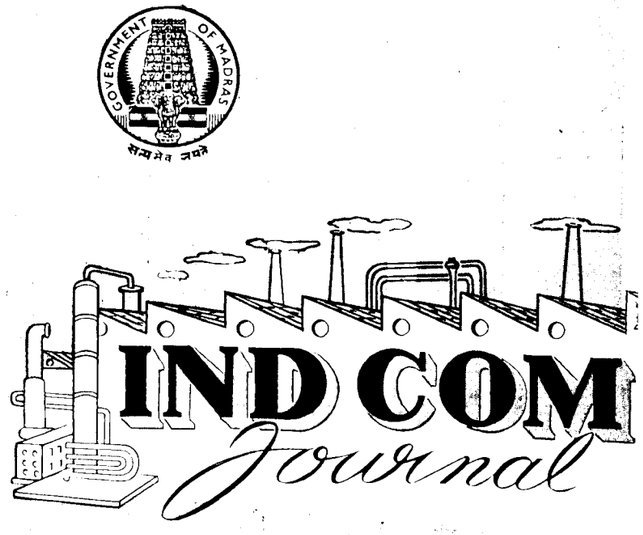
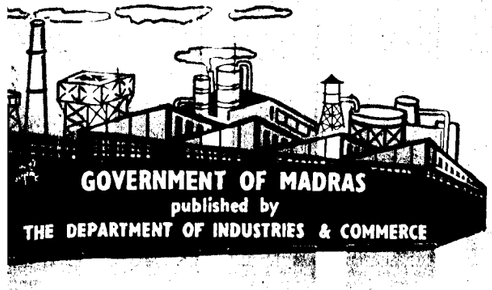


IND COM *Journal*

Volume XVII *No.* 4

October-December 1962



IND COM Journal

Vol. XVII ... OCTOBER - DECEMBER 1962 ... No. 4

IN THIS ISSUE

Industrial Design Cell

The Work of Industrial Design :

The purpose of industrial design is to make the best possible product. An excellent product is one which functions well, has strong aesthetic appeal and is economical and convenient to manufacture. The product designer makes a study of the physical abilities of the user in order to determine the product's shape and the location of elements such as control knobs, levers, switches, instruction panels, labels, handles, wheels and other mechanical parts for convenient, but correct and safe operation. All of these considerations together with the choice of colour, material and finishes should be combined in such a way that the product acquires that appearance which most clearly expresses its function. In simpler items, we may say that a product should look like what it is and clearly reveal how it works. In addition to its functional appearance, the product should have a strong aesthetic appeal, which attracts customers and encourages proper care by the user.

From the manufacturer's point of view, the most important purpose of industrial design is to design the product so that it is economical and convenient to manufacture. A good design can mean significant savings in skilled labour, number of production operations, quantity and quality of materials. However, if such savings are made they must be in proper proportions relative to the end use and price of the product. These savings are best accomplished when the designer has a good understanding of the machines, workers and the existing production methods of the manufacturer.

All the thought which goes into designing a product very much influences and, in turn, is influenced by :

1. Production facilities (type and precision of machines).
2. Abilities of the workers.
3. Availability of raw materials and component parts.
4. Interchangeability of parts.
5. Production costs and market price.

These factors vary from manufacturer to manufacturer, therefore, demanding a different solution according to their various combinations. Thus, it can be seen that the industrial designer must consider many factors, some of which narrowly limit his work.

Development and scope of industrial design

Before the Industrial Revolution in the Western countries, all products were hand produced by craftsmen. The craftsman has, throughout the history of mankind, been the designer, producer and salesman for his own

products. In many cases he has copied his designs from his father or other predecessors just as many present day manufacturers copy designs from others. However, it can be shown that in general the craftsman has been individually responsible for the design of his product, whereas the industrial manufacturer uses the services of a designer to determine the shape of his products, which are produced by machines. Because the machines are operated by workers who are considerably less skilled than craftsmen, the obvious advantage of machine production over hand-craft is greater quantity at a lower cost. However, the design of the product must be suitable for machine production. Since the producer—the machine and operator—is unable to design the products, as the producer-craftsman does, the need for a product designer arises.

An industrial designer is distinctly not an engineer. He is not a salesman or a machinist and definitely not a Bohemian artist. However, the industrial designer is an artist with a developed aesthetic ability to create beautiful three dimensional forms whether they are furniture, electrical appliances or abstract sculpture, and at the same time he has an understanding of manufacturing methods, the consumer market and new materials. Both the product engineer and the designer work together to develop an economical and functional product, but the engineer is chiefly responsible for the appearance. In their work the engineer and designer advise each other and also consider the advice of salesmen, raw material suppliers, and other specialists.

History and work of the design cell

The Government of India encourages the successful and expanding growth of small industries because of their value to the nation's economy. Through the Central Small Scale Industries Organisation much valuable assistance and technical advice is given to small industrialists, because most small firms, unlike larger industries, cannot bear the financial costs of having a staff of qualified specialists. In order to make this service as complete and comprehensive as possible, a design cell was set up about four years ago to provide industrial design for small industries. During the first 1½ years, the cell was working in the four regions of Calcutta, Delhi, Bombay and Madras. In August 1959, the Design Cell was centralised into one office in New Delhi in order that its services might be improved because of common workshop facilities which were available in this central location for making experiments and building actual prototypes. Today, the Design Cell is attached to the Small Industries Service Institute, New Delhi, where the offices are situated in a modern building with attached workshops consisting of a machine shop, a tool room, a heat treatment shop and foundry and laboratories for chemical, leather and ceramics research. The facilities available to the Design Cell also include a fine reading room and library of many technical and design books and journals.

Since its inception the Design Cell has produced more than 1,200 designs and drawings, issued many blue-prints, and especially since centralisation, a number of prototypes have been made. Also, the Design Cell has published a semi-annual design bulletin called "Design for Industry" which is a review of its work with photographs and drawings. Much of this work has directly helped small manufacturers, but many of the designs have not yet been put into production. The small industrialist may also have free advice from other technical officers of the S.I.S.I., on all questions concerning machinery, materials, investment costs, production schemes, etc., Presently the Design Cell is designing domestic electrical appliances, hardware, cutlery and domestic utensils, furniture, ceramics, leather goods and toys. Other items might also be designed if a demand arises and it is decided that they are beneficial to the development of small industries.

Procedure for obtaining industrial design service. As mentioned previously, the Design Cell was established by the Ministry of Commerce and Industry as an additional aid to encourage the growth of small scale industries. Therefore, all of its work is available on an equal basis to all units which qualify as small scale industries. None of the work prepared by the Design Cell can become the specific property of any industrial unit. A small industry may obtain the industrial design service very simply from the Small Industries Service Institute.

The procedure is :—

Design assistance—

A small industry which wishes the help of the Design Cell on a specific problem or product may file an application with the Office of the S.I.S.I., in the State where the industry is located. Design application forms are available from all S.I.S.I., Offices.

Blue-prints—

These can be had on request and payment of nominal charges to the Director, S.I.S.I., New Delhi.

Design bulletin—

Every issue of "Design for Industry" is available on request from the Director of the S.I.S.I., in each State, as long as the supply lasts.

ROUTINE TESTING FACILITIES TO SMALL UNITS

Realising the difficulties put forward by the small scale industrial units in satisfying the condition of individual testing facilities which is a prerequisite of every tenderer who desires to take part in the tenders announced by the Director General of Supplies and Disposals, the Director General of Supplies and Disposals in the course of the discussion held in the Regional Purchase Advisory Council meeting on 20-7-'61 at Ahmedabad assured that the offers of small scale units and requests for registration would not be rejected on the ground that they are not equipped with Individual Testing Facilities. It is enough if those units make arrangements with other agencies like the Small Industries Service Institutes in the respective areas for testing their products and they may merely mention the names of the testing laboratory which can test the products offered in their tenders and applications for registration so that the Inspecting Officers of the Director General of Supplies and Disposals can inspect those laboratories and satisfy themselves of the arrangements available in the laboratories under reference to test the products. The above concession will go a long way to promote the sales of the products of small scale industries.

UTILISATION OF ILMENITE

PART I

OCCURRENCE, PRODUCTION AND USES OF ILMENITE

★

(a) *Occurrence*:—**The beach sands around the tip of the Indian Peninsula contain large quantities of high grade ilmenite, most of which is exported at a low price. Ilmenite is the source of rutile titanium dioxide pigment and titanium metal. The domestic industry absorbs only 4,000 to 5,000 tons of ilmenite. Recovery of useful minerals from beach sands is getting poorer and therefore dredging or deep mining will have to be resorted to.**

Of the five different stretches of beach sands containing ilmenite and rutile, around the southern tip of the Indian Peninsula, the two deposits at Muttam Puddar (near Colachel) and Lipuram (on the east coast) are in Madras State. Besides these, the Vaippar Kaillar region and the Tranquebar area contain 32,000 tons and 90,000 tons respectively of ilmenite of average ilmenite content of 49·5—50·5%. The Manavalakurichi and Lipuram deposits are estimated to be about 2 million tons. Only the former are being worked now and the ilmenite has 54% TiO_2, the chief contamination being crimson coloured garnet. The Kerala ilmenite contains 60% TiO_2.

(b) *Production of Ilmenite & Rutile (Production of Ilmenite)*

All India			*Manavalakurichi*			*Export*		
Year	*Qty. (Tons)*	*Value (Rs.)*	*Year*	*Qty. (Tons)*	*Value (Rs.)*	*Year*	*Qty. (Tons)*	*Value (Rs.)*
—	—	—	1958	24,203	12,85,000	—	—	—
1959	3,03,022	1,78,41,000	1959	13,785	7,60,000	1959	2,76,631	2,07,86,631
1960	2,49,751	1,46,95,000	1960	9,150	4,86,000	1960	2,28,916	1,56,60,000

The production of rutile in India is very small.

(c) *Uses of Ilmenite and its Products:* Ilmenite is used for production of titanium dioxide and titanium metal. Titanium dioxide is the best known white pigment. Of the two types of titanium dioxide, the anatase and the rutile, the latter has 30% more hiding power and is therefore considered more valuable. Titanium dioxide finds use in paints, plastics, rubber, lenoleum, oil-cloth, soap rayon (delustering), industries. It is also used in ceramics, enamels, dielectric components welding rods, glass fibre industries. Titanium metal has very high chemical resistance and resists acids, chlorides and oxychloro compounds and oxidising agents. It finds wide application in Jet engine compressors. Heat resistant titanium alloys are being used increasingly in areoplanes flying at ultrasonic speeds. Titanium metal is used in heat exchangers, valves, reactor parts, pumps etc., wherever highly corrosive liquids and chemicals such as chlorinated brine, calcium chloride, chlorosulphonic acids etc., are encountered. Titanium jigs and fixtures are used in anodising and pickling operations. Marine, petroleum, food processing and such industries are expected to employ larger quantities of titanium alloys where prices improve.

PART II

TITANIUM DIOXIDE

There is only one factory in India, producing anatase grade of titanium dioxide. The installed capacity is 3,600 tons per year. However, the production in the years 1954 to 1960 are 1,369 5 tons; 1,808; 1,700; 1,671; 1,675; 1,842 and 2,640 tons respectively. The demand for titanium dioxide is increasing and as indigenous production is not able to meet this, imports are also increasing. 5,300 cwt of anatase and 5,600 cwt of rutile were imported in 1957, total value being Rs. 14·75 lakhs. In 1960, the imports have increased to 6,65,722 Kg. anatase and 10,02,624 Kg. rutile to the value of Rs. 38 15 lakhs. The consuming industries of titanium dioxide in India are paint, rubber, linoleum, plastics, leather and polish, soap, printing ink, paper, rayon, ceramics, electroes, enamelware and cosmetics. Other consumers are laboratories, and other miscellaneous consumers. Paint, rubber and textile industries are the main consumers of titanium dioxide. The consumption of titanium dioxide in the paint industry has doubled within a period of two years. Expansion of paint, rubber are expected to double their production by the end of III Plan. Accordingly "demand for titanium dioxide will increase largely and the forecast is that by the end of the III Five Year Plan the demand for anatase variety of TiO_2 will reach 12,000 tons per year and of another 3,000 tons of rutile variety".

Location of the factory and capacity of the plant:—"Madras is one of the best locations for a titanium dioxide plant. Ilmenite sand is available on the sea coast. Madras has a flourishing paint and textile industtry. Therefore, there is a ready market for TiO_2. "Lignite from Neyveli may be used for raising steam. "About 70,000 gallons of water will be required for a 10-ton per day plant". Madras is a major part and therefore transport of imported sulphur will not present any problem.

"While there is an installed capacity of only 3,600 tons for producing the anatase variety licences granted cover *(a)* expansion of the existing unit to 6,500 tons *(b)* an additional 15,000 tons a year to the same concern (M/s. Travancore Titanium products Ltd.) and *(c)* another 4,400 tons to a new concern (M/s. Nowrojee Wadia & Sons Ltd.,) These make a total of 26,000 tons (approximately) mainly for anatase against an expected demand of 12,000 tons a year at the end of the III Five Year Plan."

"Correct information is not available on the likely installed capacity for the rutile form of TiO_2 at the end of the III Plan Period. But it would appear that scope exists for installing further capacity because rutile is not in production to-day and because of its superior properties".

"We accordingly recommend a plant to produce 10 tons of pigment grade rutile in Madras which may at a later date be expanded to 20 T/D. The economics of 10 T/D and 20 T/D plants are discussed in the next section".

Economics for 10 T/D & 20 T/D Titanium Dioxide Plant

(Rutile Variety)

Capital Requirement:

	10 T/D Plant (Rs. in lakhs)	*20 T/D Plant (Rs. in lakhs)*
1. Titanium dioxide plant	35·00	52·50
2. Sulphuric acid plant	19·00	28·50
3. Off site facilities including water treatment, sewage disposal & fire fighting and safety equipment	5·00	7·50
4. Land @ Rs. 2,500 per acre (20 acres)	0·50	
(40 acres)		1·00
5. Site preparation at Rs. 1,000 per acre (20 acres)	0·20	
(40 acres)		0·40
6. to 9 Administrative building, canteen, darwan's quarters, factory boundary wall, manager's bunglow & guest house, staff quarters, roads inside & outside the Factory	11·00	15·00
10. Trucks and cars	1·00	2·00
11. Estimating contingencies	7·20	10·70
12. Working capital	8·20	15·16
Total ...	87·10	133·20

Manufacturing cost

(a) *Cost of Materials*

1. Ilmenite @ Rs. 75 per ton		
(6,150 tons)	4·61	
(12,300 tons)		9·20
2. Sulphuric acid @ Rs. 180 per ton		
(4,250 tons)	7·65	
(8,450 tons)		15·30
3. Iron filings @ Rs. 200 per ton		
(375 tons)	0·75	
(750 tons)		1·50
Total ...	13·01	26·00

(b) *Chemicals*

1. Antimony oxide @ Rs. 3000 per ton		
(7·5 tons)	0·225	
(15 tons)		0·45
2. Sodium sulphide (Rs. 650 per ton)		
(6 tons)	0·039	
(12 tons)		0·078
3. Glue @ Rs. 3,400 per ton		
32·5 tons	1·105	
65·0 tons		2·21
4. Ammonium phosphite @ Rs. 5,250 per ton		
22·5 tons	1·18	
45 tons		2·36

		10 T/D Plant (Rs. in lakhs)	20 T/D Plant (Rs. in lakhs)
5. Zinc @ Rs. 3,600 per ton			
5·0 tons		0·18	
10·0 tons			0·36
6. Potassium sulphate @ Rs. 2,000 per ton			
12·5 tons		0·25	
25 tons			0·50
Total	...	2·98	5·96

(c) *Utilities*:

1. Light diesel oil @ Rs. 300 per ton			
1,060 tons		3·18	
2,120 tons			6·36
2. Steam @ Rs. 6 per ton			
26,680 tons		1·60	
53,360 tons			3·20
3. Electricity @ 0·10 per kw			
500 kw		3·60	
1,000 kw			7·20
4. Process water @ Re. 1 per 1,000 gallons			
1,58,00,000 gls.		0·158	
3,16,00,000 gls.			0·316
5. Circulating water for cooling @ Rs. 0·25 per 1,000 gallons			
1,26,00,000 gls.		0·0,315	
2,52,00,000 gls.			0·063
Total	...	8·57	17·14

(d) *Labour, Supervison and management*:

		10 T/D Plant per year	20 T/D Plant per year
1. Works manager-1 @ Rs. 1,200 p. m.		Rs. 14,400	Rs. 14,400
2. Shift incharge @ Rs. 500 p. m.	(8)	48,000	
	(12)		72,000
3. Chemists @ Rs. 450 p. m.	(16)	86,400	
	(24)		1,29,600
4. Operators @ Rs. 200 p. m.	(40)	96,000	
	(60)		1,44,000
5. Helpers @ Rs. 100 p. m.	(40)	48,000	
	(60)		72,000
6. Mazdoors @ Rs. 75 p. m.	(20)	18,000	
	(30)		27,000
7. Darwans @ Rs. 75 p. m.	(12)	10,800	16,200
		3·22 lakhs	4·76 lakhs

(e) *Administrative staff*:

1. Manager @ Rs. 1,500 per month			
	(1)	18,000	
	(1)		18,000
2. Mechanical & Electrical Engineer @ Rs. 750 p. m.	(4)	36,000	
	(6)		54,000
3. Laboratory Chemists @ Rs. 250 p. m.	(8)	24,000	
	(12)		36,000
4. Laboratory Assistants @ Rs. 150 p. m.	(8)	14,400	
	(12)		21,600
5. Accountant @ Rs. 750 p. m.	(2)	18,000	
	(3)		27,000
6. Store Keeper @ Rs. 450 p. m.	(4)	21,600	
	(6)		32,4000
7. Clerks @ Rs. 150 p. m.	(8)	14,400	
	(12)		21,600
8. Bearers @ Rs. 75 p. m.	(5)	4,500	
	(8)		7,200
9. Darwans @ Rs. 75 p. m.	(4)	3,600	
	(4)		3,600
Rs. in lakhs	...	1·55	2·22

(f) *Labour Welfare*:

	10 T/D Plant per year	20 T/D Plant per year
	Rs. in lakhs	
1. Provident Fund @ 6·25% of salaries and wages	0·29	9·42
2. Gratuity @ 1/24 part of salaries and wages	0·20	0·28
3. Employees State Insurance and accident insurance	0·14	0·20
	0·63	0·90

(g) *Other Charges*:

1. Maintenance Stores @ 2% on Rs. 50 lakhs	1·00	
Maintenance Stores @ 2% on Rs. 80 lakhs		1·60
2. Depreciation @ 8% on Rs. 79 lakhs	6·32	
Depreciation @ 8% on Rs. 117·6 lakhs		9·40
Interest on working capital @ 7%		
on Rs. 117·6 lakhs		9·40
on Rs. 8·2 lakhs	0·58	
on Rs. 15·6 lakhs		1·10
4. Contingencies	0·60	1·20
5. Packing	0·75	1·50
6. Transportation	0·25	0·50
7. Sales promotion	1·00	2·00
8. Insurance	0·80	1·18
Grand Total ...	41·26	75·26

Sales Revenue:

Rutile @ Rs. 2,350 per ton	*Rs. in lakhs*	
3,000 tons	70·50	
6,000 tons		141·00
Profit before taxes	(70·50–41·26)	(141·00–75·26)
	29·24	65·74
% Return on total	33·6	49·3

(*No credit has been taken for copperas*)

PART III

Metallic Titanium

India's resources of non-ferrous metals are limited. The only demand for aluminium is met by internal production. Vast mineral resources of ilmenite may be used as a source for making titanium. This metal is well known for its lightness, strength and resistance to corrosion. Latest developments in the technique of welding titanium has made it possible to produce chemical process vessels of mild steel with titanium lining to replace brick and rubber lined equipment. The titanium metal finds use in aircraft industry. Improved techniques have brought down the prices of this metal in U. S. A. (billets) from $ 8 lbs. in 1955 to $ 4·5 lbs. in 1959.

A large number of technological difficulties are involved in the production of titanium. Rutile is generally preferred as a starting material, but ilmenite will be preferred on account of price and large abundance.

Process: Finely powdered ilmenite (200 mesh) bonded with fenic chloride and about 7% of its carbon and briquetted is chlorinated at about 500—600°C when 90% of iron content of ilmenite may be removed. In the presence of carbon at 800°C crude $TiCl_4$ is formed. The crude titanium tetrachloride

(containing impurities such as $FeCl_3$, $MgCl_2$, $VoCl_3$, $SiCl_4$, $ZrCl_4$ etc.) is purified by decantation and finally by fractional distillation. The final product must be 99.2% pure.

Reduction of $TiCl_4$ is done with metallic magnesium or sodium. In the magnesium process, the reactor made of mild steel and completely free from scales is charted with pure magnesium metal and the chamber evacuated and flushed with purified inert gas. Then magnesium is melted slowly and when magnesium is completely molten, $TiCl_4$ is introduced and temperature maintained between 800-900°C. Spongy titanium is deposited around the walls of the vessel. The total amount of $TiCl_4$ let in is generally 10 to 15% less than the amount necessary to react with magnesium..

The charge is cooled down in the inert gas atmosphere. The sponge is then purified by vacuum distillation or leaching. About 48 hours are required to purify a charge of 200 lbs.

Recommendations: Metallic sodium or magnesium is not produced in India. Magnesium can be produced from magnesite deposits of Salem District, Madras State. "A study of the capacities of the individual plants abroad indicate that one 750 tons per year plant will be able to produce the metal at competitive price. The total cost of such a plant will be about Rs. 3·5 crores. Setting up of a metallic titanium plant may be further studied.

ANNEXURE I

Ilmenite to Rutile Titanium Dioxide

1. *Ore Dressing:* The raw sands (washings of the rainy season) contain ilmenite, zirconia, sillimanite, rutile, and monazite. Well dried raw sand is put through 38 mesh vibrating screen and the sieved material is fed to an electromagnetic separator of the lift type. The field and the feed are regulated and 98% ilmenite is obtained with 50 to 60% recovery. The residual ilmenite is recovered by secondary operations.

Rutile is almost non-magnetic. The tailings after ilmenite separation are run through another high intensity induced roll electromagnetic separator, with the weakly magnetic rutile. Non-magnetic portion is further concentrated by electric separators.

2. *Description of the recommended process for making Titanium Dioxide (Rutile variety):* Raw ilmenite is fed continuously into a ball mill working in conjuction with an air classifier. The discharge from the cyclone is conveyed to bunkers. Ground ilmenite from the bunker is fed into digestor containing sulphuric acid 98%. Water is added to lower the acid concentration to 92% and live steam at 5,000 lb/Hour is introduced for 15 mts. The reaction mass is baked for 2 hours and further acid and water added to bring specific gravity to 1·54 at 65°C. Scrap iron is then added to reduce the ferric iron. Antimony oxide is added to aid quick settling, in the settling tanks. The crude liquor now goes to the crude liquor storage tank and then to settlers wherein glue and sodium sulphide are added. The overflow from settling tank is cooled and $FeSO_4$ 7 H_2O removed by filtration. The overflow from the settling tanks is run into concentration feed tank and thence to separator. The concentrated liquor through storage tank goes to precipitator. The iron free titanyl sulphate solution is neutralised with sodium carbonate. The orthotitanic acid precipitated is filtered, washed and then slurried with water and HCl. The slurry concentrate is run into precipitation tanks and steam infected.. Diluted rutile neuclei slurry is added. The contents are boiled for 2 hours when water is added. Boiling is again continued. Titanium dioxide is precipitated by autohydrolysis. The precipitate is then washed and leached, bleached and the pulp washed and repulped. Ammonium phosphate and potasium sulphate are added and the treated pulp filtered. The filtered cake is then calcined in rotary calciner, cooled in rotary cooler and then pulverised and bagged.

SUMMARY

There are four stretches of ilmenite beach sand in Madras State. They are at Manavalakurichi, Lipuram, Viapparkallar and Tranquebar. Of these, estimated reserves of ilmenite at the first two stretches total 2 million tons and the remaining areas total 1·3 lakhs tons. The Manavalakurichi deposit is the only one being worked. The TiO_2 content of this ilmenite is only 54%.

Titanium dioxide, the best known white pigment is the main product from ilmenite. It is used in paint, rubber, textile, ceramics and other industries. Rutile grade is preferred to anatase variety TiO_2.

There is only one factory (3,600 tons capacity) at Trivandrum producing anatase variety TiO_2. Rutile is also contemplated to be produced. Capacity licenced for the III Plan is 26,000 tons as against estimated demand of 12,000 tons anatase and 3,000 tons rutile. There is good scope for production of rutile variety of titanium dioxide. Setting up of a plant producing 10-ton/day rutile grade TiO_2 is recommended. The capital costs for a ten-ton/day plant will be Rs. 78 9 lakhs plus Rs. 8·2 lakhs working capital. 33·6% return on capital (before taxes) is estimated. Project report and economics for 10-ton/day and 20-ton/day plants have been given. Ferrous sulphate is recommended to be used for production of sulphuric acid. One titanium metal plant with a capacity of 750 tons a year at a capital cost Rs. 3·5 crores is also recommended for Madras.

(Prepared by Industrial Consulting Bureau [P] Ltd., New Delhi)

MANUFACTURE OF TEXTILE MACHINERY

RECOMMENDATIONS OF THE TEXTILE COMMITTEE

The Government of India have appointed a committee during the later part of 1960 with the Textile Commissioner, Bombay as its chairman to study and report on the requirements of textile machinery and indigenous production programme. The Committee submited the roport to the Government in December 1961 with its recommendations.

The terms of reference of the Committee were to ascertain the realistic demand for textile machinery during the Third Plan Period, so that a phased programme of manufacture could be worked out.

The Committee working under two groups—one for spinning and weaving and the other for processing-submitted the following recommendations.

1. The textile mill industry should hence forth look forward to the domestic textile machinery manufacturing industry for their needs.

2. The textile machinery manufactures should make all efforts to manufacture machinery to satisfy the demands of the textile industry.

3. The Committee has accepted the assessment made by the N. I. D. C. working group 1960 (cotton, wollen and art silk industry) for rehabilition and modernisation as realistic.

4. In view of the Government's recent granting of licences to the installation of cotton waste and art silk waste spindles the Committee stated that there would be some demand for machinery for cotton waste and art silk.

5. The requirements of textile machinery during the third plan is given in Appendix A.

APPENDIX—'A'

Requirements of Textile Machinery during the Third Five Year Plan Period

Items of Machinery	*Average requirements of Machinery (annual)*		
	Expansion	*Replacement*	*Total*
Cotton Industry			
1. Blow room lines	42	44	36
2. Carding engines	2,133	945	3,078
3. Comber sets	51	12	63
4. Draw frames	133	105	238
5. Speed frames	266	315	581
6. Ring frames (each 400 spindles) ...	1,600 (6·4 lakhs)	1,425 (5 7 lakhs)	3,025 (12 1 lakhs)
7. Winding machine	184	71	255
8. Warping machine (fully auto) ...	35	—	35
9. High speed warping machines ...	—	33	33
10. Pirn winding spindles ...	1,966	975	2,941
11. Sizing machines	62	52	114
12. Auto looms	5,000	4,950	9,950
13. Wet processing machinery (in value)	Rs. 4 50 crores	5·44 crores	9·95 crores
Art Silk Industry			
1. Twisting machinery	—	50	50
2. Pirn spindles	—	1,500	1,500
3. Warping machines	—	15	15
4. Sizing machine	—	10	10
5. Plain looms	—	2,400	2,400
6. Auto looms	—	500	500
7. Special types of looms	—	100	100
8. Finishing and dyeing machines	—	Rs. 0·65 crores	0·65 crores
Woollen Industry			
1. Worsted Spinning (*a*) Raper auto leveller	—	5,405	5,405
(*b*) Ambler super drafter ...	—	2,920	2,920
(*c*) Miscellaneous spindles ...	—	5,005	5,005
2. Woollen spinning	—	2,160	2,160
3. Shoddy spinning	—	632	632 (does not include expansion)
Looms and Preparatory for Woollen industry			
1. Looms—ordinary and other types with preparatory	—	52	52
2. Auto looms with preparatory ...	—	131	131
3. Finishing and dyeing (in value) ...	—	Rs. 1·75 crores	1·75 crores

Further the Committee anticipates considerable difficulty in the manufacture of the following machines during the Third Plan period because of the small annual requirement and the complexity and intricacy of machines.

Cotton Machinery:

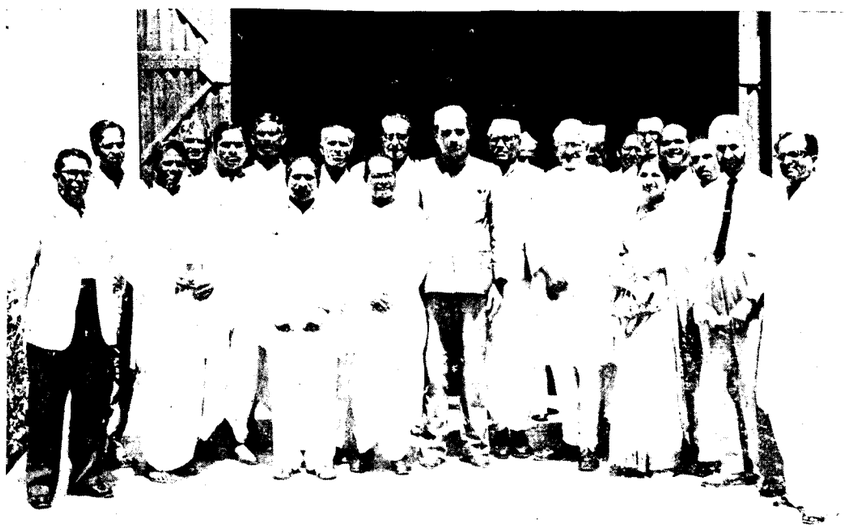
1. Combining equipments.
2. Doublers and cablers above 2½" ring required for the manufacture of fishing nets, etc.
3. Barber colman winding and warping machines.
4. Special types of automatic looms other than ordinary type automatic looms.
5. Auto pirn winders (single spindle type).
6. Vacuum stripping plant.
7. Flat grinding machine.
8. Flat and milling machine.
9. Yarn gassing machine.
10. Yarn and fabric testing machines other than those which are being currently manufactured.
11. All types of calenders.
12. Automatic / semi-automatic screen printing machines.

Art Silk Machinery:

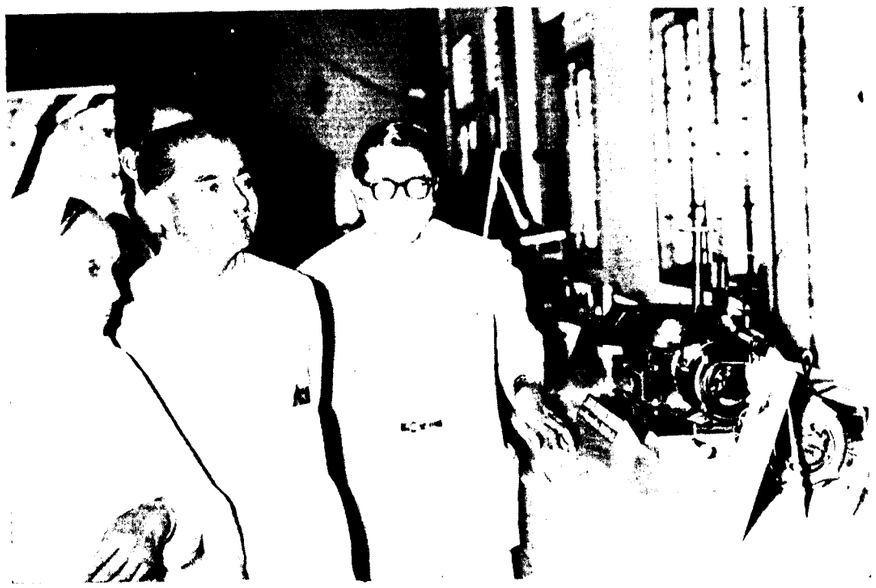
1. Decatising machine.
2. Plaiting machine.

