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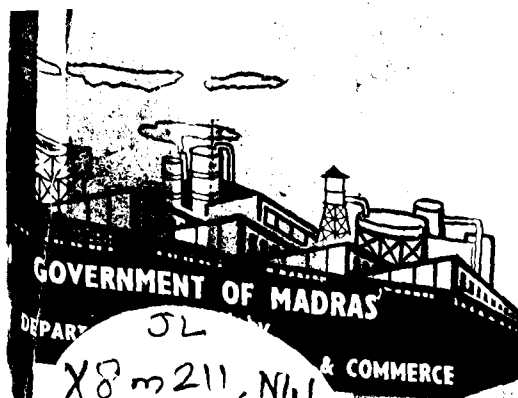
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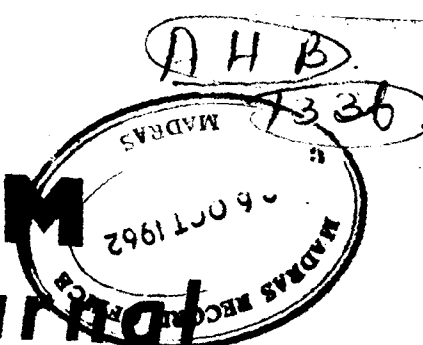
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SMALL SCALE INDUSTRIES

“EASI”

EXPORT AID FOR
SMALL INDUSTRIES

(Contributed)

A tremendous amount of interest has been evinced in the ‘EASI’ scheme which was launched by the Government of India, Ministry of Commerce and Industry, in the early part of this year.

The ‘EASI’ scheme was conceived by the British Consultant, Mr. G. Alan Major, and operates with his guidance under the jurisdiction of the State Trading Corporation of India Ltd., and with the full co-operation of the Office of the Development Commissioner, S.S.I., and the Directors of the Small Industries Service Institutes throughout the Country.



The ‘EASI’ scheme is a completely new concept in export promotion, (and indeed is a new concept in training methods as a whole), and, so far as is known, no other country has attempted a revolutionary project of this nature, although several other countries have shown considerable interest in the possibility of initiating similar schemes since the ‘EASI’ scheme has been announced in the Indian and overseas presses. Surprisingly enough, one of the first of such countries to ask for information on the workings of the ‘EASI’ scheme with the object of setting up a similar organization was a country with a very long established export marketing tradition.

and of future Plans was dependent upon India's ability to increase exports. Previous Plans and pronouncements on those Plans had largely concerned themselves with balancing foreign exchange payments. Such balancing can be done in two ways. The first method, which, up to a point, is the easiest way, is to reduce overseas spending, or, in other words, by reducing imports. There is, however, a limit to the extent to which this process can be resorted to without restricting the Country's economic welfare, and this limit was reached some long time ago.

Therefore, the Third Plan transferred the accent from the rather nebulous requirement for balancing foreign exchange payments to the positive and precise requirement for

increasing exports. The Plan calls for a minimum increase of export earnings of an annual average of 17 1/2% over and above the best year of the Second Plan period, and it categorically states that the achievement of the Plan's objectives rests fairly and squarely upon the achievement of this target.

But this is not, by any means, the only specification, nor, in fact is it the most vital call of the Planners. The real task, as set by the Plan, is often overlooked in the concentration upon the immediate tasks, and it cannot be stated in better words than those which the Plan, itself, uses:—

“—the need is for increasing exports during the Third Plan—(and for preparing the ground) to meet the requirements of the Fourth Plan, by the end of which exports will have to rise to twice their present level.

Even for countries which have exporting traditions and whose goods and reputations are firmly established in overseas markets, this would be an enormous task. The magnitude is better appreciated when it is seen that over the past ten years India's exports have tended to decrease, and that the increase of 100% called for during the next ten years compares, at best, with an increase of about 6% during the past five years. If it is to be achieved, (and it can be), every person in the Nation must play his part, and everyone does have a part to play from the peon, whose prompt or otherwise handling of a letter may mean the obtaining or the loss of an order, right up to the highest echelons where policies are made.

The adoption of 'panic' measures, so frequently advocated, such as financial incentives or export compulsion, may lead to a temporary upsurge of export trade, but they can never be the whole answer, and they have attendant dangers. Firstly, as soon as any such measures which enable the

shipment of goods at 'cut' prices show any measure of success they are almost certain to be countered by the imposition of tariff barriers on the grounds of protection against 'dumping'. Secondly, there is the great risk, that under the threat of compulsion, or the 'bait' of incentives, exports may be effected with the accompaniment of mal-practices either intensional or through inexperience or negligence. Thus the immediate achievement may merely be the measure of the future detriment.

A certain amount of additional export trade can be induced by less orthodox methods such as link and barter deals but there are inherent disadvantages in such arrangements and the extent to which they can be employed is limited. The flow of International Trade is already established in traditional patterns and established channels which have been built up over hundreds of years and if India wishes to expand her export trade she must co-ordinate her main efforts along these established paths. She may, indeed, have to employ unorthodox methods in order to enable her to enter these orthodox channels but this is as far as she can go.

This is the appreciation upon which the 'EASI' scheme was formulated. Having arrived at this appreciation the next point was to determine where to start upon the development of exports. It is comparatively easy to throw up suggestions of a general nature, which, if carried out would bring about an immediate improvement in export sales. It is another thing to decide where the best place to start may be, and what is capable of being done not only for the immediate remedy but also in order to establish the firm foundation on which the future should depend. It was remarked that although India was swinging towards an industrial economy the proportion of exports

of manufactured goods was very much upon the decline.

What is more, India has one 'commodity' in free supply, and which the other countries of the world are short of. That 'commodity' is labour. Therefore, the export of manufactured goods would have a double pronged effect—the earning of foreign exchange and the creation of additional employment opportunities.

Despite its large population, India is a very poor market for many goods, and especially those consumer goods which can be made from largely indigenous materials. The force of this contention will be appreciated when it is seen that the U. K. with about one tenth of India's population has twice India's purchasing power.

Thus the 'EASI' scheme was centered on manufactured goods exports. Furthermore, because it seemed that those most in need of practical guidance and the facilities which the scheme intended were the units within the small scale sector, the main objective of the scheme was announced as being 'Export Aid for Small Industries.' However, it has never been intended that this definition should be so rigid as to exclude completely, units not satisfying the 'Small Scale Industry' definition, for the dual reasons that it would be incorrect, in the light of the country's needs, to restrict export possibilities by adherence to an artificial and arbitrary interpretation, and that, in many instances, the co-ordination of large or medium scale industries' efforts with those of the small scale sector would be mutually advantageous.

It had always been alleged, (and still is in some quarters), that the reasons preventing the expansion of India's foreign trade in manufactured goods were the twin causes of high prices and poor quality. A study of several hundred units throughout the country,

and especially units in the small scale sector carried out by Mr. Major during his advisory work, showed that these alleged causes of default were largely fictitious. Indeed, it cannot be denied, some products are completely outpriced in international markets but, in general, these are in the minority and are confined to those items where there is a high imported raw material component allied to a small labour utilization. Similarly, it was seen by a tabulation of inspection reports, that in at least 55% of the cases investigated, quality was at least equivalent to overseas competing items within the same price ranges. Additionally, another 18% of the products assessed were seen to be within achievable range of the competing foreign products.

Nor was there seen to be any lack of enthusiasm on the part of manufacturers, generally, to export their products, although comparatively few of them realised that they had the potential capabilities for export.

The greatest single hindrance towards expanded exports was seen to be lack of know-how. Surprisingly enough, in a country whose whole economic welfare and future was already described as being reliant on expanded foreign trade, the subject of export marketing was the single exception for which no training facilities existed.

Extension service and training was provided for almost every form of skill and technique from architecture to art, and from mechanical engineering to metallurgy, and from farming to family planning, yet the teaching of, and provision of services for, export marketing which is required to earn the raw materials, machines, and higher knowledge by means of which the skills and techniques could be properly exercised, were neglected.

Not only was there an absence of any teaching and servicing arrangements but also there was an absence of teachers and servicing personnel. Unfortunately this state of affairs cannot be remedied overnight, nor can it even be remedied in a few months except at huge expense—and that expense largely in the form of foreign exchange. Even now there is insufficient appreciation of the high skills and varied experience which are the requisites of a successful export sales manager. Each product to be sold needs an entirely different approach to any other product and each overseas market has its own peculiarities, and all must be known and learnt from experience by the successful export manager, let alone by the teacher and advisor on export marketing. And, of course, export marketing has this difference from other subjects, that it cannot be learnt on a trial and error basis otherwise the Country's reputation as an exporting country suffers to an irrecoverable extent. Overseas customers may be sympathetically inclined towards India but they soon lose that sympathy if and when inefficiency is demonstrated in the mishandling of orders and enquiries.

The 'EASI' scheme seeks to remedy this state of affairs by providing an extension service which will help manufacturers to export their products by doing the whole job for them from A to Z, and in the process of doing this work, to demonstrate to those manufacturers the techniques of export marketing so that after having worked under the scheme's guidance for some time they will be able to assume more and more of the work themselves until such time as they become fully proficient and can be entrusted to continue exporting on their own with only occasional reference to the 'EASI' scheme on problems not previously encountered.

At the same time, the expert operating the scheme, will have a number of Central and State Government officers attached to him as his counterparts and who, by seeing and participating in the processing of the manufacturers' cases will eventually become Export Advisory Officers in their own right and capable of rendering extension services to potential exporters with only an occasional reference to the EASI scheme headquarters on unusual problems. After completion of their own training these officers will also be capable of instructing still further intakes of counterpart officers so that a countrywide cadre of Export Advisory Officers eventually comes into being. It is conceived that there should eventually, be an 'EASI' scheme centre in every manufacturing nucleus in the country and that export advisory services should be available as a common facility on every Industrial Estate. This is, of course looking well into the future but unless preparations and plans are made now progress will never be achieved.

In considering the facilities offered by the 'EASI' scheme it must always be borne in mind that the scheme is of an entirely different nature from such schemes as have been tried in this country and elsewhere and which aim at securing large orders for standardised items and arranging their production under a common brand name by apportionment amongst a number of different producers. The 'EASI' scheme aims at finding, first, those products which are available and then securing markets abroad for such products, and to do this market development work in the name of the manufacturer and using his own brand names. The identity of the manufacturer and his products is retained and there is much greater compulsion upon the manufacturer to attend to quality and good service when his own firm and his own branded

products are seen to incur any customer displeasure or benefit directly from and goodwill built up. The manufacturer is directly and vitally concerned with the progress of export sales of his own items.

The facilities offered by the 'EASI' scheme have been described in the press and through public meetings etc. (they are also published separately in this issue on page 9). A booklet entitled 'EASI' is also available from all State Directorates of Industries, Small Industries Service Institutes and from the State Trading Corporation of India. These facilities cover the selection of goods suitable for export, the preparation of such goods in order to ensure overseas acceptance, by means of better presentation, acceptable sales leaflets and catalogues, and improved letter heading etc. Also incorporated is assistance in the pricing of goods in a manner acceptable to overseas customers and the preparation of price lists. After this preparatory work has been completed the scheme will find overseas customers for the products and will attend to all foreign correspondence and the negotiation of orders. It will then assist with the booking of shipping space, marine insurance and, where applicable, export risky insurance cover. Where the manufacturer needs such assistance the scheme's officers will attend to all documentary requirements and negotiate the documents for payment. After sales service correspondence will also be attended to on the manufacturer's behalf.

Although it was not intended to be the focal point of the scheme the facility which allows manufacturers to offer credit terms to suitably approved overseas customers and yet receive for themselves up to 95% of the value of the goods immediately upon shipment, has attracted considerable interest and attention.

In the initial stages it was intended to operate the 'EASI' scheme as a

pilot scheme working only from one centre and incorporating about 12 manufacturers as it was thought that this was the maximum which could be handled with one foreign consultant and his counterpart staff. When the scheme was first launched the apparent interest seemed small and it was thought that, eventually about fifty or sixty applications would be received from which the twelve proposed units would be selected. It was then hoped to develop the scheme so that at the end of twelve months another thirty or so manufacturers could be included if there were a sufficient number of applicants.

