adapter ball bearings upto 51 millimetres bore diameter should also be liable to the same rate of protective duty.

[Paragraph 14.2.]

(vii) Indian Customs Tariff Items No. 72(35), 72(36) and 72(37) should be modified as indicated in paragraph 14.2.

[Paragraph 14.2.]

(viii) National Engineering Industries Ltd. should adopt suitable measures to make its after sales service more effective.

[Paragraph 15.2.]

17. We wish to express our thanks to manufacturers, importers and consumers of ball bearings and the Associations who furnished detailed information in connection with this inquiry and to their representatives who tendered evidence before us.

Acknowledgements

K. R. P. AIYANGAR,
Chairman.

S. K. MURANJAN,
Member.

J. N. DUTTA,
Member.

R. S. BHATT,
Member.

RAMA VARMA,
Secretary.

BOMBAY,
Dated, 31st October, 1960.

APPENDIX I

(*Vide* Paragraph 3.1)

List of parties to whom the Commission's questionnaires/letters were issued and from whom replies or memoranda have been received

*Indicates that they replied or sent memoranda.

@Indicates that they are not interested.

A. *Producer :*

*National Engineering Industries Ltd., (Bearing Division), *Jaipur* (Rajasthan).

B. *Prospective Producers :*

*1. Kamlashankar P. Joshi & Co., 98, Nagdevi Cross Lane, Bombay-3.
*2. Dhirajlal & Co., Post Bag No. 2, Lonavla.
*3. The Investment Corporation of India Ltd., Ewart House, Bruce Street, Fort, Bombay-1.

C. *Importers :*

*1. The Central Trading Co., 137, Canning Street, Calcutta-1.
*2. Greaves Cotton & Co. Ltd., 1, Forbes Street, Fort, Bombay.
*3. Joshina & Thakker Engineering Stores, Tulsi Falia, Station Road, Surat.
*4. Roberts, Mclean & Co. Ltd., 31, Netaji Subhas Road, Calcutta-1.
*5. Mcleod & Co. Ltd., 3, Netaji Subhas Road, Calcutta-1.
*6. S. K. F. Ball Bearing Co. Ltd., Mustafa Building, 19, Sir P. M. Road, Fort, Bombay-1.
*7. P. B. Shah & Co. Ltd., 34, Netaji Subhas Road, Calcutta.
@8. Tata Iron & Steel Co. Ltd., Jamshedpur.
9. Damodardas Jaichand Aggarwal, Railway Road, Batala.
*10. C. C. Vaswani & Co., 11, Habib Court, Causeway, Bombay.
@11. Turner, Hoare & Co. Ltd., Gateway Building, Apollo Bunder, Bombay-1.
*12. William Jacks and Co. Ltd., 16, Netaji Subhas Road, Calcutta-1.
*13. Dhirajlal and Co., 15, New Queens Road, Bombay-4.
14. Universal Business Agency, 9, Waudby Road, Bombay-1.
*15. Kamlashankar P. Joshi & Co., 98, Nagdevi Cross Lane, Bombay-3.
*16. United Supply Agency Pvt. Ltd., 38, Strand Road, P. B. No. G.P.O. 865, Calcutta-1.
17. Soni Jain Private Ltd., 38, Netaji Subhas Road, Calcutta-1.
18. M/s. New Import Agency, 138, Canning Street, Calcutta-1.
19. M/s. Popatlal Ghelabhai & Co., P-7, Old China Bazar Street, Calcutta-1.
20. M/s. Overseas Exchange Corporation, 14/2, Old China Bazar Street, Calcutta-1.
21. M/s. Champaklal & Bros., P/33, Mission Row Extension, Calcutta-1.
22. M/s. Chimanlal Vadilal & Co., 2, Portuguese Church Street, Calcutta-1.
23. M/s. Madanlal & Co. Ltd., 89, Netaji Subhas Road, Calcutta-1.
24. M/s. Girdharilal & Co., 89, Netaji Subhas Road, Calcutta-1.
25. M/s. Taparia & Co., 137, Canning Street, Calcutta-1.
*26. M/s. Calcutta Cycle Supply Co., 11-A, Lall Bazar Street, Calcutta-1.

27. Muller and Phipps (India) Pvt. Ltd., P. O. Box No. 773, Queen's Mansions, Bastion Road, Fort, Bombay.

*28. Nariendarnath D. Puri, Mistry House, 25, Parsi Bazar Street, Fort, Bombay.

*29. Dhirajlal Morarji, 37-A, Sarang Street, (Khokha Bazar), Bombay-3.

D. *Importers' Associations :*

*1. The Mill Gin Stores Merchants' Association, 109-111, Nagdevi Street, Bombay.

*2. Bharat Chamber of Commerce, Imperial Bank Building, Calcutta.

*3. The All-India Ball Bearing Merchants' Association, 524, Sandhurst Road, Sandhurst Building, Bombay-4.

E. *Dealers :*

*1. Associated India Agencies, India Exchange Building, Calcutta-1.

*2. Motor Trade Supply Co., Parekh Mansions, Sardar Patel Road, Bombay-4.

@3. Bharat Trading Co., 71, Nagdevi Cross Lane, Bombay-3.

@4. B. Chowdhury & Co., Indian Globe Chambers, Fort Street, Bombay-1.

*5. Babu and Co., Gheekanta Road, Ahmedabad.

F. *Consumers :*

*1. Hind Cycles Ltd., 250, Worli, Bombay-18.

*2. T. I. Cycles of India, Ambattur, Near Madras.

3. Cooper Engineering Ltd., Satara Road, Satara District, Maharashtra State.

@4. Acme Manufacturing Co. Ltd., Antop Hill, Wadala, Bombay-19.

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

*6. Jaura Engineering Works, Azad Nagar, Amritsar.

*7. Alcock, Ashdown and Co., Defence Works, Mazgaon, Bombay.

8. Angus Engineering Works, *P. O. Angus*, Hooghly District, West Bengal State.

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

*10. British India Electric Construction Co. Ltd., 21, Netaji Subhas Road, Calcutta.

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

*12. Praga Tools Corporation Ltd., Saifabad, Hyderabad, Andhra Pradesh.

*13. S. P. Engineering Corporation, 79/7, Larouche Road, Kanpur.

14. Central Province Industries Ltd., Kandwa, Madhya Pradesh.

*15. Jyoti Ltd., Post Chemical Industries, Baroda-3.

*16. Kirloskar Brothers Ltd., Kirloskarvadi, South Satara District.

@17. Jhonston Pumps (India) Ltd., 2, Fairlie Place, Calcutta-1.

*18. Port Engineering Works Ltd., 8, Clive Row, Calcutta-1.

*19. Tata Iron and Steel Co. Ltd., Bombay House, Bruce Street, Fort, Bombay.

*20. Vasant Industrial & Engineering Works, 'Vasant Vijay' 470-471, Worli Road, Bombay-18.

*21. Hindustan Motors Ltd., 8, Royal Exchange Place, Calcutta.

*22. Simpson & Co. Ltd., 202/203, Mount Road, Madras.
*23. Bombay State Road Transport Corporation, Central Stores, S. T. Premises Bellasis Road, Bombay-8.
*24. B.E.S.T. Undertaking, Electric House, Bombay.
*25. Hindustan Aircraft Ltd., Bangalore.
*26. Air India International, Santa Cruz, Bombay-29.
*27. Controller of Stores, Northern Railway, The Mall, Delhi.
*28. Controller of Stores, Southern Railway, Perambur, Madras.
*29. Controller of Stores, Western Railway, Churchgate, Bombay.
*30. Chittaranjan Locomotive Works, Chittaranjan, West Bengal State.
*31. Bombay Port Trust, Ballard Estate, Bombay.
*32. Calcutta Fan Works Ltd., 19-B, Chowringhee Road, Calcutta-13.
@33. Hindustan Lever Ltd., Scindia House, Ballard Estate, Bombay.
34. India Machinery Company Ltd., 29, Strand Road, Calcutta.
35. Lakshmiratan Engineering Works, Ltd., Empire House, Hornby Road Fort, Bombay.
*36. Stores and Purchase Officer, Machinery Manufacturers' Corporation Ltd. P 618, Circular Garden Beach Road, Calcutta-23.
37. Mysore Machinery Manufacturers Ltd., P. B. No. 691, Bangalore-2.
*38. National Machinery Manufacturers Ltd., Kalwa, Thana.
*39. Parmar Mechanic Works, Vadi Pura, Surendranagar (Saurashtra).
40. Ramkrishna Industrials Ltd., Peelamedu Post, Coimbatore.
*41. Sewing Machine Parts Making Works, Surendranagar (Saurashtra).
42. Star Textile Engineering Works, Ltd., Bank of Baroda Building, 12, Apollo Street, Fort, Bombay.
*43. Central India Machinery Manufacturers Ltd., P. B. Birlanagar, Gwalior.
*44. Textile Machinery Corporation Ltd., Belgharia.
*45. Textool Company Ltd., Post Box No. 221, Coimbatore.
*46. Textile Equipment Co., 11-A, Sitalfalwadi, Mount Road, Mazgaon, Bombay-10.
*47. Ravi Industries Ltd., Nawapada, Bombay Agra Road, Thana.
*48. Indo-Engineering Works, Hornby Vellard, Opp. Gwalior Palace, Worli, Bombay-18.
49. Indo-Belga Engineering Co. Ltd., Ahmedabad.
*50. Hindusthan Textile Engineers, Kamer Building, 38, Cawasji Patel Stree Bombay-1.
51. Calico Industrial Engineers, Sone Baug Chakala, Bombay-41.
52. The Premier Automobiles Ltd., Agra Road, Kurla, Bombay-37.
*53. The Tata Locomotive & Engineering Co. Ltd., (Automobiles Division), Bombay House, Bruce Street, Bombay-1.
*54. Mahindra & Mahindra Ltd., Gateway Building, Apollo Bunder, Bombay-1.
@55. Ashok-Leyland Ltd., 38 Mount Road, Madras-6.
*56. The Standard Motor Products of India Ltd., 29, Mount Road Madras-6.
*57. The Automobile Products of India Ltd., Agra Road, Bhandup, Bombay-40.
*58. The Controller of Store, Central Railway, V.T., Bombay.
*59. The Indian Sugar & General Engineering Corporation Ltd., P. O. Yamuna Nagar, Dist. Ambala.
60. Walchandnagar Industries Ltd., Walchandanagar (Poona).