The Committee feels that the findings and recommendations will enable machinery manufacturers to correctly assess the requirements of the textile mill industry and plan production accordingly. ★

Tunku Abdul Rahman, Prime Minister of Malaya, visited the Industrial Estate, Guindy on 22nd Oct. '62. Picture shows the distinguished visitor admiring a raplica of a glass boat presented to him as a memento.



A new electronic tester for testing automobiles. *(See article on facing page)*



Sri Hari Ram, Deputy Minister for Tourism, Government of Punjab, while on a visit to the Guindy

ELECTRONIC TESTER FOR AUTOMOBILES

LOW-COST AND SIMPLE TO OPERATE

By
Mr. John P. Wilson
Editor, "Electronics Weekly," London.

A new low-cost electronic tester for automobile engines has been introduced by Crypton Equipment Ltd. (1). The equipment is cheap enough to be installed by even the smallest garage and simple enough in operation to be used by comparatively unskilled mechanics—yet more than that it enables a complete and accurate engine check to be made within 20 minutes. Only four connections from the equipment to the engine are required and no engine parts need to be removed during testing.

The equipment, "Scopemaster" Model BD 120, is self-contained and operates from alternating current mains. The cabinet is mounted on large castors and apart from the electronic units houses all test tools and accessories, and has a cupboard space for spares. A special compartment is provided to house the Crypton BA 64 exhaust gas analyser which is available as an optional extra.

Two electronic units and an oscilloscope unit perform the major role in testing. The instruments include a high-accuracy 0-20 volt meter for general testing of the car electrical circuits, an electronic tachometer reading 0-5,000 revolutions a minute for measuring engine speed, a distributor dwell tester reading 20 to 70 degrees for checking contact breaker performance, an ignition test meter and a tuning and advance tester.

Saving in Costs

The oscilloscope has a four-inch (120-millimetre) high-intensity, flat-faced cathode ray tube with post-deflection acceleration. By the use of special pulse brightening and broadening circuits, a fan-tailed trace is produced which leads to easy examination of spark plug voltages which hitherto have been extremely difficult to measure as they have a duration of only a few micro-seconds.

A positive example of the value of electronic testing to garages is given by a

leading British automobile distributor who analysed his use of a "Dynavision" tester, also made by Crypton.

In 33 days the tester handled 567 cars at an average of 17·2 per day from one operator. Practically all the vehicles would have needed road testing, but with the electronic tester 118 road tests were eliminated. On all cars tested there was a substantial saving in time, ensuring better profits and improved service to the customer. In one case an obscure fault which had defied solution for a year was cured in two minutes.

The new "Scopemaster" equipment is now in full-scale production.

New Transducers

The Solartron Electronic Group Ltd. (2) has introduced a new family of transducers. One model, the NT4-313M, has been produced specially for the engineer who needs to use them in large quantities.

Previously, many engineers faced with economic problems were forced to use low-accuracy devices in the interests of cost. The NT4-313M is a general-purpose, miniature, flush-mounting, pressure transducer made to a rugged specification.

Accuracy is better than 2 per cent and it is temperature-compensated over the range of minus 65 to plus 250 degrees Fahrenheit. It can, however, be used without damage over the range of minus 350 to plus 300 degrees Fahrenheit.

Another model, the NT·1224, is a vibrating cylinder depth transducer. It measures the depths of fluids and has no moving parts. The applied pressure is translated into an alternating current singal, the frequency of which bears a precise relationship to the pressure.

Fluid density can be measured by yet another model, the NT·1225. This is a vibrating density transducer with a large number of applications. In conjunction with Solartron's NT4-9802, it can be used for mass flow measurement apart from its basic use of rapid routine density measurement and general plant instrumentation.

Two-way Communication System

A simple, two-way communication system for use in noisy industrial locations has been developed by Associated Electrical Industries Ltd. (3). The system is completely portable and self-contained and consists of

two identical microphone/loudspeaker/amplifier units which are connected by ordinary lighting flex up to distances of half a mile (0 8 kilometre). The basic unit is designated type FK IAX, and is fully transistorised. In average use the two six-volt batteries will last for a month, They are standard types, universally obtainable.

The equipment can also be used as an ordinary public address loud-hailer.

Instrument with Various Applications

New advances in technology have been accommodated, after a careful study of modern requirements in chromatography, by the design of the Pye "Panchromatograph" (4). The instrument has application in many fields, namely petroleum refining, food processing, medical research and so on.

Two independent column systems can be mounted, either feeding one detector or two separate detectors. The dectector oven accommodates most types of detector, including the experimental triode ionisation and electron mobility detectors.

Electronic temperature controllers enable column and detector temperatures to be set independently and reproducibly at any point in the range 50 to 250 degrees Centigrade.

The "Panchromatograph" is supported by a comprehensive range of ancillary equipment.

Key to names and addresses of manufacturers mentioned in the article.

(1) Crypton Equipment Ltd., a subsidiary of Metal Industries Ltd., Brook House, Park Lane, London, W. 1.

(2) Solartron Electronic Group Ltd., Farnborough, Hampshire, England.

(3) Associated Electrical Industries Ltd., Crown House, Aldwych, London, W. C. 2.

(4) Pye Ltd., St. Andrews Road, Cambridge, England.

A NEW TEA UP-GRADING MACHINE

Invented by Sri B. N. Ghosh

Half a century ago teas were generally sorted by hand over China Sieves of different mesh. Later, various types of sorting machines invented, and sorting operation now-a-days is carried out mechanically. Yet, a tea maker, even today has to depend upon hand operation for screening or concentrating 'tips' for making his flowery orange pekoe or other tippy orange grades of teas because no machine is available to do this job.

Screening of tips is usually done by women labourers, who, throw handfuls of tea over a framed blanket, endi silk or flannelette and tap gently so that the coarse and flakly tea falls off but tips stick to the hair of the cloth. The frame is then taken away and by giving it a jolt tips dislodged from cloth. The operation is not only slow and un-uniform but much of the valuable 'bloom' of tips is knocked off by handling. More over, when operation is carried out on floor, workers often tread over the tea causing damage and getting dirt mixed up.

Inventor of this machine, a tea maker-cum-engineer, gave serious thought for a mechanised device to overcome the above difficulties in making tippy teas and started experiments. For this he had valuable help and encouragement from Mr. A. R. Holmes-Tarn, former Manager of Numalighur Tea Estate and Mr. S.G.B. Brown, (now) Superintendent of Jorehaut Tea Co., Assam.

As a result of long and elaborate experiments, evolved this machine, which, proved efficient not only for screening and concentrating tips but also for removing excessive flakes from graded teas resulting from leaf rolled without proper withering which has often to be done during monsoon. The machine is also found useful in extracting the tips which get mixed or 'lost' in B.P. grade without any advantage but if extracted could profitably be added to an upper grade. A patent was then applied for and was granted.

Briefly the principle of operation is:— Mechanical arrangements so deviced that after tea is fed to the cloth through a specially designed hopper—screening, seperating, collecting, etc. done automatically, uniformly and continuously. As there is nothing in the machine to cause friction to the tea, the 'bloom' is fully maintained. Ample adjustments are provided for treating different sizes of teas and to suit individual requirements.

The machine occupies about 25 sq. ft. of floor space and requires only one h.p. of power for driving. Manufactured on a commercial basis the machine will not cost more than Rs. 2,500 each.

A prototype machine, after working out a most suitable standard specifications, was made and sent to an Assam tea garden and then to a South Indian tea garden for tests. Results obtained are as follows:—

(a) **From Assam Garden.**

(i) 124 lbs. B.O.P. valued @ Rs. 5-8 per lb. = Rs. 682 passed through the machine and extracted— Rs.

68 lbs. B.O.P. No. 1 valued @ Rs. 8 = 544
56 „ B.O.P. „ @ Rs. 3 = 168
712

Gain of this up grading being Rs. 30 or 24·18%

(ii) 100 lbs. B.O.P. valued @ Rs. 3-6 = 337-8

Re-graded by the machine and obtained—

45 lbs. B.O.P. No. 1 valued @ Rs. 4-8 = 202-8

55 lbs. B.O.P. No. 1 valued @ Rs. 2-14 = 158-2

360-10

Gain of Rs. 23/2 per 100 lbs.

(iii) 100 lbs. very flakey B.O.P. (manufactured from under-withered leaf) valued @ Rs. 3-2 per lb. = Rs. 312-8 up-graded and turned out to—

74 lbs. B.O.P. (free from flakes) valued @ Rs. 4-8 = 333

26 lbs. B.P. ... @ Rs. 2-10 = 68-4

Rs. 401-4

resulting an increase of Rs. 88-12 in value per 100 lbs.

(iv) 100 lbs. B. P. with few tips, valued @ Rs. 2-10 per lb. treated through the machine and extracted 10 lbs. of B. O. P. which was valued @ Rs. 2-12 per lb. while the value of the remaining 90 lbs. left unchanged.

(v) A bulk of very fibrous C. T. C. (P. F.) tried through the machine and found most of the fibre was removed.

(vi) The machine proved to be a labour saver as well as time saver.

Tests were carried out in different months of season and valuations were ascertained from Calcutta brokers.

(b) **From South Indian Garden (Coimbatore Dist.)**

(i) Feeding of tea into the machine adjusted to 160 kgs. per hour which produced a graded F.B.O.P. at the rate of 66 kgs. per hour.

Estimated up-grading prices based on input and output figures and on prevailing Cochin prices are:—

Input 160 kgs. value @ Rs. 6 00 per kg. = Rs. 960 00

Output 66 kgs. F.B.O.P value Rs. @ Rs. 9·00 = 594 00

Output 94 kgs. B.O.P. value @ Rs. 5·25 = 493 00

1,087·00

This represents an increase of Rs. 127 or 13·2% per hour on the upgraded 160 kgs.

(ii) The machine used for removing stalk, fibre and cut leaf from a mixed B.P. grade:

With an output of 250 kgs. per hour valued @ Rs. 5·00 per kg. = Rs. 1,250·00

Cut leaf, stalk, etc. removed was 24 kgs. per hour leaving an upgraded B. O. P. of 226 kgs. per hour valued @ Rs. 5·25 per kg. = Rs. 1,185 50

The remainig 24 kgs. reduced to fannings and dust valued @ Rs. 4·80 = Rs. 115·20

Total Rs. 1,300·70

This is an increse of Rs. 51·70 or 4·14% per hour.

(iii) As a labour saver the machine is effective in that it would handle the work of 8 women whom the factory normally employed for screening tip by hand.

According to expert opinions the machine has a vast field of utility, specially on gardens on conventional (non-C. T. C.) manufacture and on smaller gardens. Those planters who saw the prototype machine at work opined that it will be very useful addition to the sorting machinery in any tea factory.

Arrangements for commercial manufacture of the machine is being made. Interested tea gardens may contact the inventor and patentee of the machine:—

Sri B. N. Ghosh, Tegharipara, P. O., Nabadwip, West Bengal. ★

SELF-PRIMING CENTRIFUGAL PUMP

A new 3 in. (7·62 cm) self-priming centrifugal pump, which has no gears between pumps and engine—an innovation that cut the cost and makes the unit more compact without reduced performance—has been developed by a Leicestershire firm, Pegsons Ltd. The gears have been eliminated by reducing the pump speed to that of the engine, and mounting the impeller directly on the engine shaft. The design maintains the pump capacity at 16,800 gallons (76,371·77 litres) an hour and gives it a shut-off head of 70 ft. (21·33 m) and less power is needed than with a geared pump. The engine is a air-cooled diesel with a continuous rating of 4¾ h. p. at 2,000 r. p. m. The diffusion priming system employed in the pump is effective down to static suction lifts of 25 ft. (7·62 m) of the static lift is 20 ft. (6·09 m) or less a faster type of priming system can be used, reducing standard priming times by as much as 30 to 40%. Both systems are very simple, with no re-circulation mechansims to clog or wear. ★

FIBRE GLASS FILTER

Special filters made of glass fibre which can extract particles of 0·3 micron diameters at an efficiency level of 99·9 per cent and at high temperatures, have been developed by a firm in Gloucestershire, Evans Adlardand Co. Ltd. Designed for use where the highest possible filtration efficiency is required, where long life is essential and where humidities of upto 100 per cent exist, the filters can be operated at constant temperatures of 500 C. They have the advantage over esparto grass-phased filters of being rolt and insect proof are unaffected by acids, and bacteria will not grow through them. Their efficiency never varies unlike natural fibres. The filters are already being used in nuclear power stations, where large volumes of absolutely clean air are required. One filter is capable of handling 1,000 cu. ft (16387·1 cu.m) of air a minute. The filters are also being used for hospital operating theatres, laboratories, precision engineering and pharmaceutical manufacturing concerns. ★

CONTAINER AND DISPENSER FOR CORROSIVE LIQUIDS

A combined container and dispenser to meet the requirements of industry for an economical method of handling relatively small quantities of corrosive liquids is now being marketed by a British firm, Turner Brown Ltd., Lancashire. The unit consists of a circular container made from 18 inch (45 71 cms) diameter extruded P.V.C. (poly vinylchloride) tube with a welded plastic base and with a layer of resin-impregnated glass fibre bonded to the outside to give it added rigidity and longer life. A close fitted cover of ⅜" (9·52 mm) P. V. C. can be securely bolted to the tank through a 1¼"

(3·18 cm) plastic flange welded to the rim of the container. A patent hand pump is in turn bolted to the covers. The pump, which works on the piston and non-return valve principle, is simple and is made entirely of P.V.C. with a minimum of working parts. It claimed to be completely non-reactive to all the more common liquids used in industry and the hard-wearing nature of P.V.C. enables the piston cylinder and non-return valve to remain dimensionally accurate for an indefinite period. It requires no servicing other than once when different liquids are dispensed. The pump is capable of delivering a maximum of 11 gallons (50 006 litres) of liquid per minute and by a valve being incorporated in the outflow pipe the flow of liquid can be accurately controlled. ★

CRYO-SURGERY SYSTEM CONTROL UNIT

A special equipment for use with the radically new surgical freezing technique developed by Dr. Irvin, S. Cooper, Director of the Department of Neuro-surgery at New York's St. Barnabas Hospital is now available from Union Carbide Corporation. The Cooper technique makes use of freezing as a surgical tool—at temperatures as low as 100 degrees below zero centigrade (minus 150 degrees Fahrenhiet). The control unit made by Union Carbide for the Cooper cryo-surgery system regulates the flow of liquid nitrogeon, which provide the ultra-low temperature. The nitrogeon is delivered through the tip of an insulated instrument known as a cannula—sometimes referred to as the "cold knife". The cannula freezes the affected tissue so that it is destroyed and eventually absorbed in the body. This cryo-surgery evolved out of more than 10 years of research by Dr. Cooper on cases of parkinsenism or "shaking palsy" as it was once known, in which he treated the patients successfully in more than 1,400 operations by destroying small localised area of brain tissue. The key operating features of the cryo-surgical control of the cannula tip to within one degree centigrade of the pre-selected, temperature, continous monitoring and recording of the temperature, and electronically controlled circuits that permit the neuro surgeon to regulate temperature.★

SCOPE FOR STARTING SOME INDUSTRIES IN MADRAS STATE

In Madras State about 250,900 acreage is under mango cultivation and some important commercial varieties are grown in the State. During the glut season, for want of proper storage and transport facilities, huge wastage of this important fruit occurs and this can easily be prevented, in one way, by utilising the mango juice in making fruited cereal flakes, fruit toffees or slab by setting up some suitable factory near about the mango growing area. Fruited cereal flakes is quite nutritious and delicious and demonstration of the product in different parts of the country have shown beyond doubt, that it can soon acquire the status of one of the most favourite break-fast foods. Project report on the subject is also published herewith.

Manufacture of dehydrated vegetables:

There is an internal and external market especially for dehydrated peas and onion. Other dehydrated vegetables will need some effort to popularise in civilian market, though Defence needs will always be there. Preservation of perishable foodstuffs by dehydration is a time old well known method and it is needless to stress upon this point. Salient features of the scheme and the project report is also published herewith.

If any further particulars are required on the schemes the same can be obtained from the Deputy Technical Adviser to the Ministry of Food and Agriculture in the Office of the Regional Director (Food) Southern Region, 48, Harrington Road, Chetput, Madras.

PROJECT FOR THE MANUFACTURE OF FRUITED CEREALS, STRAINED DRIED BABY FOODS, FRUIT TOFFEES AND FRUITSLABS

A detailed scheme covering all technical and commercial aspects of the project and salient features of the scheme are briefly summarised below:—

1. *Estimated production capacity of the plant:*

Annual production of 67 tons of mango cereal flakes, 17 tons each of tomato cereal flakes and mango custard powder and 9 tons each of mango toffee and mango slabs.

2. *A quantitative estimate of various raw materials to be used annually:*

Mangoes	...	...	478 tons
Tomatoes	...	...	374 „
Wheat flour	...	...	23 tons
Sugar ...	...	...	21 „
Glucose	...	...	12 „
Skim milk powder		...	4 „
Corn starch	...	...	1·5 „
Hydrogenated fat	...	...	1563 lbs.
Citric Acid	...	...	400 „
Common salt	...	...	651 „
Spices, assorted	...	...	651 „
Chemicals, assorted		...	608 „

3. *An estimated cost of the project, indicating distribution of cost over buildings, plant and equipment and working capital, giving approximate idea of profit and loss account:*

	Annual Rs.	*For 5 years* Rs.
Cost of land and building	1,44,000	1,44,000
Plant and epuipment etc.	5,66,000	5,66,000
Working capital	4,15,000	21,09,200*
	11,25,000	28,19,200 or 28,20,000

4. *Indications and fuel, power and water requirements:*

	Annual Qnty.	Cost Rs.	*For 5 years* Qnty.	Cost Rs.
Electric power K.W.H.	Units 80,000	7,200	Units 4,00,000	3,60,000
Steam, High pressure	T 2,200	30,800	T 11,000	1,54,000
Low Pressure	550 gallons	4,950	2,750 gallons	24,750
Water	70,00,000	3,500	3,50,00,000	17,500
Total ...		46,450		5,56,250

5. *Indications for requirements of labour-skilled and unskilled-showing the employment potential of the scheme:*

Skilled including technical staff 30 one throughout the year

Unskilled 54

6. *The amount of foreign exchange required recurring as well as non-recurring and the ultimate saving in foreign exchange availability of indigenous machinery and need for foreign technical assistance to be clearly specified:*

About Rs. 1,56,000 required as non-recurring foreign exchance to purchase double drum driers and homogenisérs. The products are highly nutritious and are to be introduced for the first time in the Indian market. Mostly the other equipments are available within the country. There is no need of foreign technical assistance, since the technical information is available within the country.

7. *Suggested location of the plant (State):*

Mangoes growing area in the state of Madras.

8. *Marketing possibilities present as well as future:*

These are all new categories of products and are highly-nutritious and can be easily popularised for use within the country. From a number of enquiries received from abroad, export possibilities are also bright. Mango custard powder may be popularised for feeding in schools. Mango flakes are likely to be highly acceptable as a breakfast fruited cereal. Fruit toffees and fruit slabs can replace with advantage and toffees at present being manufactured from sugar colour synthetic essences.

9. *General remarks:*

Enough land has been provided for extending the buildings which may be required if production has to be increased as a result of experience gained in market acceptability of the products manufactured under these schemes.

Some modifications in the scheme may become necessary as a result of experience gained in the first few years of working. During it the course of putting the scheme into actual practice, a fruitful dynamic approach is likely to yield ideal results.

* including Rs. 34,200 on account of increments of the staff.

PROJECT ON DEHYDRATION UNIT

A detailed scheme covering all technical and commercial aspects of the project is given and salient features of the scheme are briefly summarised below:

1. *Estimated production capacity of the plant.*

One ton of dehydrated vegetables per day or 300 tons per year consisting of 100 tons each of peas and onions, 20 tons each of califlower, carrot, potato and cabbage and 10 tons each of leafy vegetables and miscellaneous vegetables.

2. *A quantitative estimate of various raw materials to be used annually.*

	Tons
Peas	900
Onions	1,000
Califlower	700
Carrot	360
Potato	140
Cabbage...	360
Leafy vegetables (like spinach, sarson kasag)	200
Miscellaneous vegetables ...	150
Chemicals assorted	3,335 lbs.

3. *An estimated cost of the project indicating distribution of the cost over buildings, plant and equipment and working capital giving approximate idea of profit and loss account:*

	Annual Rs.	*For 5 years* Rs.
Cost of land and building ...	2,40,000	2,40,000
Cost of plant and equipment ...	3,60,000	3,60,000
Working capital..	2,40,000	12,36,850*
	8,40,000	18,35,850 or 18,40,000

* Including Rs. 35,850 on account of increment of staff.

4. *Indications of fuel, power and water requirements:*

	Annual Qnty.	Cost Rs.	*For 5 years* Qnty.	Cost Rs.
Electric power K.W.H.	Units 60,000	5,400	3,00,000	27,000
Steam at high pressure (tons)	4,400	61,600	22,000	3,08,000
Water (gallons)	2,00,00,000	10,000	10,00,00,000	50,000
Total ...		77,000		3,85,000

5. *Indications of requirements of labour-semi-skilled and skilled—showing the employment potential of the scheme:*

Skilled including technical 31 throughout the year

Unskilled 37 do do

6. *The amount of foreign exchange required recurring as well as non-recurring; and the ultimate savings in foreign exchange availability of indigenous machinery and need for foreign technical assistance to be clearly specified:*

Neither foreign exchange nor foreign technical assistance is required. Indigenous machinery can be fabricated within the country.

7. *Suggested location of the plant (State):*

Vegetable growing area of Madras.

8. *Marketing possibilities present as well as future:*

There is a ready internal and external market for dehydrated peas and onions. Other vegetables will need some effort to popularise in the civilian market, though defence needs will always be there. The products are specially suited for expeditions and there will be continuous demand from

organisations engaged in these activities. Catering establishments and canteens will find such products very convenient to use. There is no import of dried vegetables in this country at present.

9. *General Remarks :*

Enough land has been provided for extending the building which may be required if production has to be increased as a result of experience gained in market acceptability of the products manufactured under this scheme.

Some modifications in the scheme may become necessary as a result of experience gained in the first few years of its working. During the course of putting the scheme into actual practice, a fruitful and dynamic approach is likely to yield ideal results. ★

SCOPE FOR THE ESTABLISHMENT OF LARGE SCALE INDUSTRIES IN NEYVELI - SALEM AREA

There is vide scope for the starting of a large unit for the manufacture of glazed "Wall Tiles" in the State of Madras. The requisite raw material viz., clay is available in abundance in the Neyveli area. There is no unit at present for this manufacture in the States of Madras, Mysore, Kerala and Andhra Interested entrepreneurs may take to this prospective venture. ★

SOME ASPECTS OF THE MANUFACTURE OF CEMENT BY SHAFT KILN PROCESS

PROSPECTS IN MADRAS STATE

In continuation of the report published in the July-September '62 issue of *Ind Com Journal* on page 51., the information regarding prospects for small cement plants in the Madras State is given below.

The limestone deposits in this State for the most part have been fairly investigated and the probable reserves of cement grade are already known. Only drilling has to be undertaken to find out the actual reserves.

At present, there are already four large cement plants each in the Tirunelveli, Ramanathapuram, Tiruchirapalli and Coimbatore Districts. In addition to these, three new plants are being set up at each of the following districts i. e., Salem, Ramanathapuram and Tiruchirapalli in private sector. Most of the major desposits of limestone have been leased or being leased to the above cement companies and only smaller deposits useful for cement industries are unleased. These deposits are situated in the Ramanathapuram, Tirunelveli and Tiruchirapalli districts. The details of these are given below :—

I. Ramanathapuram District :

There is a fairly large deposit of good limestone near Sunnambur about 15 miles east of Madurai. A rough estimate of reserves for this deposit appears to be as much as 5 million tons for a depth of 50 feet. But in all probability, the limestone deposit will extend further down and in that case. the reserves may be expected to be in the order of 10 million tons. However, drilling has not yet been carried out to assess the reserves accurately. The nearest rail head is Tirupuvanam R. S., 3 miles from the deposit, on the Madurai-Mannamadurai branch line across the Vaigai river, which has no bridge. This deposit is also situated roughly midway between Sivaganga and Madurai Railway Stations. This may support a small plant of 300 tons a day.

II. Tirunelveli District :

In the southern part of Tirunelveli, there are small deposits of crystalline and marine limestones and large reserves of kankary limestones. If Vadakku Valliyoor, a prominent village, 10 miles south of Nanguneri is taken as a factory site, cement grade crystalline limestone of about 1·5 million tons occurs near the above village and Padamaneri. About 6 million tons of cement grade limestone occurs on the sea-coast near Kudangulam, a village about 16 miles south of Valliyoor. The total probable reserves of cement grade in this area is about 7·5 million tons. In addition to these, there are large deposits of tufaceous and kankary limestones near Valliyoor with about 5 to 10 million tons as reserves. But the latter have high silica and low iron and alumina percentages. If suitable clay, rich in iron and alumina, is added, mixture of all these varieties of limestone may be brought into a standard composition and a small plant of about 300 tons a day may be established at Valliyoor which is 32 miles south of Tirunelveli on the highway to Nagercoil. However, chemical and physical tests have to be conducted on the mixed limestones before deciding to set up a cement plant. Near vadakku Valliyoor, there is the Nambiar river which can provide sufficient water for the factory. Sufficient clay is available in the large Valliyoor tank. There is also a proposal to connect Tirunelveli by rail with Nagercoil and if this comes into existence, it is expected to pass through Valliyoor.

III. Tiruchirapalli District :

About 15 miles south of Kulithalai, there is a small village known as Varavanai. The main Karur limestone bands pass through this village. At present, there is a proposal to set up a plant utilising the limestones to the west of Varavanai. It is very likely that the thick limestone deposits west and northwest of Palaiyam may be utilised for a second plant if drilling tests prove satisfactory. However, the eastern portion of the limestone, from Varavanai to Ayyampalayam, a distance of about 4–5 miles, run as narrow bands, the reserves of which may be about 12 million tons or a depth of 50 feet only. This area is roughly 12 to 13 miles south of Lalapet R. S. on the Erode—Tiruchirapalli broad guage line. This deposit is also about 10 to 15 miles from Vyampatti R. S. on the Tiruchirapalli—Madurai metre guage line.

IV. South Arcot District :

There is a reserve of about 3·5 million tons of marine limestone of nearly cement grade occuring around Vanur in the South Arcot District and the contiguous part of Pondicherry State. It is about 5 to 6 miles from the Villupuram—Pondicherry Rly. line. The quality of the limestone indicates that it is nearly of cement grade though of high silica content. In view of the limited reserves and quality of the limestones, these may not be favourably considered for putting up a cement plant. However, selected portions of it may be useful to set up a small plant of about 75 tons a day, if it is practicable, for such a plant. ★

MANUFACTURE OF ABRASIVES

INTRODUCTION:

Abrasives are substances which because of their hardness, toughness and sharpness will wear away or abrade other substances. They include a wide range of materials extensively used in almost every branch of industry for cutting, drilling, grinding and polishing. The materials employed are required to be hard, tough and sharp The efficiency of an abrasive depends not only on its hardness and toughness but also on its ability to develop and maintain a proper angularity even in smallest particles. It is largely for this reason that corundum has not been displaced entirely by the products of electric furnace such as carborandum (silicon carbide); alundum (fused); norbida (boron carbide).

In industrially advanced countries natural high grade abrasives are being displaced by artificial abrasives chiefly due to their greater uniformity in shape and hardness. The most important of these are fused alumina (alundum H. 9. 2-9 6); silicon carbide (carborandum H. 9·5-9·75) and boron carbide (norbides). In hardness boron carbide is intermediate between silicon carbide and diamond. These synthetic grains are used for the production of grinding wheels and stones, coated abrasives, grains, powers, etc.

The production of abrasives have not developed to any considerable extent in India. There are four large firms manufacturing coated abrasives and paper; emery paper and cloth and two firms producing grinding wheels and discs. The production of coated abrasives is carried out also through cottage industries.

Coated abrasives are: sand, glass or flint paper and cloth: emery paper and cloth; garnet paper and cloth; aluminium oxide paper; cloth and combination; silicon carbide paper, cloth and combination; waterproof abrasive paper, etc., These are sold in sheets, rolls, discs, belts, tapes or coils. The larger abrasive consuming industries in India are the engineering and automobile works, leather factories, railways and furniture makers. They are extensively used for abrading, polishing and sharpening of all types of materials.

Occurrence of Natural Abrasive Minerals in Salem Area: (Madras State)

Crystalline corundum has a wide distribution in Southern India most commonly in association with basic rocks containing pyroxenes as a predominant constituent together with some member of spinel group of minerals.

At Papparappatti in Salem District, corundum occurs in foliated pyroxene granulites. It occurs as a constituent of

anorthite gneisses in Sithampundi (Salem District). It is found with Syenitic rocks at Palakod (Salem District). The present output is of the order of 50 to 60 tons per year. It is estimated that several thousand tons of the mineral will be available within a depth of 40′ or 50′. Fused lateritic material from the Shevroy Hills of Salem marked under the name 'ALIROX' contains much artificial corundum from its original bauxite content.

Garnet rich rock occurs in Saniyasimalai in the Shevery Hills of Salem. It is crushed, graded and marketed as garnet emery. M/s Aja Products Ltd., Madras manufacture graded and coated garnet abrasive products, the raw mineral drawn from the mica belt of Nellore.

Artificial Abrasives

Alundum:—The raw material for the manufacture of the abrasive (H. 9·2 — 9·6) is high grade bauxite. The bauxite should be low in silico (3%), titanium (2·5 — 4%) and iron (Fe_2O_3 3-5%) The finer grades of artificial aluminium abrasives are manufactured from chemically prepared alumina. There are about 60 to 70 lakhs tons of bauxite in the Shevroy Hills of Salem. However, they do not conform to the above specification. Bauxite samples may be suitably blended to correspond to the above date. The Shevroy Bauxite Products Co., Ltd., make a fused alumina abrasive called 'ALIROX' from the bauxite of Salem. The impurities mainly iron and silicon oxides impart toughness to the finished abrasive. However, some pure alumina is also fused for particular demands as where the grinding wheel temperature must be kept low. In any case, the aluminous material should be calcined before charging into the furnace. The final product is fabricated into abrasive wheels, papers, powders or into refractory shapes.