In actual fact, within five months of the scheme's initiation over 700 applications had been received completed and another three or four hundred applications are being presented at the Small Industries Service Institutes and elsewhere. The pace of the scheme has already been accelerated to bring the expansion visualized at the end of twelve months into immediate effect but this still means that many applicants will have to wait for some time before there is any prospect of their being accepted for participation.

Three centres of 'EASI' operations are being established at Delhi, Kanpur, Agra, and Bombay, these being the areas from which the greatest concentration of applications has been received, and it is preferred, initially, to establish centres where the maximum benefit can derive from the ability to assist the greatest number of parties whilst wasting the least possible time on travelling. Other centres will be started as and when trained staff becomes available. In order to fill the gap, to some extent, it is intended to run courses on export marketing for the benefit of industrialists and the first such course is planned to commence in Delhi in October and to run for about ten weeks. Additionally, other measures are in hand to

accelerate the pace of the scheme considerably so that there is the least possible delay in affording all out assistance to every worthy potential exporting manufacturer.

It is too early yet to assess the success of the scheme from the point of view of orders received from abroad. Only in the past month have the sales catalogues and letter headings for the first accepted units been finalized and sales efforts commenced. Nevertheless a considerable number of enquiries are being received for products dealt with by the scheme and sampling requirements are being attended to. These enquiries have been received from such places as Uganda, Kenya, Ethiopia, Libya, Tanganyika, Malaya, Borneo, Burma, West Indies, Colombia, U.K. and Iraq.

In order to stimulate overseas interest in the scheme a second booklet has been pub-

lished, entitled, "It's 'EASI' to import from India and several thousand copies are in the course of circulation to foreign embassies in this country, Indian trade representatives abroad, Chambers of Commerce overseas, large buying houses, and to many other potential sources of trade for Indian goods. The work involved in these preliminaries is rarely appreciated and two or three hundred letters are despatched each week from the 'EASI' scheme offices—many of these being highly detailed offers and quotations.

There is still some ambiguity concerning the real intentions and purposes of the 'EASI' scheme which throw much work upon the schemes officers when their time could be spent more fruitfully on other matters. 'EASI' is a scheme which is intended to develop new markets for suitable products of Indian manufacture. It is essentially a

scheme for developing India's exports as quickly and as widely as possible. All other aspects of the scheme are subsidiary to this main purpose of selling. Therefore, prior attention is being given to those manufacturers and those products which need the least possible preparation to fit them for exporting. Preference in selection for participation is given to those products which do not have any financial or raw material difficulties which may lead to delays in the execution of orders and the consequent nullification of sales efforts. Additionally an attempt is made to select units which are likely to earn reasonable profits out of export trading as it is considered that the enthusiasm of a manufacturer who is making such profits is much more certain to continue than in the case of a manufacturer who is not.

Many pleas are put forward for inclusion of certain individual units or groups of units, or for the commencement of a centre of operations, on the basis of considerations not directly related to foreign exchange earnings. These include pleas for support because the unit has domestic sales difficulties, or because the unit employs certain categories of workers, or because the unit is in an area which is below standard in development, or simply because the unit cannot expand unless it obtains performance import licences.

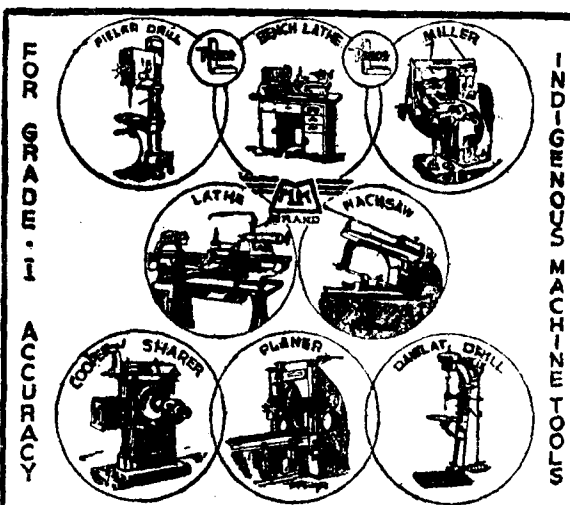
It is, indeed, a pity that assistance cannot be given immediately to all units who show a genuine desire to export, and that a centre of 'EASI' operations cannot be established immediately in every area, but it is considered to be in the Country's best interests that the help given by 'EASI' should be practical, definite and thorough, and that it is preferable in these early stages, to assist a small number of units properly and fully, and to give intensive training to future Export Advisory Officers, than to attempt to deal with a large number of manufacturers and products in a superficial manner.

The time should come, in the not too distant future, when 'EASI' facilities are at the doorstep of every genuine manufacturer who desires to export, and when the facilities which the scheme is able to offer can be considerably enhanced to include product design services, market research arrangements, ancillary product order gathering, and many other needed facilities.

Much of the success of the 'EASI' scheme rests upon the co-operation from the manufacturers themselves, from trade and manufacturing associations, and from everyone who has the Country's future welfare at heart.



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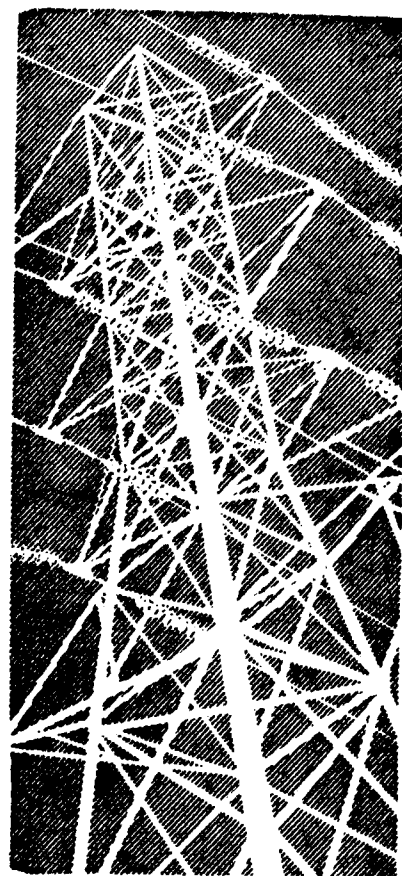
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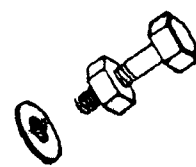
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THE "E A S I" SCHEME

Details of facilities offered

General Purposes

The "EASI" scheme aims at fostering direct business relationships, in the field of export marketing, between Small Scale and Medium Scale Indian manufacturers and foreign importers of the types of products which they produce.

"EASI" is a practical attempt to remove the difficulties which have so far prevented the great majority of Indian manufacturers from enjoying the considerable benefits of export marketing and from playing their proper part in establishing India's balance of foreign exchange.

In the more industrially advanced countries the small and medium industries contribute as much as half of the total value of their countries' exports and they do so because they find that export marketing leads to greater efficiency and improved profitability. There is no reason why, with proper stimulation and backing, the small and medium scale manufacturers in India should not benefit similarly.

"EASI" has the objective of helping manufacturers to help themselves and it does not intend to deprive them of their individuality or responsibilities. Nor will the scheme conflict with, or usurp the functions of, any of the other existing export promotion measures, but much rather will it help to make such facilities more widely effective.

"EASI" will operate, initially, as a pilot scheme although it is intended later to assist all small and medium scale manufacturers who wish to participate, providing that they

are manufacturing products of a suitable quality and are prepared to guarantee that they will continue to do so.

Products

One of the essential purposes of "EASI" is to assist in the diversification of India's exports. Items which are already catered for under a Governmental export marketing scheme, such as minerals, commodities, handloom fabrics etc. will not qualify for inclusion, but this does not debar manufacturers who are merely members of Export Promotion Councils from participation.

In the pilot scheme stage, because of the non-availability of technical experts and testing facilities, it is not proposed to admit products of a highly technical nature.

Generally, assistance will be provided for the export marketing of quality consumer, semi-consumer, and non-technical industrial goods. An appendix (on page 15) gives a schedule of the types of items envisaged although this schedule is to be taken as a guide only and some items may be omitted or others of similar types added.

No product will be selected unless it has been ascertained by inspection that the quality is satisfactory, that the prices are fair and reasonable, and that the manufacturer has the proper facilities and capacity to maintain quality and give quick delivery against anticipated orders.

Choice of Products

Any manufacturer wishing to participate will inform one of the parties referred to at

the foot of page 13, giving brief details of the product or products and sending copies of leaflets or catalogues, if available. Samples are not to be sent unless asked for at a later date.

If the products or product can be accepted for participation, arrangements will be made for a small board of officers, appointed under the scheme, to visit the manufacturer's factory after prior notice.

If the product or products cannot be accepted the manufacturer will be notified to this effect although the officers operating the scheme will not be bound to give any explanation for non-acceptance and cannot undertake correspondence for this reason. Details of such non-accepted products will be filed and the manufacturer may be notified at a later date that acceptance is then possible and applications for assistance will be generally considered in the order in which they are received.

Where a manufacturer offers several products for assistance the selection board may choose one or more products only without entailing any obligation to accept the whole range. In such a case the manufacturer may, if he wishes, withdraw his application to participate.

Presentation

One of the main hindrances to the export from India of the types of goods covered by this scheme has, to date, been poor presentation. Presentation in this context refers to packages, sales leaflets and catalogues, sales letters and price lists. In most cases these have been of such poor design and production that they are incapable of creating a foreign buyer's confidence in the goods themselves or in the manufacturer's status. For those products which have been selected, "EASI" will arrange for the design and printing of top class presentation material,

where current material is not considered suitable, and the cost of the same will be recovered from the manufacturer at the rate of 5 per cent deducted from payments for export order until the whole cost has been recovered. This presentation material will remain the property of the State Trading Corporation until the full cost has been recovered, and if export orders are not realized no liability will fall upon the manufacturer unless otherwise agreed.

Finding of Foreign Customers

"EASI" will undertake correspondence on the selected manufacturer's behalf and will, wherever possible, use the manufacturer's own stationery for this purpose to establish relationships direct between manufacturer and foreign buyer. Correspondence will be continued in this way until transactions have been finalised. The scheme will undertake such correspondence both with potential private buyers abroad and with foreign Government representatives, foreign trade associations, Indian Government representatives abroad and other official, semi-official and private bodies, for the assembly of marketing information and opportunities.

Through the offices of "EASI" it is intended that the valuable services of the Export Promotion Councils should be made readily available to appropriate small industries. A service for the translation of letters, labels, package directions, leaflets, and catalogues to and from appropriate foreign languages, will be provided.

Pricing

Whilst assessing a product or products for participation the selection board will examine costs to ensure that the manufacturer will receive a reasonable profit on any export orders which may accrue. It is intended that the manufacturer should receive the same margin of profit as he would if he were supplying a large internal distributor. Prac-

tical assistance will be given in the calculation of shipping and other export charges to enable the manufacturer to quote C.I.F. or other prices preferred by the foreign buyer. Furthermore, such assistance will extend to the conversion of prices into foreign currencies for the buyer's convenience and in the preparation, design, and printing of acceptable price lists. Manufacturers will be required, as part of a written agreement, to abide by the prices and terms recommended.

Credit

It is appreciated that the ability to allow credit of varying durations to foreign buyers is a great asset in the establishment of export sales. The small and medium scale manufacturer does not have sufficient working capital to enable him to allow such deferred payments nor does he have sufficient status to enable him to obtain discounting facilities from the usual banking channels. "EASI" provides for the State Trading Corporation to take on the role of recourse party to foreign bills. The effect of this provision will be that, subject to the scheme's officers being satisfied as to the credit worthiness of the overseas buyer, the manufacturer will be permitted to offer, (or "EASI" will offer for him), to the foreign buyer, up to 120 days credit, whilst the manufacturer himself will receive payment to the extent of 95 per cent of the value of the goods, (less any charges incurred on his behalf), immediately the goods have been shipped and the shipping documents are handed over, with the remaining 5 per cent to be paid on receipt of the foreign buyer's remittance.

References

In order to be able to advise manufacturers on the appropriate payment terms to be offered to a particular foreign party, "EASI" will undertake the obtaining of trade and other references and the assessment, from these references, of foreign buyers' credit

status. Whilst this service is primarily intended for participants in the scheme any information so gathered will be made available to non-participant manufacturers, on the understanding that it is given without liability or responsibility.