@61. Binny's Engineering Works Pvt. Ltd., P. B. No. 2393, Meenambakkam, Madras-27.

62. Kamlashankar P. Joshi & Co., Nagdevi Cross Lane, Bombay-3.

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

*64. Jay Engineering Works Ltd., 183-A, Prince Anwar Shah Road, Dhakuria, Calcutta-31.

*65. India Electric Works Ltd., Diamond Harbour Road, Calcutta-34.

*66. The General Electric Co. of India (Mfg.) Ltd., 68, Taratalla Road, Garden Beach, Calcutta-24.

*67. P. S. G. & Sons Charity Industrial Institute, Peelamedu P. O., Coimbatore.

68. Soni Jain Private Ltd., 38, Netaji Subhas Road, Calcutta.

*69. Clyde Fan Company Private Ltd., Rai Bahadur Road, Behala, Calcutta-34.

*70. Matchwell Electricals (India) Ltd., P. O. Box No. 156, 4/11, Asaf Ali Road, New Delhi.

*71. Bharat Electrical Industries Ltd., 6-A, S. N. Banerjee Road, Calcutta-12.

*72. Motor & Machinery Manufacturers Ltd., 31, Chittaranjan Avenue, Calcutta-12.

G. *Associations (Consumers) :*

*1. The Secretary, Fan Makers' Association of India, 35, Stephen House, 4, Dalhousie Square East, Calcutta.

*2. The Secretary, Indian Electrical Manufacturers Association, India Exchange, Calcutta.

3. Society of Motor Manufacturers & Traders Ltd., Post Box No. 173, New Delhi.

*4. The Secretary, Engineering Association of India, 23, Netaji Subhas Road, Calcutta-1.

*5. Delhi Motor Traders' Association, P. O. Box No. 1098, Kashmere Gate, Delhi-1.

*6. The All India Ball Bearing Merchants' Association, 524, Sandhurst Road, Sandhurst Building, Bombay-4.

H. *Raw Material Suppliers :*

*1. The Superintendent, Metal & Steel Factory, Ichapur-Nawabgunj (West Bengal).

*2. Mukand Iron & Steel Works Ltd., Bombay-Agra Road, Kurla, Bombay-37.

*3. Bhartia Electric Steel Co. Ltd., 8, Sminhoe Street, Ballygunge, Calcutta-19.

*4. Man Industrial Corporation Ltd., P. O. Box No. 131, Jaipur (H.O.).

*5. T. I. & M. Sales Private Ltd., 2nd floor, United Bank of India Bldg., Sir P. M. Road, G.P.O. Box No. 1308, Bombay-1.

I. *Government Departments :*

Central Government—

*1. The Senior Industrial Adviser, Development Wing, Ministry of Commerce & Industry, Udyog Bhavan, Maulana Azad Road, New Delhi.

*2. The Director, Indian Standards Institution, Manak Bhavan, 9, Mathura Road, New Delhi.

*3. The Collector of Customs, Bombay.

*4. The Collector of Customs, Calcutta.

*5. The Collector of Customs, Madras.

*6. The Collector of Customs, Cochin.

*7. The Director of Co-ordination & Statistics, Directorate-General of Supplies & Disposals, National Insurance Building, Parliament Street, New Delhi.

*8. The Secretary to the Government of India, Ministry of Commerce & Industry, Udyog Bhavan, Maulana Azad Road, New Delhi.

*9. The Development Commissioner, Small Scale Industries, Ministry of Commerce & Industry, Shahjhan Road, New Delhi.

*10. The Chief Controller of Imports & Exports, Ministry of Commerce and Industry, New Delhi.

11. The Iron & Steel Controller, Netaji Subhas Road, Calcutta.

(*ii*) State Governments—

*1. The Chief Secretary to the Government of Andhra Pradesh, Hyderabad.

*2. The Chief Secretary to the Government of Assam, Shillong.

*3. The Chief Secretary to the Government of Bihar, Patna.

@4. The Chief Secretary to the Government of West Bengal, Calcutta.

5. The Chief Secretary to the Government of Gujrat, Ahmedabad.

6. The Chief Secretary to the Government of Jammu and Kashmir, Shrinagar.

7. The Chief Secretaty to the Government of Kerala, Trivandrum.

8. The Chief Secretary to the Government of Madhya Pradesh, Bhopal.

9. The Chief Secretary to the Government of Madras, Madras.

*10. The Chief Secretary to the Government of Maharashtra, Bombay.

*11. The Chief Secretary to the Government of Mysore, Bangalore.

12. The Chief Secretary to the Government of Orissa, Bhubaneshwar.

*13. The Chief Secretary to the Government of Punjab, Chandigarh.

14. The Chief Secretary to the Government of Rajasthan, Jaipur.

15. The Chief Secretary to the Government of Uttar Pradesh, Lucknow.

16. The Chief Commissioner, Delhi Administration, Delhi.

*17. The Chief Commissioner, Himachal Pradesh, Simla.

J. *Others :*

1. The Industrial Labour Welfare Association Ltd., Avanashi Road, Coimbatore.

2. Association of Indian Automobile Manufacturers, C/o. Tata Locomotive & Engineering Co. Ltd., Sales Department, Army & Navy Building, 2nd Floor, Mahatma Gandhi Road, Fort, Bombay.

3. Auto-Spark, 457, Sardar Vallabhai Patel Road, Bombay-4.

APPENDIX II

(*Vide* Paragraph 3·3)

List of persons who attended the Commission's public inquiry on the 8th September, 1960

(A) *Producers :*

1. Shri K. D. Churiwala 2. Shri V. R. Kedia 3. Shri S. K. Sureka 4. Shri S. G. Choudhary 5. Mr. S. F. Booth 6. Shri S. R. Bhise 7. Shri P. D. Bhaiya	Representing	National Engineering Industries Ltd. (Bearing Division), Jaipur (Rajasthan).

(B) *Prospective Producers :*

1. Shri P. K. Joshi	Representing	Kamlashankar P. Joshi & Co., 98, Nagdevi Cross Lane, Bombay-3.
2. Shri D. S. Gandhi 3. Mr. G. W. Golding 4. Shri A. K. Roy Chowdhary	Representing	Dhirajlal & Co., Post Bag No. 2, Lonavla.
5. Smt. Z. Z. Kothavala	Representing	The Investment Corporation of India Ltd., Ewart House, Bruce Street, Fort, Bombay-1.

(C) *Importers :*

1. Mr. B. Mattsson 2. Shri H. T. Mirchandani	Representing	S. K. F. Ball Bearing Co. Ltd., Mustafa Building, 19, Sir P. M. Road, Fort, Bombay-1.
3. Shri G. C. Mirchandani	Representing	Mcleod & Co. Ltd., 3, Netaji Subhas Road, Calcutta-1.
4. Shri R. L. Maheshwari	Representing	The Central Trading Co., 137, Canning Street, Calcutta-1 and Bharat Chamber of Commerce, State Bank Building (Burrabazar Branch), Calcutta-7.
5. Shri C. M. Parikh	Representing	Muller and Phipps (India) Private Ltd., P. O. Box No. 773, Queen's Mansions, Bastion Road, Fort, Bombay.
6. Shri H. L. Lamba	Representing	Nariendarnath D. Puri, Mistry House, 25, Parsee Bazar Street, Fort, Bombay.

7. Shri D. M. Ajmera . .	Representing	Dhirajlal Morarji, 37-A Sarang Street, (Khokha Bazar), Bombay-3.

(D) *Imporiers' Association :*

1. Shri K. J. Shah . .	Representing	The Mill Gin Stores Merchants Association, 109-111, Nagdevi Street, Bombay.
2. Shri A. G. Shah . .		

(E) *Dealers :*

1. Shri C. G. Shah . . .	Representing	Bharat Trading Co., 71, Nagdevi Cross Lane, Bombay-3.
2. Shri B. S. Panchal . .	Representing	Babu and Company, Gheekanta Road, Ahmedabad-1.

(F) *Consumers :*

1. Shri A. Natarajan . .	Representing	The Tata Locomotive & Engineering Co. Ltd. (Automobiles Division), Bombay House, Bruce Street, Bombay-1.
2. Shri S. Johns	Representing	Bombay State Road Transport Corporation, Central, Stores, S. T. Premises, Ballasis Road, Bombay-8.
3. Shri S. Miranda		
4. Shri S. P. Divgi . . .	Representing	Associated Electrical Industries Manufacturing Co. Ltd., Crown House 6, Mission Row, Calcutta-1.
5. Shri N. G. Morarji . .	Representing	National Machinery Manufacturers Ltd., Kalwa-Thana.
6. Shri Telang	Representing	Stores and Purchase Officer, Machinery Manufacturers Corporation Ltd., P-618, Circular Garden Reach Road, Calcutta-23.
7. Shri V. V. Dhume	Representing	Crompton Parkinson (Works Ltd., Haines Road, Worli, Bombay-18.
8. Shri V. D. Desai		
9. Shri Ravi L. Kirloskar . .	Representing	Kirloskar Electric Co. Ltd., Post Box No. 1017, Bangalore-3.