Alundum is produced by fusing high grade bauxite in an electric arc type furnace which consists of a steel kettle, about 6 feet in diameter at the top, 5′ in diameter at the bottom and 6′ high into which two large carbon electrodes project downward. A typical charge might be: calcined bauxite 89%, iron borings 9% and petroleum coke 2%. A layer of calcined bauxite which is mixed with a little iron fillings is placed at the bottom of the kettle and on top of this, a layer of ground coke to make connection between the ends of the electrodes is arranged. With the arc, intense heat is generated, which melts and burns away the impurities from the bauxite and converts it into aluminium oxide. As the process continues, fresh bauxite is added as fast as the melting and purification takes place until the kettle is full. The electrodes either burn off or gradually raised to accommodate the height of arc to the level of the melting zone. The mass is then cooled, dumped, broken to pieces, further crushed, screened, cleaned, graded and manufactured into abrassive articles. The products should have a brilliant waxy lustre and consist of large crystals. The higher the content of foreign oxides, the darker the products but beyond a certain limit (especially of Silica SiO_2) the product rapidly falls off in grade. Titania (TiO_2) is believed to have a decided toughening influence on the products. The approximate composition of the final product (fused alumina) will be 95% alumina, 1-1 5% SiO_2, 0·15 to 0 4% Fe_2O_3, 3 8 to 4 2% TiO_2.

Details of Furnace

Vertical arc resistance furnace—550 kw.; steel wall water cooled-- voltage 100--110; current 2,500 amp.: furnace temperature—2,000--2,000°C; % conversion of material 95 to 100: energy consumption kw. hr. lb.; 1 to 1 5 electrode consumption—35 lb./ton of product.

Modern type of furnace consists of a circular steel plate about 7′ high and 5′—6′ in diameter with a carbon bottom, sitting on a movable small truck. The shell has a slight taper towards the top so that it can be easily lifted off from around the pig. The shell is water cooled, usually by a spray mounted at the top around the outer side of the shell. This keeps a thin layer of bauxite unfused on the inside of the steel so that the bauxite acts as its own refractory. The furnace requires about 550 K.W. at 100—110 V., three phase current being used. Round carbon electrodes 10″ in diameter are used. The process is a batch one. Some mix is added, the electrodes are lowered and the furnace is started. The bauxite which fuses from its own conductor and the bath is slowly built up by shovelling in more mix until the furnace is full. This takes about 36—38 hours for a total charge of 13 to 14 tons.

Machinery Required

Machinery required are: jaw crushers, roll crushers, pulverisers, electric arc furnace, sieves and bauxite calcination furnace.

Location of the plant

The plant may be located nearer to the source of raw materials where 3 phase power is available with copious water supply. Raw material (high grade bauxite) is available to a limited extent in the Shevroy Hills, Salem District. Power and water are likely to be available more easily in the Neyveli area. As some bauxite will have to be obtained if necessary even from outside the State to get the proper blend, it may be more economical to set up the alumina abrasive plant nearer Neyveli than Salem. It may even be possible to blend raw bauxite with purified alumina obtained by the Bayer process by the aluminium industry based on Shevroy

bauxite. If such a possibility materialises, it would then be possible to set up a plant at Mettur or Salem. Thus it is seen that either location is possible, but a final choice will have to depend on exact details of the project to be worked by the enterpreneurs.

APPENDIX I

Product Manufactured: Alundum abrasive (fused alumina) grains.

Production Capacity: 250 tons per month of 25 working days.

Capital Investment: Rs. 16 5 lakhs.

Statement No. I

		Rs.
(a) *Land and Building:*	...	75,000
(b) *Machinery and Equipment:*		
Size reduction units	...	50,000
Electric arc furnace ...	...	8,00,000
Calciner	...	50,000
Sieves	...	10,000
Erection charges ...	...	60,000
Service line and miscellaneous	...	30,000
	Rs.	10,00,000
(c) *Raw Materials:*		
Bauxite 8 tons @ Rs. 100 per ton		800
Pure alumina 4·9 tons @ Rs. 500 per ton	...	2,450
Coke 0·25 ton @ Rs. 160 per ton		40
Electricity (30,000 k.w.hr.)	...	3,000
Iron borings 1·0 ton @ Rs. 300 per ton	...	300
Cost of carbon electrodes required for the process ...	...	700
Water	...	60
	Rs.	7,350
For 25 days a month 3 month requirement ...	Rs.	5,51,250

(d) *Labour and Supervision:*	Rs.
Skilled and semi-skilled labour on average wages of Rs. 3 per day...	3,000
Staff, supervisory and administrative	1,500
Per month	4,500
Labour and supervision for 3 months ... Rs.	13,500
Rs.	16,39,750
Total (a b c d) or Rs.	16,50,000

Statement No. II

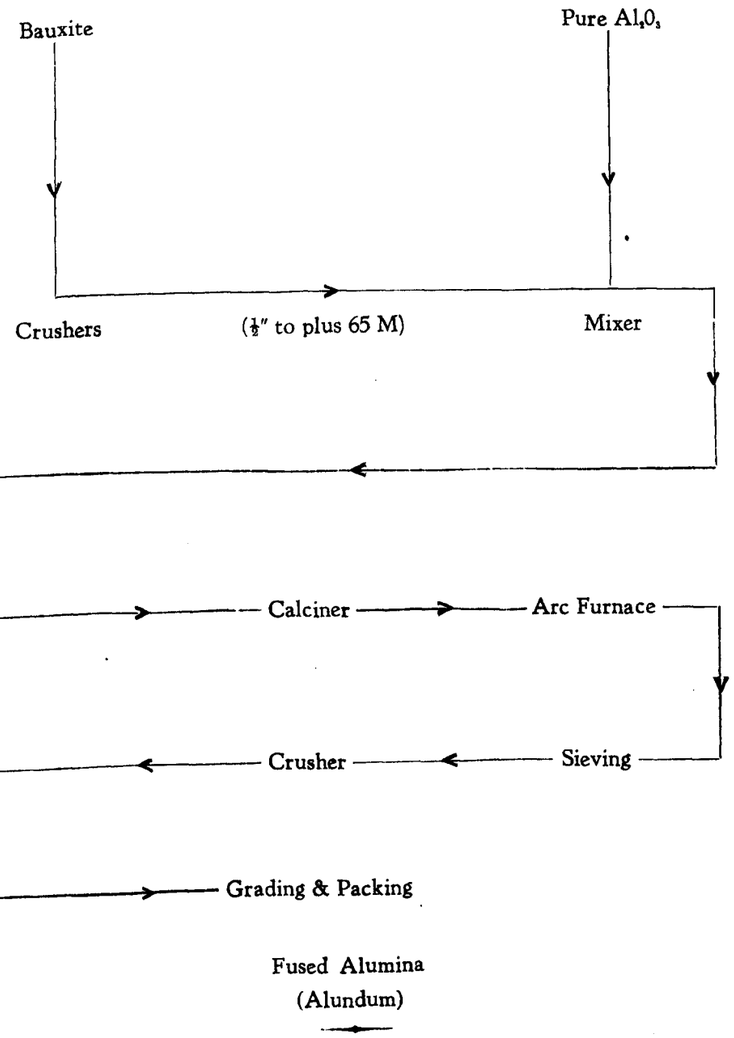
Cost of Production (Monthly)

	Rs.
Raw materials, electricity, water, carbon electrodes, etc. (as per statement I) (Rs. 7,350 x 25) ...	1,83,750
Labour and supervision ...	4,500
Repair and maintenance @ 2% of cost of machinery and building	1,800
Depreciation of machinery at 10%	8,333
Depreciation on buildings @ 5% ...	313
Interest on capital of Rs. 16·5 lakhs at 6%	8,250
Incidential expenses, taxes, and insurance @ 5% of capital costs.	6,875
Rs.	2,13,821
Production—250 tons per month.	
Cost of production per ton of material in bulk and loose ...	855 28
Allowance for price fluctuations, plant shut downs etc. @ 20% of cost	171·06
Rs.	1,026·24
Packing materials etc. @ 10% of average cost	102·63
	1,128 97
or Rs.	1,129 00 per ton
Profit @ 20%	226·00
Rs.	1,355·00 per ton

or Rs. 1·36 per Kilogram

APPENDIX II

Manufacturing process flow sheet



TECHNOLOGY OPENS NEW DOORS TO AUTOMATION

A NEW APPLICATION OF AUTOMATION
COMPUTER PROCESS CONTROL

PART I.

The new technology of "computer process control," in which machines work out operating decisions on their own and then act on them, is beginning to bear fruit. Totally automated processing plants are still comparatively rare, but companies producing chemicals, steel, plastics, electric power, petroleum and cement are deciding how to adopt the advantages of the computer process control system to their specific activities.

The first step in introducing computers to process control was to have the human operator feed data from thermostat—like instruments into the computer; from this information, the computer calculated the best combination of settings for the controlling instruments. The next step was linking of instruments to computers, which received readings directly. In both cases, however, the worker himself had to reset controls according to the computer's results.

With CPC (computer process control) both the instruments and the control settings are hitched directly to the computer. One article dealing with CPC points out:

"Connected by its own communications network to perhaps hundreds of instruments, the machine gathers in rapid succession reports on critical variables in the process. The computer then analyses how things are going. It takes a computer's fantastic speed to analyse what is happening in, say, a steel rolling mill where strip is flashing by at nearly 35 miles per hour, or in a chemical plant where thousands of calculations must be made to reveal the exact state of the process. After analysis, the computer makes decisions, calculating how valves, burners, rollers and other apparatus should be adjusted. Finally, it takes action. It despatches back through the communications network a series of commands that cause individual controls on each piece of apparatus to make the necessary adjustments. And it can repeat this routine hundreds of times a day for weeks at a stretch, virtually without human supervision. In its spare time the computer can type out a condensed log of the operation."

Though automation opens new opportunities, it also presents major problems. The technological revolution in industry caused by the computer is proceeding at a faster pace than the technological changes of earlier days. Comprehensive studies of the effects of automation on the nation's economy and labour force have been and are being made by the executive and legislative branches of the U.S. Government as a major step towards solution of the human as well as the technical problems. Where automation has been introduced in factories or offices, in many cases it has been preceeded by consultations between the company management and labour unions, and programmes have been worked out jointly for the reassignment or retraining of displaced workers.

How quickly different industries will adopt true automation depends to a great extent on their knowledge of their production processes. Because programming the computer is the heart of such a system of control, this requires an exhaustive engineering analysis of what takes place in a process. However, the expense of lengthy process analysis bears dividends. Surprisingly often, the engineering studies provide so much fresh knowledge of existing processes that it is possible to improve plant operations markedly without installation of costlier control systems.

Once computer control is installed, the studies never stop. Scientific theory holds that a computer can always improve its performance. Every adjustment it makes is an experiment carried out under actual operating conditions. Engineers can use the results to sharpen the computer's programme and in the long run, to consider more drastic improvements in the process itself.

Still in the future is a more sophisticated system, dynamic closed-loop control, in which the computer will send its orders directly to valves and motor controls, thus eliminating the need for thermostat type devices which are now still necessary. Although this peak of automation may not be gained for another five years, the current interest in computer process control seems highly justified, particularly in four basic industries: electric power generation, steel rolling and plating, petroleum refining, and chemical manufacture. Their processes are similar in an important respect; energy and materials flow continuously, almost without interruption. Thus, mathematical formulation of continuous process can be accomplished and a computer programmed to take over control.

In contrast, manufacturing processes characterised by stages or steps, such as motor-car assembly, are hard to formulate mathematically; hence they lag in total automation. Even, in these however, automatic machinery and partially automatic assembly are common.

What does computer process control offer to companies which are highly machanised already? Maximum operating efficiency at all times is attained through better and faster decision-making. Other advantages are: increased safety and reliability; more accurate production scheduling; more efficient inventory control.

Yet, despite these benefits, management must face the questions: Is it worth while to devote so much time and labour to determine the mathematical model of a process in order to put a computer in charge of it? Will it bring enough improvements in productivity to pay for high-salaried scientists and engineers and costly new equipment? The answers differ from one industry to another, from one company to another. But undeniably computer control is here to stay.

(To be continued)

IMPORT OF CAPITAL GOODS FROM JAPAN UNDER THE SECOND YEN CREDIT

Under the Second Yen Credit agreement concluded between the Export-Import Bank of Japan and certain other Japanese Banks on the one hand and the Government of India on the other, imports of capital goods from Japan into India against contracts of a value exceeding Rs. 4·76 lakhs C. & F. can be financed against the credit. Intending importers may apply to the Chief Controller of Imports and Exports, New Delhi, for a clearance in principle, with a copy to the Deputy Economic Advisor, Ministry of Commerce and Industry, New Delhi providing the information indicated in paragraph 59 in Section I of the Import Trade Control Policy Book for the current licensing period—October 1961 March '62.

Applicants, who are informed that their import proposals have been approved in principle, will be required thereafter to submit to the Chief Controller of Imports and Exports, Udyog Bhavan, Maulana Azad Road, New Delhi, import applications in the prescribed form for capital goods and in the prescribed manner. After scrutiny of the applications from the view point of essentiality the applicants will be advised of the list of goods and the value thereof that may be permitted for import. Thereafter, the applicants should submit to the Ministry of Finance, Department of Economic Affairs, Foreign Credits Section, North Block, New Delhi with a copy to the Deputy Economic Adviser, Ministry of Commerce and Industry, New Delhi, three attested copies of a contract with the suppliers in Japan which would be subject to approval by the Government of India and the Government of Japan. The Department of Economic Affairs will secure banking confirmation from the Export—Import Bank of Japan in regard to the financing of the contract under the Second Yen Credit and thereafter advise the applicant to make contract with the Japanese supplier effective indicating also the name and address of a Japanese bank through whom payment is to be made to the Japanese supplier. The applicant will be required at this stage to furnish to the Department of Economic Affairs a bank guarantee in the form reproduced in Appendix I to this Public Notice, which will ensure that the rupee equivalent of payments made from time to time to the Japanese supplier is deposited immediately thereafter to the account

of Government through the State Bank of India, New Delhi. On receipt of the bank guarantee duly executed, the Chief Controller of Imports and Exports, will be authorised to issue the Import Licence for the capital goods. The special conditions governing the import which will be intimated to the applicants at the time they are informed that their import proposals have been approved in principle will provide *inter alia* for the following.

(*i*) Payment for the goods can be effected only under a confirmed irrecoverable letter of credit opened on a specified Japanese bank through the applicant's bank in India which would be the one which will furnish the bank guarantee to Government.

(*ii*) The letter of credit would provide for payment by the Japanese bank against the Second Yen Credit. No foreign exchange remittance from India will be permitted.

(*iii*) The letter of credit should be in the form set out in Appendix II to this Public Notice.

(*iv*) All contracts should be on C. & F. basis.

(*v*) Insurance, if required should be effected against payment in Indian rupees in India. The amount of insurance payment will however, be debited to the C.I.F. value of the licence.

(*vi*) As and when payments are made by the Japanese Bank to the Japanese suppliers, the rupee equivalent should be deposited with a specified Government account with the State Bank of India. The rupees equivalent of Yen payments should be calculated at the IMF parity rate on the date of Yen payments (at present this rate is Rupee.1—75'6 Yen). Interest @ 6% will be payable from the date of payment to the Japanese supplier to the date of deposit of rupee equivalent by the importer into Government account.

2. Applicants should note that the contracts submitted for approval should normally provide for payment on cash basis i. e. on presentation of shipping documents. For any customary performance guarantee required, 10 to 20 per cent of the contract value could be withheld which should, however, be paid within twelve to eighteen months after erection of the plant. Contracts on the basis of deferred payments can be considered only in exceptional cases, and if the value of the equipment exceeds Rs. 1·5 crores. In no instance can payments after 31st March, 1965 be permitted.

APPENDIX I

Ministry of Commerce & Industry

Public Notice

No. 141-ITC (PN / 61)

Dated 26—12—61

Guarantee Bond (*To be duly stamped*)

(To be furnished by banks under the procedure for the import of goods under the Second Yen Credit).

To

The President of India,

In consideration of the President of India (hereinafter called "Government") having at our request arranged for payment for the import of.....(here specify the nature of the goods) by.....(Name of Indian "importer(s) herein after called "the said importer(s)" under the terms and conditions of an agreement/contract date..... made between the said importer(s) and..... .....(Name of Japanese supplier) and in pursuance of an import licence to be issued to the said importer(s) by the Government of India under the Yen Credit Procedure, against the credit made available for this purpose by the Export-Import Bank of Japan and twelve other participating Japanese banks.

2. We.....Bank Ltd., do hereby undertake to indemnify and keep indemnified the Government against any default in payment by the said importer(s) of any sum that may be due and payable from time to time by the said importer(s) to the Government in respect or on account of the said import under the above Yen Credit Procedure and for that purpose undertake to pay on demand to the Government at such place and in such manner as the Government may from time to time direct the sum in the rupee equivalent of Yen..... at the International Monetary Fund parity rate on the dates of payments to the suppliers in Japan, or any part thereof, for the time being due and payable by the said importer(s), together with interest thereon at the rate of 6 percent per annum from the date of payment to the Japanese supplier.

3. We,.....Bank Ltd., further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement contract and that it shall continue to be

enforceable till all the dues to the Government under or by virtue of this guarantee have been fully paid and its claims satisfied or discharged, or till the Department of Economic Affairs, Ministry of Finance certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said importers and accordingly discharges this guarantee, whichever of these periods may be later.

4. The guarantee herein contained shall not be affected by any change in the constitution of the said importer(s) or the.....Bank Ltd., and the Government shall have the fullest liberty without affecting the guarantee to postpone for anytime and from time to time any of the powers exercisable by it against the said importers and either to enforce payments by the said importer(s) or forbear in enforcing payment by the said importer(s) of any of the amounts, the payment whereof is intended to be hereby secured and the..... Bank Ltd., shall not be released from its liability under this guarantee by any exercise of the Government of the liberty with reference to the matters aforesaid or by reason of time being given to the said Importers(s) or any other forbearance, act or omission on the part of the Government or any indulgence by the Government to the said importer(s) or by any matter or thing whatsoever which under the law relating to sureties shall, but for this provision, have the effect of so releasing the..... Bank Ltd., from its such liability.

5. We,.....Bank Ltd., lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Government in writing.

Dated..... day of 1962

For..... Bank Ltd.,

Accepted for and on behalf of the president of India.

(Signature)

Signature and Designation

APPENDIX II

Ministry of Commerce and Industry

Public Notice

No. 141-ITC (PN/61)

Dated 25—12—61

(Name of Issueing Bank in India).

To

(Designated Japanese Bank).....

(Date)

This letter of credit has been issued pursuant to Article V of the Loan Agreement dated August 18, 1961, concerning the Second Yen Credit to India & in accordance with the Notice of Approval No..... issued by the Export-Import Bank of Japan.

Dear Sirs,

We request you to advise..... that we have opened our irrecovable credit No..... in their favour for account of.....for a sum or sums not exceeding a total of..... available by beneficiary's draft(s) at sight for..... available by beneficiary's draft(s) at sight for.....% invoice value drawn on you (Designated Japanese Bank), covering shipment from..... to.....of.....

To be accompanied by the following documents.

All documents must indicate import licence No.....and the Export-Import Bank of Japan. Notice of approval No..... Partial shipments are.....permitted. Transhipment is.....permitted. Shipment must be effected not later than .....drafts must be presented to the drawee not later than.....

All drafts drawn hereunder must be marked "drawn under..... .....irrecoverable. credit No .....dated....."

We hereby undertake that all drafts drawn under and in compliance with the terms of the credit shall be duly honoured on due presentation and delivery of documents to the drawee.

Special Instructions:—

1. This letter of credit does not become available unless the Issuance or letter of undertaking as provided for in Article V of the loan agreement dated August 18, 1961, concerning the Second Yen credit is confirmed and certified by you to that effect on the face of your advice of this credit to the beneficiary.

2. Simultaneously with the payment of draft(s) under this letter of credit, reimbursment shall be obtained by you in accordance with Article V of the said Loan Agreement.

All banking charges in connection with this letter of credit are to be paid by us.

Yours faithfully.

NEW EXPORT (CONTROL) ORDER

The Government of India has issued a new Export (Control) Order freeing a large number of items from *all export control.* Under the new order, export restrictions will operate only on a small number of items in respect of which control is inescapable. These fall under six categories, namely, specified kinds of metals, minerals, oilseeds, seeds, wild life and wheat and wheat flour. Exports of about 31 items will be allowed either on merit, or subject to celings or subject to some stipulations to be specified from time to time. Among these are specifed arrivals, coal and coke, raw cotton, cotton waste, raw jute and meshy, wheat bran and rice bran, hides and skins, pulses and four (other than wheat and wheat flour) metal scraps, certain types of minerals,, ores and concentrates certain varieties of oil cakes raw wool, wood and timber, arms, ammunition and military stores, mineral oils, aircraft and parts, tapioca meal and wastes, rock salt and specified types of metals, cinemotograph films (not exposed) mustard oil and ripe seed oil. All the items, which are not included in either of these two lists, will be allowed for export without any licensing formalities what so ever. ★

PROTECTION TO PLASTICS INDUSTRY WITHDRAWN

The Government of India have accepted the Tariff Commission's recommendation that protection to the plastics (phenol formaldehyde moulding powder) industry need not be continued beyond Dec. 31, 1962.

The Government's resolution on the Tariff Commission's Report (1962) on the continuance or otherwise of protection to the plastics (phenol formaldehyde moulding powder) industry has been published.

Government have taken note of the recommendation of the Commission that the applications for import licences from producers of P.F. moulding powder for testing equipments should be given sympathetic consideration and steps will be taken to implement it as far as possible.

The attention of the manufacturers of phenol formaldehyde moulding powder has been invited in the resolution to the Commission's recommendation that since there are some complaints from the manufacturers of electrical accessories, producers of GX grade should take steps for improvement of the moulding powder for which there is scope. ★

PROTECTION EXTENDED TO SHEET GLASS INDUSTRY

The Government of India have accepted the Tariff Commission's recommendation that protection to the sheet glass industry should be continued at the existing rate of duty, Viz., 70 per cent *ad valorem*, for a further period of three years, i.e. upto December 31, 1965.

Government's resolution on the Commission's report has been published.

Government have also taken note of certain ancillary recommendations made by the Commission for assistance to the industry for consideration and implementation as far as possible. ★

PROTECTION TO BALL BEARING INDUSTRY TO BE CONTINUED

The Government of India have accepted the Tariff Commissions recommendation that protection to the ball bearing industry should be continued at the existing rate of duty for a further period of three years ending December 31, 1965.

Government's resolution on the Tariff Commission's report (1962) on the continuance of protection to the ball bearing industry has been published.

The Government have taken note of certain other recommendations of the Commission and will take steps to implement them to the extent possible.

The attention of the National Engineering Industries Ltd., Jaipur, has been drawn to the recommendations of the Commission that it should (*a*) properly enforce statistical quality control and utilise its electronic mechines for the purpose for which they were procured, (*b*) take earnest steps to improve its records of production and process costs in order to exercise better control, effect economies and facilitate determination of costs with accuracy and (*c*) explore the possibility of getting its scrap arisings from H. C. I. steel, which are very heavy, processed for re-use. ★

PROTECTION EXTENDED TO CERTAIN TYPES OF NON-FERROUS METAL PRODUCTS

The Government of India's resolution on the report (1962) of the Tariff Commission on the continuance or otherwise of protection to the non-ferrous metals industry has been published. The Government have accepted the Tariff Commission's recommendation that the protection granted to copper pipes and tubes, brass pipes and tubes, extruded copper rods other than electrolytic copper rods, and extruded brass rods be continued at the existing rate of duty for a period of three years from January 1, 1963.

Protection is also being extended to extruded copper sections, extruded brass sections and highly polished zinc sheets for making process blocks at enhanced rates of duty for a period of three years from January 1, 1963.

Protection granted to lead sheets other than sheets for tea chests, zinc sheets not otherwise specified and zinc strips is being discontinued at the existing rate of duty on the expiry of the current period of protection from January 1st 1963. Protection granted to copper rods manufactured by rolling process and rolled brass rods is also being withdrawn from January 1st, 1963 and will be accessable to revenue duty which is lower than the existing duty.

The changes in the rates of the duties on the articles referred to above are being brought into force with immediate effect by notifications under the provisions of the Indian Tariff Act, 1934.

Government have also taken note of certain ancillary recommendations of the Tariff Commission for suitable action. ★

MORE EXPORTED COMMODITIES GET DUTY DRAWBACK

As a measure of export promotion, the Government of India have decided to allow drawback of customs and/or Central Excise duty on export of 15 more items. They are: Steel barbed wire, disinte: rators—all types, printing inks, silver nitrate, tooth brush, gas cylinders, sanitaryware, aggarbathies, post type insulators, clocks-all kinds, storage batteries, articles made of acrylic sheets, finished leather and leather manufactures and jute manufactures.

Changes have been made in items relating to pistons, gudgeon pins, cylinder liners etc., staple fibre yarn, bicycle spokes, polythene lined jute goods and paper products.

Further details and advice regarding the procedure for obtaining these concessions are available at the Customs House at the ports from which the goods are to be exported. ★

MANUFACTURE OF WATCHES

Some of the major watch manufacturers, including Favre-Leuba and Technika, have offered to collaborate with Indian industrialists in the manufacture of watches in India, according to Mr. A. Bezzola, Director of Henry Sandoz and Files, who was on a short visit to Bombay recently. Henry Sandoz itself is one of the largest Swiss watch manufacturers, producing 3,000 watches per day. ★

WORLD'S THINNEST WRIST WATCH

The Citizen Watch Company, one of the leading Japanese watch makers has started the sales of its new wrist watch, the company claims is the thinnest wrist watch in the World. The new model, a 3 needle wrist watch is only 2-3 mm and provided with a thin "parashock" device to assure its accuracy. This watch is presently being manufactured at a rate of about 5,000 units per month. ★

TRAINING OF CRAFTSMEN

With the growing industrialisation in the Country, the demand for trained craftsmen both in the Public and Private Sectors is increasing by leaps and bounds. It is stated for every degree holder, trained and employed, there should be four diploma holders and sixteen craftsmen. This is the structure on which engineering personnel are built up.

One of the measures implemented for turning out skilled craftsmen commensurate with the demand was the establishment of the Industrial Training Institutes all over the Country. With the additional 44,500 seats that have been sanctioned during the Third Five Year Plan, the total training capacity in the various Industrial Training Institutes in the country will now be 94,340 and the number of new Industrial Training Institutes sanctioned during this period is 117, thus bringing the total to 284. In August 1962 alone, creation of 1,744 seats and the establishment of four new training institutes were sanctioned. The Third Five Year Plan envisages creation of 156 new institutes and about 58,000 additional seats. This will raise the total number of institutes to 323 and the seating capacity to about 1,00,000. At the end of the Second Plan, facilities existed for the training of about 42,000 craftsmen annually. The above is a glimpse of the figures taking the Country as a whole.

So far as the Madras State is concerned, 6 Industrial Training Institutes with a seating capacity of 768 were set up during the First Plan period, and during the Second Plan period four more institutes came into existence, bringing the total for 10 with a seating capacity of 3,368. In the Third Plan provision has been made for the establishment of 14 more Industrial Training Institutes.

There are at present 22 institutes in Madras State. In these institutes, technical training is given to the candidates in engineering building construction for a period of two years including compulsory training for the last six months in factories under workshop conditions. The aim of training is to equip the trainees for suitable industrial employment. There are also a few non-engineering trades like stenography, hand composing, proof-reading and book-binding. It has been the endeavour of the Government to locate the Industrial Training Institutes, near the Industrial Estates, as far as possible, in order to give industrial atmosphere to the boys who can conceive for themselves not only the opportunity available for them to secure employment, but also the facilities made available by Government for the starting of new industries.

The educational qualifications required for admission into the institutes is only a study upto IV Form. The age restriction is between 16 and 25 years. In so far as specialised trades like draughtsmen, electrician, radio machanic etc., are concerned where the standards are a little higher, an appilicant must be a matriculate. Training is free; workshop clothing and free hostel accommodation are also provided. In addition a stipend of Rs. 25 per month is given to approximately 1/3 the number of trainees in the institute. It will, therefore, be seen that a wonderful opportunity lies before those who cannot afford higher education and who have the aptitude for work, to get admission into these institutes and build up a career. The trainees appear for a trade test at the end of their period of training and successful trainees are awarded certificates which are recognised by both the Public and Private sectors.

EVENING CLASSES IN THE INDUSTRIAL TRAINING INSTITUTE, GUINDY

With a view to provide facilities for the training of the workers already employed in the private industries, the Department of Industries and Commerce, Madras has introduced the scheme of "Evening Classes". The object of the scheme is to improve the theoretical knowledge of the industrial workers by arranging evening classes for them after factory hours. The industrial workers are taught workshop arithmetic, reading of blueprints and elementary trade theory and use of precision instruments. The duration of the course will be two years and classes are held from 6 P.M. to 8 P.M. thrice a week. A fee of Rs. 2/- per mensem, in addition to Rs. 5/- as caution deposit, is collected from each candidate undergoing training. The sanctioned strength is 200 students divided into two batches of 100 each. The trades taught at present are (*a*) Fitting (50), (*b*) Motor Mechanic (50), (*c*) Draftsmen Civil (50), (*d*) Instrument Mechanic (50).

The first batch of 100 students have been admitted in September 1962. On satisfactory completion of the course the students will be awarded the certificate of the State Council for Training in Vocational Trades.

TECHNICAL TRAINING CENTRE, INDUSTRIAL ESTATE, GUINDY

Under the Third Five Year Plan, the Government of Madras have sanctioned a scheme for the establishment of a Technical Training Centre at Guindy at a total cost of Rs. 20,00,000 towards recurring and non-recurring expenditure. The object of the scheme is to give intensive training by experts to the craftsmen in various specialised fields of Die Designing; Machine Operatives; Die & Tool Making; Forge & Heat Treatment and Wood Working, Seasoning and Treating.

The first batch of these courses has begun from 1—1—62 and the names of courses and number of trainees are as follows:

S. No.	*Course*	*Period*	*No. of trainees*	*Stipend per month*
				Rs.
1.	Die Designing	2 years	10	100
2.	Machine Operative	18 month	20	60
3.	Die Sinking & Tool Making	,,	20	60
4.	Forge & Heat Treatment	,,	10	60
5.	Wood Working, Seasoning & Treating	12 month	10	60

USE OF ASSAM TEA WASTE

Investigations at the Regional Research Laboratory at Jorhat in Assam have shown the possibility of recovering 95 per cent of the caffeine from the alkaline tea cutch by extraction with ammonical chloroform.

Tea waste containing 3-4 per cent caffeine and 6-7 per cent tannin is accumulating to an extent of 9 million pounds annually in Assam and its utilisation is of considerable economic interest.

Also the residual alkaline cutch could possibly be utilised as a drilling additive with certain types of muds in the petroleum industry. Acacia cutch used at present in the Assam oil drilling operations is costly and has to be procured from outside the State.★

PRESERVATIVE FOR SALTED AND DRIED MACKEREL

Propionic acid at a concentration level of four per cent has been suggested as an effective chemical preservative for salted and dried mackerel. Mould growth and reddening can be brought under control even up to 62 weeks in the treated samples as against a normal shelf life of 15-20 weeks in the untreated controls, according to research work carried out at the Central Institute of Fisheries Technology, Ernakulam.

Reddening caused by halophilic bacteria and growth of moulds, popularly known as 'dun', constitute the main types of spoilage in fish, particularly under tropical conditions. Reddish discolouration has been noticed in 2-3 months in Indian commercial fish samples.