Sampling

"EASI" will make itself responsible for the examination and despatch, by the appropriate means, of samples on behalf of participating manufacturers and such manufacturers will be required to undertake to despatch all samples abroad through this channel. Normally the cost of samples and their despatch will be debited to the foreign buyer and any monies collected for the same will be paid over to the manufacturer. No payment for samples will be made to the manufacturer until the foreign buyer has first made payment and in the event of non-payment, or samples being despatched free of charge to the buyer, the manufacturer will bear the cost of the samples himself, whilst the cost of postage, air freight or other transportation, (but not packing), will be covered by the scheme at no cost to the manufacturer. However, where orders subsequently result from a foreign party who has had free samples the freight cost paid by "EASI" will be deducted from payment for the first substantial order or orders.

Documentation

"EASI" officers will assist in the preparation of all shipping documents, if necessary to the extent of doing this work at the manufacturer's premises. This will include the proper preparation of invoices, bills of lading, insurance certificates policies, certificates of origin and any other documents necessary to ensure the full satisfaction of the foreign customer and his ease in cleaning the goods.

Shipping

Arrangements will be made under 'EASI' to provide accurate and speedy information regarding marine freight rates and shipping opportunities in order to facilitate the proper calculation of quotations and earliest despatch of orders abroad by the best route. Incorporated in this same service will be the work of booking shipping space, arranging docks and customs clearance, obtaining of export licences, drawback certificates and import permit entitlements, where these are applicable. Where necessary 'EASI' will pay the appropriate shipping freight to the steamship company to speed up the issue of freight paid bills of lading and the cost of freight will be recovered from the manufacturer's payment.

Marine Insurance

It is intended to arrange for an open cover for marine insurance, against which certificates of insurance giving the appropriate cover can be drawn, for consignments requiring marine insurance cover. This will minimise the work involved and provide cover at the most favourable premium rates. Premium will be paid by 'EASI' and will be recovered from the manufacturer as a deduction from payment for goods supplied.

Export Risks Insurance Cover

The insurance cover afforded by the Export Risks Insurance Corporation Ltd will be made available through 'EASI' arrangements as and when such cover appears to be suitable and desirable.

Import Licences

'EASI' does not provide for any new concessions in the way of import licences etc. in exchange for proof of exports or export orders received. It will, however, provide a liaison service which will assist participating manufacturers to obtain any import licences etc. which they may be

entitled to under the existing or any future provisions.

Agency Agreements

'EASI' will assist participating manufacturers to draw up and conclude the appropriate agency agreements required by foreign parties and will advise on any disputes arising therefrom. In the conclusion of such agreements it may be required that the State Trading Corporation shall be included as a third party.

Training

Whilst any 'EASI' officer is attending to practical work, such as correspondence, documentation etc. on the manufacturer's premises, or convenient to him, it is expected that a responsible member of the firm will be present to watch and learn from the work being carried out so that in due course this staff member may be able to undertake the works without assistance. Training courses in 'Export Marketing' covering the whole processes of export sales, shipping documentation and related subjects will be conducted at various centres throughout the country for the benefit of those manufacturers who are unable, or do not wish, to participate in the scheme as a whole. These courses will be conducted by experts and will be of a practical nature and a reasonable charge will be made for admission. Details of times and venue will be announced separately.

Cost of Participation

In order to cover the costs involved in providing these services a small commission will be charged, although this will normally be provided for in the calculation of prices. The commission rate will be in the form of a sliding scale according to the length of credit to be allowed to the overseas buyer. Commission will be leviable only on actual orders and will be collected by deduction from the payment to the manufacturer.

Participating manufacturers will incur no liability for the payment of commission unless orders are actually received.

Terms of Participation

Manufacturers selected for participation in 'EASI' will be required to enter into an agreement of two years minimum duration. Normally the agreement will provide that all export marketing efforts, all orders from abroad, and related matters are routed via the State Trading Corporation. The participating manufacturer will be required to advise the State Trading Corporation of all orders and enquiries received from abroad and to act in accordance with the advice given by 'EASI' officers on all matters concerning exports, shipping, payment terms, presentation, packing and all related matters. Where a selected manufacturer is already exporting to certain markets successfully he may be permitted to exclude these markets from the agreement if he so wishes. Participating manufacturers will be required to forward all orders received by them from abroad to S.T.C., for confirmation and when this is done S.T.C. will issue its own confirming order on the manufacturer thus accepting the responsibility for the transaction. No responsibility will be accepted for

any orders which have not been confirmed irrespective of the fact that they were obtained as a result of 'EASI' assistance.

Summary

'EASI' is a scheme which will bring the opportunities of world-wide markets to the doorsteps of the small and medium sized Indian manufacturer who is prepared to help himself whilst at the same time helping his country's need, and assisting in building a firm reputation for the quality of Indian goods throughout the world. 'EASI' will bring many benefits to the small and medium scale industries of India and its success will depend, largely, upon those manufacturers whom it seeks to assist.

More precise details on this scheme can be obtained from the following address:

'EASI' Scheme,
State Trading Corporation of India
Limited,
Post Box No. 79,
'Express Building',
Mathura Road, New Delhi-1.

or from any regional office of the State Trading Corporation or through the Director of any Small Industries Service Institute.

For

PAINTS, VARNISH & DISTEMPERS

— Contact —

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GUINDY :: MADRAS-15.

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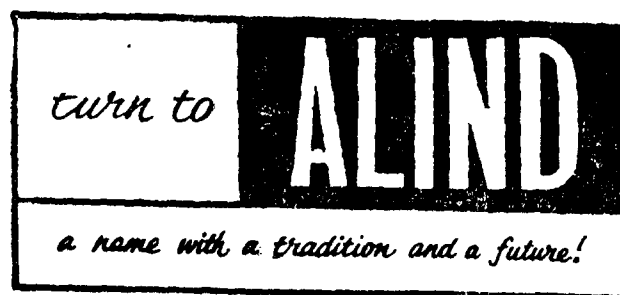
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AL/62/A3

APPENDIX

Some examples of the types of products and group formations which "EASI" contemplates assisting. Please see paragraph headed 'PRODUCTS' on page 9.

Stationery Items	Drug Extracts	Panel Pins	Kitchen Miners
Inks	Fire Extinguishers	Castors	Sewing Machines
Adhesives	Hand Trucks	Fancy Goods	Disinfectants
Fountain Pens	Trolleys	Playing Cards	Sieves
Pencils	Switches and Fuses	Toys (of all kinds)	Paints and Varnishes
Diaries & Memo Pads	Toilet Products	Costume Jewellery	Clothing Sundries
Chalks	Shaving Creams	Purses and Wallets	Hosiery (Socks Vests, Pants)
Crayons	Razor Blades	Brasswares	Jerseys and Pullovers
Water Colours	Talcum Powder	Sandalwood Carvings	Chappals (Rubber)
Rasars	Face Powder	Ivory Carvings	Fancy Leather Chappals
Chemists' Supplies	Cosmetics	Plastic Wares	Raw Silk Ties and Scarves
Patent Medicines	Nail Polish	Novelties	Buttons
Vitamin Preparations	Perfumes	Foodstuffs	Embroidered Badges
Hospital Equipment	Hair Dressings	Fresh Vegetables	Zip Fasteners
Hospital Furniture	Toilet Soaps	Packed Spices	Readymade Clothing
Spectacle Frames	Hardware Items	Flavouring Extracts	Auto Spares
Surgical Plaster of Paris	Nuts and Bolts	Food Colours	Motor Springs
Bandages	Machine Screws	Dried Fruits	Oil Seals
Gripe Water	Hinges	Domestic Sundries	Seat Covers
Artificial Teeth	Shower Roses	Ice Boxes	Motor Horns
Industrial Items	Plumbing Fittings	Ice Cream Freezers	Motor Polishes
Essential Oils	Padlocks		
Perfume Compounds	Wood Screws		



JULY-SEPTEMBER 1962

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 TOYS AND MODELS ETC.,

may contact THE SUPERINTENDENT

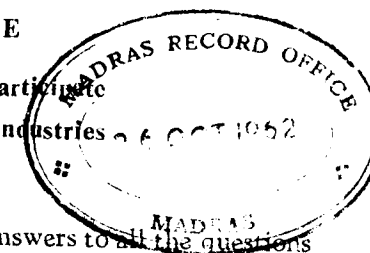
Govt. Pressure Die - Casting Unit

INDUSTRIAL ESTATE
 GUINDY, MADRAS - 16



"EASI" SCHEME—QUESTIONNAIRE

To be completed by manufacturers who wish to participate
 in the scheme of Export Aid for Small Industries



NOTES:

- (1) Applicants should in their own interest, give factual answers to all the questions.
- (2) Before completing this form applicants should read the booklet entitled "Export Aid for Small Industries" and should not apply unless they are willing to accept all the conditions.
- (3) In the initial stages the scheme is a Pilot Scheme and will be limited to a comparatively small number of participants. The completion of this questionnaire does not imply that the applicant firm will be accepted for participation in the scheme at this or any later date. (Every endeavour will be made to accommodate unsuccessful applicants at a later date).
- (4) Manufacturers will be notified as to whether or not their applications have been accepted but no correspondence will be entered into regarding explanations for non-acceptance.
- (5) Applications can only be entertained from actual manufacturers.

PART I

To be completed by applicant

- (a) What is the name of the firm?.....
- (b) What is the address of the factory?.....
- (c) What is the registered office address?
 (If different from [b]).....
- (d) Date on which the firm was first established.....
- (e) Is it a registered small scale industry?.....
- (f) Is the firm a Proprietorship, Partnership or
 Private Limited Company?.....
- (g) Name(s) of Proprietor(s), Partners, or Directors.....

- (h) What is the capital of the business? (a) Fixed Rs
 (b) Working..... (c) LOANS.....
 (i) Name and address of bankers.....
 (j) Have any of the firms' products ever been exported?.....
 (k) If the answer to (j) is yes, to which countries?.....
 (l) Do any agreements exist between your
 firm and any other party in India or
 overseas covering the export of your
 products? (If yes, please give brief details).....
 (m) What product(s) do you wish to export?.....
 (n) What is your present annual production
 capacity of these items.....
 (o) Any additional remarks which you think
 should be considered in considering the
 selection of your products
 (p) The following items should be enclosed with this completed questionnaire :—
 (i) Specimen of the firm's letter heading.
 (ii) Specimens of any catalogues, sales leaflets, labels, printed packages,
 photographs concerning the product(s).

*To

The Director
 Small Industries Service Institute

Signed..... Date.....

Status

Name of firm.....

Full postal address.....

* All forms of application are to be sent to the Director, Small Industries Service Institute, whose address should be intimated here, and who should be requested to complete Part II of the form, and forward the same to the State Trading Corporation of India Ltd., New Delhi,

PART II

Not to be completed by applicant

The Director, Small Industries Service Institute, is requested to complete the following before submission :—

- (a) Is the firm an actual manufacturer of
 the products mentioned at (m)?.....
 (b) Is the firm a genuine small industry?.....
 (c) Are the answers correct to the best
 of your knowledge and belief?.....
 (d) Any remarks which you may consider
 helpful regarding the possible selection
 of this applicant.

Signed..... Date.....

Status

Address.....

To

The State Trading Corporation of India Ltd.,
 (Export Aid for Small Industries)
 Post Box No. 79,
 Express Building,
 Mathura Road,
 NEW DELHI

A. MASTHAN SAHIB & SON,

(MASTHAN BUILDING)

25, EVENING BAZAAR RD.

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 (C. E. & T.)

Chemical Testing and Analytical Laboratory,
 Industrial Estate, :: Guindy, Madras-32.

MACHINERY ON HIRE PURCHASE

The National Small Industries Corporation Ltd., has been set up by the Government of India, Ministry of Commerce & Industry, for the purpose of development of Small Scale Industries in the Country. One of the main functions of the Corporation at present is to supply machines on hire purchase basis. The details of the hire purchase scheme are given below.

General Terms & Conditions

1. The object of this scheme is to provide small scale industrial units with facilities of acquiring machines and equipment on easy instalment basis.