10. Shri R. Krishnaswamy . .	Representing	P. S. G. & Sons Charity Industrial Institute, Peelamedu P. O., Coimbatore.
11. Shri P. K. Palit . . .	Representing	Mahindra & Mahindra Ltd., Gateway Building, Apollo Bunder, Bombay-1.
12. Shri V. R. Pathak . .	Representing	Jyoti Ltd., Post Chemical Industries, Baroda-3.
13. Shri D. Velayudhan . .	Representing	Controller of Stores, Western Railway, Churchgate, Bombay.

(G) *Consumers' Associations :*

1. Lala Shri Dhar . . .	Representing	Fan Makers' Association of India, 35, Stephen House, 4, Dalhousie Square East, Calcutta.
2. Shri D. K. Sinha . . .	Representing	Indian Electrical Manufacturers' Association, India Exchange, Calcutta.
3. Shri S. Harchandrai ..	Representing	The All India Ball Bearing Merchants Association, 524, Sandhurst Road, Sandhurst Building, Bombay-4.
4. Shri R. T. Shah		
5. Shri R. A. Kothari ..		
6. Shri Dayachand Malhotra		
7. Shri M. L. Ghai		

(H) *Raw Material Suppliers :*

1. Shri J. H. Shah . . .	Representing	Mukand Iron & Steel Works Ltd., Bombay-Agra Road, Kurla, Bombay-37.
2. Mr. R. C. Atterton ..	Representing	T. I. & M. Sales Private Ltd., 2nd Floor, United Bank of India Building, Sir P. M. Road, G.P.O. Box No. 1308, Bombay-1.
3. Shri T. R. Arunachalam ..		

(I) *Government Departments :*

1. Shri M. Rama Rao . .	Representing	The Senior Industrial Adviser, Development Wing, Ministry of Commerce and Industry, Udyog Bhavan, Maulana Azad Road, New Delhi.

2. Lt. Col. O. G. Eapen . .	Representing	The Iron & Steel Controller, Netaji Subhas Road, Calcutta.
3. Dr. B. P. Ghosh . . .	Representing	The Development Commissioner, Small Scale Industries, Ministry of Commerce & Industry, Shahjahan Road, New Delhi.
4. Shri P. L. Chopra . .	Representing	The Director of Co-ordination & Statistics, Directorate-General of Supplies & Disposals, National Insurance Building, Parliament Street, New Delhi.
5. Shri D. V. Sohoni . .	Representing	The Collector of Customs, Bombay.
6. Shri A. B. Rao . . .	Representing	Indian Standards Institution, Manak Bhavan, 9, Mathura Road, New Delhi.

(J) *Others :*

1. Shri M. B. Tamhankar .	Representing	Auto-Spark 457, Sardar Vallabhbhai Patel Road, Bombay-4.
2. Shri N. Balkrishna . .	Representing	Association of Indian Automobile Manufacturers, C/o Tata Locomotive & Engineering Co. Ltd., Sales Department, Army & Navy Building, 2nd Floor, Mahatma Gandhi Road, Fort, Bombay.

सत्यमेव जयते

APPENDIX III

(*Vide* Paragraph 11.1)

Statement showing country-wise imports of ball bearing during 1957, 1958, 1959 & 1960 (*Jan.-March*)

Specifications	1957		1958		1959		1960 (Jan.-March)	
	Qty. (Cwt.)	Value (Rs.)	Qty. (Cwt.)	Value (Rs.)	Qty. (Cwt.)	Value (Rs.)	Qty. (Cwt.)	Value (Rs.)
1	2	3	4	5	6	7	8	9
1. *Adapter bearings upto 2″ bore.*—								
U. K.	156	1,33,735	88	90,872	23	17,732	11	5,910
U. S. S. R.	57	20,793	70	32,658	37	27,136	1	859
Sweden	125	78,251	277	1,55,316	207	1,05,006	33	16,385
Germany W.	55	54,078	66	39,462	138	89,741	40	24,352
Germany E.	..	187	..	132	2	1,180	..	..
Netherlands	..	135	..	..	..	..	..	..
Belgium	..	43	..	..	..	..	..	..
Switzerland	..	187	8	6,463	..	540	21	8,234
Italy	21	7,276	6	5,177	5	4,762	..	..
Austria	79	36,720	71	36,970	18	12,606	33	9,629
Hongkong	..	968	..	..	..	..	..	..
Japan	34	10,126	29	9,456	75	19,549	1	485
U. S. A.	1	2,566	3	14,512	17	6,537	2	1,750
Australia	3	5,556	..	..	..	116	..	..
France	..	..	..	305	..	..	..	..
Czechoslovkia	..	..	1	367	15	8,956	..	..
Canada	..	..	..	..	..	89	..	..
TOTAL	531	3,50,621	619	3,91,690	537	2,93,950	142	67,604

2. *Ball Bearings upto 2" bore for motor Vehicles.—*

U. K. . . .	831	3,80,069	54	69,817	212	1,37,773	119	63,553
U. S. S. R. . . .	193	81,744	15	7,174	35	10,137	11	1,318
Sweden . . .	48	19,457	60	36,712	28	16,714	13	8,040
Poland . . .	1	449	..	..	..	..	..	..
Germany W. . .	7,656	36,10,071	656	9,42,964	551	8,14,830	288	2,84,576
Netherlands . .	5	1,736	..	..	11	26,739	..	..
Belgium . . .	22	46,732	..	195	24	9,396	..	..
Germany E. . .	..	..	1	875	..	..	..	..
France . . .	..	26	..	..	..	..	..	..
Switzerland . . .	10	30,092	1	1,249	..	45	..	..
Italy	99	50,605	833	3,96,886	197	1,56,528	93	65,016
Austria . . .	59	35,125	8	6,019	26	13,850	22	6,144
Hungary . . .	10	7,112	..	..	..	..	..	..
Czechoslovkia . .	3	2,507	1	3,610	..	..	5	1,998
Hongkong . . .	1	2,407	..	..	..	..	..	..
Japan	132	68,762	30	18,001	20	4,278	..	174
Canada . . .	..	63	..	..	..	..	..	..
U. S. A. . . .	613	4,71,210	357	3,90,041	112	91,790	45	35,754
Australia . . .	..	99	..	..	..	..	..	..
Yugoslovia . . .	..	..	3	9,357	..	..	..	..
Denmark . . .	..	..	..	..	..	43	..	..
TOTAL . .	9,683	48,08,266	2,019	18,82,900	1,216	12,82,123	596	4,66,573

1	2	3	4	5	6	7	8	9
3. *Ball Bearings upto 1" bore N.E.S.*—								
U. K. . . .	232	1,77,742	119	1,24,963	189	1,50,344	62	55,015
U. S. S. R. . . .	825	3,04,533	579	1,92,025	356	1,49,643	44	14,801
Sweden . . .	163	1,27,065	363	3,25,426	129	1,56,031	47	37,224
Norway . . .	..	395	..	..	..	..	..	..
Poland . . .	1	200	..	..	..	..	..	..
Germany W. . .	423	2,96,491	227	1,75,567	312	2,52,511	138	1,01,093
Germany E. . .	2	1,846	..	..	1	503	3	1,072
Netherlands . .	..	45	..	..	..	..	..	..
Belgium . . .	4	1,075	..	..	..	..	..	..
Denmark . . .	..	..	..	..	..	..	..	662
France . . .	..	..	..	..	..	..	4	3,043
Switzerland . .	9	3,776	6	7,259	8	6,143	6	5,985
Italy	225	1,10,763	99	74,057	141	1,24,997	139	1,16,012
Austria . . .	433	1,95,678	196	1,34,354	141	85,163	42	25,292
Czechoslovkia . .	61	24,803	13	7,323	..	239	23	8,817
Singapore . . .	29	18,883	..	..	..	..	..	..
Hongkong . . .	..	1,120	1	633	..	..	..	..
Japan	92	32,262	128	54,477	103	29,753	2	407
Canada . . .	1	331	..	..	..	..	..	..
U. S. A. . . .	14	14,195	69	58,993	29	26,068	11	6,724
Australia . . .	12	5,345	..	..	7	4,824	9	4,627
Switzerland	..	..	..	..	..	..	1	1,005
TOTAL .	2,526	13,16,548	1,800	11,55,077	1,416	9,86,219	531	3,81,779