Although several preservative chemicals like sodium acid phosphate, sodium benzoate, boric acid, etc. have been recommended; none of them are found to be really satisfactory even sorbic acid considered by Canadian workers as the most effective fungistat for cured fish was found to be inactive under Indian conditions. On the other hand, promising results have been obtained by using propionic acid as chemical preservative especially in the case of wet salted and pickled fish. Further investigations on the use of propionic acid in the dry salting of mackerel have been reported which yield equally encouraging results with a modified procedure. Results of these studies reveal that salted and dried mackerel could be preserved for over one year without any microbial attack. ★

ABRASION CHARACTERISTICS OF CLAVS

A simple and rapid method has been developed at the National Physical Laboratory in New Delhi for testing the abrasion characteristics of clays.

Certain clays used in pencil manufacture are found to wear out the dies very fast which is due to the abrasive nature of the clay. As it is very difficult to find a single clay having all the desirable properties for use in pencil manufacture, a knowledge of the abrasive power and its increase on calcination is necessary in the proper selection of clays for blending.

Though primarily intended for comparing the abrasiveness of pencil clays, the method can be used for testing other materials also.★

NEW STRAIN OF MINT

A new variety of mint which gives a high yield of essential oil than Japanese and Indian mints has been produced as a result of genetical experiments carried out at the Regional Research Laboratory, Jammu and Kashmir.

About Rs. 10 to 15 lakhs worth of mint oil and about Rs. 80 lakhs worth of natural menthol are annually consumed by the pharmaceutical, soap, cosmetic and tobacco industries in India. At present India's requirements of these oils are met by imports, mainly from U.S.A., Brazil and Japan. The new strain may advantageously replace the imported varieties.

The new strain developed in the laboratory gardens is more robust, and has larger leaves, and its seed-setting is more satisfactory than that of Japanese mint.

The essential oil yield of this new variety is 5 per cent and above compared to 3-4 per cent yield from Japanese mint, while the mint ordinarily grown in India is of poor quality and its yield of oil is less than one per cent.

Steps are now being taken for the large-scale cultivation in the country of this new variety of mint which has been named 'Jammu Mint.'

★

SURFACE COATINGS FROM ASSAM EKRA REED

A lignin-furfural-based resin has been prepared at the Regional Research Laboratory, Jorhat from the lignin fraction of Ekra reed, which is abundantly available in Assam. An alcoholic solution of the resin can be applied as a surface coat on wood, metal and glass surfaces.

The surface films have been found to be tough and resistant to dilute acids and alkalis.

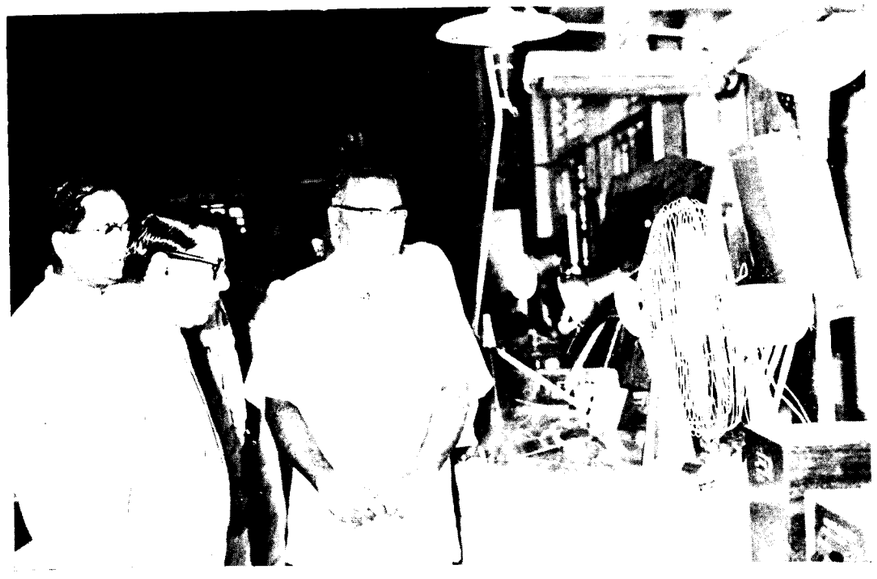
Furfural, an industrial raw material for plastics, can be obtained from the reeds in yields of about ten per cent by weight. ★

AREA METER

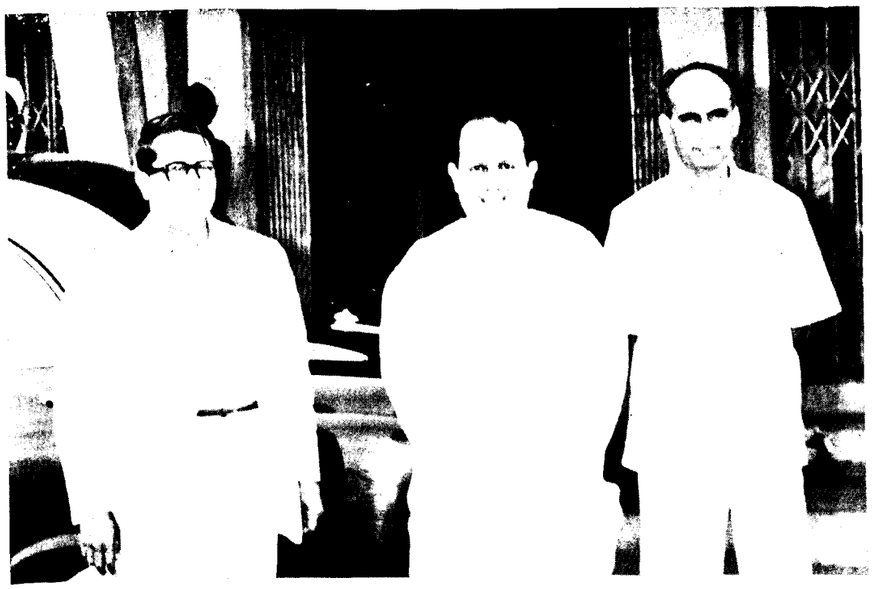
A simple inexpensive instrument has been designed at the Central Mining Research Station, Dhanbad, which enables direct measurement of the cross-sectional area of a mine airway or that of any other similar section and at the same time records a scaled drawing of the perimeter. The instruments can measure area within the range of 4—20 ft. diameter.

A knowledge of the cross-sectional area of mine airways is needed to estimate the quantity of air flowing in a mine airway which is given by the product of the average linear velocity of air and the area of the cross-section of the airway. Mine airways are generally of irregular shape and uneven profile. The ordinary method of measuring the area of cross-section by means of a measuring tape is tedious and may lead to large errors. The currently known methods like the photographic methods and the one using a profilograph designed at the National Coal Board, England, record a scaled drawing of the perimeter of the cross-section of the airway, but do not indicate directly the value of the cross-sectional area necessitating further measurements and calculations to obtain the area.

The new instrument is an improvement over the profilograph achieved by incorporating a measuring wheel with the marking point of the profilograph. ★



Dr. M. N. Lakshminarasaiah, Minister for Industries, Andhra Pradesh is seen at the Exhibition Hall, during his visit to the Guindy Estate.



Sri D. K. Boroach, Minister for Education, Assam *(centre)* at the Guindy Estate.

Sri R. Venkataraman, Minister for Industries, inaugurated the Sudar Match Workers' Co-operative Cottage Industries Society Ltd., Kancheepuram. *(See report on facing page)*

Sri Salebhoi Abdul Khader, Minister for Prohibition, Maharashtra *(front row centre)* paid a

The Kancheepuram Match Workers Industrial Co-operative Society Ltd.

ORIGIN

In the beginning of the year 1957, the Government of Madras established a match factory with a production capacity of 1,500 gross per day at Perambur in Madras City. The factory could not, however, be worked to the minimum optimum production capacity as the required labour force could not be enrolled in and around Perambur where the labourers get higher wages than what they could normally get in the match industry. The Government, therefore, ordered the shifting of this match factory to the CARE CAMP at Avadi. It was subsequently found that the inmates of the Avadi CARE CAMP could not take up this industry and work the factory on economical and commercial basis. And finally, on the recommendation of Sri P. Sabanayagam, Director of Industries and Commerce, the Government ordered the closure of the Government Match Factory at Perambur and in its place establish an industrial co-operative match factory with a production capacity of 400 gross per day, similar to the Iudustrial Co-operative Match Factories in other districts. Accordingly, the Kancheepuram Match Workers Industrial Co-operative Society Ltd., was established in June '61 and started on its work by the Joint Director of Industries and Commerce, (Industrial Co-operatives) from July 1961.

Organisation and Production Set up

This Society is to provide employment to about 250 workers—200 outside the factory and 50 inside the factory. At present, its production capacity will not exceed 400 gross per day. The Society will in a few years time increase its production capacity to four fold.

Its area of operations extend to Kancheepuram taluk and its authorised share capital is Rs. 1 lakh made up of 10,000 shares of Rs. 10 each. There are 494 members on its rolls. They have contributed a total paid up share capital of Rs. 23,620 (Rs. 19,000 as share capital loans to 190 members at Rs. 100 each and Rs. 4,620 by cash).

The Society has been given loan under the Second Plan schemes to the tune of Rs. 1·14 lakhs to meet the cost of lands and buildings, equipment and working capital.

Construction of Buildings

The Department of Industries and Commerce, has allotted M. B. Shed materials to the Society for the construction of the

factory buildings. It is not an exaggeration to state that within a short period of six months, it has been possible to construct the buildings satisfying all the provisions of Factories Act, Explosives Act and other laws governing the running of a match factory. The plinth area of all the buildings is about, 5,600 sq. ft. and the total cost of constructing the buildings including the cost of the sheds amounts to about Rs. 50,000 which works out to Rs. 9 per sq. foot of plinth area. It is quite appropriate to mention here a word of thanks to Sri M. Munuswamy Mudaliar of Kancheepuram who has been kind enough to give the lands for locating the factory.

Obtaining of Licences under Factories and Explosives Act

The compliance of the provisions of the laws governing the establishment of a match factory is a difficult process and ordinarily it takes nearly a year to comply with all the requirements of the laws in force to the satisfaction of the authorities concerned and to get all the licences. With the co-operation and timely help of the officers of the Industries, Revenue, Police and Central Excise Departments, the President, Sri K. S. Parthasarathy has been able to get all the licences in a record time of three months and it has been possible to commence production on the day of inauguration, within a short time of the existence of the Society.

Transfer of Assets of the Government Match Factory

This Society has been able to obtain all the raw materials of the Government Match Factory at Perambur such as splints and veneers, chemicals, frames etc. to the value of Rs. 29,000 which is to be repaid in 10 equal annual instalments with interest at 2½% per annum. The Government have also permitted the Society to use goodwill and the Trade Mark viz. SUDAR.

Training of the Office Bearers and Workers

As the match industry is a new venture in Kancheepuram especially in Chingleput District, the Industrial Co-operative Officer-Secretary and 20 workers (13 men and 7 women) were given training in the several processes of match production for a period of one month in the Sattur Match Workers Industrial Co-operative Society. The Conference of Match Workers Co-operative Societies held in July 1962 under the Chairmanship of the Joint Director of Industries and Commerce, (Industrial Co-operatives) has been very useful in that it has been possible to thrash out all the problems confronting the match industry and to chalk out a clear and detailed procedure to be followed in organising, running and marketing match industry for the guidance of the existing industrial co-operatives as also any new match factory which may be established in future.

The deliberations at this conference go to show that the demand for matches in North India is so great that any additional production of matches in this State will have a good market and that there is a good scope for establishing and running a few more co-operative match factories in the State. It is therefore obvious that this Society has a good future.

Board of Management

As in the case of all Industrial Co-operatives the management of this Industrial Co-operative Society is vested in a Board of Directors nominated by the Registrar of Industrial Co-operatives, Madras.

The Kancheepuram Metal Workers Industrial Co-operative Society Ltd.

ORIGIN

As one of the Plan schemes for 1959-60, the Government of Madras sanctioned the establishment of Industrial Co-operative Society for Metal Workers in Kancheepuram at an estimated cost of Rs. 51,000 (Rs. 46,300 as loan and Rs. 5,000 as establishment grant). This institution is to provide gainful employment to 30 artisans in improved methods of production by providing them with a common workshop facilities for the use of labour saving machines in certain items of production. The Industrial Co-operative was registered in July, 1959 and the production was inaugurated by the Deputy Director (now Joint Director, Industrial Co-operatives) in January, 1960.

Organisational Set up

The authorised share capital of the Society is Rs. 25,000 made up of 1,000 shares of Rs. 25 each. There are 33 members (29 workers and 4 sympathisers) with a paid up share capital of Rs. 15,125 (Rs. 11,000 as share capital loan to 22 members at Rs. 500 each and Rs. 4,125 as cash). The Society issues raw materials viz., metal sheets to its members for the manufacture of household utensils in their houses and pay piece-rate wages.

Working

The Society has been working satisfactorily and making profits year after year as per details given below:

Year	No. of workers	Value of production	Wages paid	Value of sales	Profit earned	Bonus declared
		Rs.	Rs.	Rs.	Rs.	Rs.
1959-60 (3 months)	23	37,668	3,684	16,562 (-)	1,005	Nil
1960-61	28	1,69,152	28,766	1,74,373 (+)	9,800	2,508
1961-62	29	1,95,867	31,292	2,20,975 (+)	12,181	(unaudited)
1962-63 (3 months)	29	47,484	7,680	58,514 (+)	2,775	

Common Workshed

Though the scheme envisaged the establishment of a common facility workshed for the use of the metal workers it has not been possible to find a suitable place for constructing the workshed. The Director of Industries and Commerce, Madras was kind enough to allot M. B. Shed materials for constructing a shed and with the funds provided by the Government the workshed has been erected and labour saving machines have been installed. The workshed was inaugurated by Sri R. Venkataraman, Minister for Industries, Madras in August, 1962.

As in the case of other industrial co-operative societies the management of the Society is vested in a Board of Directors.

REGISTRATION OF COMPANIES

Review on the working of the Companies Act, 1956 in the Southern Region for the quarter ending 30th September, 1962.

During the quarter ending 30-9-1962, 112 companies with an authorised capital of Rs. 1,790·57 lakhs were registered in the Southern Region comprising the four States of Andhra Pradesh, Kerala, Madras and Mysore. Out of them 27 are public companies with an authorised capital of Rs. 1512·49 lakhs and 85 are private companies with an authorised capital of Rs. 278·08 lakhs. The statement on page 66 gives the statewise and industrywise classification of companies registered under the Act during the period. As usual among the new registration transport companies continue to form the bulk in the State of Madras. The total investment by way of increase in paid up capital of companies is in the order of Rs. 594·38 lakhs. During the month of September, Neyveli Lignite Corporation Limited, a Government company, has increased its paid up capital to the tune of Rs. 125 lakhs. Of the newly floated companies in the region during the report under review there are fifteen giant floatations. But for one company whose authorised capital is Rs. 25 lakhs, the rest of the cases are having an authorised capitals of Rs. 5o lakhs and above. Among the 15 giant floatations 11 are for the promotion of textile industry and the rest for establishing general machinery, manufacture of textile machinery and accessories etc.; basic industrial chemicals etc., and for the manufacture of automobiles, spare parts such as fly-weels, ringstarters, gears etc.

During the quarter under report 31 companies were struck off the Register of Companies as defunct with a total paid up capital of Rs. 13·74 lakhs, and 21 companies went into liquidation, the total paid up capital of which is Rs. 32·94 lakhs.

77 prosecutions were launched during the period under report in the region against certain companies and their officers mostly for not holding the annual general meeting and for non filing of the annual returns and the balance sheets as required by law. 110 cases were disposed of resulting in conviction of the accused in 97 cases, acquittal in 7 cases, withdrawal in one case and ordered for re-trial by the High Court in 5 cases.

The total amount of fines imposed amounted to Rs. 14,540/- during the quarter under report in respect of prosecutions disposed off.

Classification of Companies Registered.

Classification	Industrial Classification	Madras		Andhra Pradesh		Mysore		Kerala		Total
		Public	Private	Public	Private	Public	Private	Public	Private	
0.	Agriculture and allied activities	—	—	—	—	—	—	—	3	3
1.	Mining and quarrying ...	—	—	—	—	—	—	—	—	—
2.	Processing and manufacture (food stuffs, textiles and products thereof ...	3	1	8	1	1	1	2	—	17
3.	Processing and manufacture (metals, chemicals and products thereof) ...	4	10	—	1	—	2	—	4	21
4.	Processing and manufacture (not elsewhere classified)	3	3	1	—	1	—	1	1	10
5.	Construction and utilities...	—	1	—	—	—	—	—	—	1
6.	Commerce (trade and finances)	1	14	—	3	—	4	—	1	23
7.	Transport, communication and storage	1	32	—	—	—	—	—	1	34
8.	Community and business services	—	—	—	—	—	—	—	—	—
9.	Personal and other services	—	1	—	1	—	—	—	1	3
	Total ...	12	62	9	6	2	7	3	11	112

LIST OF STORES REQUIRED BY THE DIRECTORATE-GENERAL OF SUPPLIES & DISPOSALS FOR DEFENCE NEEDS

A list of some of the items of the various classes of stores immediately required for the defence needs is given below. Further lists of items will be issued from time to time indicating future requirements as and when they arise.

All small scale units who are equipped to manufacture any one or more of these items are advised to have themselves registered immediately with the Small Industries Service Institute (Ancillary Section), Madras, indicating clearly the item/items they are interested in supplying.

These small scale units are also advised to watch for the various D.G.S. & D., advertisements that appear in the *Indian Trade Journal* published weekly by the Department of Commercial Intelligence and Statistics, Government of India, Calcutta and to take up such of the items which they can take up for manufacture.

I. Light Engineering

Hand Tools for carpenters, fitters etc., such as screw drivers of different sizes; square for carpenters; adjustable spanners, chisels etc.
Bicycle parts.
Saddles for bicycles.
Different sizes of screws in brass and mild steel etc.
The components of sewing machines heavy duty and light duty type for singer machines
Hurricane lanterns of different types.
Buckets G. I. of different sizes.
Mugs-enamelled.
Spring balance.
Chopper meat.
Containers for milk of different capacities.
Utensils of cooking.
Handcuff.
Fire extinguishers of different types.
Bolts hexagonal rounded on different sizes and different type of threads such as BSW: BSF galvanised and Black sizes ranging from $\frac{1}{4}$" to $\frac{7}{8}$" dia. length varying upto 6".
Rivets (brass & copper).
Tubular rivets of different sizes.
Wire nails from 12 to 14 SWG length varying from $\frac{1}{4}$" to 2".
Wire nails heavy $\frac{3}{8}$" dia. length.
Brass screws.
Padlocks.
Tacks steel cut $\frac{3}{4}$" etc.
Bifurcated rivets.
Blacksmithy hand tools.
Fitters hand tools.
Spirit lamps.
Blow lamps and wickless stoves.
Electrician hand tools.
Iron dhobis.
Whistles.
Helmet steel linings.
Water bottle.
Tin mess.
Chairs invalid wheeling type.
Barbed wire.

II. Chemical

Ink marking-black.
Paint PFU GS brushing green B/W deep.
Paint PFU tinted flat drying hospital EAU-de-NIL.
Paint PFU GS white interior.
Varnish-gold.
Varnish oil GS.
Paint PFU WE brushing air drying OG seamic 314.
Varnish insulating finishing AD Type I.
Primer.
Surfacer.
Thinner.
Paint PFU enamel HG blue azure.
Paint remover inflammable.
Paint PFU enamel HG yellow golden.
Paint PFU priming GS brushing red oxide for wood.
Paint PFU WE spraying AD GS.
Paint PFU bituminous black anti-corrosive.
Paint PFU nitra cellulose brushing navy blue.
Paint PFU N/C brushing yellow lemon.
Paint PFU enamel HG black.
Paint PFU enamel HG red signal.
Paint PFU H/G white.
Paint PFU enamel hospital white.
Paint PFU GS brushing black.
Paint PFU GS brushing aluminium.
Paint PFU GS brushing blue azure.
Paint PFU GS brushing buff light.
Paint PFU priming GS brushing green bronze deep.
Paint PFU GS brushing grey, admiralty dark.
Paint PFU GS brushing grey light.
Paint PFU priming GS brushing red PO.
Paint PFU GS brushing white.
Paint PFU GS brushing yellow lemon.
Paint PFU marking white.
Paint PFU heat resisting black.
Varnish fengicide.
Blanco waterproof khaki.
Soap toilet.
Soap shaving.
Blanco white.
Acid hydrochloric commercial.
Acid hydrochloric pure.
Acid sulphuric pure.
Polish metal liquid.
Soap carbolic.
Soap woollen.
Soap yellow.
Zinc chloride solution.
Oil coconut.
Solution rust preventive special.
Composition rust preventive.
Dubbin ordinary.
Mineral jelly GS.
Oil castor refined.
Oil linseed boiled ammunition.
Oil linseed raw.
Paper packing waterproof 36" plain.
Paper kraft (imitation) waxed Gde I normal 36" × 100 yds.
Polish wax.
Chalk french.
Glue ordinary.
Naphthalene.
Buttons plastic OG 5/8".
Buttons plastic OG 3/4".
Rubber vulcanised insertion sheet canvas 1/16", 1/8", 1/4".
Rubber vulcanised solid sheet 1/16".
Tubing rubber 1/4" thick.
Oil cutting soluble.

III. Leather

Boots ankle black officers.
Boots ankle complete with laces leather.
Boots jungle No. 2.

IV. Glass, Ceramics and Enamel Ware

Mugs enamelled.

V. Miscellaneous

Equipment for camouflage: bamboo poles—standing and ridges of different sizes.
Shovels.
Dress materials: blankets, socks, shirtings, mosquito nets etc.
Materials for supply of dropping equipment.

TECHNICAL INFORMATION SECTION LIBRARY

INDUSTRIAL ESTATE, GUINDY

List of Books Added

1.	Non-ferrous Production Metallurgy	*Bray John. L*
2.	Foundry Engineering	*Taylor Howard F Etc.,*
3.	Heat Treatment of Metals	*Zakharov (B)*
4.	Machine Elements: a Text Book	*Dobrovolsky V etc.,*
5.	Forging Practice	*Kamenshchikov S etc.,*
6.	Reinforced Concrete	*Sigalov E and Strongin S*
7.	Metallurgist's Hand book	*Foreign languages publishing House*
8.	Kazhaga Tamil Kaiagarathi	*Mudaliyar S.S.*
9.	Khazhaga Angila-Thamizh Kai Agarathi	*K. Appadurai Pillai*
10.	An English-Tamil Dictionary	*Percival (P) Comp*
11.	Hand book of I. S. I. Publications	*I. S. I.*
12.	B. S. Handbook No. 2—British Standards for Workshop Practice	*British Standard Institution*

EXPORT PROMOTION PROCEDURES STREAMLINED

The Minister for International Trade has recently held consultations with a number of Export Promotion Councils and Export Promotion Organisations. As a result of these discussions as well as those held earlier, a number of procedures in the field of export promotion have been simplified.

It should now be possible practically over the whole range of entitlements, drawbacks, and rebates for claims to be met expeditiously. In case parties having claims find difficulties in getting them met quickly, they are requested to approach the Director of Incentives in the Department of International Trade. Every endeavour would be made to ensure that all due claims are met quickly.

Regarding difficulties or delays in issuance of import licences for machineries, raw materials and components against entitlements under the different export promotion schemes, exporters and manufacturer—exporters should write to the Joint Chief Controller of Imports and Exports (Exports) Udyog Bhavan, New Delhi.

AUTHORITIES COMPETENT TO ISSUE CERTIFICATES OF ORIGIN

The following is the list of Chambers of Commerce and Trade Associations in the States of Madras, Andhra Pradesh, Mysore and Kerala, competent to issue certificates of origin under Article II of the International Convention relating to the simplification of Customs Formalities, 1923 (corrected upto 31st July 1962) :—

MADRAS

1. Andhra Chamber of Commerce,
   Andhra Chamber Building,
   272/3, Angappa Naick Street,
   Madras-1.

2. The Madras Chamber of Commerce,
   Dare House, First Line Beach,
   P.O. Box 35,
   Madras-1.

3. The Madras Provincial Foodgrains Merchants' Association,
   40, Anderson Street,
   George Town, Madras-1.

4. Southern India Skin and Hide Merchants' Association,
   Sydenham's Road,
   Periament, Madras.

5. The Southern India Chamber of Commerce,
   Chamber's Building,
   P.B. No. 1208, Madras-1.

6. Tamil Chamber of Commerce,
   "Caithness Hall",
   P. B. No. 1661,
   310/311, Linghi Chetty Street,
   Madras-1.

7. Madras Merchants' Association,
38, Mint Street,
Park Town, Madras.

8. Hindustan Chamber of Commerce,
168, Broadway,
Gujarathi Mandal Buildings,
Madras-1.

9. Madura-Ramnad Chamber of Commerce,
90-92, Avanimoola Street,
2nd Floor, Madhurai.

10. South India Tanners and Dealers' Association,
Ranipet,
North Arcot Dist.

11. Coimbatore Chamber of Commerce,
Coimbatore.

12. Nagapattinam Chamber of Commerce,
Nagapattinam.

13. Salem District Chamber of Commerce,
Salem.

14. Indian Chamber of Commerce,
Indian Chamber Building,
South Raja Street,
Tuticorin.

15. Tuticorin Chamber of Commerce,
Tuticorin.

16. Tuticorin Trades Association,
Board Road,
Tuticorin.

17. The Tobacco Export Promotion Council,
37, Cathedral Road,
Madras-6.

18. The Leather Export Promotion Council,
Marble Hall,
3/38, Vepery High Road,
Madras-3.

19. The Madras Piecegoods Merchants Association,
100, Godown Street,
Madras-1.

20. The Indian Chamber of Commerce,
14/73, Oppannakara Street,
P. B. No. 200,
Coimbatore.

21. The Southern India Roller Flour Mills Ltd.,
17, Baker Street,
Madras-1.

22. South India Minerals Association,
52/53, Jehangir Street,
Madras-1.

LIST OF LICENCES ISSUED UNDER THE INDUSTRIES (DEVELOPMENT & REGULATION) ACT, 1951 DURING APRIL—JUNE 1962

APRIL 1962

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Schd. Ind. No. 1A (3)—Iron & Steel Castings & Forgings		
Kamani Engineering Corporation Ltd., Agra Road, Kurla North, Bombay 37 (Bombay, Maharashtra)	*Capacity in tons p a* Towers ... ... 30,000 Heavy structurals ... 6,000 High tensile nuts and bolts 6,000 S E	L 1 A 3 28-62 EI-M 4-4-62
Schd. Ind. No. 1A (7)—Other Products of Iron & Steel		
Shri C.K. Patel, C/o. Dr. R.M. Patel, Ph. D., P. O. Institute of Agriculture, Via Anand, Dist. Kaira (West Rly.) (Baroda, Gujarat)	*Tons p a* Cranes & structurals ... 2,400 N U	L 1 A 7-29-62 EI-M 27-3-62
National Engineering Co., Ltd., 33, Netaji Subhas Road, Calcutta-1 (Kapurthala, Punjab)	*Re-Rolled products* Change of location from industrial area, kapurthala, punjab to near Madras—shifting)	L 1 A 7 N 265-62 28-3-62
The National Foundry & Rolling Mills Ltd, Mehatab Road, Cuttack-3 (Manchaswar, Cuttack, Orissa)	Manufacture of wire rods (in coils) without increase in the capacity already licensed Change of location from naya bazaar, Cuttack to Mancheswar, Cuttack (N A & Shifting)	L 1 A 7 N 266-62 5-4-62
Schd. Ind. No. 5 (1)—Equipment for Generation, Transmission and Distribution of Electricity includi Transformers		
Kirloskar Electric Co., Ltd., Post Box No. 1017, Bangalore (Bangalore, Mysore)	*p a* Transformers upto 132 KV 4,00,000 KVA after expansion—S E	L 5-1-58 EEI 62 27-3-62
General Manager, Govt. Electric Factory, Bangalore-2 (Bangalore, Mysore)	*p a* Transformers upto 132 KV, KVA ... ... 3,96,000 Switchgear and control gear worth ... Rs. 80,00,000 Electric motor, H P. (p a.) 4,20,300 S E	L 5-1-60 EEI 62 31-3-62
Schd. Ind. No. 5 (6) Electrical Cables & Wires		
Bharat Insulation Industries, Prem Kutir 177, Marine Drive, Bombay-1 (Mysore)	Enamelled wires, paper covered strips and wires shifting from Bangalore, Mysore State to Bombay, Maharashtra State—(Shifting)	L 5-6-40 EEI 62 28-2-62
Orissa Cement Ltd., Rajganj Pur, Orissa	10-Ton box type railway wagons 332 nos. for their own use	L 7-4-4 MEI 61 17-11-61

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Cable Corporation of India Ltd., Laxmi Building, 6, Ballard Road, Bombay-1 [Bombay, Maharashtra]	*Capacity per annum* Paper insulated power cables 500 miles PVC Power cables 8 million core yards PVC Control cables & PVC insulated wires S E 40 million core yards	L 5-6-41 EEI 62 24-3 62
Schd. Ind. No. 6 (4)—Radio Receivers including Amplifying & Public Address Equipment		
Eastern Electronics, Krishi Building, Asaf Ali Road, New Delhi [Faridabad, Punjab]	*Annual capacity in Nos.* Printed circuits 1,20,000 Telescopic aerial 2,40,000 valve bases 60,000 N A	L 6-4-46 EEI 62 24-3 62
Schd. Ind. No. 7 (4)—Railway Rolling Stock		
Orissa Cement Ltd., Rajganj Pur Orissa [Orissa]	10-Ton box type railway wagons 32 Nos. for their own use—S E	L 7-4-4 MEI 61 17-11-61
Schd. Ind. No. 7 (5)—Automobile		
Natwarlal & Co., Rajkot Rajkot, [Gujarat]	*Annual capacity* Motor cycle and automobile timing chains pieces 3,00,000 Industrial roller chains do 1,08,000 N A	L 7-5-4 AEI 62 2-4 62
Globe Auto Electricals Ltd., Green's Mansions, Gateway of India, Bombay-1 [Bombay, Maharashtra]	*Annual installed capacity* Dynamos, regulators, starter Motors for Automobiles, 25,000 nos. each. N A	L 7-5-7-62 AEI 4-4-62
Shri Indar Singh, Flat 4, Shankas Market, Connaught Circus, New Delhi [Near about Delhi, Punjab]	*Annual capacity in Nos.* 1. Condensers 60,000 2. Regulators 20,000 3. Horn relays 1,00,000 4. Solenoids 25,000 5. S. P. Cleaners 5,000 6 Rotors 60,000 7. Caps 25,000 8. Contact points 1,00,000 9. Coils (ignition) 50,000 10. Horns 50,000 11. Lamps 50,000 12. Battery cables (end fittings only) 1,00,000 13 Ignition cables (end fittings only) 1,00,000 14. Governors 10,000 N U	L 7-5-12-62 AEI 6-4-62
Schd. Ind. No. 7 (6)—Bicycles		
Ronuk Industries Ltd., 11-A, Abdul Gaffar Khan Road, [Worli Sea Face,] Bombay-18 [Bombay, Maharashtra]	*Capacity per annum* Reflectors for auto mobiles & bicycle head lamps, fender and rear lamps 45,000 nos.—N U	L 7-6-2 EEI 62 24-3-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Schd. Ind No. 7 (7)—Other, such as fork lift trucks and the like		
Kilburn & Co. Ltd., 2, Fairlie Place, Calcutta-1 [Calcutta, West Bengal]	*360 Nos. per annum* Model POEP 2—Pedestrian pallet trucks Model SOEP 2—Pedestrian stillage trucks Model FRES 2—Reach fork trucks Model FRES 3— ,, ,, ,, Model FOER 5—'Rapide' fork trucks N U	L 7-7-1-62 AEI 3-4-62-
Schd. Ind. No. 8-A (7)—Metallurgical Machinery		
Heavy Engineering Corporation Ltd., Ranchi (Bihar) [Hatia, Bihar]	*Annual capacity tons* 1. Coke owens and bye-products equipment 7,700 2. Blast furnace equipment 5,500 3. Steel making equipment 7,000 4. Crushing and grinding equipment 3,100 5. Grane equipment 6,570 6. Rolling mill equipment 34,500 7. Spare parts for metallurgical equipment 1,080 8. Mining equipment 880 9. Excavaters 4,950 10. Press forging equipment 1,360 11. Heavy oil drilling rigs 5,500 12. Miscellaneous heavy machine parts and assemblies 1,810 N U	L 8-A 7-2 MEI 62 27-3-62
Schd. Ind. No. 9—Machine Tools		
Lynx Machinery Co., 104, Ultadanga Main Road, Calcutta-4 [West Bengal]	Flexible shaft machines-capacity to be determined after one year—N A	L 9-80 MEI 62 12-3-62
Kirloskar Brothers Ltd., Kirloskarvadi, Dist. Sangli, [Kirloskarwadi, Maharashtra]	*Nos. p a* 1. Key-way milling machines 72 2. Column, piller, turret & radial drilling machines 300 S E	L 9-82 MEI 62 15-3-62
Schd. Ind. No. 11—Earth Moving Machinery		
Khandelwal—Udyog Private Ltd., 166, Dadabhai Nowroji Road, Bombay-1 [Bombay, Maharashtra]	*Nos. p a* Millars' high-way combined drying and mixing unit of 10 cubic feet— 72 N A	L 11-1-62 IEI-A 28-3-62
Schd. Ind. No. 12 (2)—Hand Tools, Small Tools & the like		
Raghunath Metal Industries, 18-1-209 High Road, Chittoor (A.P.) [Nishat, Andhra Pradesh]	*Nos. p a* Screw taps ... ... 2,50,000 Adjustable tap wrenches 2,50,000 Dies ... ... 2,50,000 Die holders ... ... 2,50,000 N U	L 12-2-56-62 2-3-62