2. Only small scale industrial units are entitled to get benefit of this scheme. Applications from units which do not come under the purview of small scale industries will not be entertained.

3. A small scale industrial unit for this scheme has been defined as one with a capital investment of not more than Rs. 5 lakhs irrespective of the number of persons employed.

This has further been relaxed, to begin with, upto Rs. 10 lakhs in capital ceiling, to industrial units manufacturing ancillaries and components for the following industries.

1. Industrial & agricultural machinery.
2. Machinery tools and small tools.
3. Electrical machinery & equipments.

4. Radios.
5. Electrical & mechanical instruments.
6. Transport industry, including automobiles, railways and shipping.
7. Steel, iron, foundry and forge shops, rerolling and wire drawing industry.
8. Bicycles.

The term "Capital investment" for the purpose of the above noted definition will mean investment in fixed assets like land, building, machinery and equipment. If a unit functions in a rented premises, the capital valuation of such premises shall be taken into account for assessing the prescribed limit of Rs. 5 lakhs, but workers housing and welfare amenities shall be excluded while making the above said assessment. For calculating the value of machinery and equipments, irrespective of whether the same were new or second hand ones, the original price paid by owner, will be taken into consideration. The applicant must attach to the application an affidavit

that his total capital investment does not exceed Rs. 5 lakhs; such affidavit must be on requisite stamp-paper and must also be duly sworn in either before a magistrate or an Oath Commissioner or any competent authority.

4. Prescribed application forms can be had on payment of 25 naye Paise per set from the Head Office and from the following Branch Offices of the National Small Industries Corporation :

Eastern Region

The Branch Manager, National Small Industries Corporation Ltd., 116-A, Lower Circular Road, Calcutta-14.

States & areas covered

1. West Bengal. 2. Bihar. 3. Assam. 4. Orissa. 5. Manipur and 6. Tripura.

Western Region

The Branch Manager, National Small Industries Corporation Ltd., Janmabhoomi Chambers, 5th Floor, Fort St. Bombay-1.

States & areas covered

1. Maharashtra. 2. Gujrat and 3. Madhya Pradesh.

Northern Region

The Deputy Manager, National Small Industries Corporation Ltd., Rani Jhansi Road (M. M. Road) New Delhi.

States & areas covered

1. Jammu & Kashmir. 2. Himachal Pradesh. 3. U.P. 4. Punjab. 5. Rajasthan and 6. Delhi.

Southern Region

The Branch Manager, National Small Industries Corporation Ltd., 15, Mowbrays Road, Madras-18.

States & areas covered

1. Andhra Pradesh. 2. Madras. 3. Kerala and 4. Mysore.

5. The applicant will be required to give a declaration to the Corporation that he has not applied for, or, obtained loan to purchase machinery he has asked the Corporation to supply on hire purchase basis offering the same machine machines as security.

6. The application is to be completed in quintuplicate. The original and two copies thereof meant for Director of Industries, and Branch Office respectively should be submitted to the Director of Industries of the State administration concerned accompanied by a Crossed Postal Order for Rs. 5 only drawn in favour of the National Small Industries Corporation Ltd., New Delhi. The particulars of the Postal Order should be mentioned in the application form in the space provided therein. The application fee is non-refundable. The application without the application fee of Rs. 5 in the form of Crossed Postal Order will not be considered or acknowledged. The fourth copy, i.e., advance copy meant for Head Office should be sent by the applicant to the National Small Industries Corporation Ltd., Rani Jhansi Road, New Delhi directly and the fifth copy is to be retained by the applicant. It has been duly indicated on the application forms for which they are meant.

7. The Director of Industries after the necessary scrutiny of the application will forward the original application together with the application fee of Rs. 5 in the form of Crossed Postal Order with his recommendations to (the Head Office) the National Small Industries Corporation Ltd., New Delhi. Simultaneously the copy of the application meant for Branch Office would be forwarded by the Director of Industries to the concerned Branch Office of the National Small Industries Corporation Ltd., New Delhi. A copy meant for the Director of Industries is to be retained by his office.

8. Only such applications as are recommended by the Director of Industries will be considered.

9. Acceptance or rejection of the application will be generally communicated within 21 days of its receipt by the Corporation.

10. The Corporation reserves the right to refuse the supply of machine(s) at any stage without assigning any reasons.

11. Applicants should indicate clearly in their application full particulars of the machine(s) required by them including specifications, size, maker's name and wherever possible the source of supply (agents, distributors etc. in India).

12. Acceptance of an application, ipso-facto, shall not create any contractual obligation on the part of the Corporation. It would only mean that the applicant has tentatively been considered to be one of the persons for whom efforts may be made by the Corporation to render assistance or help under the Hire-Purchase Scheme.

13. Supply of machine(s) will be subject to the Corporation being able to obtain the same. In case the machine(s) applied for cannot be secured for any reason, the Corporation without any obligation will try to obtain machine(s) of comparable specifications for the applicant.

14. Whereas the Corporation will make all efforts to supply machine(s), it shall not be responsible for losses, if any, by the applicant on account of non-supply of machine(s) or delay in their supply.

15. Offer of machines from the Corporation against demands of the applicant would be based either (i) on quotations received from suppliers of the machines or (ii) stocks of machines held by it.

In case where offers are based on (i) above, the conditions stipulated by the suppliers

will apply so far as prices, packing, insurance, delivery etc., are concerned. The offers based on (ii) above, are subject to prior sale of machines as well as variations in price. As the machines in stock and/or ordered for stock with the Corporation are limited in numbers and demands are large, the same machines are offered simultaneously to various applicants and reservation of such machines for sale is made strictly according to the date of receipt of earnest money deposit.

The applicant must intimate, on receipt of the offer from the Corporation his selection and remit the requisite earnest money by a demand draft on a Scheduled Bank in time to reach the Branch Office within 15 days of the offer. In case of failure on the part of the applicant, the Corporation reserves the right to treat the demand of the applicant as withdrawn.

Applicants will also have to pay apart from the earnest money, 5% of the value of machines as service charge to the Corporation, which would be calculated on the basis of C. I. F. price in the case of imported machines and F. O. R. price (excluding Sales Tax and Insurance) in the case of machines procured from indigenous sources. This charge will be levied in respect of all applications received in the Corporation as and from 11-8-60.

Besides this, where an applicant directly negotiates or deals with the supplier as regards purchase of machine(s) and subsequently applies to the Corporation for supply of that very machine(s) under Hire-Purchase Scheme, he in addition to the above-noted dues shall be liable to pay as under :—

(1) Where the applicant has placed the order on a foreign supplier for the machine(s) but the L/C is to be opened by the Corporation and import licence also to be procured

by the Corporation—5% of the CIF value of Imported machine(s)

(2) Where the applicant has placed an order on the Indian supplier for the machine(s) and the Corporation is called upon to make the payment—3% on F. O. R.

16 [a] (i) From applicants for machinery valued upto Rs. 50,000 (general purpose machines), 10%

(ii) For furnaces. 15%

[b] (i) From applicants for machinery valued at more than Rs. 50,000 (general purpose). 20%

(ii) In the case of furnaces 30%

In regard to the mode of payment of the Earnest Money the units have been given the following option:

(a) The present scheme as per which, in case more than 3 months delay is anticipated in supply of machines, the Earnest Money is split up in two equal instalments payable in cash.

(b) 5% cash and the Bank Guarantee for the remaining 15% or 25% as the case may be encashable at the time of delivery of machines.

In the case of imported machines, the Corporation will charge 3½% of the C. I. F. price of machines to cover clearing charges, bank charges, etc. with effect from 1—9—60

In respect of the applications for machine(s) costing upto Rs. 2,000 the amount of earnest money shall be reduced to half the above limits provided the outstanding Hire-Purchase value of the total machine(s) supplied to the party or accepted for supply does not exceed Rs. 2,000.

In the case of Industrial Co-operatives, the Corporation may allow a reduction upto 5% of the earnest money payable where the value of machine(s) exceeds Rs. 2,000. Special

concessions are allowed to ancillaries to large undertakings in the Public and Private Sectors.

Earnest money deposit in all cases shall be tendered in the form of a demand draft in favour of the Branch Offices of the Corporation concerned drawn on a Scheduled Bank located in Bombay Calcutta Delhi or Madras as the case may be.

In case the concerned State Government specially sponsors the application of an hirer under the present scheme, the Corporation will accept only 5% of the value of the machinery as earnest money, and the balance 15% or 25% as the case may be, may be covered by the guarantee of the sponsoring State Government. The above-said balance of 15% or 25% as the case may be, shall be paid by the applicant in equal instalments simultaneously with the payment of usual instalments of the hire-rent under the relevant hire-purchase agreement and the concerned State Government shall stand surety for the above noted balance amount. Further details of the agreement bond to be got executed between the Corporation and the applicants in such case and the surety bond to be executed by the State Government concerned may be seen with the Director of Industries of the State concerned or the Branch Offices of the National Small Industries Corporation Ltd., New Delhi. The very fact that the applicant has submitted application under this scheme and that the concerned State Government has so specially sponsored the application shall mean that the applicant and the concerned State Government have already persued and understood the terms contained in the relevant specimen hire-purchase agreement and the surety bond referred to in this clause and that they are prepared to abide by the same.

17. Where delivery of a machine is likely to be protracted, the Corporation will

accept the earnest money indicated in clause No. 16 in two equal instalments. The first instalment (i.e., earnest money) shall be paid before the orders are placed on the suppliers by the Corporation and the second (to be called ADVANCE), shall be made within 15 days of intimation from the Branch Office to do so.

18. The earnest money and advance, so paid by the applicant will be credited towards Hire-Purchase price of the machinery at the time of execution of the hire purchase agreement. The balance will be payable in instalments spread over a period not exceeding 7 years depending upon the serviceable life of the machine. The first instalment will be due on the completion of one year from the date of execution of the agreement. The subsequent instalments will be payable every six months after the due date of the first instalment.

Note: In respect of Hire-Purchase applications under which more than one machine has been applied for and each individual machine forms part of complete plant, a separate agreement may be entered into by the hirer in respect of each individual machine as and when delivered. These agreements will be replaced by a consolidated agreement, hereinafter described as the "ultimate agreement", at the time of delivery of the last item of machines applied for. In the ultimate agreements an amount representing the interest on investment of capital towards the cost of the individual items of machine delivered earlier will be added. The first instalment in respect of such applications would fall due on the expiry of one year from date of execution of the ultimate agreement. The subsequent instalments in such cases will be payable every six months after due date of the first instalment. The concession given under this clause is subject to the conditions mentioned in clause Nos. 14 & 26 and provi-

ded the sponsoring authority, viz, the Director of Industries specifically certifies that each individual machine forms part of a complete plant and no machine could be made use of independently.

19. In calculating the instalments, an interest of 4½% per annum will be charged from the applicants when the value of machine or machines supplied does not exceed in aggregate Rs. 15,000. For a machine or machines, supply of which would raise the total value of machines above Rs. 15,000 the rate of interest will be 6% per annum. For Industrial Co-operatives the rate of interest will be 3½% and 5% respectively.

20. The earnest money should be remitted only after careful selection of the machines. The applicant is, therefore, advised to exercise care while selecting the machines from among those offered by the Corporation as any subsequent change of his selection will not entitle him for refund or adjustment of earnest money paid by him and such change will form subject matter for a fresh application only.

21. A separate Hire-Purchase Agreement for each individual machine shall be executed between the hirer and the Corporation before the railway or transport receipt of the machine is despatched/delivered to the hirer. In case of local delivery the Hire-Purchase Agreement shall be executed before the actual delivery or issue of delivery order covering the machine. Inland freight and insurance, sales tax (if any) and other incidental charges (including demurrage, if any) will be paid by the hirer separately.

22. The hirer shall send a report about the condition of the machine immediately on its receipt. In case no report, to the contrary, is received from the hirer within 15 days of receipt, it will be presumed that the hirer has received the machine(s) in good condition.

23. The machine shall remain the property of the Corporation until full value together with interest and other charges, if any have been paid by the hirer to the Corporation and till such time the terms embodied in the Agreement shall operate. A place indication that the machine is the property of the Corporation shall be affixed on each machine and it shall remain there until all dues to the Corporation are fully paid.