4. *Ball Bearings over 1" to 2" bore N.E.S.—*

U. K.	1,116	6,59,403	553	3,80,996	524	3,63,708	192	1,40,452
U. S. S. R.	1,761	6,03,819	1,764	6,46,100	761	2,89,934	124	34,918
Sweden	510	2,60,196	534	2,61,000	378	1,87,042	87	47,849
Norway	..	162	..	534	..	..	..	..
Poland	16	3,832	..	..	..	..	..	..
Denmark	1	289	..	..	..	..	..	42
Germany W.	1,882	10,59,964	892	5,41,287	1,036	6,73,038	480	3,15,893
Germany E.	23	6,633	7	4,827	19	9,611	1	928
Netherlands	8	2,268	..	26	2	2,153	14	2,645
Belgium	24	12,942	7	3,180	..	..	..	103
France	7	2,887	..	610	1	264	1	606
Switzerland	35	20,267	77	45,612	9	11,811	19	9,956
Italy	169	97,744	181	1,09,508	371	2,04,652	175	1,45,097
Austria	1,492	4,51,567	677	3,79,334	352	1,96,132	113	50,362
Czechoslovkia	253	1,05,572	59	27,243	168	74,162	65	62,108
Singapore	83	38,973	..	..	..	..	..	..
Hongkong	10	7,471	11	9,433	..	..	..	..
Japan	380	97,035	514	1,77,025	598	1,56,125	52	16,427
China	2	1,271	..	..	..	..	7	2,402
Canada	2	10,801	..	138	..	..	..	269
U. S. A.	118	1,15,324	189	95,085	72	95,148	31	40,265
Australia	3	1,894	1	483	3	2,421	19	10,338
New Guinea	1	1,175	..	..	..	..	..	..
Hungary	..	..	..	..	..	239	..	..
TOTAL	7,896	35,61,489	5,466	26,82,421	4,294	22,66,440	1,380	8,80,660
GRAND TOTAL	20,636	1,00,36,924	9,904	61,12,088	7,463	48,28,732	2,649	17,96,616

APPENDIX IV

(*Vide* Paragraph 11.2)

(i) *Statement showing summary of Import Control Policy in respect of Ball Bearings for different licensing periods from Jan.-June* 1956 *to April-September*, 1960

Description	1956				1957				1957-58				1958-59				1959-60			
	January-June		July-December		January-June		July-September		October 57-March 58		April-Sept. 58		October 58-March 59		April-Sept. 59		Oct. 1959-March 60		April-Sept. 1960	
	No. of sizes	Quota	No. of sizes	Quota	No. of sizes	Quota	No. of sizes	Quota	No. of sizes	Quota	No. of sizes	Quota	No. of sizes	Quota	No. of sizes	Quota	No. of sizes	Quota	No. of sizes	Quota
		%		%		%		%		%		%		%		%		%		%
(A) *Restricted Sizes: Protected.*																				
(*i*) Up to 1″ and below	42	5	40	7½	41	10	..	Nil	39	7½	39	7½	40	2½	42	2½	42	2½	37	2½
(*ii*) Above 1″ and up to and including 2″	59	5	58	7½	56	10	..	Nil	52	7½	52	7½	55	5	55	5	55	5	53	5
Non-protected:																				
(*iii*) Above 2″ and up to 3″ bore dia.	13	5	18	7½	22	10	..	Nil	8	7½	9	7½	9	7½	10	7½	10	7½	9	7½
(B) *Non-restricted sizes: Protected:*																				
(*i*) Up to 1″	..	33⅓	..	40	..	40	..	Nil	..	40	..	40	..	40	..	40	..	40	..	40
(*ii*) Above 1″ and up to 2″	..	20	..	50	..	50	..	Nil	..	50	..	50	..	50	..	50	..	50	..	50
Non-protected:																				
(*iii*) Above 2″ and up to 3″ bore dia.	..	33⅓	..	75	..	75	..	Nil	..	50	..	50	..	50	..	50	..	50	..	50
(*iv*) Above 3″ bore dia.	..	100	..	100	..	100	..	..	..	100	..	100	..	100	..	100	..	100	..	100

(ii) *Statement showing the Import Control Policy in respect of Ball Bearings for the different licensing periods from January-June* 1956 *to April-September* 1960

Part and Serial No. of I.T.C. Schedule	Description	Policy for Established Importers									
		Jan.-June 1956	July-Dec. 1956	Jan.-June 1957	July-Sept. 1957	Oct. 57 March 1958	April-Sept. 1958	Oct. 58 March 1959	April-Sept. 1959	Oct. 59 March 1960	April-Sept. 1960
19(1)	*Ball Bearings—*				No fresh licences were issued to established importers.						
	(i) Ball bearings of 1″ in bore (internal) diameter and below as specified in Appendix XIV (I).	5% (12)	7½% (12)	10% (9)		7½% (9)	7½% (9)	2½% (9)	2½% (9)	2½% (9)	2½% (9)
	(ii) Ball bearings of 1″ in bore (internal) diameter and below other than those specified in Appendix XIV(I).	33 1/3% (12)	40% (12)	40% (12)		40% (12)	40% (12)	40% (12)	40% (12)	40% (12)	40% (12)
	(iii) Ball bearings above 1″ in bore (internal) diameter and upto and including 2″ in bore (internal) diamcter as specified in Appendix XIV(2).	5% (12)	7½% (12)	10% (9)		7½% (9)	7½% (9)	5% (9)	5% (9)	5% (9)	5% (9)
	(iv) Ball bearings above 1″ and upto and including 2″ in bore (internal) diameter other than those specified in Appendix XIV(2).	20% (12)	50% (12)	50% (12)		50% (12)	50% (12)	50% (12)	50% (12)	50% (12)	50% (12)

Part and Serial No. of I.T.C. Schedule	Description	Policy for Established Importers									
		Jan.-June 1956	July-Dec. 1956	Jan.-June 1957	July-Sept. 1957	Oct.57=March 1958	April-Sept. 1958	Oct. 58=March 1959	April-Sept. 1959	Oct. 59=March 1960	April-Sept. 1960
	(v) Ball bearings above 2″ in bore (internal) diameter upto and including 3″ as specified in Appendix XIV(3).	5% (12)	7½% (12)	10% (9)	No fresh licences were issued to established importers.	7½% (9)	7½% (9)	7½% (9)	7½% (9)	7½% (9)	7½% (9)
	(vi) Ball bearings above 2″ in bore (internal) diameter upto and including 3″ other than those Specified in Appendix XIV (3).	33 1/3% (12)	75% (12)	75% (12)		50% (12)	50% (12)	50% (12)	50% (12)	50% (12)	50% (12)
	(vii) Ball bearings above 3″ in bore (internal) diameter.	100% (12)	100% (12)	100% (12)		100% (12)	100% (12)	100% (12)	100% (12)	100% (12)	100% (12)

The figures in brackets indicate the period of validity of licences.

NOTE.—The following notes (1) to (9) relate to Serial Nos. 19(I)(i) and 19(I)(ii) and Notes (10) to (16) to Serial Nos. 19(I)(iii) and 19(I)(iv) shown in the above statement.

(1) Licences were issued subject to both quantity and value as limiting factors (the quantity was to be determined by converting the value of the licence at Rs. 1/5/- per bearing upto the licensing period January-June, 1957 and at Rs. 1·43 per bearing from the licensing period October, 1957-March, 1958 onwards).

(2) Licences were also issued subject to the condition that the licence holders informed the licensing authorities about the progress of imports.

(3) Notwithstanding anything contained in the general instructions given in the Red Book, the value for which a quota licence was granted was equal to the exact quota entitlement or (i) Rs. 15,000 in the case of item 19(I)(i) (Rs. 10,000 in the licensing period July-December, 1956) and (ii) Rs. 30,000 in the case of item 19(I)(ii), whichever was less, subject to a minimum of Rs. 500.

(4) Quota licences for ball bearings were calculated on the basis of half of best years' imports of all bearings of 1″in bore (internal) diameter and below falling under items 19(I)(i) and 19(I)(ii).

(5) Not more than 15% of the face value of licence could be utilised for the import of any single type ball bearing. In cases, however, where the value of the quota licence was Rs. 2,000 or less, ball bearings of any single type could be imported to the extent of 25% of the face value of the licence.

(6) The licence could be utilised for the import of ball bearings from Dollar area upto 20% of its face value. (In July-December, 1956 licensing period only.)

(7) A.U. licences were also issued to industrial undertakings for the requirements of ball bearings other than those mentioned in Appendix XIV (restricted varieties) for manufacturing purposes and for the maintenance of plant and machinery (upto April-September, 1958). A.U. licences were issued *ad hoc* to industrial undertakings for their requirements of ball bearings both for manufacturing purposes and for maintenance of plant and equipment. (From October, 1958-March, 1959 to April-September, 1960 licensing periods, for item 19(I)(ii) only.)

(8) Applications for grant of licences for export purposes of finished articles were considered *ad hoc* in consultation with the Develop ment Wing. (From October, 1958-March, 1959 to April-September, 1960 licensing periods, for item 19(I)(i) only.)

(9) Quota licences were not valid for import of bearings Hoffman Nos. 110, 112, 115, 117, 120, N 1025, U 110, L S7, S8, S9 or equivalent sizes of other makes. (From October, 1958-March, 1959 to April-September, 1960 licensing periods for item 19(I)(i) only.)

(10) Licences were issued subject to both quantity and value as limiting factors. (The quantity was to be determined by converting the value of the licence at Rs. 2/14/- per bearing upto the licensing period January-June, 1957 and at Rs. 3·75 per bearing from the licensing period October,1957-March 1958 onwards.)

(11) Licences were also issued subject to the condition that the licence holders informed the licensing authorities about the progress of imports.

(12) Notwithstanding anything contained in the general instructions given in the Red Book, the value for which a quota licence was granted was equal to (i) the exact quota entitlement or Rs. 15,000 whichever was less, subject to a minimum of Rs. 250, in the case of item 19(I)(iii) (Rs. 10,000 in the licensing period July-December, 1956), and (ii) the exact quota entitlement or Rs. 40,000 whichever is less, subject to a minimum of Rs. 500, in the case of item, 19(I)(iv).