(*Contd.*)

(Contd.)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*		*Licence number and date*
Shri Hari Prasad Lohia Director, Tool & Electricals (India) Ltd., 38, Netaji Subhas Road, Calcutta-1 [Gurgaon, Punjab]		*Capacity p a*	
	A. Small Tools	Rs.	L 12-2-60 MEI—62 30-3-62
	Press tools ...	4,00,000	
	Moulds & dies ...	15,00,000	
	Jigs & fixtures ...	4,00,000	
	Gauges ...	6,00,000	
	Die block sets ...	3,00,000 sets	
	Milling cutters ...	50,000 nos.	
	B. Electrical Relays		
	Luminous call relays alarm relays ...	24,000 Nos	
	Power relays ...	24,000 ,,	
	C. Thermostats ...	24,000 ,,	
	D. Horn relays ...	60,000 ,,	
	E. Voltage regulators	30,000 ,,	
	F. Ignition contact (Breakers) ...	3,00,000 pairs	
	N U		
Schd. Ind. No. 12 (3)—Razor Blades			
Hind Razor & Blade Co., Private Ltd., Industrial Assurance Building, Churchgate, Bombay-1 [Bombay Maharashtra]	Razor Blades ...	*Nos p a* 100 million	L 12-3 1 IEI (A) 62 30-3-62
	S E		
Shri R. P. Sawhney, 210, Hornby Road, Taj Building, Bombay [Bombay, Maharashtra]	Safty razor blades ...	90 million	L 12-3 2 IEI (A) 62 30-3-62
	S E		
Schd. Ind. No. 13 (5)—Sewing & Knitting Machines			
Rita Machanical Works, 416, Industrial Area 'A' Ludhiana, Punjab [Ludhiana, Punjab]		*Capacity p a* *Nos*	
	1. Domestic sewing machines	30,400	L 13-5-1 IEI (A) 62 30-3-62
	2 Umbrella type sewing machine corresponding to Singer 103-k-10-103 model	4,800	
	3. Industrial type sewing machine corresponding to 31-K-15 Singer model	1,800	
	S E		
Schd. Ind. No. 14—Medical and Surgical Appliances			
H. Mukerjee & Banerjee Surgical Private Ltd., 39-1 College Street, Calcutta-12 [Calcutta, West Bengal]	Infra-red Lamps	*Nos. p a*	
	type (EM/75P)	480	L 14-3 LEI (A) 62 28-3-62
	type (EM/92 PFM) ...	60	
	N A		
Philips India Ltd " Philips House ", 7, Justice Chandra Madhab Road, Calcutta-20 [Calcutta, West Bengal]	*Infraphil (Infra-red therapy appratus)*		
	1st year	4,500	L 14-4 LEI (A) 62 28-3-62
	2nd year	5,900	
	3rd year	7,300	
	4th year	8,900	
	5th year & onwards ...	10,200	
	N A		
Schd. Ind. No. 51 (1)—Water Meters, Steam Meters, Electricity Meters and the like			
Shri C. C. Desai, 44, Friends Colony, New Delhi [Anand-Baroda, Gujarat]	Water meters (Provisional) —N U	60,000 Nos.	L 15-1-3 LEI (A) 62 9-3-62

(Contd.)

(Contd.)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*		*Licence number and date*
J. Barman and Company, Post Box 265, New Delhi (Faridabad, Punjab)	A C. Single phase house 1st year ...	*Nos. p a* ... 42,000	L 15 1-32 EEI 62 29 3-62
	Service meters 2nd year and onwards ...	... 60,000	
	N U		
Schd. Ind. No. 19 (1)—Inorganic Heavy Chemicals			
East India Trading Co , 165, Lower Chitpore Road, Calcutta (Raipur, Madhya Pradesh)		*Tons p a*	
	1. Cryolite ...	... 12,600	L 19-1-64 NU Ch. I, 62 31-3-62
	2. Flourite ...	... 3,600	
	N U		
Schd. Ind. No. 19 (2)—Organic Heavy Chemicals			
Bayer-Agrochem Ltd., Mehta Chambers, 13, Mathew Road, Bombay-4 (Thana, Maharashtra)		*Tons p a*	L 19-2-3 Ch. V, 62 30-3-62
	(A) **Accelerators**		
	1 Mercapto cude as intermediate product ...	700	
	and the following items there from vulkacit etc.	683	
	Dithiocarbamates ...	30	
	Vulkacit F ...	60	
	Accelarators total ...	773	
	(B) **Antioxidants** ...	1,000	
	(C) Others	130	
	Grand Total	1,903	
Excel Industries Private Ltd , 184-87, Chodbunder Road, Jogeshwari, Bombay-60 [Maharashtra]		*Tons p a*	
	1. Triphenyl phosphate	250	L 19-2-4 Ch. V 62 30-3-62
	2. Tricresyl phosphate	500	
	3. phosphorous pentasulphide	300	
	N A		
Raghunad Chemical Industries Private Ltd., Mustafa Building, Sir P M. Road, Bombay-1 [Thana, Maharashtra]	Maleac Anhydride ...	... 1,200	L 19-2-5 Ch. V 62 30-3-62
	S E		
Surfactant Private Ltd., 28, Apollo Street, Fort, Bombay-1 [Thana Dist. Maharashtra]	Alkyl phenol	... 1,000	L 19-2-6 Ch. V 62 3-4-62
	N A & (Shifting) (from Bhandup to Thana)		
Schd. Ind. No. 22—Drugs and Pharmaceuticals			
Parke Davis (India) Ltd., Saki Naka, Andheri-Kurla Road, Bombay-70 [Bombay, Maharashtra]	Chloramphenicol ...	*Tons p a* ... 20	L 22-9-62 A & I 5-4-62
	S E		
Schd. Ind. No. 23 (1)—Textiles made wholly or in part of Cotton, including Cotton Yarn, Hosiery and Rope			
Raja Bahadur Motilal Poona Mills Ltd., Hamam House, Hamam Street, Fort, Bombay-1 [Maharashtra]	Spindles ...	... 7,000	L 23-1-212-61 Tex B 28-3-62
	S E		
Shri Ramalinga Mills Private Ltd., Melacheval, Tirunelveli Dist. Madras State [Aruppukottai, Madras]	Spindles (after expansion) ...	12,000	L 23-1-220 Tex B 62 31-3-62
	(S E & Shifting) (From Melacheval to Aruppukottai)		
Swatantra Bharata Mills, New Delhi [New Delhi]	Cotton spindles ...	... 26,112	L 23-1-221 Tex B 62 31-3-62
	Waste spindles ...	... 1,040	
	Looms ...	... 500	
	S E		

(Contd.)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Schd. Ind. No. 23 (5)—Made wholly or in part of Synthetic, Artificial (Man-made) Fibres, including Yarn and Hosiery of such Fibres		
Vasudeva Industries Ltd., Odderpalayam, Ondiputhur P.O., Coimbatore [Periyanaickepalayam Dist. Madras]	Spindles ... ... 10,000 (Shifting)—(from Oddarpalayam to Periyanaickenpalayam, Madras)	L 23-5-25 Tex D 62 5-4-62
Schd. Ind. No. 27 (3)—Malted Foods		
Foremost Dairies, 196, Rajpore Road, Dehradun [U.P.] Saraswa, U P.]	Skim milk powder *Tons p a.* N U ... 1,200	L 27-3-2 Ch. II 62 20-3-62
Schd. Ind. 27 (5)—Other Processed Foods		
Century Flour Mills Ltd. 221, Govindappa Naick Street, Madras-1 [Salem, Madras]	Biscuits *Tons p. a.* ... N U ... 3,000	L 27-51 Ch. II 62 20-3-62
Schd. Ind. No. 30 (4)—Other Ruber Goods		
Fenner, Cockill Ltd. Pandyan Building, West Vali Street, Madurai-1 [Kochadi, Madras State]	Fenaplast PVC impregnated flame resisting colliery *R. ft. p. a.* conveyor belting ... 1,00,000 N A	L 30 4-1 LEI B 62 28-3-62
Schd. Ind. No. 1 A (3)—Iron & Steel Casting & Forgings		
G S. Atwal & Co., [Asansol, 16-A, Asaf Ali Road, New Delhi [Chandigarh, Punjab	Malleable iron castings industry 600 tons per annum of malleable iron pipe fittings- 2,400 tons per annum on the basis of maximum utilisation of the plant capacity—N U	L 1 A 3-64 EI-M 62 26-3-62
Jessop & Co. Ltd., 63, Netaji Subhas Road, Calcutta [Dum Dum, Calcutta, West Bengal]	Meehanite iron castings—7,200 tons per annum on the basis of maximum utilisation of the equipment to be installed—N A	L 1 A 3 65 EI-M 62 26-3-62
Shri K.K. Sukhani, C/o. M/s. Gaday Iron & Steel Co. Ltd., 25, Ganesh Chandra Avenue, Calcutta-13 [Kodarma, Bihar]	Malleable iron castings including 600 tons of malleable pipe fittings - 2,400 tons per annum on the basis of maximum utilisation of plant capacity—N U	L 1 A 3-66 EI-M 62 26 3-62
Orient Steel & Wire Industries Private Ltd., 2, Brabourne Road, Calcutta-1 [Lilooah, West Bengal]	Chilled cast iron shots *Tons p. a.* S E 1,200	L 1 A 3-70 EI-M 62 2-4-62
Schd. Ind. No. 1 A (7)—Other Products of Iron & Steel		
Agrind Fabrications Ltd., 6, Ganesh Chandra Avenue, Calcutta-13 [Calcutta, West Bengal]	High tensile bolts and nuts *Tons (annual)* N A 126	L 1 A 7-12 IEI-B 62 16-3-62
Aswin Industries, Samalya, Dist Baroda, [Samalya, Gujarat]	18-litre size tin containers *Nos. p a* N U 4,80,000	L 1 A-7-13 IEI-B 62 2-4-62
Schd. Ind. No. 7 (5)—Automobiles		
Overseas Agencies, 75-G, Nizamuddin West, New Delhi-14 [Bombay, Maharashtra]	Roller chains ... *Annual capacity* 72,000 *Meters or* 75,000 *pieces*	L 7-5-8 AEI 62 9-4-62
	Needle roller assemblies for ¼" to 2" diameter 3,12,000 nos N U	

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Lyra Engineers, G. T. Road, Miller Ganj, Ludhiana [Jaipur Rajasthan]	Taxi meters ... ... *Nos. p a* 3.600 N U	L 7-5-9 AEI 62 9-4-62
Shri Amratlal Khimji, C/o. The Orient Motor Accessories Agency (Private) Ltd., 28, Chittaranjan Avenue, Calcutta-12 [Calcutta, West Bengal]	Clutch Plates for automobiles *Annual capacity* Nos. 2,40,000 N U	L 7-5-10 AEI 62 9-4-62
Nathani Industries Private Ltd., Scrap House, Quay Street Darukhana, Bombay-10 [Goregaon, Bombay, Maharashtra]	*Annual capacity To be determined one year after the firm goes into production* (*a*) Automobile parts viz. 1. Studs, 2. Castled nuts, 3. Brake tube connection, 4. Oil and fuel tube connection, 5. Wheel pins, 6. Crank pins, 7, Gudgaon pins, 8. King pins, 9 Shackle bolts, 10. Shackle pins, 11. Grease nipples, 12. Dowel pins. (*b*) Scientific and industrial instrument parts viz. 1. Pivot, 2. Pivot bushes. 3. Pivot pins, 4. Trip arm pivot, 5. Pillars, 6. Terminals, 7. Jewel screws, 8. Cell lens, field, 9. Grub screws, 10. Ring for centre magnet movement 11. Movement mountings, 12. Tapping switch contact stud, 13. Inserts, 14. Dowel pins and other turned parts.—N U	L 7-5-11 AEI 62 9-4-62
Schd. Ind. No. 8 (C-3)—Grinding Wheels and Abrasives		
Hindustan Abrasives, 100, South Avenue, New Delhi [Ranchi, Bihar]	*Annual capacity* Coated abrasive—Resin bonded and water-proof types 45,000 reams N U	L 8 C 3-4 IEI-B 62 16-3-62
Schd. Ind. No. 19 (1)—Inorganic Heavy Chemicals		
Dhrangadhra Chemical Works Ltd., 15-A, Horniman Circle, Bombay-1 [Sahupuram, Madras]	Calcium carbide *Tons p a* ... 30,000 N U—N A	L 19-1-66 NA Ch 1 62 29-3 62
Schd. Ind. No. 19 (2)—Organic Heavy Chemicals		
P. K. Velu and Co., (Private) Ltd., 111, Mahatma Gandhi Road, P. B. No. 514, Bombay-1 [Ratlam, Madhya Pradesh]	*Annual capacity of tons* Acetone ... ... 1,800 Diacetone Alcohol.. ... 720 Isophorone ... ... 120 Mesityl Oxide .. ... 120 Methyl Iso-Butyle Ketone ... 300 N U	L 19-2-7 Ch V 62 3-4-62
Schd. Ind. No. 19 (3)—Fine Chemicals including photographic Chemicals		
Suhrid Geigy Ltd., P. O. Box No. 48, Wadi Wadi, Baroda [Baroda, Gujarat]	Cyanuric chloride *Kgs. p a* ... 72,000 N A	L 19-3-3 Ch II 62 30-3-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Schd. Ind. No. 19 (14)—Miscellaneous Chemicals		
Grauer & Weil (India) Ltd., 29, Fort Street, Bombay-1 [Bombay, Maharashtra]	*Capacity p a* *Tons* i. Plating salt and chemicals ... 400 ii. Basic chemicals nickel sulphate, Nickel ammonium sulphate, nickel chloride chromic acid, copper cyanide, cobalt sulphate, cadmium iodide, cadmium carbonate ... ... 360 N A	L 19-14-4 Ch II 62 3-4-62
Schd. Ind. No. 23 (1)—Cotton Textiles		
J. K. Cotton Spinning & Weaving Mills Co., Ltd., Kamla Tower, Kanpur [Khafilabad, Uttar Pradesh]	Spindles for the manufacture of cotton yarn ... ... 25,000 N U	L 23-1-241 Tex B 4-4-62
Schd. Ind. No. 34 (6)—Ceramic: Insulators		
Shri Shanti Swrup, 7/13, Darya Ganj, Delhi [Kotah, Rajasthan]	*Annual capacity* *Tons* Steatite porcelain parts for telephone and chemical industries, textiles ceramics, post and telegraph insulators, cleats, and porcelain basis and parts for electronics ... ... 1,200 N U	L 34-5-69-62 18-1-62
Schd. Ind. No. 1 A (7)—Other Products of Iron & Steel		
Shri Sri Ram, Jindal Steel Works, Malerkotla "Sir Ganga Ram & Sons" [Malerkotla, Punjab]	*Tons p. a.* Transmission Towers fabricated polos and substation structures 4.000	L-IA 7-30 EI-M 62 2-4-62
Schd. Ind. No. 3—Boilers and Steam Generating Plants		
The Investment Corporation of India Ltd., Ewart House, Bruce Street, Fort, Bombay [West Bengal]	*Annual turn over Rs. 29,00,000 approximately* 1. Forced and induced draught fans, 2. Primary and secondary air fans 3. Exhauster fans 4. Single and multi-storage blowers 5. Ventilating fans 6. Sintering fans 7. Regenerative air preheaters 8. Mechanical and electrostatic dust collectors [Shifting] [from Maharashtra State to West Bengal]	L 3-1 FC 62 30-3-62
Schd. Ind. No. 7 (5)—Automobiles (Motor Cars, Buses, Trucks, Motor Cycles, Scooters and the like)		
Bharat Industries & Commercial Corporation, Tower House, Chowringhee Square, Calcutta 1 [Calcutta, West Bengal]	*Capacity will be determined after the unit goes into production* Aircraft refuellers, fire fighting, tankers, bulk and cement carriers N U	L 7-5-13 AEI 62 16-4-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Schd. Ind. No. 8 A (6) Mining Machinery		
Hindustan Development Corporation Ltd., 4, Chittaranjan Avenue, Calcutta-13 [West Bengal]	*No. p. a.* Shortwall type coal cutters ... 175 N A	L 8 A 6-12 MEI 62 4-4-62
Schd. Ind. No. 8 (B-2)—Conveying Equipment—Bucket Elevators Skip Hoists, Cranes, Derbricks and the like		
Sayaji Iron & Engineering Co., Private Ltd., Chhani Road, Baroda [Baroda, Gujarat]	*No. p. a.* Electric hoist blocks of ½ ton 10 tons capacity ... 500 N A	L 8 B 2-24 MEI 62 27-1-62
Schd. Ind. No. 9—Machine Tools		
Podar Sons Private Ltd., Podar Chambers, Fort, Bombay-1 [Bombay, Maharashtra]	*Capacity to be determined one year after production* 1. Injection moulding machines 2. Compression moulding machines 3. Extrusion machines 4. Tabulating machines 5. Blow moulding machines 6. Broaching machines 7. Dies and moulds for plastics. 8. Laminating machines. N U	L 9-50 MEI 62 17-8-61

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*		*Licence number and date*
Hindustan Small Tools Private Ltd., 4, Mandeville Gardens, Ballygunge, Calcutta-19 [Calcutta, West Bengal]		*No. p a*	L 9-78 ME 62 2-3-62
	Centre Lathes ...	... 100	
	Drilling machines...	... 100	
	Pantograph Engraving machines ...	... 50	
	N A		
Schd. Ind. No. 12 (2)—Hand Tools, Small Tools & the like			
Sandvik Asia Ltd., P. O Box 40, Poona-1 [Maharashtra]		*Worth p a* Rs.	L 12 2-53 MEI 62 23-2-62
	Tungston carbide tipped tools ...	... 20,00 000	
	S E		
Schd. Ind. No. 13 (3)—Air Conditioneers and Refrigerators			
Electronics Limited, A Block, Connaught Place, New Delhi [Faridabad, Punjab]		*Units p a*	L 13-3-15 FC 62 29-3-62
	Rotor Stator Units	... 1,00,000	
	S E		
Schd. Ind. No. 19 (1)—Inorganic Heavy Chemicals			
Kanoria Chemical Industries, [Uttar Pradesh] [Pipri, Uttar Pradesh]		*Tonnes p a*	L 19-65 NU Ch I 62 23-3-62
	1. Liquid Chlorine	... 14,600	
	2. Hydrochloric acid [100%]	... 10,950	
	3. Aluminium chloride	... 1,800	
	4. Stable bleaching powder	... 18,000	
	N A		
Schd. Ind. No. 19 (5)—Paints, Varnishes, and Enamels			
Shalimar Tar Products [1935] Ltd., 6, Lyons Range, Calcutta-1 Ladna, Bihar]		*Tons p. a.*	L 19-5-2 Ch II 62 11-4-62
	Coal tar enamels primers and cold applied paints	... 10,000	
	N A		
Schd. Ind. No. 23 (1)—Cotton Textiles			
Gwalior Rayon Silk Manufacturing Co., Ltd., Birlanagar [Gwalior], [P. O. Birlanagar, Madhya Pradesh]	Looms for the manufacture of cotton cordurey & velvet	48	L 23 1 142 Tex B 61 12-10-62
	N A		
Madhavnagar Cotton Mills Private Ltd., Madhavnagar, Dist. Sangli [Madhavnagar, Maharashtra]	Spindles for the manufacture of cotton yarn—S E ...	11,300	L 23-1-214 Tex B 62 28-3-62
Kiran Spinning Mills, Ravi Industries Estate, Nawarada, Agra Road, Thana [C. Rly.] [Thana, Maharashtra]	do N A ...	12,000	L 23-1-216 Tex B 62 28-3-62
Vidarbha Mills Berar Ltd., Ellichpur, Dist. Amravati [Dist. Amravati Maharashtra]	do S E ...	4,100	L 23-1-217 Tex B 62 28-3-62
Shri Mannalal Agarwal, C/o The Hukamchand Mills Ltd., [Indore Madhya Pradesh]	do NU ...	18,000	L 23-1-222 Tex B 62 4-4-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*		*Licence number and date*
The Standard Mills Co. Ltd., Mafatlal House, Backbay Reclamation, Bombay-1 [Dewas, Madhya Pradesh]	Spindles for the manufacture of cotton yarn N U	... 18,000	L 23-1-224 Tex B 62 4-4-62
Shri Shiv Prasad Nopany, 178, Mahatma Gandhi Road, Calcutta-7 [Madhya Pradesh Cotton Mills, Madhya Pradesh] [Bilaspur, Madhya Pradesh]	do	... 12,000	L 23-1-227 Tex B 62 4-4-62
Premsukhdas Rameshwardas, P. O. Katni [Katni, Madhya Pradesh]	do	... 12,000	L 23-1-228 Tex B 62 4-4-62
Shree Sadul Textiles Ltd., Thapar House, 25, Brabourne Road, Calcutta-1 [Sri Ganganagar,] [Rajasthan]	do S E ...	2,704	L 23-1-230 Tex B 62 4-4-62
Swadeshi Cotton Mills Co. Ltd., Udaipur [Udaipur, Rajasthan]	do	... 3,000	L 23-1-231 Tex B 62 4-4-62
Shree Gopal Industries Ltd., Kota Junction, [Kota Junction, Rajasthan]	do	... 6,000	L 23-1-232 Tex B 62 4-4-62
Jaipur Spg & Wvg. Mills Ltd, Power House Road, Jaipur, [Jaipur Rajasthan]	do	... 2,424	L 23-1-233 Tex B 62 4-4-62
Surya & Co., Dudu Bagh, Sansarehandra Road, Jaipur [Durgarpur Rajasthan]	do	do	L 23-1-234 Tex B 62 4-4-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture ; capacity and type of licence*		*Licence number and date*
Ramkumar Shewchandray and Sons Private Ltd., 311, Krishna Behari Sen Street, Calcutta-7 [Jhunjhunu, Rajasthan]	Spindles for the manufacture of cotton yarn N U	... 12,000	L 23-1-235 Tex B 62 4-4-62
Shri Beharilal Benipershad, Mahalaxmi Market, Chandni Chowk, Delhi-6 [Alwar, Rajasthan]	do	do	L 23-1-236 Tex B 62 4-4-62
Shri K L. Thirani, 1 & 3 Brabourne Road, Calcutta-1 [Nohar, Dist. Ganga Nagar, Rajasthan]	do	do	L 23-1-237 Tex B 62 4-4-62
Pratap Cotton Mills, 'Prem Niketan' 220, Ashok Nagar, Udaipur [Chittergarh, Rajasthan]	do	do	L 23-1-238 Tex B 62 4-4-62
Jagmohandas Harilal & Co., Mull Jatha Market, Samcha Gali, Bombay-2 [Reengus, Dist Sikar, Rajasthan]	do	do	L 23-1-239 Tex B 62 4-4-62
Shree Ashok Cotton Mills, Ashok Bhawan, 658, Residancy Road, Jodhpur [Jodhpur, Rajasthan]	do	do	L 23-1-240 Tex B 62 4-4-62
Shri Bhawani Cotton Mills Ltd., 2, Brabourne Road, Calcutta-1 [Jharsuguda, Orissa]	do	... 25,000	L 23-1-243 Tex B 62 4-4-62
Hindusthan Gas Co., Ltd., 22, New Tangra Road, Calcutta-15 [Patna, Bihar]	do	... 12,000	L 23-1-251 Tex B 62 4-4-62
Shri Ram Gopal Agarwala, M.P., P.O. Domchanch, Dist. Hazaribagh [Jhumri Telaiya (Kodarma), Dist. Hazaribagh, Bihar]	do	do	L 23-1-252 Tex B 62 4-4-62
Ajudhia Textile Mills Ltd., Azadpur, Delhi-6 [Lucknow, Uttar Pradesh]	do	do	L 23-1-254 Tex B 62 5-4-62
Ram Prakash & Sons, Mandi Bans, Moradabad [Moradabad, Uttar Pradesh]	do	do	L 23-1-255 Tex B 62 5-4-62
Shri Madan Lal Soni, 'Kenilworth', Allenganj, Kanpur [Ghaziabad, U.P.]	do	do	L 23-1-256 Tex B 62 5-4 62
Swadeshi Ayat Niryat Ltd., 33, Brabourne Road, Calcutta [Sitapur, U.P.]	do	do	L 23-1-257 Tex B 62 5-4-62
Moradabad Spinning & Wvg. Mills Co., Ltd., Kundampur, Moradabad [Moradabad, U.P.]	do	S E ... 11,220	L 23-1-259 Tex B 62 5-4-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture ; capacity and type of licence*		*Licence number and date*
Textile Store Dealers Ltd., 33, Netaji Subhas Road, Calcutta-1 [Bhagalpur, Bihar	Spindles for the manufacture of cotton yarn N U	... 12,000	L 23-1-261 Tex B 62 5-4-62
The Sutlej Cotton Mills Ltd., 39, The Mall, Amritsar [Saharsa, Bihar]	do	... 25,000	L 23-1-263 Tex B 62 5-4-62
Shree Balaji Spg. & Wvg. Mills, Sangli, [Sangli Maharashtra]	do	S E ... 13,000	L 23-1-213 Tex B 62 28-3-62
Maratha Textile Mills, Miraj [Miraj, Maharashtra]	do	... 6,000	L 23-1-215 Tex B 62 28-3-62
Shri Shahu Chhatrapati Mills, Shahupuri, Kolhapur [Shahupuri, Kolhapur, Maharashtra]	do	... 8,736	L 23-1-218 Tex B 28-2-62
Jaya Shankar Mills Barsi Ltd., Barsi, [Dist. Sholapur] [Barsi, Maharashtra]	do	... 12,128	L 23-1-219-62 Tex B 28-3-62
Bharat Commerce & Industries Ltd., India Exchange Buildings, Calcutta-1 [Bhind, Madhya Pradesh]	do	N U ... 12 000	L 23-1-225 Tex B 62 4-4-62
Sanghi Bros [Indore] Private Ltd., 44, Maharani Road, P.B. 1, Indore [Shujalpur, Madhya Pradesh]	do	... 12,000	L 23-1-226 Tex B 62 4-4-62
Shri Nabakishore Mahanty, Jhanjirangla, Cuttack-1 (Cuttack, Orissa)	do	... 12,500	L 23-1-244 Tex B 62 4-4-62

(*Contd.*)

(Contd.)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*		*Licence number and date*
Hindusthan Gas Co., Ltd., 22, New Tangra Road, Calcutta-15 (Berhampur, Orissa)	Spindles for the manufacture of cotton yarn N U	... 25,000	L.23-1-246-Tex-B 62 4-4-62
Surajmal Mehta & Co. (Private) Ltd., 2, Brabourne Road, Calcutta-1 (Daltonganj, Bihar)	do	... 25,000	L 23-1-247 Tex-B 62 4-4-62
Kalinga Textiles (Private) Ltd., P.O. Rajganjpur, Dist. Sundergarh (Rajgangpur, Orissa)	do	S E ... 15,000	L 23-1-245 Tex-B 62 4-4-62
Shri M.P. Goenka, Director, The Goenka Properties Private Ltd., Khurja (Kosi Kalan, Mathura District U.P.)	do	... 12,000	L 23-1-258-62 Tex-B 5-4-62
Shree Hanuman Sugar Mills Ltd., 178, Mahatma Gandhi Road, Calcutta-7 (Motihari, Bihar)	do	... 12,000	L 23-1-262 Tex-B 62 5-4-62
Shri Shyam Sunder Bagaria, P. O. Pachamba, Dist. Hazaribagh (Rohini, Dist. Santhal Parganas, Bihar)	do	... 12,000	L 23-1-264 Tex-B 62 5-4-62
Winsome Trading Co., 23/24, Radha Bazar Street, Calcutta-1 (Gauhati, Assam)	do	... 25,000	L 23-1-265 Tex-B 62 5-4-62
Shri Kashi Prasad Kataruka, Kataruka Niwas, Gandhi Maidan South, Patna-1 (M/s. Asoka Spg. Mills Ltd.,) (Patna, Bihar)	do	... 12,000	L 23-1-253 Tex-B 62 4-4-62
Bharat Kala Bhandar Ltd., 8, India Exchange Place, Calcutta-1 (Assam)	do	S E ... 12,500	L 23-1-266 Tex-B 62 5-4-62
Ajudhia Textile Mills Ltd., Azadpur, Delhi-6 (Sonepat, Punjab)	do	N U ... 12,000	L 23-1-267-62 Tex-B 5-4-62-
Gopichand Ahuja Industries, Ahuja Mansion, 67-G.B Road, Delhi-6 (Sirsa, Punjab)	do	... 12,000	L 23-1-269-62 Tex-B 5-4-62
Fine Spinners, Kashmir Road, Amritsar (Amritsar, Punjab)	do	... 12,000	L 23-1-271-62 Tex-B 5-4-62
Jagatijit Cotton Textile Mills Ltd., Phagwara, Punjab State (Phagwara, Punjab)	do	S E ... 10,000	L 23-1-272-62 Tex-B 5-4-62
Technological Institute of Textiles, Birla Colony, Bhiwani (Punjab State) (Bhiwani Punjab)	do	... 5,000	L 23-1-273-62 Tex-B 5-4-62
Delhi Cloth & General Mills Co., Ltd., Bara Hindu Road, Delhi-6 (Hissar, Punjab)	do	... 23,000	L 23-1-274-62 Tex-B 5-4-62
South Punjab Electricity Corporation Private Ltd., Rohtak (Punjab State) (Rohtak, Punjab)	do	N U ... 12,000	L 23-1-275-62 Tex-B 5-4-62

(Contd.)