It shall be the responsibility of the hirer to ensure that during the period the agreement is in force, the machine(s) is are kept well-serviced and in proper working order.

24. The machine must be covered against fire, riots and civic commotion risks upto the full value of the machine, and such insurance policies are to be taken in the name of the Corporation as the beneficiary. The Regional Office of the Corporation will furnish to the hirers a list of Insurance Companies approved by it, with one of whom the hirer will insure the machine. Before the machine is given delivery of to the hirer, the hirer will deposit the insurance cover note insurance policy with the Corporation. Under no circumstances, delivery of the

machine will be made to the hirer without the Corporation having received in possession the insurance cover-note/insurance policy of the machine(s). In cases where the hirer fails to obtain the insurance cover-note insurance policy before the delivery of the machine, the Corporation will proceed to secure the insurance policy for the first year and recover the cost thereof from the hirer. The policy shall always be maintained in force till such time as the machine(s) remain the property of the Corporation and all policies and renewals thereof shall be forwarded to and retained in the custody of the Corporation.

25. It is the sole responsibility of the hirer to arrange for space and motive power for the machine and raw material to put the machine into commission. Non-availability of any one or more of these will not be accepted as an excuse for non-payment of instalments on due dates. Every instalment must be paid on or before the date on which it falls due. Any delay in payment of hire charges would entitle the Corporation to exercise its right to get the actual possession of the machine. However, the Corporation may, on request from the hirer in writing

allow him to defer the payment of hire charges for a period not exceeding six months provided the hirer agrees to pay the defaulted payment with additional interest @ 1% per month or part thereof. In the event of a machine being withdrawn from the hirer due to reasons of defaulted payment of instalments, or poor maintenance of machine or any breach of any of the terms of the agreement, the Corporation reserves the right to sell the machine by private or public auction or by any other means at its own discretion, and if the resale value falls short of the balance outstanding on the hirer's account the resultant loss shall be made good by the hirer.

26. The Corporation will endeavour to obtain for the applicant all the items of machine(s) required by him as far as possible, simultaneously but for obvious reasons this cannot be guaranteed. The applicant will have to take delivery of items of machine(s), as and when supplied by the Corporation.

27. Any authorised representative of the Corporation will have the right to inspect the machine machines at the hirer's address at any time.

28. The hirer at any time after the expiry of 3 years from the date of the agreement will have the option to buy out the machine(s) by making lump-sum payment of the balance amount due under the agreement.

29. The hirer may terminate the agreement at any time by a month's notice in writing to the Corporation. The Corporation shall acknowledge the notice and take steps to appoint an expert for the inspection of the machine at hirer's premises at hirer's expense. The certificate of fitness or otherwise regarding the machine given by the expert shall be final and binding on the parties. The hirer shall return the machine to the Corporation at his risk and expense to a place to be advised by the Corporation and further pay to the Corporation all monies due together with other charges and expenses, if any, incurred in repairing and reconditioning the machine.

30. The Corporation reserves the absolute right to alter, amend, amplify or abrogate at its discretion any of the terms and conditions stipulated above without prior notice.



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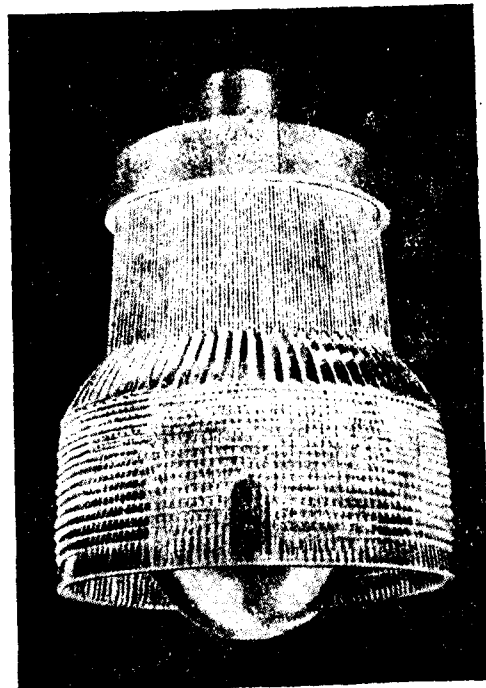
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RAILWAY STORES REQUIREMENTS

PURCHASE FROM SMALL SCALE UNITS

In order to encourage and support small scale industries in India, the Railway has drawn up a programme under which certain items for the Railway stores requirements are exclusively reserved for procurement from the small scale units. Small scale industrialists may avail of the concession extended to small scale units and improve their production.

The items, so far, reserved for procurement exclusively from small scale units by the Southern Railway, are given below. The Stores Purchase Officer, Southern Railway, Madras may be contacted for detailed particulars on the stores purchase programme.

Items exclusively reserved for procurement from small scale units:—

<i>Sl. No.</i>	<i>Stores</i>	<i>Sl. No.</i>	<i>Stores</i>
1.	Brass padlocks	16.	Boots and shoes of types required by civil indentors
2.	G. I. padlocks	17.	Glass ampoules
3.	Brass dampers	18.	Handles—wooden and bamboo
4.	Boxes made of metal (excluding army requirements)	19.	Soap washing or laundry soap (against civil indentors only)
5.	Signboard painted	20.	Metal polish
6.	Buttons—metal	21.	Scissors cutting (ordinay scissors)
7.	Postal weighing scales	22.	Coir fibre and coir yarn
8.	All badges, cloth embroidered and metal (civil requirements only)	23.	Postal lead seals
9.	Belt leather (apparel)	24.	Cotton hosiery (against civil indents only)
10.	Cash bags	25.	Woollen hoisery (against civil indents only)
11.	Dust shield leather	26.	Keys—wooden
12.	Chappals and sandals	27.	Stone curry and stone curry roller
13.	Leather boxes (not army type)		
14.	Laces leather		
15.	Leather bags		

JULY-SEPTEMBER 1962

Sl. No.	Stores	Sl. No.	Stores
28.	Caps-cotton (against requirements of indentors)	36.	Black smith Hearth
29.	Mosquito curtain (against requirements of civil indentors)	37.	Kodali
30.	Tape cotton (against requirements of civil indentors)	38.	Basket-cane
31.	Bandage cloth (against requirements of civil indentors)	39.	Lathies
32.	Garments (against requirements of civil indentors)	40.	Caps—woollen
33.	Wicks—cotton (against requirements of civil indentors)	41.	Belts-leather and strips
34.	Stockinette (against requirements of civil indentors)	42.	Wheel barrows
35.	Rags cotton (against requirements of civil indentors)	43.	Tarpaulin (against requirements of civil indentors)
		44.	Brushes
		45.	Brooms; and
		46.	Steel trunks (against requirements of civil indentors)

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SPECIAL FEATURES

Machines for Industry

Hindustan Machine Tools

(From Special Correspondent)



'Our industries are the present day temples of India', that has been often said by our Prime Minister. Realisation of these remarks is felt nowhere else so much as when one visits the Hindustan Machine Tools at Bangalore. It is a sight to see workers working with that devotion as can be seen in sacred places. Certainly this devotion on their part has today contributed to the 'Success story' that 'HMT' can tell today.

Only a few years ago and that too in the wake of its very birth in 1955, HMT was regarded as the 'danger signal' indicative of the failure of the very experiment of public sector in India. Dubbed as a colossal financial failure, and salesman's el-dorado; many an industrial prophets warned the Government and people of India to take a leaf from this experience and abandon the very experiment of 'public sector'. Today this very 'danger signal' is the 'beacon light' of the bold experiment which is the very basis of a 'socialistic society'. Rightly it has come to be regarded the 'Jewel of the Public Sector'. This transformation has not come the easy way. 'HMT' had to go that hard way like any individual or institution that marches to progress.

Perhaps that failure upto 1955 or even as far as upto early 1956 was an eye-opener to the management. They also seem to have learnt from the failure—that Grand failure, and their realisation to it enabled them to go up the ladder of success.

Starting its commercial production for the first time in 1956 with 135 machines, against a target of 57, the factory had been able to raise its production to 420 against a target of 131 machines in 1957-58. This was possible due to their being able to make increasing use of the available plant capacity combined with rise in labour efficiency. The authorities as a first step towards attaining higher production, made a careful assessment of the plant capacity

of the factory and simultaneously evolved a "Training Programme" with a view to preparing the necessary 'Technical Personnel' to man the factory's plant.

With its production of 402 machines in 1957-58, the factory reached the Second Plan target three years ahead of schedule. Simultaneously the factory had taken steps to diversify its production lines, in the light of the demand position in the country. In addition to the high precision lathe, milling machines, came off the production lines of HMT this year.

Subsequent year saw further progress. 552 machines were turned out against the original target of 238. This was followed with 702 against a target of 314 in 1959-60 and finally 1,002 in 1960-61 against the target of 400. Every year was eventful—more technical collaboration agreements and more varieties of machines! The factory today turns out over 162 different types of machines including the machines its design cell had been able to put out, without any foreign technical assistance—a tribute to the skill and ingenuity of Indian Engineers!

This progress helped the factory to build adequate resources. The policy of the Directors of HMT had always been to plough back the surpluses for the expansion of the project. The management embarked upon an ambitious expansion programme. Designed to double the production capacity of the factory to 2,000 machines per year, this programme was taken in hand in April 1960. The programme was completed in May 1961 in a record time of 14 months against 7 years taken for completion of the original factory.

The entire expansion programme was financed from the internal resources built by the Company during its first five years of

operation and after providing for 10 per cent dividend for two consecutive years since 1960. Further it was built without foreign technical collaboration. Simultaneously, the foundry, construction of which was commenced late in 1959, had also been completed and the foundry has gone into production in June 1961.

As a result of this expansion Bangalore has the pride of having one more machine tool unit—the second machine tool factory which can rightly be called 'Gift to the Nation'. As a consequence of the commissioning of this 'Second Factory', production of the combined HMT factories at Bangalore has risen to 1,251 machines against 1,002 machines from the first factory during the previous year.

Third Machine Tool Factory

A third Machine Tool Factory and Township is to be built in the Punjab and Pinjore near Chandigarh. Construction has already commenced last month.

One more feather in its cap is that HMT machines are being exported to West Germany and Switzerland. It is a matter of pride that 'HMT' is the first factory in the public sector to have been able to strike export deals for Indian machines and that too with countries regarded as the 'Industrial Heart of Europe.'

The Hindustan Machine Tools has been entrusted with one more project viz. the first ever watch-making project in the country. This, it is understood, has been done in consideration to the largest concentration of skilled man-power and the excellent machining skill that the factory has in comparison to any other industry.

The Government of India signed a technical collaboration agreement with Messrs. Citizen Watch Co., of Japan for the manufacture of watches and the HMT has been

entrusted with the working of the project. The construction of the Watch Factory was delayed by several months on account of certain unforeseen defects in the title of the land originally selected. Another site had been acquired and the first phase of construction is expected to be completed shortly and manufacturing is expected to start by October this year. According to the production programme outlined by HMT, the factory will reach the production figures of 3.6 lakhs a year in four years. At the present, the factory is just assembling watches from imported components.

The annual accounts for the year ended March 1962, testify to the continued progress of this project. Against a profit of Rs. 74 lakhs during the previous year, the factory's profits have gone to Rs. 127 lakhs during this one year period.

The factory also received the highest Presidential Award for being the best managed industry in the Public Sector. This in itself is a tribute to the factory more so to its efficient and devoted workers.