(13) Quota licences for ball bearings were calculated on the basis of half of best years' imports of ball bearings above 1" in bore (internal) diameter and upto and including 2" in bore (internal) diameter falling under items 19(I)(iii) and 19(I)(iv).

(14) Not more than 15% (item 19(I)(iii)) [10% in the case of item 19(I)(iv)] of the face value of the licence could be utilised for the import of any single type ball bearing. In cases, however, where the value of of the quota licence is Rs. 2,000 or less, ball bearings of any single type could be imported to the extent of 25% (item 19(I)(iii)) [20% in the case of item 19(I)(iv)] of the face value of the licence.

(15) The licence could be utilised for the import of ball bearings from Dollar area upto 20% of its face value. (July-December, 1956 licensing period only.)

(16) A. U. licences were also issued to industrial undertakings for their requirements of ball bearings other than those mentioned in Appendix XIV (restricted varieties) for manufacturing purposes and for the maintenance of plant and machinery (upto April-September, 1958 licensing period). A. U. licences were issued *ad hoc* to industrial undertakings for their requirements of ball bearings both for manufacturing purposes as well as maintenance of plant and equipment (from October 1958-March 1959 to April-September, 1960 licensing periods).

(iii) *Statement showing types of Ball Bearings, the imports of which are restricted during the period April-September*, 1960

[Appendix XIV (1) of Red Book]

Hoffmann Licence No.	SKF No.	R & M No.	FBC No.	Bearing Dimensions		
				Bore	Outside Diameter	Width
Ball bearing of 1" in Bore (Internal) Diameter and Below Deep—Groove Single Row Radial Ball Bearings Light Series—Metric Sizes						
110	6200	LJ 10	6200	10 mm	30 mm	9 mm
112	6201	LJ 12	6201	12 mm	32 mm	10 mm
115	6202	LJ 15	6202	15 mm	35 mm	11 mm
117	6203	LJ 17	6203	17 mm	40 mm	12 mm
120	6204	LJ 20	6204	20 mm	47 mm	14 mm
125	6205	LJ 25	6205	25 mm	52 mm	15 mm
Medium Series—Metric Sizes						
310	6300	MJ 10	6300	10 mm	35 mm	11 mm
312	6301	MJ 12	6301	12 mm	37 mm	12 mm
315	6302	MJ 15	6302	15 mm	42 mm	13 mm
317	6303	MJ 17	6303	17 mm	47 mm	14 mm
320	6304	MJ 20	6304	20 mm	52 mm	15 mm
325	6305	MJ 25	6305	25 mm	62 mm	17 mm

Light Series—Inch Sizes						
LS 5	RLS 4	LJ 1/2	LS 5	1/2″	1·5/16″	3/8″
LS 7	RLS 5	LJ 5/8	LS 7	5/8″	1·9/16″	7/16″
LS 8	RLS 6	LJ 3/4	LS 8	3/4″	1·7/8″	9/16″
LS 9	RLS 7	LJ 7/8	LS 9	7/8″	2″	9/16″
LS 10	RLS 8	LJ 1	LS 10	1″	2·1/4″	5/8″
Medium Series—Inch Sizes						
MS 8	RMS 6	MJ 3/4	MS 8	3/4″	2″	11/16″
MS 9	RMS 7	MJ 7/8	MS 9	7/8″	2·1/4″	11/16″
MS 10	RMS 8	MJ 1	MS 10	1″	1·1/2″	3/4″
Light Series—Inch Size						
S 3	EE 3	KLNJ 3/8	EE 5	3/8″	7/8″	7/32″
Narrow Series—Inch Sizes						
S 7	EE 5	KLNJ 5/8	EE 5	5/8″	1·3/8″	9/32″
S 8	EE 6	KLNJ 3/4	EE 6	3/4″	1·5/8″	5/16″
S 9	EE 8	KLNJ 7/8	EE 8	7/8″	1·7/8″	3/8″

All the above bearings with special features such as :—

(i) A groove in the outer ring with or without loose ring in the groove.

(ii) A dust shield or plate on one or both sides of the bearings.

(iii) Any combination of items (1) and (2) above will be considered as restricted bearings and can only be imported within the quota and the conditions prescribed in the Red Book for restricted sizes.

Hoffmann Licence No.	SKF No.	R & M No.	FBC No.	Bearing Dimensions		
				Bore	Outside Diameter	Width
Extra light Series—Single Thrust Bearings—Inch Sizes						
EW 5/8 . . .	B 5	FT 5/8	EW 5/8	5/8″	1·3/32″	9/32″
EW 3/4 . . .	B 6	FT 3/4	EW 3/4	3/4″	1·5/16″	9/32″
EW 7/8 . . .	B 7	FT 7/8	EW 7/8	7/8″	1·1/2″	3/8″
EW 1 . . .	B 8	FT 1	EW 1	1″	1·5/8″	3/8″
Light Series—Single Thrust Bearings—Inch Size						
W 1 . . .	O 8	LT 1	W 1	1″	1·25/32″	5/8″
Light Series—Combined Radial and One Directional Thrust Bearings—Metric Size						
120 ACD . . .	7204	LJT 20	7204	20 mm	47 mm	14 mm
Light Series—Double Row Self-Aligning Ball Bearings—Metric Size						
U 110 . . .	1200	NLJ 10	P 200	10 mm	30 mm	9 mm
Medium Series—Self-Aligning Double Row Ball Journel Bearings—Metric Size						
U 325 . . .	1305	NMJ 25	P 305	25 mm	62 mm	17 mm

Special Bearings—Metric Size

N 1025 . . .	EL 9	..	..	9 mm	24 mm	7 mm

Light Series—Double Row Self—Aligning Ball Bearings-Inch Sizes

ULS 8 . .	RL 6	NLJ 3/4	RL 6	3/4″	1·7/8″	9/16
ULS 9 . . .	RL 7	NLJ 7/8	RL 7	7/8″	2″	9/16
ULS 10 . . .	RL 8	NLJ 1	RL 8	1″	2·1/4″	5/8

Light Series—Double Row Self-Aligning Adaptor Bearings—Inch Size

UT 130 E . . .	1506 E	ANLM	1 P 506	1″	62	16 mm

Ball Bearing above 1″ in Bore (Internal) Diameter and upto and including 2″ in Bore (Internal) Diameter—Deep Groove Single Row Radial Ball Bearings

Light Series—Metric Sizes

140-W (Extended inner) ..	..	..	..	40 mm	80 mm	18 mm
130	6206	LJ 30	6206	30 mm	62 mm	16 mm
135	6207	LJ 35	6207	35 mm	72 mm	17 mm
140	6208	LJ 40	6208	40 mm	80 mm	18 mm
145	6209	LJ 45	6209	45 mm	85 mm	19 mm
150	6210	LJ 50	6210	50 mm	90 mm	20 mm

Hoffmann Licence No.	SKF No.	R & M No.	FBC No.	Bearing Dimensions		
				Bore	Outside Diameter	Width
Medium Series—Metric Sizes						
330	6306	MJ 30	6306	30 mm	72 mm	19 mm
335	6307	MJ 35	6307	35 mm	80 mm	21 mm
340	6308	MJ 40	6308	40 mm	90 mm	23 mm
345	6309	MJ 45	6309	45 mm	100 mm	25 mm
350	6310	MJ 50	6310	50 mm	110 mm	27 mm
Light Series—Inch Sizes						
LS 11 . . .	RLS 9	LJ 1·1/8	LS 11	1·1/8″	2·1/2″	5/8″″
LS 12 . . .	RLS 10	LJ 1·1/4	LS 12	1·1/4″	2·3/4″	11/16″
LS 12½ . . .	RLS 11	LJ 1·3/8	LS 12½	1·3/8″	3″	11/16″
LS 13 . . .	RLS 12	LJ 1·1/2	LS 13	1·1/2″	3·1/4″	3/4″
LS 13½ . . .	RLS 13	LJ 1·5/8	LS 13½	1·5/8″	3·1/2″	3/4″
LS 14 . . .	RLS 14	LJ 1·3/4	LS 14	1·3/4″	3·3/4″	13/16″
LS 14½ . . .	RLS 14	LJ 1·7/8	LS 14½	1·7/8″	4″	13/16″
LS 15 . . .	RLS 16	LJ 2	LS 15	2″	4″	13/16″

Medium Series—Inch Sizes

MS 11 . . .	RMS 9	MJ 1·1/8	MS 11	1·1/8″	2·13/16″	13/16
MS 12 . . .	RMS 10	MJ 1·1/4	MS 12	1·1/4″	3·1/8″	7/8″
MS 12½ . . .	RMS 11	MJ 1·3/8	MS 12½	1·3/8″	3·1/2″	7/8″
MS 13 . . .	RMS 12	MJ 1·1/2	MS 13	1·1/2″	3·3/4″	15/16″
MS 13½ . . .	RMS 13	MJ 1·5/8	MS 13½	1·5/8″	4″	15/16″
MS 14 . . .	RMS 14	MJ 1·3/4	MS 14	1·3/4″	4·1/4″	1·1/16″
MS 14½ . .	RMS 15	MJ 1·7/8	MS 14½	1·7/8″	4·1/2″	1·1/16″
MS 15 . . .	RMS 16	MJ 2	MS 15	2″	4·1/2″	1·1/16″

All the above bearings with special features such as,

(1) a groove in the outer ring with or without loose ring in the groove

(2) a dust shield or plate on one or both sides of the bearings

(3) any combination of items (1) and (2) above

will be considered as restricted bearings and can only be imported within the quota and the conditions prescribed in the Red Book for restricted sizes.