(Contd.)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*		*Licence number and date*
Shree Bhawani Cotton Mills Ltd., Abohar (Punjab) (Abohor, Punjab)	Spindles for the manufacture of cotton yarn—S E ... 10,000		L 23-1-278-62 Tex B 5-4-62
Bharat Commerce & Industries Ltd., India Exchange Building, Calcutta-1 (Rajpura, Punjab)	do	N U ... 12,000	L 23-1-280-62 Tex B 5-4-62
Shri Manubhai Karsondas Bhiwani, 9, Wallace Street, Bombay-1 (Kutch District, Gujarat)	do	... 12,000	L 23-1-292-62 Tex B 6-4-62
Khemchand Bahadarchand Ahuja Abohar, Punjab State (Hanumangarh, Rajasthan)	do	... 12,000	L 23-1-295-62 Tex B 6-4-62
Aryavatra Industries Private Ltd., 2, Brabourne Road, Calcutta (Amritsar, Punjab)	do	S E ... 12,000	L 23-1-276-62 Tex B 5-4-62
Schd. Ind. No. 35 (1)—Portland Cement			
Associated Cement Companies Ltd., 121, Queen's Road, Bombay-1 (Jamul, Madhya Pradesh)	Blast furnace slag cement S E	*Tons p a* 2,90,000	L 35-1-19 62- Cement 4-4-62
Schd. Ind. No. 3 (8)—Boilers & Steam Generating Plants			
The Ahmedabad Jupiter Spinning, Weaving & Manufacturing Co., Ltd., 28, Apollo Street, Fort, Bombay-1 [Bombay, Maharashtra]	Boilers small medium range Pressure vessels N U	*Per annum* Rs. 1 crore ... 1·8 crore	L 3-3-62 F.C. 9-4-62
Leader Engineering Works, S/3-S/4, Industrial Town, Jullunder [Jullunder, Punjab]	Boiler mountings and steam valves ... S E	*Annual capacity* Rs. ... 9,00,000	L 3-4-62 F.C. 9-4-62
Schd. Ind. No. 5 (1)—Equipment for generation, transmission and distribution of electricity including transformers			
Electrical Manufacturing Co., Ltd., EMC Gardens, 136, Jessu Road, Calcutta-28	Shifting from 136, Jessore Road, to 51, Canal East Road, Calcutta (Shifting) (Capacity same as before)		L 5-1-59-EEI 62 28-3-62
Schd. Ind. No. 5 (2)—Electrical motors			
Tropical Engineering Co., 21, Forbes Street, Fort, Bombay [Indore, Madhya Pradesh]	Slipring and squirrel cage electric motors N U	H. P. *per annum* 30 to 200 84,000	L 5-2-16-EEI 62 6-4-62
Schd. Ind. No. 8-A (6)—Mining Machinery			
Holman Climax Manufacturing Ltd., Chartered Bank Building, Calcutta (West Bengal)	Rock drills S E	*Nos. p a* ... 600	L 8A-6-11 MEI 62 29-3-62
Schd. Ind. No. 8-B (2)—Conveying equipment			
Eastern Machinery & Trading Co., Imperial Chambers, Welson Road, Ballard Estate, Bombay-1 [Ulhasnagar, Maharashtra]	Electric hoists N U	*Units p a* ... 1,000	L 8 B (2) 28 MEI 62 23-4-62

(Contd.)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Schd. Ind. No. 9—Machine Tools		
Shri Ramamurti, 6/105 Tricy Road, Coimbatore [Coimbatore, Madras]	*Capacity to be determined one year after the unit goes into production* 1. Woodworking circular saws 2. do planning machines 3. do sanding do N U	L 9-83 MEI 62 17-3-62
Schd. Ind. No. 12 (2)—Hand tools, small tools & the like		
Shivaji Works Ltd., P.O. Shivashahi, Taluka North Sholapur, [Maharashtra]	Vices ... ... *Nos. p a* 30,000 S E	L 12-2-58 62 3-3-62
Burn and Co., Ltd., 12, Mission Row, Calcutta-1 [West Bengal]	Twist drills ... ... *Nos. p. a.* 8,40,000 S E	L 12 (2) 61-62 2-4-62
India Tap & Die Co., Private Ltd., 8/IV Central Bank Building, Post Box No. 1607, Fort, Bombay-1 [Maharashtra]	*Annual capacity* Taps-ground-rolled thread taps ... ... 2,50,000 sets Coventry chasers ... 25,000 " Threading dies other types 1,50,000 " Tool bits ... ... 24,000 doz. Milling cutters ... 10,000 nos. Reamers ... ... 24,000 " Twist drills ... 1,50,000 pcs S E	L 12 (2) 63 MEI 62 5-4-62
Schd. Ind. No. 15 (1)—Water meter, steam meters, electricity meters and the like		
Shri V. Nimbkar, 15th Road, Khar, Bombay-52 [Wadgaon, Maharashtra]	*Annual capacity* *Nos.* Water Meters ½" & ¾" ... 30,000 do 1", 1½" & 2" ... 3,000 Gas Meters ½" & ¾" and pressure reducers ... ... 30,000 N U	L 15 (1) 2 LEI (A) 62 28-3-62
Jupiter Industries Bunder Road, Jamnagar [Gujarat]	*Nos. p a.* ½" Water meters ... 24,000 ¾" do ... 12,000 1" do ... 6,000 N U	L 15 (1) 6 LEI (A) 62 6-4 62
Beharilal Beni Pershad, Mahalaxmi Market, Chandni Chowk, Delhi [Jaipur or Alwar, Rajasthan]	*1st year Nos.* / *2nd year Nos.* / *3rd year Nos.* Domestic water meters ½" to 1"size 20,000 / 30,000 / 50,000 Industrial watermeters 1½" to 6" size 2,000 / 3,000 / 4,000 N U	L 15 (1) 7 LEI (A) 62 16-4-62
Schd. Ind. No. 19 (3)—Fine chemicals including photographic chemicals		
Alembic Chemical Works, Co. Ltd., P.O. Chemical Industries, Baroda-3 (Baroda, Gujarat)	*Tons p a* Sodium sulphite ... ... 500 N A	L 19 (3) 4-62 Ch. II 11-4-62
Schd. Ind. No. 23 (1)—Cotton textiles		
M. G. Corporation, 31, Forbes Street, Fort, Bombay-1 [Khandwa Madhya Pradesh]	Spindles for the manufacture of cotton yarn—NU... 18,000	L 23 (1) 223 Tex B 62 4-4-62
Shri P.S. Kalani, 11, Tukoganj Road, Indore [Satna, Madhya Pradesh]	do ... 12,000	L 23 (1) 229 Tex B 62 4-4-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Orissa Cotton Mills Ltd., 8, Lyons Range, Calcutta-1 Bhagalpur, Dist. [Cuttack, Bihar]	Spindles for the manufacture of cotton yarn S E ... 20,500	L 23 (1) 242 Tex B 62 4-4-62
Shri Deokinandan Poddar, Karnibad, Deoghar, [Bhagalpur, Bihar]	do NU ... 12,000	L 23 (1) 248 Tex B 62 4-4-62
Shri B. L. Sharma, 1, Gupta, Lane, Calcutta-6 [Dumraon, Shahabad Dist. Bihar]	do do	L 23 (1) 249 Tex B 62 4-4-62
Shri A. C Burman, Dabur [Dr. S. K. Burman] Private Ltd., 142, Rashbehari Avenue, Calcutta-29 [Daburgram Bihar]	do do	L 23 (1) 250 Tex B 62 4-4-62
Inderchand Rajgarhia and Sons Private Ltd., 12, Syed Sally Lane, Calcutta-7 [Kodarma Bihar]	do do	L 23 (1) 260 Tex B 62 5-4-62
Punjab Cloth Mills Ltd., Bhiwani [District Hissar,] [Bhiwani, Punjab]	do S E ... 5,000	L 23 (1) 268 Tex B 62 5-4-62
Bhagwati Hosiery, 80, G. B. Road, Jogeshwari, Bombay-60 [Chandigarh, Punjab]	do NU ... 12,000	L 23 (1) 270 Tex B 62 5-4-62
Vardhman Spinning & General Mills [Plot No. 231] Industrial Area A, Ludhiana [Ludhiana, Punjab]	do do	L 23 (1) 277 Tex B 62 5-4-62
India Woollen Textile Mills, Private Ltd., G. T Road, Chheharta, Amritsar [Ballabgarh, Punjab]	do do	L 23 (1) 279 Tex B 62 5-4-62
Hasimara Industries Ltd , 5 & 7, Netaji Subhas Road, Calcutta-1, [Purulia, West Bengal]	do do	L 23 (1) 281 Tex B 62 6-4-62
Deepak Industries Ltd., 62, Hazra Road, Calcutta-19, [Bankura, West Bengal]	do do	L 23 (1) 282 Tex B 62 6-4-62
Shri H. P. Barat, 14, India Exchange Place, Calcutta [Burdwan, West Bengal]	do do	L 23 (1) 283 Tex B 62 6-4-62
Ramdutt Ramkissendass, 9, Brabourne Road, Calcutta-1, [Midnapur, West Bengal]	do do	L 23 (1) 284 Tex B 62 6-4-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture ; capacity and type of licence*	*Licence number and date*
Shri N. C. Roy, 10, Hastings Street, Calcutta [Birbhum, West Bengal]	Spindles for the manufacture of cotton yarn NU ... 12,000	L 23 (1) 285 Tex B 62 6-4-62
Jay Shree Textiles Ltd., P. O. Rishra, Dist. Hooghly, [Midnapore, West Bengal]	do do	L 23 (1) 286 Tex B 62 6-4-62
Shri B. P. Poddar, 36, Chowringhee Road, Calcutta-16 [Greater Calcutta, West Bengal]	do ... 25,000	L 23 (1) 287 Tex B 62 6-4-62
Chimanlal & Co., c/o The Aryan Brush Co. Ltd., Ahmedabad-2. [Sabarkantha Dist. Gujarat]	do ... 12,000	L 23 (1) 288 Tex B 62 6-4-62
Shri Muljibhai Chhaganlal Mehta, Prop. : M/s Kantilal & Co., Chaura Chowk, 1st Gully, Mulji Jetha Market, Bombay-2, [Amreli, Gujarat]	do do	L 23 (1) 289 Tex B 62 6-4-62
Shri Kantilal S. Shah, c/o Shah Construction Co. Ltd., 198, Jamshedji Tata Road, Bombay-1 [Punchmahals, Gujarat]	do do	L 23 (1) 290 Tex B 62 6-4-62
Shri Udayam Chinubhai, c/o Udayam & Co., Ballentines Haveli, Three Gates, Ahmedabad-1 [Sabarkantha, Gujarat]	do do	L 23 (1) 291 Tex B 62 6-4-62
Shri Mahendra J. Shah, 198, Churchgate Reclamation, Bombay-1 [Broach Dist. Gujarat)	do do	L 23 (1) 293 Tex B 62 6-4-62
Vanaja Textiles Ltd., Kurichikara P. O., Trichur [Kerala]	do SE ... 3,600	L 23 (1) 294 Tex B 62 6-4-62
Usha Spinning & Weaving Mills Ltd., Badarpur [Near Faridapad] [Badarpur, Punjab]	do ... 13,000	L 23 (1) 296 Tex B 62 6-4-62
Sutlej Cotton Mills Ltd., 39, The Mall, Amritsar [Bhawani Mandi, Rajasthan]	do ... 3,600	L 23 (1) 297 Tex B 62 6-4-62
Ahmedabad Advance Mills Ltd., Outside Delhi Gate, Ahmedabad [Gujarat]	do ... 3,000	L 23 (1) 298 Tex B 62 9-4-62
New Asarwa Manufacturing Co., Ltd., P. O. Asarwa, Ahmedabad-11 [Gujarat]	do ... 800	L 23 (1) 299 Tex B 62 9-4-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture ; capacity and type of licence*	*Licence number and date*
Asarwa Mills Ltd., P. O. Asarwa, Ahmedabad-11 [Gujarat]	Spindles for the manufacture of cotton yarn SE ... 400	L 23 (1) 300 Tex B 62 9-4-62
New Rajpur Mills Co., Ltd , Gomtipur Road, Ahmedabad-10 [Gujarat]	do ... 800	L 23 (1) 301 Tex B 62 9-4-62
New Maneckchock Spg. & Weaving Co., Ltd., Post Asarwa, Ahmedabad-11 [Gujarat]	do ... 3,000	L 23 (1) 302 Tex B 62 9-4-62
Mafatlal Fine Spg. & Manufacturing Co., Ltd., Mafatlal House, Backbay Reclamation, Bombay-1 [Gujarat]	do do	L 23 (1) 303 Tex B 62 9-4-62
Mahalaxmi Mills Ltd., Vartej Road, Bhavnagar [Gujarat]	do do	L 23 (1) 304 Tex B 62 9-4-62
Aryodaya Spg. & Weavg. Co., Ltd., Asarwa Road, Ahmedabad [Gujarat]	do do	L 23 (1) 305 Tex B 62 9-4-62
Shree Vivekanand Mills Ltd., Ahmedabad-10 [Gujarat]	do ... 800	L 23 (1) 306 Tex B 62 9-4-62
Manaklal Harilal Spg. & Mfg. Co., Ltd , Saraspur Road, Ahmedabad-2 [Gujarat]	do ... 400	L 23 (1) 307 Tex B 62 9-4-62
Vikram Mills Ltd., Outside Saraspur Gate, Ahmedabad-10 [Gujarat]	do ... 3,000	L 23 (1) 308 Tex B 62 9-4-62
Nandlal Bhandari Mills Ltd., Indore [Indore, Madhya Pradesh]	do ... 1,200	L 23 (1) 309 Tex B 62 9-4-62
Monogram Mills Co., Ltd., Rakhial Road, Ahmedabad-10 [Gujarat]	do ... 3,000	L 23 (1) 310 Tex B 62 9-4-62
Ahmedabad Shri Rama-krishna Mills Co , Ltd., Gountipur, Ahmedabad-10 [Gujarat]	do ... 2,000	L 23 (1) 311 Tex B 62 9-4-62
Kalyanmal Mills Ltd., 15, Shilnath Camp, Indore [Indore, Madhya Pradesh]	do ... 3,000	L 23 (1) 312 Tex B 62 9-4-62
Bihari Mills Ltd., Ahmedabad-1 [Gujarat]	do ... 2,000	L 23 (1) 313 Tex B 12 9-4-62
Gold Mohur Mills Ltd., Chartered Bank Building, Fort, Bombay-1 [Maharashtra]	do ... 3,000	L 23 (1) 314 Tex B 62 9-4-62
Aryodaya Ginning & Manufacturing Co , Ltd., Asarwa Road, Ahmedabad-11 [Gujarat]	do do	L 23 (1) 315 Tex B 62 9-4-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture ; capacity and type of licence*			*Licence number and date*
Western India Cotton Ltd., P. O. Pappinisseri, Connanore Dist. [Kerala]	Spindles for the manufacture of cotton yarn	SE ...	3,000	L 23 (1) 316 Tex B 62 9-4-62
Ahmedabad Kaiseri Hind Mills Co., Ltd., Outside Raipur Gate, Ahmedabad-1 [Gujarat]	do	...	1,200	L 23 (1) 317 Tex B 62 9-4-62
New India Spinning & Weaving Mills [Private] Ltd., House No. 12, Sector 4. Street-A, Chandigarh [Bhatinda, Punjab]	do	NU ...	12,000	L 23 (1) 320 Tex B 62 12-4-62
S. R. S. Madho Ram & Sons, Connaught Place, New Delhi, [Dehra Dun, Uttar Pradesh]	do	do		L 23 (1) 321 Tex B 62 21-4-62
Bansidhar Chandi Prasad, D. N. Singh Road, Bhagalpur, [Bhagalpur, Bihar]	do	do		L 23 (1) 322 Tex B 62 21-4-62
J. K. Cotton Manufacturers Ltd., Kamla Tower, Kanpur, [Keshorampatan, Rajasthan]	do	do		L 23 (1) 323 Tex B 62 21-4-62

Schd. Ind. No. 23 (2)—Textiles made of jute, including jute, twine and rope

			Per annum (after expansion)		
The Megna Mills Co. Ltd., 16, Strand Road, Calcutta, [West Bengal]	Wide Hessian (Carpet backing cloth)	S E	Broad looms 80	For producing : tonnes ... 8,400	L 23 (2) 3 Tex D 62 19-4-62
Hukum Chand Jute Mills Ltd., 9, Brabourne Road, Calcutta, [West Bengal]	do		25	... 2,625	L 23 (2) 4 Tex D 62
The General Industrial Society Ltd., 15, India Exchange Place, Calcutta-1 [West Bengal]	do		30	... 3,150	L 23 (2) 5 Tex D 62 19-4-62
Shree Gouri Shankar Jute Mills Private Ltd., 10, Clive Road, Calcutta, [West Bengal]	do		25	... 2,625	L 23 (2) 6 Tex D 62 19-4-62
Ganges Manufacturing Co Ltd., 7, Council House Street, Calcutta, [West Bengal]	do		30	... 3,150	L 23 (2) 7 Tex D 62 19-4-62
The Kelvin Jute Co., Ltd., "Mcleod House" 3, Netaji Subhas Road, Calcutta-1 [West Bengal]	do		60	... 63,00	L 23 (2) 8 Tex D 62 19-4-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture ; capacity and type of licence*				*Licence number and date*
The Dalhousie Jute Co. Ltd., Chartered Bank Buildings, Calcutta-1 [West Bengal]	Wide Hessian [Carpet Backing cloth]	S E	Broad looms 12	For producing : tonnes ... 1,260	L 23 (2) 9 Tex D 62 19-4-62
The Champdany Jute Co. Ltd., 2, Netaji Subhas Road, Calcutta-1 [West Bengal]	do		30	... 3,150	L 23 (2) 10 Tex D 62 19-4-62
National Co. Ltd., Sankrail, Andul, [Howrah] [West Bengal]	do		100	...10,500	L 23 (2) 11 Tex D 62 19-4-62
Hastings Mills Ltd., 14, Netaji Subhas Road, Calcutta-1 [West Bengal]	do		48	... 5,040	L 23 (2) 12 Tex D 62 19-4-62
The Naihati Jute Mills Co. Ltd., 33, Netaji Subhas Road, Calcutta-1 [West Bengal]	do		20	... 2,100	L 23 (2) 14 Tex D 62 19-4-62
The Agarpara Co. Ltd., Old Court House Corner, National Tobacco Building, Calcutta-1 [West Bengal]	do		40	... 4,200	L 23 [2] 15 Tex D 62 19-4-62
New Central Jute Mills Co. Ltd., 11, Clive Row, Calcutta-1 [West Bengal]	do		170	...17,850	L 23 [2] 16 Tex D 62 19-4-62
Anglo-Indian Jute Mills Co. Ltd., 31, Netaji Subhas Road, Calcutta [West Bengal]	do		20	... 21,00	L 23 [2] 18 Tex D 62 19-4-62
Union Jute Co. Ltd., Chartered Bank Building, Calcutta-1, [West Bengal]	do		16	... 1,680	L 23 [2] 19 Tex D 62 19-4-62
The Kinnison Jute Mills Co. Ltd., Chartered Bank Building, Calcutta-1, [West Bengal]	do		14	... 1,470	L 23 [2] 20 Tex D 62 19-4-62
The North Brook Jute Co. Ltd., Chartered Bank Building, Calcutta-1, [West Bengal]	do		65	... 6,825	L 23 [2] 21 Tex D 62 19-4-62
Auckland Jute Co. Ltd., Chartered Bank Building, Calcutta-1 [West Bengal]	do		42	... 4,410	L 23 [2] 22 Tex D 62 19-4-62
The Gourepore Co. Ltd., 2, Fairlie Place, Calcutta-1, [West Bengal]	do		72	... 7,560	L 23 [2] 23 Tex D 62

Schd. Ind. No. 24 (3)—Paper board and straw board

India Rotoprints, 21, Khorshed Buildings, Sir P. Mehta Road, Bombay-1, [Pimpri, Maharashtra]	Paper for Textiles and Cubes	Cones ... N U	...	*Tons p a* 3,600	L 24 [3] 13 NU 62 Ch. I 18-4-62

(*Contd.*)

Name and full address of the undertaking and location	Articles of manufacture; capacity and type of licence		Licence number and date
Schd Ind. No. 24 (4)—Paper for packaging			
Shri Dwarkadas J Patel, 38, Shreeniketan, Malabar Hill, Bombay-6 [Pardi, Gujarat]		*Tons p a*	L 24 [4] 14 NU 62 Ch. I 18-4-62
	Tracing paper cellulose wadding duplex and other specialized tissues... ...	... 1,440	
	Pulp	... 1,440	
	N U		
Schd. Ind. No. 27 (2)—Milk foods			
Shiv Prakash Janak Raj & Co. Katra Ahluwalia, Amritsar [Jind, Punjab]	Whole milk powder	*Tons p a* ... 1,080	L 27 [2] 2-62 Ch. II 4-4-62
	N U		
Schd. Ind. No. 27 (3)—Malted foods			
South India Research Institute [Private] Ltd., Srinagar, Industrial Estate, S.O., (Vijaywada) Krishna Dist. [Andhra Pradesh]	Malted milk food [Siritone] ...	*tons p.a.* 144	L 27 (3) 3-62 Ch. II 4-4-62
	N A		
Schd. Ind. No. 29 (1)—Soaps			
East Asiatic Co. (India) Private Ltd., Mercantile Bank Building P.B No. 146, Madras-1 (Madras)	Washing soaps, toilet soap, chips & flakes etc.	*Tons p a* ... 1,350	L 29 (1) 1-62 Ch. II 4-4-62
	S E		
Schd. Ind. No. 33 (2)—Sheet and plate glass			
Shree Vallabh Glass Works Ltd., 2, Swadhin Sadan, 'C' Road, Churchgate, Bombay-1 (Anand, Gujarat)	Plate glass ...	*Per month by a stage* *Tons* ... 750 to 1,500	L 33 (2) 1-62 Ch. II 9-4-62
	N A		
Schd. Ind. No. 33 (6)—Miscellaneous ware			
S. V. Subramaniam & Sons, 28, St. Mark's Road, Bangalore-1 (Bangalore, Mysore)	Glass Shells ...	*Million pieces* ... 7·5	L 33 (6) 4-62 Ch. II 7-4-62
	N U		

(Contd.)

Name and full address of the undertaking and location	Articles of manufacture; capacity and type of licence		Licence number and date
Schd. Ind. No. 3—Boilers and steam generating plants			
National Steel Equipment Co. Near Police Training School, Naigaum Road, Dadar, Bombay-14 [Maharashtra]	Boilers/steam generators	*Annual capacity value Rs.* 30 nos. ... 15,00,000	L 3-2 FC 62 9-4-62
	N A		
Schd. Ind. No. 5 (1)—Equipment for generation, transmission and distribution of electricity including transformers			
Greaves Cotton & Cromption, Parkinson Ltd., 1, Forbes Street, Bombay-1 [Bombay, Maharashtra]	Slydlok fuses 5-15 amp. ...	*Nos. p a* 1,00,000	L 5 [1] 61 EEI 62 6-4-62
	N A		
Octavius Steel & Co. Ltd. 14, Old Court House Street, Calcutta [Calcutta, West Bengal]	Air break switches and fuses	*Lacs p a value Rs.* N U ... 9,00,000	L 5 [1] 62 EEI 62 16-4-62
Schd. Ind. No. 5 (2)—Electrical motors			
Bharat Bijlee Ltd., Udyognagar, Bombay-22 [Maharashtra]	1. 3 Phase A.C. electric motors including marine type motors upto 200 h.p....	*Capacity p a h. p.* 75,000	L 5 [2] 17 EEI 62 25-4-62
	2. D. C. Motors upto - do - ...	12,000	
	Capacity p. a., 24,000 *h. p.*		
	3. Special electric motor including		
	i. Explosion and flame proof motors		
	ii. Motors for marine winches		
	iii. Multi-speed motors for sugar centrifuges ...		
	iv. Variable speed communator motors		
	v. Motors for hoists & cranes		
	vi. Others upto the range of 200 h. p. in each category		
	S E		
Schd. Ind. No. 8-A (9)—Chemical machinery			
De-Smet Extraction [India] Private Ltd., "Shantiniketan", 95-A, Marine Drive Bombay-2 [Bombay, Maharashtra]	*6 to 15 plants in 5 years*	*Tons in 24 hours*	L 8 A 9-33 MEI 62 29-3-62
	Cotton seed cleaning, delinting, hulling and separating ...	80	
	N U		
Schd. Ind. No. 8-B (2)—Conveying equipment—bucket elevators etc.			
The Ahmedabad Jupiter Spg. & Wvg. Manufacturing Co. Ltd., 28, Apollo Street, P.O. Box No. 240, Bombay-1 (Bombay, Mahatashtra)	E. O. T. Cranes upto a maximum load of 15 tons ...	*Nos. p a* 240	L 8 B [2] 29 MEI 62 30-4-62
	Winches upto a maximum load of 15 tons ...	480	
	N U		

(Contd.)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture ; capacity and type of licence*	*Licence number and date*
Alcock Ashdown & Co. Ltd., 16, Bank Street Bombay-1 [Bhavnagar, Gujarat]	*Tons p a* *All types* E. O. T. Cranes wharf cranes goliath cranes jib cranes, etc. 3,600 N A	L 8 B (2) 30 MEI 62 30-4-62

Schd. Ind. No. 8-C (1)—Ball, roller and tapered bearings

National Engineering Industries Ltd., Jaipur [Rajasthan]	*Nos. p a* Steel rolled rings of outer diameter not exceeding 18" ... 1,50,000 S E	L 8 C (1) 11 MEI 62 30-4-62

Schd. Ind. No. 9—Machine tools

Praga Tools Corporation Ltd., B-1-174 Fateh Maidan Road, Hyderabad [Andhra Pradesh]	*Nos. p a* 1. Tool and cutter grinding machines 200	L 9 84 MEI 62 7-4-62
	2. Milling machines ... 240 S E	

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture ; capacity and type of licence*	*Licence number and date*

Schd. Ind. No. 19 (3)—Fine Chemicals Including Photographic Chemicals

Shri S. H Kelkar, 1221 C, Apte Road, Poona-4 [Mulund, Maharashtra]	*Aromatic chemicals*	L 19 (3) (5) 62 Ch. II 11-4-62

Capacity kgs. p a	
Musk Xylol ...	50,000
do Ambrette ...	20,000
do Ketone ...	2,500
Phenyl Ethyl Alcohol	50,000
Cinnamic Alcohol	10,000
Benzophenone	10,000
Cinnamic Aldehyde	10,000
Aldehyde C 8	120
do do 9	140
do do 10	140
do do 11	250
do do 12 M N A	100
do do 12 M N A—M P	140
do do 12 Lauric	120
do do 14	100
do do 16	500
do do 18	100
do do 19	100
do do 20	100
Phenyl Acetic Aldehyde	5,000
Methyl Anthranilate	5,000
Gardenol [Styrolyl Acetate]	3,000
Isoeugenol	2,000
Cyclamen Aldehyde	2,000
Ionones and Methy Ionones	1,20,000
Perfumery compound	1,00,000

N U

Schd. Ind. No. 22—Drugs and Pharmaceuticals

May & Baker Ltd., Worli, Bombay-18 [Maharashtra]	*Tablets p a* Trescatyl brand ethionamide tablets ... ... 30,00,000 S E	L 22-115-62 Ch. III 27-4-62

Schd. Ind. No. 23 (1)—Textiles-made Wholly or in Part of Cotton etc.