The success of HMT should be an adequate factor to tone up the efficiency of other units in the Public Sector. At a time when the performance of many public sector undertakings falls woefully short of promise, the progress of HMT presents a refreshing contrast. This 'contrast' should rightly act as the 'guide for other public sector industries', so that they could contribute effectively to the progress of the country as a whole. This beacon light of the public sector can certainly show them the way how to deliver the goods and in good time. ★

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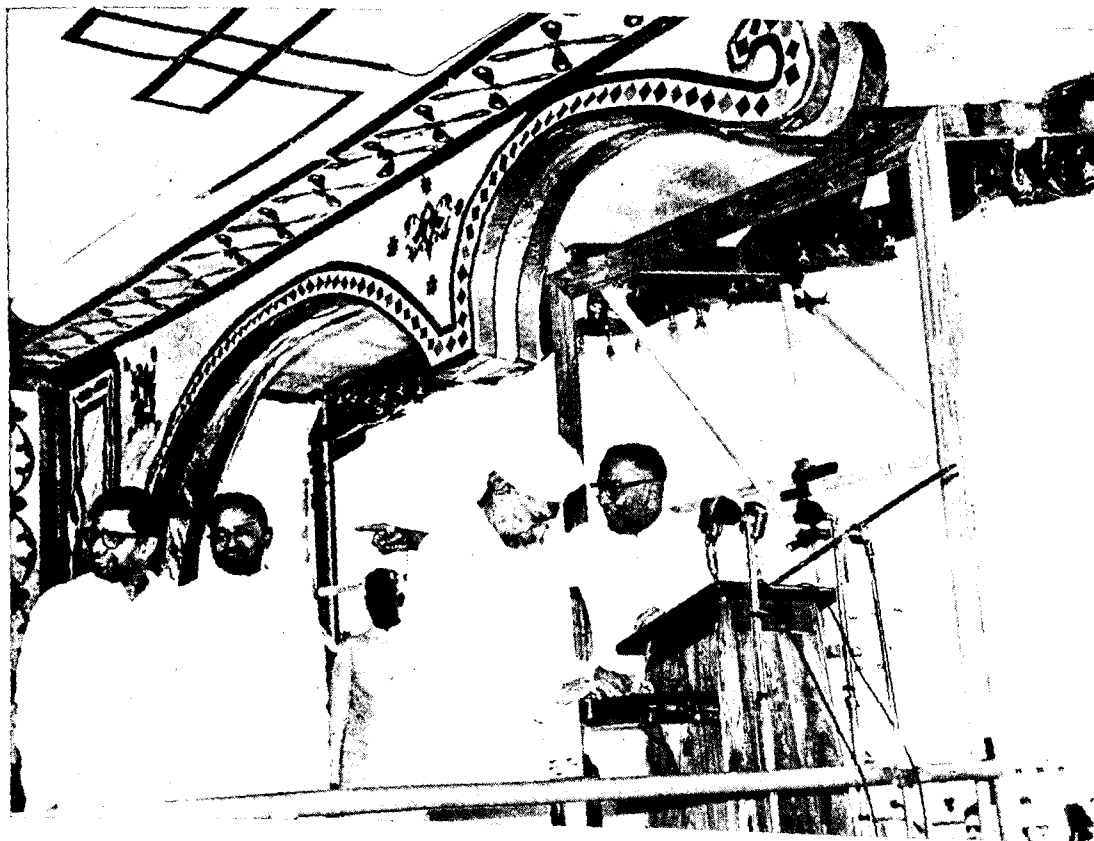
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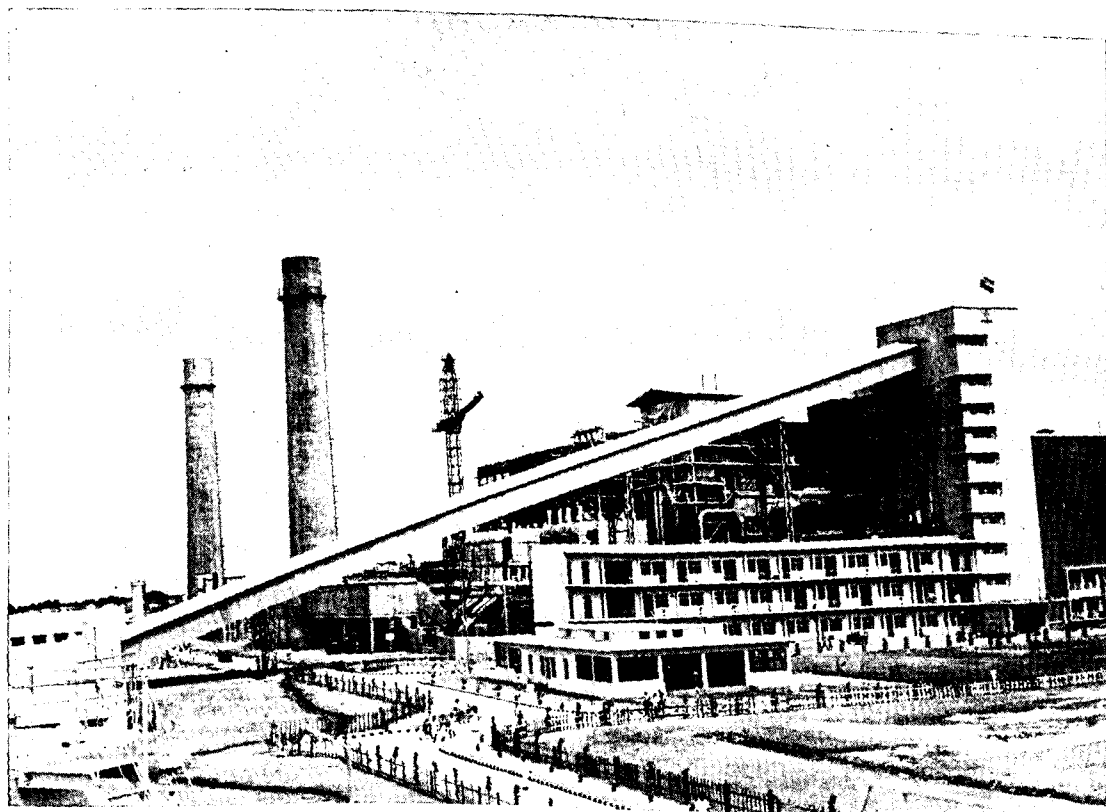
Sri Jagjivan Ram, Union Minister for Transport and Communications, laid the foundation stone for the Hindustan Teleprinters Factory in Madras on July 10, 1962. Sri K. Kamaraj, Chief Minister of Madras, presided over the function. Sri B. S. Rau, Managing Director of the Factory, is on the left.



A view of the gathering.



President Radhakrishnan commissioned the first unit of the Thermal Power Station at Neyveli on August 5, 1962. Picture shows the President inaugurating the unit by pressing a button.



A view of the first unit of the Thermal Power Station.

WHAT IS LIGNITE

Tan brown in colour and light to feel, lignite is an inferior type of coal. It is formed from vegetal matter in two stages.

Millions of years ago, the vegetal matter combined with biochemical decay resulted in peat-rotton wood.

This was the first stage of transformation. The second stage is that of consolidation and dehydration of the peat into lignite.

When the pressure on the lignite, particularly the horizontal thrust, is further increased, the lignite becomes coal which is more dense and less bulky.

About 2½ tons of raw lignite would be equivalent in thermal value to one ton of coal.

The lignite reserves at Neyveli appear to have been formed of vegetal matter over water-logged areas, resulting in artesian aquifers or water bearing strata below the lignite. These water bearing strata consist of uncompacted sand, the water occupying the interstices between the sand particles and exerting an upward thrust on the lignite and the heaps of earth above it. There are several such water bearing strata below the lignite reserves at Neyveli.

The successful mining of lignite depends on the control of the water pressure exerted by the artesian aquifers below the lignite seam.

The venture, besides being risky, was costly. Probably for this reason, the private sector did not come forward to exploit the Neyveli lignite reserves, the existence of which was known for the past several decades. A British firm did show some

interest but abandoned the idea without undertaking any prospecting.

EARLY HISTORY

During 1943-46, the Geological Survey of India drilled a number of bore-holes which revealed the occurrence of lignite over an area of 23 square miles in and around Neyveli. Further investigations carried out by the Madras Government in 1948 showed the existence of lignite deposits, estimated at 2,000 million tons over an area of 100 square miles—the largest lignite reserves so far discovered in the country.

It was in 1953-54 that an arrangement was made under the Colombo Plan for an investigation and project report by a British firm, Messrs. Powell Duffryn Technical Services.

They suggested a large scale pumping test to be carried out before mining could be

taken up in the most favourable area of 5½ square miles estimated to contain about 200 million tons of lignite.

The responsibility for the project was taken up by the Union Government in 1955. Orders for machinery and equipment for the Mining Scheme were placed in the latter half of 1956 and the Mining Scheme was inaugurated by the Prime Minister on May 20, 1957.

In the meantime, the Neyveli Lignite Corporation, a Government-owned concern, was set up to execute and manage the project.

The quality of the Neyveli lignite is better

than that of German lignite. As raw lignite is bulky and liable to spontaneous combustion, it has to be briquetted and carbonised after reducing the moisture content. The lignite carbonised at low temperature has a thermal value of 12,500 B. Th. U. per lb. and burns comparatively more steadily and economically than charcoal.

The cost of raw lignite for utilisation at site, equivalent to one ton of coal in thermal value, would be about Rs. 34 per ton, compared to the price of Rs. 60 per ton of coal delivered at site by the all-rail route and Rs. 96 per ton by sea up to Madras and then by rail.

★

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NEYVELI THERMAL POWER STATION

The Neyveli Thermal Power House, which will eventually serve as a base load station for the entire southern grid, is the most important of the constituent schemes of the Integrated Project.

The Power Station, will use 1.5 million tons of lignite per annum and will have an installed capacity of 250,000 kw. in five units of 50,000 kw. each.

There will be five boilers, each capable of producing 220 tons of steam per hour at a pressure of 100 atmospheres and a temperature of 540°C., and five turbo alternators, each with a capacity of 50,000 kw.

The boilers will fire raw lignite in pulverised form, dried as it drops into the boilers.

The Neyveli Thermal Power Project is being financed under the Indo-Soviet 112.5 million Rouble Credit Agreement of March 1957.

The detailed project report for the Power House was prepared in the USSR in consultation with Indian specialists of the Central Water and Power Commission and Contracts were concluded in 1959 with the Soviet Organisation for the preparation of designs and working drawings and for the supply of raw material, and reinforcement steel and steel structurals, supply of plant, machinery and equipment.

So far the Soviet Organisation has supplied about 27,515 tons of equipment and 12,021 tons of steel and steel structurals.

The contract also provides for the rendering of necessary technical assistance, both in the form of Soviet experts for supervision

of erection and operation, including training of Indian personnel at site and of training of Indian personnel at similar installations in the USSR.

A number of Soviet technicians are working at Neyveli. A batch of 19 Indian officials also underwent training in USSR.

The erection of the first 50,000 KW of the power station was completed in the last week of May, 1962 and it has been under trial runs since then. The unit has worked on full load using lignite and the performance has been quite satisfactory.

The remaining four units of the power station will be commissioned at intervals of 5 to 6 months each and the entire 2,50,000 KW power station is expected to be in operation early in 1964.

The plant is proposed to be expanded to 40,00,000 KW capacity during the Third Five Year Plan under the 337.5 million Rouble Credit Agreement of September 1960, by the addition of one 1,00,000 KW unit and one more 50,000 KW unit.

Technical discussions relating to the preparation of the detailed project report for the expansion of the power station have already commenced with the Soviet authorities.

THE NEYVELI TOWNSHIP

The concept of a Welfare State would be unreal if economic development programmes do not provide for amenities to workers employed at industrial units. The construction of a modern township, therefore, constitutes an important part of all industrial undertakings in the public sector.

Designed on modern principles of town planning, the township at Neyveli has been planned for an ultimate population of one lakh with 20 000 houses. For the present, however, it is proposed to have only about 7,500 houses to cater to the needs of personnel employed during the production stage.

The industrial area has been separated from the township by a broad park belt. Ample open space has also been reserved all over the township as air lungs. A compound has been provided for every class of house to enable the occupant to raise a garden.

An important feature of construction is that residences for employees in the lower income groups are larger in size and have greater amenities compared to buildings for higher grade employees which are built on austerity standards.

The township is divided into blocks comprising houses for all categories. Employees of all grades working in a particular industrial unit are also allotted houses near the unit.

The township has an auditorium with an open air theatre, a comfortable and well-planned cinema hall, a music sabha and two

reading rooms with newspapers and periodicals.

A library in a specially designed building has started functioning recently. Parks and playgrounds in the various blocks of the township, special children's playgrounds at convenient centres and two clubs, the Park Club and the Town Club with specially planned buildings and provision for both indoor and outdoor games, are some of the other features of the township which is fast becoming a real "Garden City".

Membership of the clubs is open to all grades of employees: the subscription payable in each club is in relation to the amenities and facilities provided therein.