Light Series—Double Row Self-Aligning Ball Bearing—Metric Sizes

U 130 . . .	1206	NLJ 30	P 206	30 mm	62 mm	16 mm
U 140 . . .	1208	NLJ 40	P 208	40 mm	80 mm	18 mm
U 145 . . .	1209	NLJ 45	P 209	45 mm	85 mm	19 mm

Hoffmann Licence No.	SKF No.	R. & M. No.	FBC No.	Bearing Dimensions		
				Bore	Outside Diameter	Width
Medium Series—Double Row Self-Aligning Ball Bearings—Metric Sizes						
U 330	1306	NMJ 30	P 306	30 mm	72 mm	19 mm
Light Wide Series—Double Row Self-Aligning Ball Bearings—Metric Sizes						
U 140 W	2208	NLDJ 40	P 3208	40 mm	80 mm	23 mm
U 145 W	2209	NLDJ 45	P 3209	45 mm	85 mm	23 mm
Light Series—Single Thrust Bearings—Inch Sizes						
LM 30	51206	LT 30	51206	30	53	16
Light Series—Double Row Self-Aligning Adapter Bearings—Inch Sizes						
UT 140 E	1508 E	ANLM 1¼	P 507	1·1/4″	80 mm	18 mm
UT 145 E	1509 E	ANLM 1½	P 508	1·1/2″	85 mm	19 mm
UT 155 E	1511 E	ANLM 2	P 510	2″	100 mm	21 mm
Light Wide Series—Double Row Self-Aligning Adapter Bearings—Inch Sizes						
	2508 E	..	..	1·1/4″	80 mm	23 mm
	2509 E	..	..	1·1/2″	85 mm	23 mm
	2511 E	..	..	2″	100 mm	25 mm

Light Series—Double Row Self-Aligning Adapter Bearings—Metric Sizes

UT 140	1508	ANLM 35	..	35 mm	80 mm	18 mm
UT 145	1509	ANLM 40	..	40 mm	85 mm	19 mm
UT 155	1511	ANLM 50	..	50 mm	100 mm	21 mm

Light Wide Series—Double Row Self-Aligning Adapter Bearings—Metric Sizes

	2508	..	..	35 mm	80 mm	23 mm
	2509	..	..	40 mm	85 mm	23 mm
	2511	..	..	50 mm	100 mm	25 mm

Medium Series—Single Row Angular Contact Ball Bearings—Metric Sizes

350 ACD	7310	MJT 50	..	50 mm	110 mm	27 mm
340 ACD	7308	MJT 40	..	40 mm	90 mm	23 mm

Heavy Series—Single Row Angular Contact Ball Bearings—Metric Sizes

545 ACD	7409	HJT 45	..	45 mm	120 mm	29 mm

Light Series—Double Row Self-Aligning Ball Bearings—Inch Sizes

ULS 12	RL 10	NLJ 1¼	RL 10	1¼″	2¼″	11/16″
ULS 13	RL 12	NLJ 1½	RL 12	1½″	3¼″	3/4″
ULS 13¾	RL 13	NLJ 1	RL 13	1.5/8″	3½″	3/4″
ULS 11	RL 9	NLJ 1.1/8	RL 9	1.1/8″	2½″	5/8″

Hoffmann Licence No.	SKF No.	R. & M. No.	FBC No.	Bearing Dimensions		
				Bore	Outside Diameter	Width
Ball bearings above 2″ bore (internal) diameter and upto and including 3						
Light Series—single thrust bearings—Inch Size						
W 3 . . .	024	LT 3	W 3	3″	4.3/8″	1.1/8″
Light Standard Series—double row self-aligning adapter bearing—Inch size						
UT 175 E . .	1515 E	ANLM 2½	P 513	2½″	130 mm	25 mm
UT 185 E . . .	1517 E	ANLM 3	P 515	3″	150 mm	28 mm
Light Wide Series—double row self-aligning adapter bearings—Inch size						
	2515 E	..	..	2½″	130 mm	31 mm
Light Standard Series—double row self-aligning adapter bearings—Metric size						
UT 175	1515	ANLM 65	..	65 mm	130 mm	25 mm

Light Wide Series—double row self-aligning adapter bearings—Metric size

	2515	..	..	65 mm	130 mm	1 mm

Light Series—double row self-aligning ball bearings—Metric size

U 175. . . .	1215	NLJ 75	P 215	75 mm	130 mm	25 mm

Light Wide Series—double row self-aligning ball bearings—Metric size

U 175 W . . .	2215	NLDJ 75	P 3215	75 mm	130 mm	31 mm

Light Series—combined radial and one directional thrust bearings—Metric size

160 ACD . . .	7212	LJT 60	7212	60 mm	110 mm	22 mm

N.B.—(i) The dimensions shown against all adapter ball bearings as shown in Appendix XIV (2) and (3) are the internal bore of the sleeves fitted to the bearing and not the internal bore of the bearing without the sleeves. As such, all adapter ball bearings as shown in Appendix XIV (2) and (3) can only be imported within the restricted quota irrespective of the fact whether they are imported with or without the sleeves. The face value restriction for any single type of adapter bearings will hence forward deem to apply jointly for both inch sizes and millimeter sizes in case of adapter bearings. In other words ceiling under the face value for each size will be a joint ceiling for inch as well as the corresponding millimeter size. This will also apply to non-restricted types of adapter ball bearings.

(ii) In addition to the four makes given in the appendices, *viz.*, Hoffmann, SKF, R. & M. and FBC, ball bearings of other makes falling within the specific sizes mentioned in the appendices will also be treated as 'restricted' types and will be licensed within the restricted quota.

APPENDIX V

[*Vide* Paragraph 14.1]

Statement showing the c. i. f. prices costs of imported ball bearings

(per bearing)

Source of information	Serial No. of Ball Bearing of different makes		Origin of import	Date of import	C.i.f. prices	Customs duty	Clearing Charges	Landed cost
	Hoffman	S.K.F.			Rs.	Rs.	Rs.	Rs.
1	2	3	4	5	6	7	8	9
			Ball Bearings of 1" bore diameter and below					
1. Collector of Customs, Bombay	110	6200	W. Germany	28-12-56	1.36	1·29	0·13	2·78
	115	6202	W. Germany .	28-12-59	1·41	1·22	0·13	2·76
	..	..	Austria . .	24-11-59	1·57	1·49	0·15	3·21
	117	6203	W. Germany .	28-12-59	1·56	1·48	0·15	3·19
	120	6204	W. Germany .	24-11-59	1·80	1·71	0·18	3·69
	125	6205	W. Germany .	30-3-60	1·82	1·73	0·18	3·73
			Austria . .	20-4-60	1·82	1·73	0·18	3·73
			Sweden . .	20-4-60	1·75	1·67	0·17	3·59
			Italy . .	28-4-60	1·41	1·34	0·14	2·89

		U.S.S.R. . .	3-5-60	1·60	1·52	0·16	3·28
LS-8	RLS-6	W. Germany .	4-4-60	1·95	1·85	0·19	3·99
		Austria . .	28-4-60	1·80	1·71	0·13	3·64
MS-8	RMS-6	Austria .	28-4-60	2·03	1·93	0·20	4·16
LS-10	RLS-8	Austria . .	26-4-60	2·18	2·07	0·21	4·46
		W. Germany .	30-3-60	2·18	2·07	0·21	4·46
		Italy . .	7-4-60	2·70	2·57	0·26	5·53
MS-10	RMS-8	W. Germany .	30-3-60	2·55	2·42	0·25	5·22
		Ball Bearings above 1″ and upto 2″					
LS-11	RLS-9	W. Germany .	23-4-60	2·30	2 18	0·22	4·70
MS-11	RMS-9	W. Germany .	24-3-60	3·03	2·90	0·30	6·23
LS-13	RLS-12	Austria . .	28-4-60	3·70	3·52	0·36	7·58
310	6300	U.S.S.R. . .	2-5-60	1·10	1·05	0·11	2·26
		Italy . .	12-4-60	1·48	1·41	0·14	3·03
320	6304	W. Germany .	30-3-60	1·95	1·85	0·19	3·99
		Italy . .	7-4-60	2·75	2·61	0·27	5·63
		Austria . .	19-4-60	1·95	1·85	0·19	3·99
320	6304	Sweden . .	20-4-60	1·83	1·76	0·18	3·77
		U.S.S.R. . .	2-5-60	1·60	1·52	0·16	3·28

1	2	3	4	5	6	7	8	9
1. Collector of Customs, Bombay—*contd.*	325	6305	Italy . . .	25-3-60	2·80	2·71	0·27	5·78
			W. Germany .	30-3-60	2·30	2·18	0·22	4·70
			Austria . .	20-4-60	2·30	2·18	0·22	4·70
			Sweden . .	20-4-60	2·24	2·13	0·22	4·59
			U.S.S.R. . .	23-4-60	1·94	1·84	0·19	3·97
	S-3	EE-3	W.Germany .	25-3-60	1·15	1·09	0·06	2·30
	330	6306	W. Germany .	19-4-60	3·67	3·49	0·36	7·52
			U.S.S.R. . .	19-4-60	2·50	2·37	0·24	5·11
			Sweden . .	20-4-60	2·85	2·71	0·28	5·84
			Austria . .	20-4-60	3·02	2·87	0·29	6·18
	335	6307	W. Germany .	23-4-60	3·86	3·67	0.37	7.90
			Austria . .	28-4-60	3·86	3.67	0.37	7.90
			Sweden . .	19-4-60	4·10	3·90	0·40	8·40
			Adapter Bearings above 1″ and upto 2″ bore.					
2. Collector of Customs, Calcutta	UT145E	1509E	Sweden . .	20-4-60	5·10	4·85	0·25	10·20
	110	..	G. Britain . .	May 1959	1·56	..	..	3·07
	112	..	G. Britain . .	May 1959	1·56	..	..	3·07