Shri Gopal Industries Ltd., Kotah [Rajasthan] [Kotah, Rajasthan]	140 automatic looms for the manufacture of cotton textiles S E	L 23 (1) 164 Tex B 62 11-12-61
Birla Cotton Spinning & Weaving Mills Ltd., P.O. Birla Lines, Delhi-6 [Khurja, U. P.]	Spindles for the manufacture of cotton textiles ... 25,000 N U	L 23 (1) 211 Tex B 62 27-3-62
Shree Durga Cotton Mills, [Kadi] Private Ltd., Kadi [Gujarat]	do yarn—S E ... 800	L 23 (1) 325 Tex B 62 24-4-62
Vijaya Mills Co. Ltd., Naroda Road, Ahmedabad-2 [Gujarat]	do do	L 23 (1) 326 Tex B 62 28-4-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Delhi Cloth & General Mills Co. Ltd., [Swatantra Bharat Mills] Bara Hindu Rao, Post Box No. 1039, Delhi-6 Delhi]	Spindles for the manufacture of cotton yarn—S E ... 2,000	L 23 (1) 327 Tex B 62 30-4-62
Schd. Ind. No. 23 (2)—Textiles-made wholly or in part of Jute, including Jute, Twine and Rope.		
Birla Jute Manufacturing Co Ltd., 15, India Exchange Place, Calcutta [West Bengal]	Wide Hessain (carpet backing cloth) 28 Broad looms for producing *Tons p a* ... 2,940 S E	L 23 (2) 13 Tex D 62 28-4-62
Schd. Ind. No. 24 (3)—Paper Board and Straw Board		
National Straw Board Manufacturing Co., c/o Seth Bhagwan Dass, Ambala Road, Saharanpur [Muzaffarnagar, [U.P.]	*Tons p a* Straw boards and mill boards ... 7,500 Pulp ... ... 7,500 N U	L 24 (3) 10 NU 62 Ch. I 26-4-62
Schd. Ind. No. 1-A (3)—Iron and Steel Castings and Forgings		
Mahabir Export & Import Co. Private Ltd., 11, Daryaganj, Delhi [Shahdara, Delhi]	Cast iron casting ... N A *Tons p a* ... 6,000	L 1 A (3) 71 EI-M 62 5-4-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Heavy Engineering Corporation Ltd., Ranchi Village Hatia (Bihar)	*Name of article* — *Capacity* First phase III stage annual capacity in tons: 1. Grey iron castings (In terms of fettled and clean castings) *i.* Castings ... ... 34,060 *ii.* Rolls ... ... 11,540 *iii.* Ingot moulds ... 1,000 2. Steel castings in terms of fettled and cleaned castings) *i.* Castings ... ... 40,182 *ii.* Rolls ... ... 6,000 *iii.* Ingot moulds ... 42,200 3. Forgings (In terms of cleaned forgings) *i* Forgings ... ... 29,384 *ii* Rolls ... ... 3,570 4. Non-ferrous castings (In terms of fettled and cleaned castings) N U 800	L 1 A (3) 73 EI-M 62 6-4-62
Shree Engineering Products Ltd., 21-A, Canning Street, Calcutta-1 (Rishra, West Bengal)	*Tons p a* Malleable iron castings ... 2,400 S E	L 1 A (3) 74 EI-M 62 6-4-62
Shri Kidar Nath, Partner, Leecee Malleable Castings Co. Sultanganj, Agra [Sultanganj U.P.]	do ... 1,800 Malleable pipe fittings ... 600 N U	L 1 A (3) 75 EI-M 62 7-4-62
Schd. Ind. No. 1 A (7)—Other Products of Iron and Steel		
Shah Steel Industries, 14, Garibdas Street, P.O. Box No. 3073, Bombay-3 [Malerkotla, Punjab]	*Tons p a* Transmission towers fabricated pols and sub-station structures on the basic of maximum utilisation of plant capacity.—N U 4,000	L 1 A (7) 30 EI-M 62 2-4-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*		*Licence number and date*
Andhra Steel Corporation Private] Ltd., 140, Chittranjan Avenue, Calcutta-7 (Visakhapatnam A.P.)	Cold rolled box strappings and strips ... ... N A	*Tons p a* ... 6,000	L I A 7) N 267 62 8-5-62

Schd. Ind. No. 2 (1)—Coal, Lignite, Coke and their Derivatives

Shri Madanlal Basawatia, P.O. Jharia, Dist. Dhanbad [Tormi, Bihar]	*Name of article*	*Year*	*Annual capacity*	L 2 (1) N 39-62 8-5-62
	Coal	1st year ...	12,000	
		2nd do ...	24,000	
		3rd do ...	36,000	
		4th do ...	48,000	
		5th do ...	60,000	
		to be gradually increased to 1,20,000 tons a year N U		
East Chaptoria Coal Co. Private Ltd., 22, Canning Street, Calcutta-1 [Salanpur, West Bengal]	Coal	1962 ...	72,000	L 2 (1) N 41-62 8 5 62
		1963 ...	75,000	
		1964 ...	80,000	
		1965 ...	80,000	
		N U		

Schd. Ind. No. 8 (8-A)—Cement Machinery

Tendulkar Industries [Private] Ltd., Stadium House, Veer Nariman Road, Fort, Bombay-1 [Panvel, Maharashtra]	Cement making machinery—one complete plant (Annual) N U		L 8 A 8 1 MEI 62 11-4 62

Schd. Ind. No. 9—Machine Tools

General Electrodes & Equipment Ltd., Advani Chambers, 1st Floor, Sri P.M. Road, Fort, Bombay-1 [Bombay, Maharashtra]		*Nos. p a*	L 9-85 MEI 62 30-4-62
	Welding & cutting torches	... 3,000	
	Roller guides for the above	... 1 200	
	Oxy-acetylene regulators	... 3,600	
		Pieces p a	
	Acetylene generators—N U	... 600	
Hindustan Machine Tools Ltd., Jalahalli P.O., Bangalore [Pinjore, Panjab]	*1,000 Machine tools per annum* Milling machines-sizes 2 to 5 of the normal and production types. Double head milling machines, keyway milling machines engraving machines, cold circular, saws, gear hobbers and gear shapers with necessary accessories—S E		L 9-88 MEI 62 4-5 62

Schd. Ind. No. 12 (2)—Hand Tools, Small Tools and the like

Shri S. RM. Palaniappan & Co. 9-A, Vepery High Road, Madras-3 [Madras]		*Nos. p a*	L 12 (2) 64 MEI 62 28-4 62
	Taps	72,000	
	Thread rolls	2,000	
	Dies...	24,000	
	Chasers	10,000	
	Carpenters tools excluding saws	1,00,000	
	Squares—N U	1,200	
Shri A.K. Bhattacharya, 51, Stephen House, 4, Dalhousie Square, Calcutta [Calcutta, West Bengal]		*Sets p a*	L 12 (2) 65 MEI 62 28 4-62
	Thread rolling dies ...	6,000	
	Taps (commercial and ground thread) N U	60,000	

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*		*Licence number and date*
Shri Dinesh K. Mehta, Roxy Talkies, New Queens Road, Bombay-4 [Bombay, Maharashtra]	Dies, moulds, jigs and fixtures worth N U ...	*Rs. p a* 24,00,000	L 12 (2) 66 MEI 62 30 4-62
Mahindra & Mahindra Ltd., Gateway Building, Apollo Bunder, Bombay-1 [Bombay, Maharashtra]	*Standard gauges* (Snap gauges, plug and ring gauges and thread gauges). N U	*Nos. p a* 12,000	L 12 (2) 67 MEI 62 30-4-62
Shri Arvind C. Parikh, "Purnima" 40-C, Ridge Road, Malabar Hill, Bombay, [Bombay, Maharashtra]	Dies of various (ferrous, non-ferrous and plastic dies) worth—N U	*Rs. p a* 7,00,000	L 12 (2) 70 MEI 62 2-5-62

Schd. Ind. No. 15—Industrial Instruments

Seshasayee Brothers [Private] Ltd., 4, Williams Road, Tiruchirapalli-1 [Tiruthuraipundi, Madras]		*Tons p a*	L 15 (69) NU Ch. (1) 62 16-4-62
	Bromine	240	
	Potassium chloride ...	750	
	Magnesium and magnesium compounds	6,600	
	All grades including refractory insulation and Pharmaceutical grades—N U		

Schd. Ind. No. 19 (1)—Inorganic Heavy Chemicals

Hukam Chand Jute Mills Ltd., 9, Brabourne Road, Calcutta [Amla, Madhya Pradesh]		*Annual tons*	L 19 (1) 70 NA Ch. [1] 62
	Caustic soda ...	... 10,800	(*Contd.*)
	Chlorine—N U ...	... 8,600	

(Contd.)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*		*Licence number and date*
Schd Ind. No. 19 (10)—Explosives including Gun Powder and Safety Fuses			
Continental Plant Machinery Co. Ltd., 16, Hare Street, Calcutta [West Bengal]	Detonating fuse. N U	... *Feet p a* 2,00,00,000	L 19 (1) 8-62 Ch. III 4-5-62
Continental Plant Machinery Co. Ltd., 16, Hare Street, Calcutta [West Bengal]	Electric detonators N U	... *Nos. p a* 2,40,00,000	L 19 (10) 9-62 Ch. III 4-5-62
Indian Detonators Ltd., A-4, Industrial Estate, Sanathnagar, Hyderabad, Andhra Pradesh [Hyderabad, A.P.]	Detonating fuse. N A	... *Feet p a* 2,00,00,000	L 19 (10. 10-62 Ch. III 4-5-62
Shri Dharamsey Mulraj Khatau, Laxmi Building, Ballard Road, Fort, Bombay [Madhya Pradesh]	*Items*	*Annual capacity*	L 19 (10) 11-62 Ch. III 4 5-62
	Nitro compounds such as (*a*) Blasting gelatine (*b*) Gelatine dynamites (all grades) ..	6,000	
	Intermediate products for the above nitro compounds viz. nitro glycerine, nitric acid and ammonium nitrate	In quantities necessary for the manufacture of above nitre compounds.	
	Safety fuses (all types)	10 million coils of 24 feet each)	
	Intermediate products for the above safty fuses viz. gun powder—N U	In quantities necessary for the manufacture of the above safety fuses.	
Schd. Ind. No. 23 (1)—Cotton Textiles			
Shri Ishwardas Narottamdas, C/o. Sheth Narottamdas Karsandas, Junagadh [Junagadh, Gujarat]	Spindles for the manufacture of cotton yarn-NU	... 12,000	L 23 (1) 328 Tex B 62 1-5-62
Shree Gopal Industries Ltd., Kota Junction, [Kota, Rajasthan]	do S E	... 7,000	L 23 (1) 329 Tex B 62 5-5-62
Maharaja Shree Umaid Mills Ltd., Pali [Pali, Marwar, Rajasthan]	do do	... 10,000	L 23 (1) 330 Tex B 62 5-5-62
Schd. Ind. No. 23 (3)—Wool, including Wool Tops, Woollen Yarn, Hosiery, Carpets and Druggets			
Punjab Woollen Textile Mills, Chheharta [Chheherta, Punjab]	Spindles for the manufacture of woollen yarn—S E	... 2,904	L 23 (3) Tex (D) N 9-62 10-5-62
Schd. Ind. No. 24 (1)—Paper—Writing Printing and Wrapping			
Shri Nem Kumar Jain, C/o. M/s. Bandhu Enterprises, Mistonganj, Bampur, [Etawah, U.P.]	Paper ... Pulp ... N U	*Tons p a* ... 3,000 ... 3,000	L 24 (1) 68-61 Ch. I 28-10-61
Schd. Ind. No. 27 (2)—Milk Food			
Banwarilal Ramnarain Jhunjhunwala, 59, Apollo Street, Fort, Bombay-1 [Arvi, Maharashtra]	Skimmed milk and whole milk powder... N U	*Capacity p a* ... 30,00,000	L 27 (2) 3-62 Ch. II 10-4-62

(Contd.)

(Contd.)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*		*Licence number and date*
Schd. Ind. No. 29 (1)—Soaps			
United Vegetable Manufacturers Ltd., Rishra, Lessees M/s. Kusum Products Ltd., Calcutta [West Bengal]	Laundry soap ... N A	... *tons* 360	L 29 (1) 2-62 Ch. II 4-4-62
Schd. Ind. No. 1-A (3)—Iron and Steel Castings and Forgings			
Kessoram Industries & Cotton Mills Ltd., 8, India Exchange Place, Calcutta-1 [Calcutta, West Bengal]	Malleable iron castings ... Alloy castings (including spheroidal and nodular castings) ... ... N U	*Tons p a* 1,500 ... 2,400	L 1 A (3) 68 EI(M) 62 28-3-62
Tata Chemicals Ltd., Bombay House, Bruce Street, Fort, Bombay-1 [Mithapur, Gujerat]	Cast iron castings... N A	... 240	L 1 A (3) 76 EI(M) 62 19-4-62
Schd. Ind. No. 1-A (7)—Other Products of Iron and Steel			
B.R. Horman & Mohatta [India] Private Ltd., Mustafa Building, Sir Pheroj Shah Mehta Road, Bombay-1 [Maharashtra]	Steel box-strapping and steel baling hoops ... N U	... *Tons p a* 7,200	L 1 A (7) N 268-62 8-5-62
Schd. Ind. No. 5 (4)—Electrical Lamps			
Miniature Bulb Industries of India, 131, Kanwali Road, Dehradun [Dehradun, U.P.]	Train lighting lamps N A	... *No. p a* 2,40,000	L 5 (4) 30 EEI 62 5-4-62
Schd. Ind. No. 6 (4)—Radio Receivers			
Eastern Electronics, Industrial Area, Faridabad [Punjab]	Potentiometers... N A	... *No. p a* 2,40,000	L 6 (4) 47 EEI 62 4-4-62

(Contd.)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*			*Licence number and date*
Schd. Ind. No. 8-A (1)—Textile Machinery				
India Supplies Engineering Works Ltd., Behair Niwas, Kanpur [Kanpur, U.P.]	Pneumatic cleaners (pneumatic broken ends collection unit)	*Sets p a* ... 600		L 8 A 1-32 MEI 62 2-5-62
	N A			
Schd. Ind. No. 9—Machine Tools				
Britannia Engineering Co. Ltd., 3, Netaji Subhas Road, Calcutta [West Bengal]	*Capacity to be determined one year after production commences*			L 9 86 MEI 62 2-5 62
	Wire drawing and ancillary equipments like pointing machines, die polishing machines etc			
	Bar and tube drawing machines and ancillary equipments like swaging machines, straightening and reeling machines			
	Centreless bar turning machines and descaling machines—S E			
Schd. Ind. No. 12 (2)—Hand Tools, Small Tools and the Like				
Krishna Pal Singh & Ram Krishan Singh, C/o. M/s. Tormer Machine Tools, G.T. Road, Aligarh [Aligarh, U.P.]	Twist drills	*Nos. p. a.* ... 7,00,000		L 12-2 68 MEI 62 2-5 62
	N U			

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*			*Licence number and date*
Shri I.M. Pai, Alankar, 251, Sion Road, Bombay-22 [Thana, Maharashtra]	Twist drills	... ...	*Pieces p a* 7,00,000	L 12-2-69 MEI 62 2-5-62
	Reamers	... ...	*Nos p a* 50,000	
	N U			
Schd. Ind. No. 15 (1)—Water Meters, Steam Meters, Electricity Meters and the like				
Gansons Private Ltd., 6, West View Dadar, Post Box No. 5576 Bombay-14 [Maharashtra]			*Annual capacity Water meter p a*	L 15 (1) 4 IEI (A) 62 1-5-62
	1st year	... ...	3,000	
	2nd do	... ...	3,000	
	3rd do	... ...	6,000	
	N A			
Schd. Ind. No. 22—Drugs and Pharmaceuticals				
Glaxo Laboratories [India] Private Ltd., Worli, Bombay-18	*Monthly capacity*		*Tablets*	L 22-116 Ch. III 62 14-5-62
	Betnelan tablets (0·5 mg)	...	1,50,000	
			Units	
	Betnesol, eye-ear drops 0·1% 3 ml.	... ...	2,000	
	Betnesol-N eye-ear drops 0·1% 3 ml.	... ...	3,000	
	Betnesol ointment eye-ear 0·1% 3 g	... ...	6,000	
	Betnesol N ointment eye-ear 0·1% 3 g	.. ...	3,000	
	Betnesol skin ointment 0·1% 5 g	... ...	8,000	
	Betnesol N skin ointment 0·1% 5 g	... ...	5,000	
	Betnesol injection 5 ml (0·4 mg per ml)	...	5,000	
	N A			
Schd. Ind. No. 28 (1)—Vegetable Oils including Solvent Extracted Oil				
Dewas Flour, Oil & De-oiled cake Factory, 16, Maharani Road, Street No. 1, Indore [M.P.] [Balgarh, M P.]	Cottonseed oil	... ...	*Tons of cottonseed per day* 100	L 28 (1) 6 Ch. II 62 2-5-62
	S E			
Sir Sarupchand Hukamchand [Private] Ltd., Danveer Sir Hukamchand Marg, Indore [Khandwa, M.P.]	do	...	12,000	L 28 (1) 7 Ch. II 62 4-5 62
	N U			
Schd. Ind. No. 33 (6)—Miscellaneous Ware (Glass)				
Seraikella Glass Works Private Ltd., P.O. Konnagar [E. Rly.], District Hooghly [Hooghly, West Bengal]	Glass tubes and rods	...	*Tons p a* 6,720	L 33 (6) 5 Ch. II 62 3-5-62
	S E			
Schd. Ind. No. 1-A (7)—Other Products of Iron and Steel				
The Ahmedabad Jupiter Spinning Weaving & Manufacturing Co. Ltd., 28, Apollo Street, P.O. Box 240, Bombay-1 [Bombay, Maharashtra] Proposed name: Jupiter Engineering Works Ltd.	Transmission towers and other small structural work (except towers for telephone lines) on the basis of maximum utilisation of plant capacity..		*Tons p a* 1,200	L 1 A (7) 31 EI (M) 62 6-4-62
	N U			

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Schd. Ind. No. 2 (1)—Coal, Lignite, Coke and their Derivatives		
Shri Bajranglal Agarwalla, P.O. Barakar, Dist. Burdwan [Bauri Bahal & Chak Korala, West Bengal]	*Year* — *Annual capacity Tonnes* Coal 1st year ... 15,000 2nd do ... 40,000 3rd do ... 60,000 4th do ... 70,000 5th do N U... 75,000	L 2 (1) 42 N 62 18-5-62
Schd. Ind. No. 8 (B-2)—Conveying Equipment		
B. R. Herman & Mohatta (I) Private Ltd., Mustafa Building, Sir P.M. Road, Bombay-1 [Maharashtra]	*Nos. p a* Electric overhead travelling and gartry cranes ... 900 N A	L 8 (B 2) 31 MEI 62 30-4 62
Britannia Engineering Co. Ltd., 3, Netaji Subhas Road, Calcutta [West Bengal]	Electric hoists ... ... 1,200 N A	L 8 B (2) 32 MEI 62 18-5-62
Schd. Ind. No. 9—Machine Tools		
Delhi Iron & Steel Co. [Private] Ltd., Post Box No. 7, Ghaziabad [Uttar Pradesh]	*Nos. p a* Steel re-rolling mills ... 12 Billet shearing machines ... 9 Bar-shearing machines ... 18 Power reduction gears .. 24 Flat & V-belt power drives ... 48 Billet reheating furnaces—N A 12	L 9-90 MEI 62 21-5-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Schd. Ind. No. 22 –Drugs and Pharmaceuticals		
Alembic Chemical Works Co. Ltd., P.O. Chemical Industries, Baroda-3 [Baroda, Gujarat]	*Item* — *Capacity (annual)* Oleandomycin Capsules 0·25 gms. ... 75,000 × 4 capsules Consumption of: 8,000 × 10 *tablets* Oleandomycin 100 mg. Salicylamide 0·15 mg. Phenobarbitone 30 mg. Chlorphoniramine 2 mg. Moleate S E	L 22-10 A & I 62 22-5-62
The Managing Director, Hindustan Antibiotics Ltd., Pimpri [Near Poona], [Pimpri, Maharashtra]	*Annual capacity (in tonnes)* *Existing* — *Additional* — *Total* Streptomycin 40—45 — 40—45 — 80—90 S E	L 22-12 A & I 62 22-5-62
Schd. Ind. No. 23 (1)—Cotton Textiles		
Trivandrum Spinning Mills, Balaramr Puram, Trivandrum [Trivandrum Kerala]	Spindles for the manufacture of cotton yarn SE ... 6,000	L 23 (1) 331 Tex B 62 18-5-62
Cannanore Co-operative Spinning Mills Ltd., P. O. Chorra, Cannannore Dist. [Cannanore Dist. Kerala]	do ... 5,000	L 23 (1) 332 Tex B 62 18-5-62
The Asok Textiles Private Ltd., Post Box No. 17, Asokapuram, Alwaye [Alwaye, Kerala]	do ... 2,440	L 23 (1) 333 Tex B 62 18-5-62
Shri Karumuttu Thiagarajan Chettiar, " Meenakshi Nilayam " Tirupparan Kundram Road, Madurai [Trivandrum Dist. Kerala]	do N U ... 25 000	L 23 (1) 334 Tex B 62 18-5-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture ; capacity and type of licence*	*Licence number and date*
Shri S. L. Khemka, Khemka & Co. [Agencies] Private Ltd., Vulcan Insurance Building, Church Gate Reclamation, Bombay-1 [Calicut Dist. Korala]	Spindles for the manufacture of cotton yarn NU ... 12,000	L 23 (1) 335 Tex B 62 18-5-62
Shri A.R. Adaikappa Chettiar, C/o. M/s. Ramee Mills, Mill Road, Cannamore, [Connamore Dist. Kerala]	do do	L 23 (1) 336 Tex B 62 18-5-62
K. Narayanaswamy Naidu & Sons, C/o. The Premier Mills [Cbe] Ltd., Pulankiner Post, Udamalpet [Palghat Dist. Korala]	do do	L 23 (1) 337 Tex B 62 18-5-62
Shri K. N. Ananthasivan, Chairman, The Talayar Tea Co. Ltd., Srinivasa Iyer Road, Kottayam [Kottayam, Kerala]	do do	L 23 (1) 338 Tex B 62 18-5-62
Shri N. Soundararajan, "Mangala Nivas" Race Course Road, Dindigul [Ernakulam, Kerala]	do do	L 23 (1) 339 Tex B 62 18-5-62
Shri D. Dorai Raj, Managing Director, Abboi Machine Tools [Private] Ltd., Singanallur, Coimbatore [Palghat, Kerala]	do do	L 23 (1) 340 Tex B 62 18-5-62
Sri Sakthi Textiles [Private Ltd., Pollachi, Coimbatore Dist. [Chittor, Kerala]	do do	L 23 (1) 341 Tex B 62 18-5-62
Chakala Varoo Lazar, Post Office Road, Trichur-1 [Natika Firka Trichur Dist. Kerala]	do do	L 23 (1) 342 Tex B 62 1 -5-62
Shri A.A. Rahim, Secretary, T. K. M. College Trust, Quilon, [Quilon, Kerala]	do do	L 23 (1) 343 Tex B 62 18-5-62
Shri V. A. Muthu Manickam, 5, Shunmuga Mudali Street, Royapetta, Madras-14 [Aleppy, Kerala]	do do	L 23 (1) 344 Tex B 62 18-5-62
Murigappa Chigateri & Sons, Post Box No. 1, Davangere [Davangere, Mysore]	do do	L 23 (1) 345 Tex B 62 18-56-2
Asian Industries Corporation Badri Mahal, 3rd Floor, Dadabhay Naoroje Road, Bombay-1 [Dharwar Dist. Mysore]	do do	L 23 (1) 346 Tex B 62 18-5-62
Shri M. Thimmappa, Yarn Merchant, Davangere city, [Kalpanahalli, Mysore]	do do	L 23 (1) 347 Tex B 62 18-5-62
Shri H. Linga Reddi, B.A., B.L. President, Kampli Sugar Factory of Bellary Central Co-operative Stores Ltd., Bellary [Bellary, Mysore]	do do	L 23 (1) 348 Tex B 62 18-5-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture ; capacity and type of licence*	*Licence number and date*
Shri L. G. Balakrishnan, R.P. & G.T. Road, Hindupur [Anantapur Dist. Andhra Pradesh]	Spindles for the manufacture of cotton yarn NU ... 12,000	L 23 (1) 357 Tex B 62 22-5-62
Swadeshi Cotton Mills Co. Ltd., Swadeshi House, Civil Lines, Kanpur [Kanpur, U.P.]	do NA ... 13,200	L 23 (1) 363 Tex B 62 22-5-62
Shri M. Ramanna, Industrialist, M/s. M. G. Brothers, Automobile Dealers & Fleet Owners, Yammiganur P.O. Kurnool Dist. [Kurnool Dist. Andhra Pradesh]	do NU ... 12,000	L 23 (1) 364 Tex B 62 22-5-62
Jaya Traders, 14/252, Main Bazar, Proddatur, Cuddapah Dist. [Proddatur, Cuddapah Dist. Andhra Pradesh]	do do	L 23 (1) 365 Tex B 62 22-5-62
Shri T.G.V. Naidu, 143, Kingsway, Secunderabad [Hyderabad (Dn) Andhra Pradesh]	do do	L 23 (1) 366 Tex B 62 22-5-62
Surajmal Dulichand, Cloth Merchants, Tobacco Bazar, Secunderabad, [Nirmal Dist. Adilabad, Andhra Pradesh]	do do	L 23 (1) 367 Tex B 62 22-5-62

Schd. Ind. No. 1-A (3)—Iron and Steel Castings and Forgings

Shivaji Works Ltd., P.O. Shiva-Shahi [Dist. Sholapur] [Siva Shahi, Maharashtra]	Cast iron castings ... S E ...	...	*Tons p a* 21,600	L 1 A (3) 67 EI(M) 62 27-3-62
Wyman-Gordon (India) Ltd., Post Box No. 6911, Bombay [Thana, Maharashtra]	Steel forgings ... S E ...	...	6,000	L 1 A (3) 69 EI(M) 62 29-3 62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
The Ahmedabad Jupitar Spinning Weaving & Manufacturing Co. Ltd., 28, Apollo Street, P.O. Box 240, Bombay-1 [Thana, Maharashtra]	*Per annum on the basis of maximum utilisation of the plant capacity* Malleable castings ... ... *Tons* 2,400 Steel castings ... ... 3,000 Steel forgings ... ... 3,000 Pillar drills ... ... 300 N U	L 1 A (3) 77 EI(M) 62 5-5-62
Schd. Ind No. 1-A (7)—Other Products of Iron and Steel		
Duncan Brothers & Co. Ltd., 31, Netaji Subhas Road, Calcutta-1 [Bombay, Maharashtra]	Bead wires for automobiles ... *Tons p a* 4,800 do cycle tyres ... 1,000 N U	L 1 A (7) 271 N 62 29-5-62
Shri M. L. Goenka, Bankura Cotton Mills, Bankura, [Bombay, Maharashtra]	*Annual capacity (on the basis of maximum utilisation of the plant capacity* Grinding balls—N U ... *Tons* 6000	L 1 A (7) 27 EI(M) 62 20-3-62
Schd. Ind. No. 2 (1)—Coal, Lignite, Coke and their Derivatives		
Khas Kajora Coal Co. Ltd., 59, Netaji Subhas Road, Calcutta, Burdwan, West Bengal]	Coal ... ... *Tons p a* 1,40,000 S E	L 2 (1) 40 N 62 25-5-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Schd. Ind. No. 8 (B-2)—Conveying Equipment		
Sayaji Iron & Engg. Co. (Private) Ltd., Channi Road, Baroda-2 [Baroda, Gujarat]	*Annual capacity To be fixed by Government after observing the actual production for one year* Rotary screen apron feeders portable mobile crushing plants N A	L 8 B 2-33 MEI 62 18-5-62
Schd. Ind. No. 9—Machine Tools		
Heavy Engineering Corporation Ltd., Ranchi [Ranchi, Bihar]	Heavy machine tools ... *Tons p a* 10,000 N U	L 9-89 MEI 62 7-5-62
Schd. Ind. No. 15 (1)—Water Meters, Steam Meters, Electricity Meters and the like		
Shri Chandulal Dahyabhai, Surti Bazar, Vyara [T.V. Railway], Dist. Surat [Vyara, Gujarat]	*Annual capacity* 1" Water meters ... *Nos.* 18,000 $\frac{3}{4}$" do ... ... 6,000 $\frac{1}{2}$" do ... ... 6,000 N U	L 15 (1) 8 IEI(A) 62 11 5-62
Saurashtra Chemicals Porbandar [Porbandar, Gujarat]	Refined sodium bicarbonate ... *Tons p a* 10,800 N A	L 15 (71) NA Ch. I 62 23-5-62
Schd. Ind. No. 19 (1)—Inorganic Heavy Chemicals		
Dharangadhra Chemical Works Ltd., 15-A, Horniman Circle, Bombay-1 [Sahupuram, Ahmedabad]	Liquid chlorine ... *Tons p a* ... 16,500 N A	L 19 (1) 68 NA Ch. I 62 23-5-62
Travancore Titanium Products Ltd., Trivandrum [Trivandrum, Kerala]	Sulphuric acid ... ... 16,500 S E	L 19 (I) 72 Ch. I 62 26-5-62
Schd. Ind. No. 22—Drugs and Pharmaceuticals		
Zandu Pharmaceutical Works Ltd., Gokhale Road South, Bombay-28 [Maharashtra]	*Annual capacity* *Litres* Zandu mycetin complex suspension ... ... 7,200 Zandu mycetin suspension ... 12,000 *Tubes of 3 grams each* H. C. A. eye ointment (*a*) 1% ointment... ... 3,00,000 (*b*) 2·5% ointment. ... 3,00,000 *Tubes of 5 grams each* H. C. A. ointment (*a*) 1% skin ointment ... 3,00,000 (*b*) 2·5% skin ointment ... 3,00,000 S E	L 22-118 Ch. III 62 24-5-62
Parke Davis (India) Ltd., Saki Naka, Marol, Andheri Kurla Road, Bombay-70 [Bombay, Maharashtra]	Zarontin syrup ... *Litres p a* ... 3,000 S E	L 22-117 Ch. III 62 24-5-62
Schd. Ind. No. 23 (1)—Cotton Textiles		
Shri A. Nageswera Rao, 'Nagarjuna' 38, Chamiors Road, Madras-28 [Godavari Dist. Andhra Pradesh]	Spindles for the manufacture of cotton yarn NU... 12,000	L 23 (1) 349 Tex B 62 22-5-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*		*Licence number and date*
Shri J. Rameshwar Rao, Green Gates, Saifabad, Hyderabad [Hyderabad (Dn), Andhra Pradesh]	Spindles for the manufacture of cotton yarn NU ...	12,000	L 23 (1) 350 Tex B 62 22-5-62
Shri V. S Sivalingam Chettiar, Judge Jambulinga, Mudaliar Road, Madras-4 [Nellore Dist. Andhra Pradesh]	do	do	L 23 (1) 351 Tex B 62 22-5-62
Shri B. Narayanamurthy, Amadalavalasa, Srikakulam Dist. [Amadalavalasa, Srikakulam Dist. Andhra Pradesh]	do	do	L 23 (1) 352 Tex B 62 22-5-62
Shri B. Venkataratnam, Chodavaram East Godavari Dist [Vizianagaram, Andhra Pradesh]	do	do	L 23 (1) 353 Tex B 62 22-5-62
Shri T. N. Venkata Subbareddy, Madanapalli, Chittor Dist. [Madanappalli, Andhra Pradesh]	do	do	L 28 (1) 354 Tex B 62 22-5-62
Shri N. P. Chengalraya Naidu, Naidu Buildings, Chittoor Chittoor Textiles Mills (Private) Ltd , [Chittor Dist. Andhra Pradesh]	do	do	L 23 (1) 355 Tex B 62 22-5-62
Kishan Lal Nathmal, Cotton Merchants, Adilabad Dist. Hyderabad [Nizamabad, Andhra Pradesh]	do	do	L 23 (1) 356 Tex B 62 22-5-62
Shri E. B. V.Raghavaiah, President The Vijavada Co-operative Central Bank Ltd., Vijayawada Vijay Spinning Mills Ltd., [Krishna Dist. Andhra Pradesh]	do	do	L 23 (1) 358 Tex B 62 22-5-62
Shri V. Krishna Prasad, "Pushkala" 10-2-289/35, Shantinagar, Hyderabad-4 [Anantapur Dist. Andhra Pradesh]	do	do	L 23 (1) 359 Tex B 62 22-5-62
Ravindar Kumar & Co. Cloth Merchants, Secunderabad [Mahaboobnagar Dist. Andhra Pradesh]	do	do	L 23 (1) 360 Tex B 62 22-5-62
Shri M.K.V. Reddy, 63, Bagumpet, Hyderabad-16 [Nandyal, Kurnool Dist. Andhra Pradesh]	do	od	L 23 (1) 361 Tex B 62 22-5-62
Shri P. Parthasarathy, Kodur [Cuddapah Dist] [Kodur, Cuddapali Dist. Andhra Pradesh]	do	do	L 23 (1) 362 Tex B 62 22-5-62
Swadeshi Cotton Mills Co. Ltd., Swadeshi House, Kanpur [Naini, U.P.]	do	N A ... 13,200	L 23 (1) 363 Tex B 62 22-5-62

(*Contd.*)