The clubs are given grants for the purchase of sports materials, magazines and dailies.

Two women's clubs have been recently started in the township. A Horticultural Association will also be formed to foster interest in gardening and to facilitate exchange of seeds, seedlings, plants and produce.

For the plant and the township an area of about 27,000 acres had to be acquired at a cost of nearly Rs. 2 crores.

STEEL IN THE THIRD PLAN

By Shri J. M. SHRINAGESH

The Third Plan lays considerable emphasis on the development of steel industry, which is fundamental to rapid economic growth and which determines the pace at which the economy can become self-reliant and self-generating. The development of other basic industries will, to a large extent, depend on the availability of steel. The planners have recognised the important role steel has to play in generating the economic growth of the country.

In the Second Five Year Plan, three new steel plants were set up. The Third Five Year Plan envisages the expansion of these three plants as well as the setting up of a new plant near Bokaro. It has been estimated that the steel ingot capacity will be raised to 10.2 million tons whereas that of pig-iron for sale to 1.5 million tons by 1965-66. The over-all investment required for the public sector steel development programme included in the Plan is estimated at Rs. 525 crores.

Formidable Task

The Plan provides for the establishment of an alloy steel plant in the public sector with an estimated outlay of Rs. 50 crores. The task before us is formidable. It will require our best efforts to achieve the goal. On the success of the sector will depend the development of many of the other basic industries, and indeed the growth of the national economy as a whole.

The Third Plan target of ten million tons has been characterised by some as 'too ambi-

tious'. There were various suggestions for scaling down the target when the draft of the Third Plan was published. It was suggested that the country would do well if the target was scaled down to say, 8 million tons, and wait till the machine building plant at Hatia, near Ranchi, is able to manufacture machines and plants for the steel industry. The advice was preferred on the very specious plea of better utilisation of available foreign exchange resources. But the argument will hardly stand scrutiny, for, if our demand of steel by the end of the Third Plan is ten million tons—which we consider right on the authority of the Planning Commission—we shall have to import at least two million tons of steel every year, at the cost of our foreign exchange resources.

In fact, the suggestions for scaling down the steel target are a disguised attempt to restrict our entire national economic effort, and as such are obviously contrary to our long term objective of doubling our per capita income and arriving at the 'take-off'

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stage by 1975. The economic progress of a country is judged very often from the per capita consumption of steel, and our per capita consumption is one of the lowest in the world.

"The Mother"

It has been said that the employment potential of steel industry is much less than the capital intensive or the labour-intensive industries like engineering or small scale industries. But the economic utility of a steel plant cannot be measured merely by the quantum of employment it generates. Steel industry lays the foundation on which the superstructure of the industrial growth of a country is built. The development of steel industry should be viewed in the wider perspective of national economic development. In fact, steel is the mother of very many industries; it is the basic raw material of the engineering industries.

The development of steel industry has a close bearing on the development of our agriculture and our rural economy. We require steel to manufacture agricultural implements, for tube-wells, buildings and bridges. No harmonious industrial development is possible without a simultaneous growth of the steel industry. Economists have convincingly argued that for the overall growth of the national economy the existence of excess capacity in steel industry is desirable. It is obvious that we cannot escape from the task of producing the steel we need. The achievement of the target set is not an easy affair. It will require our best efforts. We have confidence that we shall succeed. The magnitude of the problem cannot be underestimated. We have to resolve many complex problems—and there really are many of them.

For instance, to produce one million tons of steel, we need about two million tons of

coal, two million tons of iron ore, 0.85 million tons of limestone and dolomite and 35,000 tons of manganese ore and various other materials. For a one-million ton plant we require as much as five million tons of raw materials. To produce 10 million tons of steel, we shall require over 50 million tons of raw materials. We have not only to search for new sources of supply but also have to develop them in good time to feed the plants. We have to give due consideration to the conservation of natural resources as well.

Our schemes provide for the beneficiation of coal and iron ore with a view to utilising inferior grade raw materials. We are doing everything possible to find new deposits of these essential raw materials. It is remarkable that our geologists have been successful in finding out new mineral deposits, and there is no doubt many more of these will be found; but still much remains to be done.

Transport Problem

The transport of such large quantities of materials to the steel plants poses another difficult problem. The Railways have a very heavy responsibility to fulfil in this as without the raw materials the plants cannot function. Even at present a large number of railway wagons and trucks are required to transport the raw materials and lift the finished goods.

Besides the twin problems of providing raw materials and transport, the plants have to be manned by skilled personnel. As you know, steel plants require an army of workers and skilled technicians, engineers and metallurgists. These men have to be trained for the job. We have given great importance to the training of technicians and engineers and on them depends the successful operation of the steel plant. We have schemes to impart training to these techni-

cians and engineers as well. There is dearth of experienced personnel in the country. Experience is one of those things which we acquire as we get along.*

It must be realised that the three new plants in the Second Plan grew up in a short time and it was not possible to train up requisite technical manpower within such a short time. We had to train a large number of young engineers in this short period to man the plants. This process of training still continues. We are going to expand the production capacity of these three steel plants, and the major burden of running these expanded plants will be on young shoulders. The success of the industry will depend to a large extent on how successfully we resolve this problem.

The capacity of the Bhilai Steel Works will be expanded to 2.5 million tons, of Rourkela to 1.8 million tons and of Durgapur to 1.6 million tons from their present capacity of one million ton each. In addition, the Third Plan provides for a new unit near Bokaro with an initial capacity of one million ingot tons. To ensure quick progress of the project, our men are working round the clock. Preliminary survey has been

completed. Out of the 35,840 acres of land required, about 200 acres have already been acquired, and about 100 engineers and technicians and about 500 workers are on the job. The Bokaro plant will produce only flat products.

The preliminary Project Report for the Bokaro Plant was prepared by an Indian design organisation, and the Project Reports on the expansion of Rourkela and Durgapur steel plants have been prepared by the Design Organisation of Hindustan Steel Ltd. We have plans to further strengthen our Design Organisation which will in the near future undertake the preparation of designs of new plants.

Whatever is desirable and whatever is possible has been done to step up production in the three new steel plants. We hope all the problems will be overcome before long. The genius of the Nation will be severely tested in the coming years in our bid to fulfil the target of 10 million tons. We have to contend with many difficult problems. We have resolved many of these and we continue our efforts to find solutions for others. We move forward with hope and confidence in the service of the nation.

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For semi-automatic operation, the retraction movement of the wheelhead, the start-stop of the workhead, and the start-stop of the feed (either continuous or automatic) can be rapidly coupled together by switches so as to give single-button control over the full cycle.

Another feature of the machine is a dwell or "tarry" arrangement so that it can be brought

in at either or both ends of the stroke for periods up to five seconds, individually variable.

Controls can be coupled, not only when plunge grinding with a continuous in-feed, but also when traverse grinding with an intermittent in-feed. The wheelhead structure is mounted on anti-friction bearings, which provides a unit highly responsive to small increments of feed. A new arrangement, the disposition of the actual feeding units directly behind the wheel, enables wide wheels to be used without any tendency to angular distortion of the wheelhead Units.

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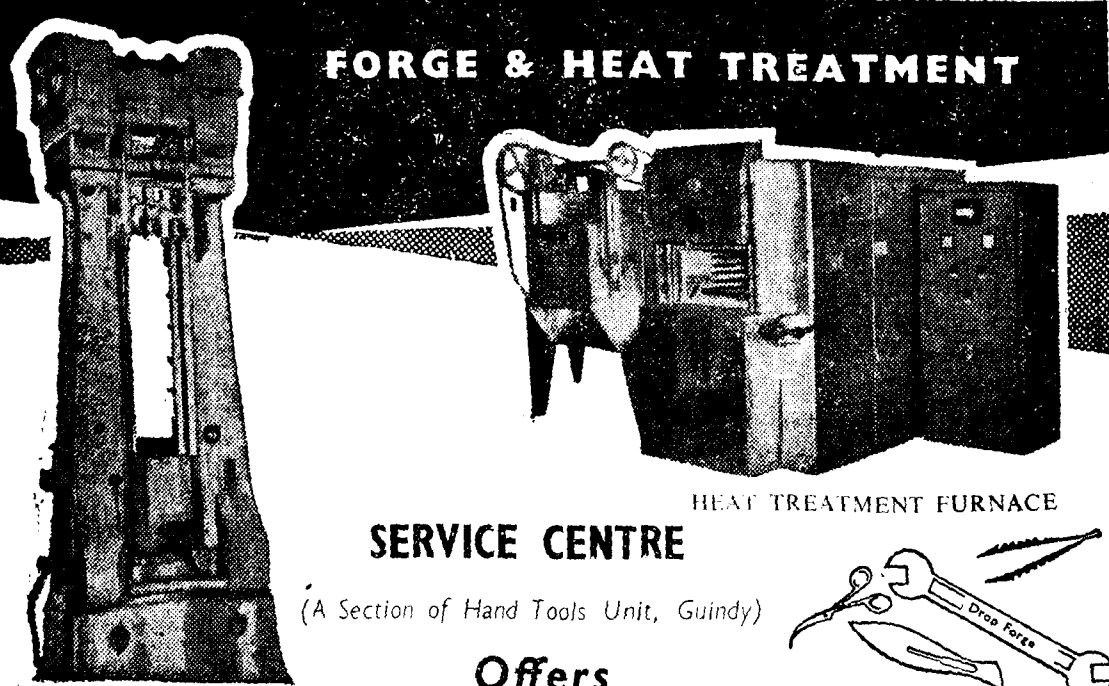
M s. A. A. Jones & Shipman Ltd.,
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MACHINE TOOL RESEARCH PRODUCES NEW CUTTER DESIGNS

New types of tool for lathe turning and face milling that not only last longer but cut metal at higher speeds than existing types. It is claimed, have been designed in the Production and Industrial Administration Department of Britain's College of Aeronautics (Cranfield, Bedfordshire). They have been used for machining steels of 120 ton tensile strength that are difficult to cut with ordinary tools.

The basic element of the new tools is a disc of metal, carbide or ceramic which is about the size of a penny but about twice as thick. The surface of the disc hollowed out by grinding to form a sharp edge. For turning, this disc is attached by a bolt to a thick bar of metal so that the edge of the disc projects beyond the end of the bar and can be brought up to metal to be turned. This device allows the metal to be removed



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from the bar smoothly and quickly with freedom from chatter or vibration.

For face milling, six of these discs are attached in a star formation to projections on the end of a circular tool so that each disc is vertical but out of alignment with the radius of the tool end. With this tool, butting speeds twice as great as those attainable with ordinary tools can be achieved and a gain the freedom from vibration gives long life too even with hard materials.

In both cases, when the tool becomes blunt, a new cutting edge can quickly be obtained by slackening the bolt and turning the wheel to a new position.

*Manufacturers and their agents or
Representatives :*

M s. British Aircraft Corporation Ltd.,
100, Pall Mall,
London, S. W. I.

★

AUDIO INTERCOMMUNICATION EQUIPMENT

A new, fully transistorised, portable intercommunication system which can be used either as a permanent installation, or in the field as a temporary system, has been introduced by a British firm.

The equipment has numerous applications, but is particularly suitable for use where team work is essential and where visual or audible communication is difficult. The whole operation can be controlled by one man who is in two-way communication with each of his team. At the same time complete co-ordination is assured by the fact that all the teams are also in touch with each other. The system uses the "hands free" principle which enables operators to pay full attention to the job at hand without obstruction or constant topping in order to speak.

Two versions of the equipment have been developed—a 2-wire and a 3-wire system.

Similar performance is obtained with either system, the basic difference being in the power feeding arrangements.

With the 2-wire system individual miniature batteries are fitted inside the compact personal amplifier carried in the pocket by each operator. The only connecting wire is therefore a two-core lead to each operator.

The 3-wire system employs a central battery and is more suitable for permanent installations, when power can be taken from a large capacity battery or a mains rectifier.

*Manufacturers and their agents or
Representatives :*

M s. Spembly Ltd.,
New Road Avenue,
Chatham, Kent, England.