115	..	G. Britain	.	May 1959	1·81	..	..	3·57
117	..	G. Britain	.	May 1959	1·97	..	..	3·88
120	..	G. Britain	.	May 1959	2·25	..	..	7·10
125	..	G. Britain	.	Jan. 1960	2·70	..	..	5·32
310	..	G. Britain	.	Jan. 1960	2·28	..	..	4·49
320	..	G. Britain	.	Jan. 1960	2·47	..	..	4·87
325	..	G. Britain	.	Jan. 1960	3·28	..	..	6·46
330	..	G. Britain	.	Jan. 1960	3·83	..	..	7·54
335	..	G. Britain	.	Nov. 1959	4·66	..	..	9·18
MS-8	..	G. Britain	.	Nov. 1959	2·53	..	..	4·98
MS-10	..	G. Britain	.	Jan. 1960	3·31	..	..	6·51
MS-11	..	G. Britain	.	Jan. 1960	4·06	..	..	8·00
LS-8	..	G. Britain	.	Jan. 1960	2·25	..	..	4·43
LS-10	..	G. Britain	.	Nov. 1959	2·78	..	..	5·47
LS-11	..	G. Britain	.	Nov. 1959	3·25	..	..	6·40
LS-13	..	G. Britain	.	Nov. 1959	4·55	..	..	8·96
S-3	..	G. Britain	.	Jan. 1960	1·58	..	..	3·11
UT-140E	..	G. Britain	.	Nov. 1959	8·95	..	..	17·62

1	2	3	4	5	6	7	8	9
2. Collector of Customs, Calcutta—*contd.*	UT-145E	..	G. Britain . .	Jan. 1960	9·83	..	..	19·36
	W ½	..	Italy . . .	Dec. 1959	1·12	..	..	2·36
	W/3/8	..	Italy . . .	Dec. 1959	1·12	..	..	2·36
	W/1/4	..	Italy . . .	Dec. 1959	1·19	..	..	2·59
	330	..	Sweden . .	April 1960	2·96	..	..	5·81
	335	..	Sweden . .	April 1960	3·49	..	..	6·86
	340	..	Sweden . .	April 1960	4·49	..	..	8·83
	140	..	Sweden . .	April 1960	3·21	..	..	5·86
	U145(1209K)	..	Sweden . .	April 1960	5·29	..	..	10·67
	LS-15AC	..	W. Germany .	May 1960	8·71	..	..	17·42
	145(6209K)	..	W. Germany .	May 1960	2·36	..	..	4·72
	140ACD	..	W. Germany .	May 1960	5·39	..	..	10·78
	525	..	W. Germany .	May 1960	4·82	..	..	9·64
	W1	..	W. Germany .	May 1960	2·18	.	..	4·36
	A 20	..	W. Germany .	May 1960	2·45	..	..	4·90
	UMS-13	..	W. Germany .	May 1960	7·63	..	..	15·26

3. Collector of Customs, Madras	110	6200	W. Germany	..	1·16	1·11	0·02	2·29
	112	6201	W. Germany	..	1·22	1·12	0·02	2·36
	115	6202	W. Germany	..	1·31	1·25	0·02	2·58
	117	6203	W. Germany	..	1·41	1·34	0·02	2·77
	120	6204	W. Germany	..	1·69	1·61	0·02	3·32
	310	6300	W. Germany	..	1·31	1·25	0·02	2·58
	320	6304	W. Germany	..	1·90	1·81	0·02	3·73
	325	6305	W. Germany	..	2·56	2·44	0·03	5·03
	330	6306	W. Germany	..	3·66	3·48	0·03	7·17
	335	6307	W. Germany	..	4·51	4·29	0·03	8·83
	125	6205	W. Germany	..	1·93	1·84	0·02	3·79

(per bearing

Source of information	Serial No. of Ball Bearings of different makes			Origin of import	Date of import	C.I.F. price	Customs duty	Clearing Charges	Landed cost
	Hoffman	S.K.F.	R & M No.			Rs.	Rs.	Rs.	Rs.
1	2	3	4	5	6	7	8	9	10
Importers									
4. Joshina & Thakker Engg. Stores, Surat	320	6304	..	Germany .	25-10-59	1·84	1·80	0·10	3·74
	MS8	RMS.6.FAG	..	Germany .	26-10-59	2·48	2·37	0·10	4·95
	MS 10	RMS.10.FAG	..	Germany .	26-10-59	3·60	3·42	0·12	7·14
	LS 8	RLS.6.FAG	..	Germany .	26-10-59	1·99	1·90	0·06	3·95
	LS 10	RLS.8.FAG	..	Germany .	26-10-59	2·62	2·48	0·09	5·19
5. Roberts, Mclean & Co. (P) Ltd., Calcutta.	100	..	LJ. 10	G. Britain .	29-5-59	1·56	1·48	0·03	3·07
	112	..	LJ. 12	G. Britain .	29-5-59	1·56	1·48	0·03	3·07
	115	..	LJ. 15	G. Britain .	29-5-59	1·81	1·72	0·04	3·57

117 ..	LJ. 17	G. Britain	.	29-5-59	1·97	1·87	0·04	3·88
120 ..	LJ. 20	G. Britain	.	29-5-59	2·25	2·14	0·04	4·43
125 ..	LJ. 25	G. Britain	.	11-1-60	2·70	2·57	0·05	5·32
LS 8 ..	LJ. 3/4″	G. Britain	.	11-1-60	2·25	2·14	0·04	4·43
LS 10 ..	LJ. 1″	G. Britain	.	6-11-59	2·78	2·64	0·05	5·47
LS 11 ..	LJ. 1 1/8″	G. Britain	.	6-11-59	3·25	3·09	0·06	6·40
LS 13 ..	LJ. 1½″	G. Britain	.	6-11-59	4·55	4·32	0·09	8·96
310 ..	MJ. 10	G. Britain	.	12-1-56	2·28	2·17	0·04	4·49
320 ..	MJ. 20	G. Britain	.	11-1-60	2·47	2·35	0·05	4·87
325 ..	MJ. 25	G. Britain	.	1-11-60	3·28	3·12	0·06	6·46
330 ..	MJ. 30	G. Britain	.	11-1-60	3·83	3·64	0·07	7·54
335 ..	MJ. 35	G. Britain	.	6-11-59	4·66	4·43	0·09	9·18
MS 8 ..	MJ. ¾″	G. Britain	.	6-11-59	2·53	2·40	0·05	4·98
MS 10 ..	MJ. 1″	G. Britain	.	11-1-60	3·31	3·14	0·06	6·51
MS 11 ..	MJ 1 1/8″	G. Britain	.	11-1-60	4·06	3·86	0·08	8·00
S-3 ..	KLNJ. 3/8″	G. Britain	.	11-1-60	1·58	1·50	0·03	3·11
UT-140E ..	ANLM. 1¼″	G. Britain	.	6-11-59	8·95	8·50	0.17	17·62
UT-145E ..	ANLM. 1½″	G. Britain	.	11-1-60	9·83	9·34	0·19	19·36

1	2	3	4	5	6	7	8	9	10
6. The S.K.F. Ball Bearing Co. (P) Ltd., Bombay	110	..	..	Sweden . .	Current	1·10	95%	2½% of c.i.f. price	2·18
	112	..	..	Sweden . .	..	1·18	..	..	2·34
	115	..	..	Sweden . .	..	1·24	..	..	2·46
	117	..	..	Sweden . .	..	1·35	..	..	2·63
	120	..	..	Sweden . .	..	1·64	..	..	3·25
	125	..	..	Sweden . .	..	1·80	..	..	3·56
	310	..	..	Sweden . .	..	1·26	..	..	2·50
	320	..	..	Sweden . .	..	1·99	..	..	3·95
	325	..	..	Sweden . .	..	2·56	..	..	5·07
	330	..	..	Sweden . .	..	3·20	..	..	6·35
	335	..	..	Sweden . .	..	3·76	..	..	7·45
	N-1025	..	..	Sweden . .	..	1·20	..	..	2·40
	MS-8	..	..	U.K. . .	..	2·31	..	..	4·57
	MS-10	..	..	U.K. . .	..	3·25	..	..	6·45
	MS-11	..	..	U.K. . .	..	4·33	..	..	7·59
	LS-8	..	..	U.K. . .	..	1·92	..	..	3·81

	LS-10	U.K. . ..	2·53	..	..	5·01
	LS-11	U.K.	3·08	..	..	6·11
	LS-13	U.K.	4·87	..	..	9·86
	S-3	U.K.	1·14	..	..	2·27
	UT-140E	Sweden	7·60	..	..	15·08
	UT-145E	Sweden	8·35	..	..	16·57
7. The All India Ball Bearing Merchants Assn., Bombay	110	Germany or Austria.	Letter dated 4-6-60	1·31	95%	2%	2·60
	112	.. ..	..	1·31	..	..	2·60
	115	.. ..	..	1·31	95%	2%	2·60
	117	.. ..	..	1·48	..	..	2·90
	120	.. ..	..	1·70	..	..	3·50
	125	.. ..	..	1·91	..	..	3·80
	320	.. ..	..	2·21	..	..	4·40
	325	.. ..	..	2·98	..	..	5·95
	MS-8	.. ..	..	2·51	..	..	5·00
	MS-10	.. ..	..	3·65	..	..	7·25
	LS-8	.. ..	..	2·05	..	..	4·10
	LS-10	.. ..	..	2·65	..	..	5·25