(*Contd*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*		*Licence number and date*
Shri Gulabchand Talakchand Sheth, C/o. Star Trading Private Ltd., Ghia Chambers, Garadia Khawa Road, Rajkot [Morvi, Gujarat]	Spindles for the manufacture of cotton yarn N U ...	12,000	L 23 (1) 369 Tex B 62 25-5-62
Shri Onkarmal Somany, 2, Wellesley Place, Calcutta-1 [Patna, Bihar]	do	do	L 23 (1) 370 Tex B 62 25-5-62
Shri Dwarkadas Shivji Atha, P.O Jharsunguda, [Sambalpur, Orissa]	do	... 25,000	L 23 (1) 371 Tex B 62 25-5-62
Modi Spg. & Weaving Mills Co Ltd , Modinagar [Modinagar, U.P]	Automatic looms for the manufacture of cotton cloth S E ...	96	L 23 (1) 133 Tex B 61 4 8-61
Schd. Ind. No. 23 (2)—Jute, including Jute, Twine and Rope			
Assam Co-operative Jute Mills Lrd., P.O. Nowgong, [Silghat, Assam]	Jute goods (gunny bags and Hessian) 150 looms or approximately N U	*Tons p a* 6,910	L 23 (2) 24 Tex D 62 26-5-62
Schd. Ind. No. 23 (3)—Wool, including Wool Tops Woollen Yarn, Hosiery, Carpets and Druggets			
Arthur Import Export Co Khandalwal Bhavan, 166, Dababhai Naoroji Road, Fort, Bombay [Bombay, Maharashtra]	Spindles for the manufacture of shoddy woollen yarn S E ...	920	L 23 (3) Tex D N I -62 31-5-62
Schd. Ind. No. 33 (6)—Miscellaneous Ware—Glass			
Shri N. N. Banerjee, 6, West View, Dadar, Bombay-14 [Thana, Maharashtra]	Precision bore glass tubings (neutral as well as soda lime) N U	*Tons p a* 1,200	L 33 (6) 6 Ch. II 62 26-5-62
Yasvadan & Brothers, 23, Fulgali, Bhuvleshwar, Bombay-2 [Anand, Gujarat]	Glass tubes and rods N U ...	*Tons p a* 1,500	L 33 (6) 7 Ch. II 62 26-5-62
Schd. Ind. No. 34 (1)—Fire Bricks			
Bawa Potteries, 6, Hailey Road, New Delhi [Delhi]	Firebricks—N A ...	*Tons p a* ... 1,920	L 34 (1) 70 Ch. IV 62 11-5-62
Perfect Pottery Co. Ltd , Jabalpur (M.P.) Bharatpur [Rajasthan]	Firebricks ... Stoneware pipes and fittings including chemical stonewares) ... N U	... 7,200 ... 7,200	L 34 (1) 75 Ch. IV 62 11-5-62
Schd. Ind. No. 34 (2)—Refractories			
Amar Nath Bhaskar Sons, P.O. Ishwar Nagar, New Delhi Amarnagar [Punjab]	Insulating bricks ... Insulation mortars and cement... N A	*Annual capacity tons* ... 1,200 600	L 34 (2) 74 Ch. IV 62 11-5-62
Orissa Cement Ltd , 4, Scindia House, New Delhi [Rajganapur, Orissa]	Chemically bounded basic refractories ... S E	... 20,000	L 34 (2) 71 Ch. IV 62 11-5-62
Hitkari Brothers (of Delhi) 9, Faiz Bazar, Delhi-6 [Punjab]	Refractories ... Porcelain bricks ... do balls ... Crockery (expansion).. S E	... 2,400 ... 600 ... 240 ... 660	L 34 (2) 72 Ch. IV 62 11-5-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Schd. Ind. No. 34 (7)—Tiles		
Mahen Merchantile Corporation, Pherozshah Mehta Road, Homji Street, Gool Mansion, Bombay-1 [Bombay, Maharashtra]	Wall tiles... ... 1,200 N U	L 34 (7) 73 Ch. IV 62 11-5-62
Bhopal Mining Works, P.O Bhilwara, [Bhilwara, Rajasthan]	Mica insulating bricks ... 72,000 S E	L 34 (2) 76 Ch. IV 62 11-5-62
Schd. Ind. No. 36 (2)—Hard Board, Chip Board and the Like		
Javanand Khira & Co Private Ltd., Khira Bhawan, Sandhurst Bridge, Bombay-7 [Bombay, Maharashtra]	*Nos. p a* Veneered panels, flush doors and block boards ... 75,000 N A	L 36 (2) 35 Ch. IV 61 5-5-62
Schd. Ind. No. 1-A (7)—Other Products of Iron and Steel		
H. B. Hashmatrai, 4, Shiv Sadan, 1st Floor, Marine Drive, 'C' Road, Bombay-1 [Madhya Pradesh]	*Tons p a* Penstock and high pressure pipes 3,000 Transmission towers ... 6,000 General structures including tank ... ... 6,000 Stainless steel fabrication ... 600 N U	L 1-A (7) 32 EI(M) 62 12-4-62
Schd. Ind. No. 1-B (2)—Semi Manufactures and Manufactures		
Shri S. G. Nevatia, "Industry House", 159, Churchgate Reclamation, Bombay-1 [Maharashtra]	*Sintered metal parts as shown below:* *Nos p a* Parts of sewing machines ... 9,60,000 do electric fans.. 2,40,000 do typewriters terminal ... 3,60,000 do telephones (Gear rachet). 1,44,000 N U	L 1-B (2) 1 LEI(A) 62 1-6-62
Schd. Ind. No. 5 (4)—Electrical Lamps		
Philips India Ltd., 7, Justice Chandra Madhab Road, Calcutta-20 [Greater, Bombay, Maharashtra]	Shifting from Hadapsar Dist Poona to Greater Bombay for the manufacture of tungsten and molybdenum wire. (Shifting)	L 5 (4) 31 LEEI 62 29-5-62
Schd. Ind. No. 19 (3)—Fine Chemicals including Photographic Chemicals		
Hyderabad Chemical & Pharmaceutical Works Ltd., Industrial Area, Azamabad, P. B. No. 182, Hyderabad [Hyderabad, Andhra Pradesh]	*Monthly capacity kg.* Benzyl chloride ... ... 15,000 do acetate ... ... 7,000 do benzoate ... ... 2,500 do alcohol ... ... 3,500 Phenyl ethyl alcohol.. ... 1,500 N A	L 19 (3) 6 Ch. II 62 24-4-62
Schd. Ind. No. 23 (1)—Cotton Textiles		
T. R. Mills (Private) Ltd., Bangalore-18 [Bengalore, Mysore]	Spindles for the manufacture of cotton yarn—S E ... 12,000	L 23 (1) 368 Tex B 62 25-5-62
Hindustan Embroidery Mills (Private) Ltd., Cheharta [Faridabad, Punjab]	Shifting from Cheharta (Amritsar) Punjab to Faridabad. (Shifting)	L 23 (1) 372 Tex B 62 30-5-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Schd. Ind. No. 25 (1)—Sugar		
The Chairman, Niphad Sahakari Sakhar Karkhana Ltd., Pimpalas, Via-Nasik-Road, Taluk Niphad, Dist. Nasik, Pimpalas and Pimpri Villages, Niphad Taluk, Dist. Nasik, [Maharashtra]	Installed capacity of sugarcane. 1,000 *Tons per day* N U	L 25 N-85 62 2-6 62
Schd. Ind. No. 1-A (7)—Other Products of Iron and Steel		
Shri C. Keshav Gopal Pithawalla, , Shankar Niwas, 17, Shivaji Park Road, No. 3, Dadar, Bombay-28 Choriyashi, Dist. Surat, Gujarat]	*Tons p a* Pressure vessels ... ... 500 Jacketted kettles ... ... 50 Steel storage tanks ... 150 Stainless steel tanks ... 50 Steel structurals ... ... 1,200 Transmission towers ... 1,200 N U	L 1-A (7) 33 EI(M) 62 17 5-62
Schd. Ind. No. 12 (2)—Hand Tools, Small Tools and the Like		
Hindusthan Gas & Industries Ltd., 3, New Tangra Road, Calcutta-45 Calcutta, West Bengal]	*dozens p a* Precision steel files ... 90.000 S E	L 12 (2) 71 EI(M) 62 25-5-62
Schd. Ind. No. 23 (3)—Wool, including Wool Tops, Woollen Yarn, Hosiery, Carpets and Druggets		
Arthur Imports Export Co. 66, Dadabhai Naoroji Road, Bombay-1 [Bombay, Maharashtra] Proposed name: Krishna Woollen Mills Private Ltd.,	*lbs. per year* Hosiery articles made of shoddy woollen yarn ... 14,40,000 S E	L 23 (3) Tex (D) N 62 11-6-62
Schd. Ind. No. 27 (2)—Milk Foods		
Hindustan Milkfood Manufacturers Ltd., Circular Road, Nabha Nabha, Punjab]	*Tons p a* Horlicks malted milk ... 1,992 S E	L 2. (2) 4 Ch II 62 28-5-62
Schd. Ind. No. 1-A (7)—Other Products of Iron & Steel		
Pravinchandra M. Modi, "Modi Mansion" 1-A, Jeera Compound, Secunderabad [Sanatnagar, Andhra Pradesh]	*Tons p a* Structural ... ... 3,600 N U	L 1-A (7) 34 EI (M) 62 25-5-62
Schd. Ind. No. 5 (6)—Electrial Cables and Wires		
Ajit Industries, P. P. O. Box No. 1558, Bombay-1 [Bombay, Maharashtra] Proposed name: Indian Structural and Galvanising Works]	*Tons p a* Enamelled Aluminium Wires 30 S E	L 5 (6) 42 LEEI 62 8-6-62
Devidayal Cable Industries Private Ltd., Gupta Mills Estate, Darukhana, Reay Road, Bombay-10 [Bombay, Maharashtra]	*annual installed capacity tons* Paper covered winding wires snd strips ... 300 S E	L 5 (6) 43 LEEI 62 8-6-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Schd. Ind. No. 8 (A-9)—Chemical Machinery		
Beco Engineering Co. 1st Floor, Ismail Building, 351, D. Naoroji Road, Bombay-1 [Bombay, Maharashtra]	*to be fixed after observing the actual working for one year* Chemical plant and equipment viz: Bubble towers, leaching towers, absorbing towers, desorption towers, oil gas coolers, oil vapour coolers, acetylene generators, rectifying columns, supper decanters, monomer receivers, brine coolers, gas heat exchangers, fermentators, tar distillation columns, scrubbers, ammonia vapurisers, etc., oil & water tanks, reaction vessels, condensers heat exchangers, evaporators, filters, driers, autoclaves, stirrers, agitators, ball mills, edge runners, steam distillers, revolving kilns, crystallisers etc., dishing work for oil tankers for railways, oil companies and chemical and allied industries, manufacture of spherical vessels etc. Special acid & alkali resistant vessels and equipments made our of stainless steel, monel metal, nickel, chromium, lead, aluminium, copper and special alloys N U	L 8 A-9 (34) MEI 62 26-5-62
	Nos Overhead travelling cranes ... ... 24 Hoists 48	
Schd. Ind. No. 13 (3)—Air Conditioners and Refrigerators		
Voltas Ltd., 19, Graham Road, Ballard Estate, Post Box No. 1198 Bombay, [Bombay, Maharashtra]	Absorption type refrigerators 50 litres capacity (1·8 cu. ft.) N A	*No. p a* 11,000 L 13 (3) 1 EIE/B 62 7-6-62
Schd. Ind. No. 23 (1)—Cotton Textiles		
Mahliram Lachmandas, Khurja, Bulandshahr, [Khurja, Bulandshahr]—U.P.	Spindles for the manufacture of cotton yarn ... ... 12,000 N U	L 23 (1) 374 Tex B 62 8-6-62
Shri Darshanlal, 19, Tilak Road, Dehra-Dun, [Meerut, U.P.]	do	do L 23 (1) 373 Tex B 62 8-6-62
Shri Ramakant Lohiya, Raj Bhavan, Kamptee, Nagpur, [Rajnandgaon, Madhya Pradesh]	do	do L 23 (1) 375 Tex B 62 15-6-62
Schd Ind. No. 34 (1)—Fire Bricks		
The General Manager, The Mysore Iron & Steel Works, Bhadravati, [Bhadravati, Mysore]	Fire bricks ... ... *Tons p a* 10,800 S E	L 34 (1) 77 Ch. IV 62 12-6-62
Schd. Ind. No. 36 (2)—Hardboard, Including Fibre-Board, Chip-Board and the Like		
Shri C J. Revel, Exports and Imports, Dharmadam, Tellicherry, [Dharmadam, Tellicherry, Kerala]	Decorative voneers N U	*sq. ft. p a* ... 9 *million* L 36 (2) 36 Ch. IV 62 2-6-62

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*	*Licence number and date*
Ram Bahadur Thakur & Co Samastipur P. O., Dharbhanga District, [Samastipur, District Darbhanga, Bihar State]	Chipboard ... ... *Tons p a* 10,800 N U	L 36 (2) 37 Ch. IV 26 19-6-62
Schd. Ind. No. 4 (2)—Internal Combustion Engines		
Indequip Private Ltd., Reid Road, Railwaypura, Ahmedabad [Gujarat]	Shifting from Bombay (Maharashtra) to Naroda village, Ahmedabad (Gujarat State) (Shifting)	L 4 (2 1 EEI 62 23-6-62
Schd. Ind. No. 5 (4)—Electrical Lamps		
Philips India Ltd., Delhi-Ajmeri Gate Extension, New Delhi-1 [Bombay, Maharashtra]	Shifting from Calcutta to Bombay (Maharashtra) (Shifting)	L 5 (4) 32 IEEI 62 11-6-62
Schd. Ind. No. 7 (5)—Automobiles		
Shri P. L. Kapoor, 3, Friends Colony, New Delhi-14 [Faridabad, Punjab] Proposed name: Napco Bevel Gear of India Ltd.,	*annual capacity tons* Bevel gears ... ... Universal joints ... Axles, Shafts ... } 43,200 Speed reduction gears ... Spoor gears—N U ...	L 7 (5) 14 AEI 62 16-6-62
Rameshbhai Babubhai Patel, Station Road, P.O. Karamsad, [Valabh Vidya Nagar Industrial Zone Gujarat] Proposed name: M/s. Bharat Auto Parts, Manufacturers Private Ltd.,	*annual capacity nos.* Complete clutch assembly less facings ... ... 3,00,000 Inlet and exhaust valves ... 1,20,000 Universal joint cross assembly ... ... 1,20,000 Tie rod ends ... ... 1,44,000 Steering wheels—N U ... 72,000	L 7 (5) 15 AEI 62 16 6-62
C. & N. Commar & Co. Lakaki, Poona-5 [Poona, Maharashtra] M/s. Atlas Motor Products Ltd.,	*Annual installed capacity Tons* Finished Automotive components made from aluminium and non-feraous castings ... 1,200 Universal joint cross and *Nos* bearings ... ... 4,20,000 Tappets and guides—N U ... 4,80,000	L 7 (5) 16 AEI 62 16-6-62
Shri K. L. Varadarajan, Kuniyamuthur, P.O Coimbatore-8 [Madras]	*Annual capacity (in Nos)* *Carburettors suitable for use on* 150 C.C. Lambratta scooters 10,000 150 C.C. Vespa Scooters ... 10,000 50 C.C. Mopeds—N U ... 10,000	L 7 (5) 17 AEI 62 22 6-62
Schd. Ind. No. 7 (7)—Others, Such as Fork Like Trucks and the like		
Mckenzies Ltd., King Edward Road, Sewri, Bombay-15 [Sewri, Bombay, Maharashtra]	*Installed capacity Nos. p a* Hy driver ... ... 300 Hy caedy stackers ... 75 Hy druped forklift trucks (1 ton & 2 ton capacity and battery/diesel driven) ... 50 Portable pallet trucks—N U... 100	L 7 (7) 2 AEI 62 21-6 62

(*Contd*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*		*Licence number and date*
Schd. Ind. No. 18 (1)—Inorganic Fertilisers			
Fertilizer Corporation of India Ltd., D-15, South Extension Area, Part-II, Ring Road, New Delhi, [Namrup, Dist. Lakhimpur-Assam]		*Tons p a*	L 18 (1) 10 61-Forts 26-6-62
	Ammenia ...	... 60,000	
	Sulphuric acid ...	... 79,200	
	Ammonium sulphate	... 1,00,000	
	Urea—N U ...	... 55,000	
Schd. Ind. No. 19 (11)—Insecticides, Fungicides, weedicides and the like			
Agr-Ind Private Ltd., Government Electric Factory, P.O. Bangalore, [Bangalore, Mysore]	Ratafin ... S E	*Tons p a* ... 50	L 19 (11) 17 A&I 62 23 6-62
Schd. Ind. No. 22—Drugs and Pharmaceuticals			
Parke Davis [India] Ltd., Saki-Naka, Marel, Andheri-Kurla Road, Bombay-70 [Bombay, Maharashtra]	Norlutate ...	*tablets p a* ... 6,00,000	L 22/119 Ch. III 62 15-6-62
	Sytron syrup ... S E	... 14,400	
Raptakos Brett & Co. Private Ltd., Dr. Annie Besant Road, Worli, Bombay-18 [Bombay Maharshtra]		*Annual capacity dragees*	L 22/120 Ch III 62 27-6-62
	Adecettes ...	... 1,80,00,000	
	Hovettes ... N A	... 1,80,00,000	

(*Contd.*)

(*Contd.*)

Name and full address of the undertaking and location	*Articles of manufacture; capacity and type of licence*		*Licence number and date*
Smith Stanistreet & Co. Ltd., 18, Gonvent Road, Calcutta-14 [Calcutta, West Bengal]		(*Annual capacity*) *tablets*	L 22/121 Ch. III 62 27-6-62
	Vagistan—N A ...	... 24,00,000	
Rallis India Ltd., [TCF Division], Ralli House, 21, Ravelin Street, Bombay-1 [Bombay, Maharashtra]		*annual capacity bottles*	L 22/122 Ca. III 62 26-6-62
	Isoprenoline spray (10 ml. each) ...	... 40,000	
		tablets	
	Alk-aphiz ... S E & N A	... 10,00,000	
Schd. Ind. No. 26 (2)—Other Products of Fermentation Industries			
V. S. Tyagaraja Mudaliar, Express Estate, Mount Road, Madras-2 [Madras]	Torula Yeast ... N A	... *Tons p a* 1,000	L 26 (2) 1 Ch. II 62 26-6-62
Schd. Ind. No. 27 (4)—Flour			
The Wallace Flour Mills, Co. Ltd., 9, Wallace Street, Fort, Bombay-1 [Grant Road, Bombay, Maharashtra]		*Capacity per month tons*	L 27 (4) 2 Ch. II 62 15-6-62
	Wheat products (flour and other products of wheat) ... S E	6,750	
The Wallace Flour Mills Co. Ltd., 9, Wallace Street, Fort, Bombay-1 Mazgaon, Road, Bombay, [Maharashtra]	do ...	14,500	L 27 (4) 3 Ch. II 62 15-6-62
Schd. Ind. No. 36 (2)—Hard Board including Fibre-Board Chip-Board and the like			
Shri B. M. Patel, Bahuchraji Road, Baroda, [Baroda Gujarat] [Proposed name : Plywoods Ltd., Baroda]	Chipboard (Perticle board)... N U	*Tons p a* 7,200	L 36 (2) 38 Ch. IV 62 18-6-62

—:o:—

STATEMENT SHOWING THE CHANGES IN THE NAMES OF THE OWNERS/UNDERTAKINGS EFFECTED DURING APRIL—JUNE 1962

APRIL 1962

The name of the original owner/ the original name of the undertaking	*The name of new owner/ the new name of undertaking*	*Licence No. and date*
Bangalkot Cement Co. Ltd., Bombay	Tendulkar Industries Private Ltd. Bombay	L 35 (1) 8 Cement 60 15-11-60 (Rajpur, Maharashtra
Beni Engineering Works Ltd.	Beni Limited	L 12 (1) N-17 59 25-5-59 (Kamarhati, 24 Parganas, West Bengal)
The Investment Corporation of India Ltd., Bombay	National Ecko Radio & Engineering Co. Ltd., Bombay	L 6 (4) 10 EEI 60 14 10-60 (N U) (Bombay, Maharashtra)
Lynx Machinery Co.	Lynx Machinery Ltd.	L 4 (2) 2 AEI 60 2 7-60 (N.A.) (Calcutta, W. Bengal)
Kesoram Cotton Mills Ltd.	Kesoram Industries and Cotton Mills Ltd.	L 10 (e) 473 57 L 22 (4) 2 Dt. 29-1-62 (N. A.) Hooghly, W. Bengal.

MAY 1962

Lallubhai Aminchand [Private] Ltd.,	Lallubhai Amichand Private Ltd	L IA (7) (7) LEI(B) 62 Dt. 3-3.62 (S.E) (Bombay, Maharashtra)
Beni Engineering Works Ltd., Calcutta	Beni Ltd. Calcutta	L 9/35 MEI 61 20-2-61 (N. A.) (West Bengal)
Jolly Brothers Private Ltd.,	Particle Boards India Ltd.	L 36 (2) 1 L Ind. 60 25- 3- 60 (Bombay, Maharashtra)
Shashi Brothers Private Ltd	Shamsher Sterling Cable Corporation Ltd.	L 5 (6) 33 EEI 61 5-9-61 (N.A.) (Maharashtra)
The Industrial Gases Ltd.	The Industrial Electrodes & Gauges Private Ltd.	L IA (7) N—47 59 10-12-59 (N.U.) Howrah, West Bengal
Shree Vallabh Glass Works Private Ltd.	Shree Vallabh Glass Works Ltd.	L 33 (6) 4 Chem II 62 1-8-60 (N.U) Anand, Maharashtra
do	do do	L 33 (2) 2 Chem II 60 23-7-60 (N.U.) Anand, Maharashtra
do	do do	L 33 (2) 4 Chem II 60 27-8-60 N.A.) (Anand, Maharashtra)

(Contd.)

(*Contd.*)

JUNE 1962

The name of the original owner/ the original name of the undertaking	*The name of new owner/ the new name of undertaking*	*Licence No. and date*
India Ferro Alloys Ltd.	Thakur Paper Mills Ltd.	L 24 (1) N-14/60 28-1-60 (N.U.) (Jitwarpur, Darbhanga, Bihar)
Great Eastern Electroplaters Ltd.	Geep Flashlight Industries Ltd.	L 5 (4) 29 EEI 62 5-2-62 (N.A.) (Allahabad U.P.)
The Ianda Paper Manufacturing Co.	Ajanta Paper and General Products Private Ltd.	L 24 (1) N-41/60 4-6-60 (N.U.) Roha, Kalaba District Maharashtra
The Almag Foundry Private Ltd.	Wyman Gordon (India) Ltd.	L 1-A (3) N-62/59 22-5-62 (N.U.) Thana, Maharashtra
Merchant & Co.	Merchant and Company Private Ltd.	L 12-1 N-25/59 15-10-59 (S.E.) Bombay, Maharashtra
Kesoram Cotton Mills Ltd.	Kesoram Industries & Cotton Mills Ltd.	L 15 (80) 56 L 19 (1) 51 6-11-56 (N. A.) (Calcutta, W. Bengal,)
Vensita Foils Ltd.	India Foils Ltd.	L 20 11 '6 L IB (2) 6 31-12-56 (S. E.) (24, Pargana West Bengal)
Shri J. C. Patel	Mahindra Electrials Ltd.	L 5 (6) 22 EEI 61 9-3-61 (N. U. (Maharashtra)
India Refrigeration Industries Ltd.	Usha Refrigeration Industries Ltd.	L 13 (3) 11 AEI 60 28-11-60 (N.U.) (Andhra Pradesh)
Supreme Motors Private Ltd.	Sanghi Oxygen Company	L 19 (14) N-38/59 25-8-59 (N.U.) (Rajasthan)
Premier Industries	The Premier Lighting Industries Private Ltd.	L 5 (4) N-5 57 12-8-57 (C. O. B.) (Maharashtra)
Sikands Private Ltd., New Delhi	Sikands Ltd., New Delhi	L 1-A (7) 10 LEI (B) 61 16 95-61 (N. U.) (Delhi)
Tandon Whitelay [India] Ltd.	Auto Udyog Ltd.	L 7 (5) 41/60 AEI 60 15-12-60 (U. P.)
New India Development Corporation	Buckau Wolf New India Engineering works Ltd.	L 14/35-56 L 8-A (4) 4 10-8-56 (N. U.) (Maharashtra)
Greaves Cotton & Crompton Parkinson Ltd.	Mr. A. M. Steele	Regn. Certificate No. 19-26/R 5 (1) 9 31-5-54 (West Bengal)

(*Contd.*)

(*Contd.*)

The name of the original owner/ the original name of the undertaking	*The name of new owner/ the new name of undertaking*	*Licence No. and date*
Nagindas Ratilal & Co.	Steeling Hydraulic Co. Ltd.	L 9 (39) M&I 61 27-3-61 (N.U.) (Maharashtra)
New Karnatak Cotton Mills	The Karnatak Co-operative Textile Mills Ltd.	Regn. Certificate No. R 10 (a) 410/R 23 (1) 377 31-5-54 (Mysore)
The Hindustan Spg. & Wvg. Mills Co. Ltd.	The Thackersay Mooljee & Co. Sir Vithaldas Chambers, 16, Appollo Street, Fort, Bombay	Regn. Certificate No. R 10 (a) 175/R 23 (1) 164 31-5-54 (Maharastra)
Detroit Bevel Gears of India Ltd.	Bahri Automobile Corporation Private Ltd.	L 7 (5) 82 AEI 62 31-10-61 (N.U.) (Maharastra)
Kohinoor Grain Mills	Kohinoor Flour Mills Private Ltd.	Regn. Certificate No. R 27 (4) 2 18-7-57 (Gujarat)

LICENCES REVOKED DURING APRIL—JUNE 1962

APRIL 1962

Name of the industrial undertaking	*Articles of manufacture*	*Licence No. and date*
R. G. Murmuria, Calcutta	Beer, brewer's yeast & malt extract	L 26 (2) N-5-59 22-12-59 (N.U.) (Dum Dum, 24 Parganas, West Bengal)
Commonwealth Spinning & Knitting Mills [Private] Ltd., Ludhiana	Writing, printing and wrapping paper and pulp	L 24 (1) N-28-60 3-5-60 (N. U.) (Ludhiana, Punjab)
Bhatreshali Brothers [Private] Ltd., Bombay	Vegetable oil by solvent extraction process	L 28 (1) N-4-57 9-3-57 (N. U.) (Wadala, Bombay, Maharashtra)
A. Wander Ltd., London	Ovaltine	L 27/3 N-1/59 1-9-59 (N.U.) Ghaziabad U.P.
J. Barman & Co. New Delhi	Gaskets for internal combustion engine	L 4 (2) 17 AEI 60 16-1-61 (N.U.) (Dehra Dun U.P.

MAY 1962

Hajee Esmail Noor Mohamed & Co. Kanpur	Vegetable oils and de-oiled cakes	L 28 (1) N 87-59 dated 26-11-59 (N. U.) Fazalganj, Kanpur, U. P.
Kalinga Industries Ltd., Calcutta	Pig iron	L 1 A (1) N 14-59 dated 15-12-59 N.U. (Salem, Madras)
Ratna Sugar Mills Co. Ltd., Varanashi	Writing & packing paper	L 24 (1) (46) CH (1) 61 dated 7-4-61 (N. U.) (U. P.)
Associated Cement Cos. Ltd., Bombay	Cement	L 35 (1) 3-60 Cement 5-11-60 (S. E.) Panuore, Madhya Pradesh
Associated Cement Co. Ltd., Bombay	Cement	L 35 (1) 4-60 Cement 5-11-60 (S. E.) Khalari, Bihar
Tata Chemicals Ltd., Bombay	Benzaldehyde	L 19 (3) N-2-58 25-10-58 (S. E.) Mithapur, Gujarat
do	do	L 19 (3) N-3-61 Chem II 16-11-61 (N. A.) (Gujarat)
Pimpri Glass Works, Bombay	Magnesia lead and chemo-resisting glass tubes and rods etc.	L 33 (5) N-10-60 12-5-60 (N. U) Pimpri, Maharashtra

(Contd.)

(Contd.)

Name of the Industrial undertaking	*Articles of manufacture*	*Licence No. and date*
Tata Chemicals Ltd., Bombay	Ethylene dichloride	L 19 (11) 6 A & I 61 27-1-61 (S.E.) (Mithapur, Gujarath)
Central India Chemicals Private Ltd., Schore	Malt extracts	L 27 (3) N-2/59 3-10-59 (N.A.) Schore (Bhopal), Madhya Pradesh
Indo-Belgium Glass Works Ltd., Madras	Sheet glass	L 33 (2) N-3/59 12-2-59 (N.U.) Sembiam, Madras
Shri Mukh Ram Agarwal, Jyotipura, Hissar	Wheat products	L 27 (4) N-16/59 13-8-59 (N.U.) Jotipura, Hissar, Punjab
Shri Kantilal K. Shah, C/o M/s. Kesherlal Talukchand [Private] Ltd., Bombay	Paper and boards	L 24 (1) N-7/59 16-2-59 Khopoli Dist. Thana, Maharashtra

JUNE 1962

P. C. Bhandari & Co. Kanpur	Paper base for cable insulating & carbonising tissue	L 24 (1) 10 Ch-1 60 14-7 60 (N. (U.) Raha, Maharashtra
Shri Chotabhai Shankerbhai Patel, Bhavnagar	High & low tension insulators	L 34 (6) 45 Chem I 62 19-1 61 (N. U.) Bhavnagar, Gujarat
P. N. Nayyar, New Delhi	do do	L 34 (6) N-3 60 24-3-60 (N. U.) Kundra, Kerala
Allahabad Glass Works, Private Ltd., Allahabad	Kitche Laboratoryware, Scientific glass-ware	L 32 (5) 1 Chem II 29-12-60 (N. U.) Maini, Allahabad, U. P.
Gangadhar Ramchander Proprietors, Agra	Vegetable oil from oil cakes by solvent extraction process	L 28 (1) N-111 60 2-3-60 (N. U.) Agra, Uttar Pradesh.
Shri Bansilal Zumber Lal Ruthi, Poona	Straw board and Mill board	L 24 (3) N 18-60 3-5-60 (N. U.) Near Chinchrad Station, Maharashtra
Steel [1957] Private Ltd., New Delhi	Printing and writing paper and pulp	L 24 (1) 13 Ch. (I) 60 14-7-60 (N U.) Kalyan, Maharashtra
Amartara Industries Bombay	Spring balances	L 15 (3) 2 IEA (A) 61 18-8 61 (N. U.) Bombay, Maharashtra
Pioneer Equipment Co. Private Ltd., Bombay	Microscopes	L 16 (3) IEI (A) 60 16-12-60 (N. U.) Bangalore, Mysore

(Contd.)

(*Contd.*)

Name of the industrial undertaking	*Articles of manufacture*	*Licence No. and date*
Oswal Paper Mills Ludhiana	Writing and printing paper and pulp	L 24 (1) N 43-60 12-5-60 (N. U.) Chandigarh, Punjab
Amartara Industries, Bombay	Laboratory balances	L 17 (4) 61 LEI (A) 31-7-61 (N. U.) (Maharashtra)
Kulwant Rai & Sons [Private] Ltd., Delhi	Paper and pulp	L 24 (1) N-36-60 9-5-60 (N. U.) (Delhi)
Surendra [Overseas] Private Ltd., Bombay	Aluminium foils	L 1-B (2) 5 Met 60 3-9-60 (N. U.) (Maharashtrh)
The New Sun Mills Co. Private Ltd., Bombay	Artificial silk textiles	Regn. Certificate R 10 (e) 51 R 23 (5) 49 30-4-54 (Maharashtra)

EDITED AND PUBLISHED BY THE DIRECTOR OF INDUSTRIES AND COMMERCE, GOVERNMENT OF MADRAS AND PRINTED AT THE TECHNICAL INFORMATION SECTION, INDUSTRIAL ESTATE, GUINDY, MADRAS - 32.

Products of

SMALL SCALE INDUSTRIES, HANDICRAFTS & VILLAGE INDUSTRIES

GOVERNMENT OF MADRAS

सत्यमेव जयते

Manufactured at

THE GOVERNMENT AND CO-OPERATIVE UNITS UNDER INDUSTRIES DEPARTMENT

Are available for sale at

INDUSTRIES DEPARTMENT SALES EMPORIUM

166-A, MOUNT ROAD : : MADRAS-2.