1	2	3	4	5	6	7	8	9	10
7. The All India Ball Bearing Merchants Assn., Bombay—*contd.*	S-3	..	..	..	..	1·45	..	..	2·00
	N1025	..	..	..	..	1·21	..	..	2·40
	310	..	..	..	..	3·66	..	..	2·85
	335	..	..	..	..	4·51	..	..	9·00
	MS-11	..	..	..	..	4·47	..	..	8·90
	LS-11	..	..	..	..	2·93	..	..	5·85
	LS-13	..	..	..	..	4·92	..	..	9·80
	UT140E	..	..	..	..	8·00	..	..	16·00
	UT145E	..	..	..	..	9·00	..	..	18·00
8. K. P. Joshi & Co., Bombay	110	..	..	..	..	1·31	95%	1%	2·55
	112	..	..	..	..	1·31	95%	1%	2·55
	115	..	..	Austria . .	1959	1·56	95%	1%	3·00
	117	..	..	Austria . .	1959	1·56	95%	1%	3·00
	120	..	..	Austria . .	1959	1·78	95%	1%	3·45
	125	..	..	..	..	1·78	95%	1%	3·45
	320	..	..	..	..	1·85	95%	1%	3·60
	325	..	..	Austria . .	1959	2·34	95%	1%	4·57

	330	..	..	..	..	2·92	95%	1%	5·70
	335	..	..	..	..	3·73	95%	1%	7·60
	MS-8	..	..	..	..	2·00	95%	1%	3·90
	MS-10	..	..	..	..	2·47	95%	1%	4·82
	MS-11	..	..	Austria . .	1959	2·93	95%	1%	5·70
	LS-11	..	..	Austria . .	1959	2·21	95%	1%	4·20
	LS-13	..	..	Austria . .	1959	3·05	95%	1%	6·70
	310	..	..	..	..	1·04	95%	1%	2·83
	UT175E	..	..	Austria . .	1959	20·00	10%	1½%	17·60
	UT 185E	..	..	Austria . .	1959	26·00	10%	1½%	23·10
9. C. C. Vaswani & Co., Bombay	115	6202	..	Austria, Italy (Quotations)	..	1·47	..	..	3·00
	117	6203	..	Do.	..	1·60	..	..	3·25
	120	6204	..	Do.	..	1·87	..	..	3·75
	125	6205	..	Do.	..	2·00	..	..	4·00
	320	6304	..	Do.	..	2·13	..	..	4·25
	325	6305	..	Do.	..	2·53	..	..	5·00
	330	6306	..	Do.	..	3·33	..	..	6·65
	335	6307	..	Do.	..	4·27	..	..	8·50
	MS-8	RMS-6	..	Do.	..	2·27	..	..	4·60

1	2	3	4	5	6	7	8	9	10
9. C. C. Vaswani & Co., Bombay—*contd.*	MS-10	RMS-8	..	Austria/Italy (Quotations)	..	2·80	..	..	5·60
	MS-11	RMS-9	..	Do.	..	3·33	..	..	6·65
	LS-8	RLS-6	..	Do.	..	1·87	..	..	3·75
	LS-10	RLS-8	..	Do.	..	2·40	..	..	4·80
	LS-11	RLS-9	..	Do.	..	2·53	..	..	5·00
	LS-13	RLS-12	..	Do.	..	4·13	..	..	8·25
	310	6300	..	Do.	..	1·60	..	..	3·25
10. Dhirajlal & Co., Bombay	110	..	..	Quotations (country of origin not specified)	..	1·31	..	..	2·50
	112	..	..	Do.	..	1·31	..	..	2·50
	115	..	..	Do.	..	1·31	..	..	2·50
	117	..	..	Do.	..	1·42	..	..	2·60
	125	..	..	Do.	..	1·78	..	..	3·20
	320	..	..	Do.	..	2·08	..	..	4·10
	325	..	..	Do.	..	2·25	..	..	4·15
	330	..	..	Do.	..	2·97	..	..	5·75
	MS-8	..	..	Do.	..	2·03	..	..	3·90
	335	..	..	Do.	..	3·81	..	..	7·00
	MS-11	..	..	Do.	..	2·97	..	..	5·75
	310	..	..	Do.	..	1·42	..	..	2·60

APPENDIX VI

[*Vide* paragraph 15.5]

Statement showing the selling prices (nett) charged by National Engineering industries Ltd., in 1956 and at present

Brg. No.	Selling prices effective from 18-10-56	Current price
1	2	3
	Rs.	Rs.
N 1025	2 10 3	2·64
110	2 14 0	2·89
112	3 0 9	3·05
115	3 4 0	3·25
117	3 11 0	3·69
120	4 3 6	4·22
125	5 0 3	5·02
130	6 4 9	6·30
135	13 2 0	13·12
140	14 14 6	14·91
145	16 4 0	16·25
150	25 6 9	19·24
140W	16 0 0	16·00
310	3 2 0	3·12
312	3 6 0	3·37
315	3 13 0	3·81
317	4 3 6	4·22
320	5 0 6	5·03
325	6 6 0	6·37
330	13 13 0	13·81
335	16 6 0	16·37
340	20 0 3	20·02
345	26 15 0	26·94
350	38 7 9	31·75
540	35 7 0	31·90
LS 5	3 1 0	3·06
LS 7	3 7 3	3·45
LS 8	4 6 3	4·39
LS 9	4 13 9	4·86
LS 10	6 0 3	6·02
LS 11	6 11 0	6·69

1	2	3
	Rs.	Rs.
LS 12	12 7 0	12·44
LS 12½	13 8 9	13·55
LS 13	15 8 9	15·55
LS 13½	16 13 3	16·83
LS 14	18 15 6	18·97
LS 14½	23 15 9	23·98
LS 15	23 15 9	23·98
MS 7	4 5 3	4·33
MS 8	5 7 6	5·47
MS 9	6 2 3	6·14
MS 10	7 7 0	7·44
MS 11	14 6 3	14·39
MS 12	15 15 6	15·97
MS 12½	18 11 0	18·69
MS 13	20 7 3	20·45
MS 13½	26 3 9	26·23
MS 14	28 9 0	28·44
MS 14½	31 2 3	31·14
MS 15	31 2 3	31·14
S 3	2 15 9	2·98
S 7	3 0 0	3·00
S 8	3 7 0	3·44
S 9	4 0 9	4·05
EW 5/8	5 0 3	5·02
EW 3/4	5 6 3	5·39
EW 7/8	5 12 0	5·75
EW 1	5 14 9	5·92
EW 1·1/8	6 5 3	6·33
W 1/2	6 8 0	6·50
W 5/8	6 14 6	6·91
W 3/4	7 6 3	7·39
W 1	8 4 9	8·30
W 1·1/4	9 11 0	9·69
W.1·1/2	10 15 3	10·95
W 2	29 15 9	14·95
W. 2·1/2	24 1 9	19·89
W. 3	29 15 9	24·73
MW 1·1/2	19 5 3	19·33
LM 30	9 12 0	9·75

1	2	3
	Rs.	Rs.
125 K	5 12 3	5·33
130 K	7 3 9	6·69
135 K	15 1 6	13·94
140 K	17 2 3	15·84
145 K	18 11 0	17·27
150 K	29 3 9	20·44
140 Location	17 2 6	17·16
325 K	7 5 3	6·77
330 K	15 14 3	14·67
335 K	18 13 3	17·39
340 K	23 0 3	21·27
345 K	30 15 9	28·62
350 K	44 4 0	33·74
540 K	40 12 0	33·90
LS 10 K	..	6·40
LS 11 K	7 11 0	7·11
LS 12 K	14 4 9	13·22
MS 10 K	8 8 9	7·90
MS 12 K	15 8 9	16·97
135 KP	17 1 0	15·09
145 KP	21 2 0	18·69
U 110	4 0 0	4·00
U 130	12 14 3	9·67
U 140	18 12 0	18·75
U 145	21 2 0	21·12
U 155	27 14 6	27·91
U 175	39 13 0	39·81
U 185	51 6 0	51·37
U 325	10 3 9	10·19
U 330	17 7 6	17·47
ULS 8	5 7 6	5·47
ULS 9	6 2 0	6·12
ULS 10	7 11 3	7·70
ULS 11	11 5 0	9·90
ULS 12	15 11 0	15·69
ULS 13	19 3 9	19·23
ULS 13·1/2	21 3 3	21·20
UT 130 E	21 2 0	13·73
UT 140 E	28 11 0	23·67

1	2	3
	R	Rs.
UT 145 E . . .	31 3 0	25·73
UT 155 E	36 1 3	31·57
UT 175 E	50 3 9	43·95
UT 185 E	63 14 6	55·92
ULP 1	30 12 0	..
ULP 1·1/4	39 8 0	..
ULP 1·1/2	48 4 0	..
ULP 2	51 10 0	..
ULP 2·1/2	73 8 0	..
ULP 3	91 8 0	..
117 AC	5 6 0	5·37
120 AC	6 12 6	6·16
160 AC	39 14 0	30·87
340 AC	26 13 3	26·83
350 AC	35 7 9	35·48
545 AC	41 0 3	41·02

सत्यमेव जयते

GIPN—S3—15 T. C. Bom./60—21-3-61—450.