★

NET MAKING MACHINE

A net-making machine capable of knotting man-made fibres as well as natural fibre twines has been introduced by a British firm. Believed to be

the only one of its kind in the world, the machine is described as being "a technical break-through of considerable significance." Until comparatively recently,

fishing nets were made almost exclusively from hemp and other natural fibres, and manufacturers experienced difficulty in making nets from man-made fibres.

The machine was designed specifically to overcome these problems, and by using the latest synthetic fibres nets can be stronger

and lighter in weight. They can also be more durable and with a constant mesh size.

*Manufacturers and their agents or
Representatives :*

M s. Porlester Ltd.,
Peckleton Common,
Near Earl Shilton,
Leicester, England.

★

A MAJOR ADVANCE IN FORK-LIFT TECHNOLOGY

A major advance in fork-lift technology is claimed by a British firm for its latest development—a dual side-loading fork-lift truck.

The machine, battery operated, can handle loads upto two tons to a height of 14 ft. (4.2 m.). With its rotating mast, a load can be picked up on one side of an axil and set down on the other while the truck itself remains stationary.

This feature enables it to do some work that until now has been done by overhead cranes. As an alternative to an overhead crane, the truck, it is said, has these

advantages—the full height of a building can be used for storage (no space taken up by gantries and crane gear); one truck can serve several bays; one driver can do the work of several crane drives and slingers; capital outlay is less; no other equipment is needed for the transfer of loads between bays; and the truck can handle long loads and the smallest stillages with equal ease.

*Manufacturers and their agents or
Representatives :*

M s. Cleco Electric Industries Ltd.,
Foundry Square,
Leicester, England.

★

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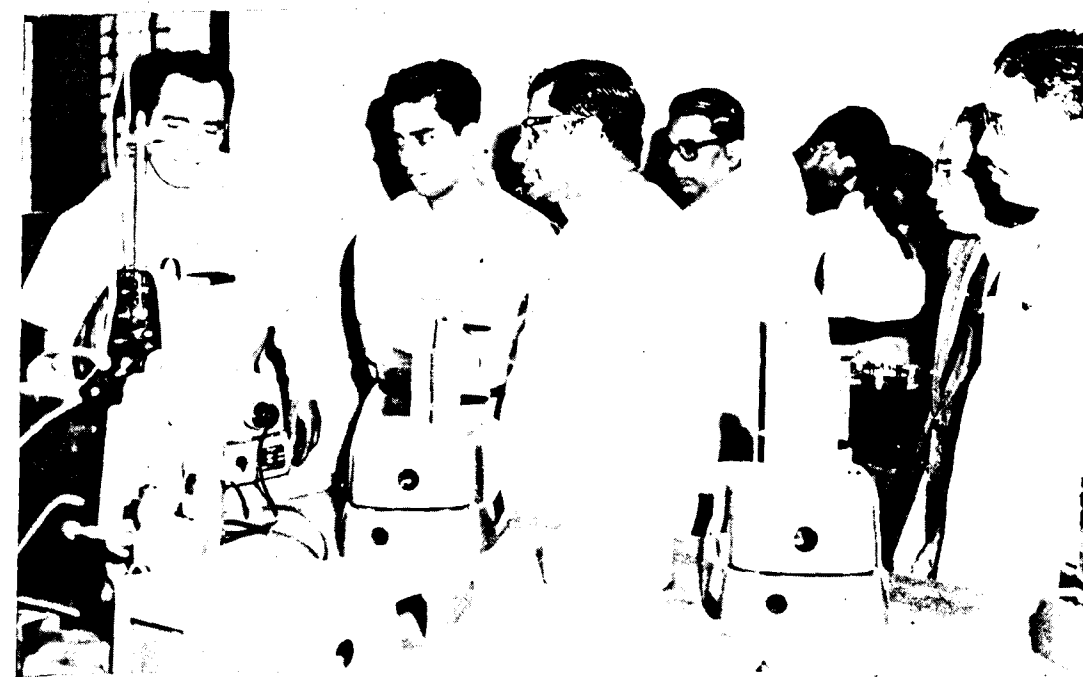
A UNIT OF THE SMALL-SCALE
INDUSTRIES
GOVERNMENT OF MADRAS

Please Contact:

The Superintendent,
GENERAL PURPOSE ENGINEERING WORKSHOP
RAJAPALAYAM.



Sri C. Subramaniam, Union Minister for Steel and Heavy Industries, visited the Industrial Estate at Guindy on August 6, 1962. Picture shows the Minister at the Government Forge & Heat Treatment Shop, examining surgical instruments.



The Minister at a private unit, which manufactures 16 mm cine projectors.



Mr. John Kenneth Galbraith, U.S. Ambassador in India, recently paid a visit to the Indian Investment Centre at New Delhi. The Ambassador is seen with Sri G. L. Mehta, Chairman of the Centre (left).



The Seventh Meeting of the Small Scale Industries and Handicrafts Board, Madras was held on July 16, 1962 at the Industrial Estate, Guindy. Picture shows the members of the Board with Sri. T. R. Krishnaswamy, Secretary of the Board and Joint Director of Industries and Commerce (S. S. I.) Madras (front row centre) who presided over the meeting.

Indian Investment Centre

A REVIEW OF ITS ACTIVITIES

The Indian Investment Centre which was established early in 1961 made a remarkable progress within a short period of one year after its inception. A brief review of its activities for the year ended March 31, 1962 is given below.

During the period, more than 1100 inquiries of various kinds were received from Indian entrepreneurs and 170 foreign investors. Of these, about 550 Indian inquiries related to proposals or establishing industrial enterprises as joint ventures with foreign firms. All of them received the check-list which calls for minimum information on the promoters and their project. Of the 200 check-lists which were returned, nearly half did not meet the requirements on various grounds, such as absence of industrial licence, uneconomic size of the proposed unit and inadequate information regarding the project. Of the remaining 100 proposals, 64 were processed and transmitted to the centre's representatives abroad. Of these 64 proposals, 48 related to engineering industries and 16 to non-engineering industries. These proposals covered a wide range of products such as tools and alloy steel, steel castings and forgings, steel pipes, machine tools, wire ropes, ball and roller bearings, cables, precision and scientific instruments, various items of industrial machinery, chemicals, rubber tyres and tubes, glass and ceramics, H.T. and L. T.

insulators. These proposals were forwarded to various countries to obtain the initial reaction of foreign firms and develop them further for technical collaboration and financial participation. So far, three of those proposals have matured into joint ventures. In respect of eight inquiries, foreign parties have indicated interest and negotiations are in a fairly advanced state. In respect of an equal number of proposals, foreign firms have shown interest and negotiations are likely to start in the near future. The remaining proposals, most of which were forwarded recently, are being actively pursued in various countries.

Other inquiries pertained to seeking information on various aspects of investment and investment opportunities in the country. In addition several hundred entrepreneurs, it is stated, visited the centre to seek advice regarding their prospective investment.

From the total of 170 foreign inquiries 57 were proposals from foreign firms and corporations interested in setting up joint ventures in India. Of these 45 proposals

pertained to manufacturing enterprises and 12 for setting up consulting firms. These were received either directly, through New York Office or through Indian Embassies and commissions in the capital exporting countries. Many of these foreign inquiries, it is stated, were in some stage of negotiations with one or more Indian firms which had already contacted them and they sought the centres assistance in obtaining information on Indian parties, licencing position, Governmental policy towards foreign private investment, position of raw materials, export possibilities and other relevant matters. These were in many cases followed up by visit of representatives of prospective investor-corporations who held detailed discussions with the officers of the centre. In addition about 15 inquiries were received from foreign firms seeking information on the business standing of Indian parties which had approached them.

As a result of the assistance given by the centre, one proposal from abroad has matured into a joint venture and five foreign corporations have chosen their Indian partners; agreements embodying terms of colloboration in these projects have been submitted to Government for approval. Five other proposals are under negotiations; when they are completed Government approval will be sought. In addition, six foreign corporations have indicated their interest in coming to India and are at present conducting detailed inquiries in regard to the

location and size of the project and suitable Indian partners for joint ventures. The inquiries covered a wide range of industries including electronic small tools, piston-pumps, plastic injection moulding machines, industrial control equipment, precision castings, earth moving equipment, hydraulic equipment, rubber contraceptives, generators, heavy chemicals and insecticides, machine tools, malt and malt preparations, wood working machinery, aluminium foil and glass lined equipment.

The centre, it is stated, has also received inquiries from consulting firms in India as well as in capital-exporting countries for setting up joint ventures in India. Some of the foreign firms are reported and have had experience of working in India and one or two have already set up their local organisations.

Advisory Committee set up

The Indian Investment Centre has set up a committee of 16 industrial experts to guide the centre in drawing up industrial surveys and feasibility studies for certain important industries to be developed under the Third-Plan. The Indian and foreign technical advisers of the Centre, in consultation with industrial experts will seek to find gaps in the country's industrial structure or sectors where development has far tended to be slow. After the preliminary investigation is over, the committee will select specific industries for surveys and feasibility studies.

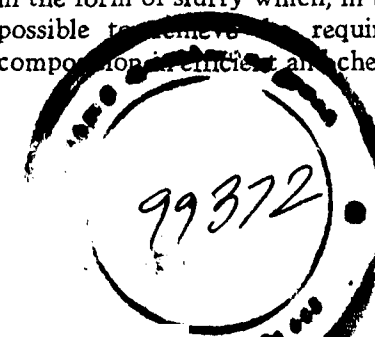
SOME ASPECTS OF THE MANUFACTURE OF CEMENT BY THE SHAFT KILN PROCESS

General: The methods of manufacturing Portland cement may be divided broadly into two processes, viz., the wet and the dry process. According to the dry process, calcereous and clayey materials are separately crushed and dried, compounded in suitable proportions, pulverized and then heated to incipient fusion in a kiln. The resulting clinker together with gypsum is finely ground into a fine powder, viz., Portland cement. In the wet process, on the other hand, no drying is effected at the raw material stage and the materials are pulverized and fed into a kiln in the form of a slurry containing upto 40% water. In other respects the wet process is the same as the dry process.

2. While the cement industry in India employs both the process, the wet process is predominant. There are certain variations of the two fundamental processes which also lend to manufacture of cement under special circumstances, as for example, the semi-dry and the shaft kiln processes. In the semi-dry process, raw materials—as used in the dry process—are sprayed with water (approximately 10%) and granulated at the kiln inlet and fed into the kiln. The 'Lepol system' in which, besides a drum type granulator, an endless travelling grate is used for feeding the granules into the kiln, is most common. In other respects, however, it does not differ from the dry process. The shaft kiln process is also similar to the dry process. The granulated raw materials are fed to the kiln and fired in the vertical kilns. As the kiln performs also the work of cooling, a separate cooler is not required.

3. The first kiln for the manufacture of cement was built by Joseph Espdin a little

more than a hundred years ago. The kiln resembled the conventional lime kiln. Modern methods of cement manufacture have been introduced since the last fifty years when the importance of correct chemical composition of the raw mix, the high temperature of burning and of fineness of cement were duly recognised. There has, therefore, been a continuous improvement of manufacturing techniques and in consequence, the quality of cement and economy of operation of cement plants have steadily improved. The early modified kilns used in the cement manufacture were shaft kilns. The operation of these kilns were difficult, a larger manual labour was employed and the quality of cement was inferior. Later the shaft kilns were discarded by the cement industry as obsolete and replaced by rotary kilns. The rotary kiln plant represented a great improvement as it permitted the blending of raw mix in the form of slurry which, in turn, made it possible to remove the required chemical composition in efficient and cheap operation.



Thus, with the introduction of rotary kilns, manufacturing operations in cement plants have become mechanised.

4. The raw material charge in the old shaft kilns was in the forms of bricks of ordinary size which were made from raw meal, water and coal in suitable presses, situated on the feed platform of the kiln. These were fed into the kiln by manual labour. The bricks required a comparatively long time for proper burning and even so the core of the bricks often remained soft and inadequately burnt, thus affecting the quality of cement.

The rotary kilns when first introduced were about 100 ft. long and were fired by pulverised coal flame. Their daily output varied from 60 to 100 tons. The fuel consumption was rather high using upto 60% of high grade bituminous coal but this additional expense of coal was regarded as worthwhile in consideration of saving in labour and improved facilities of operation. In rotary kilns, heat transfer from the flame to the rolling material is not very efficient and besides, in the wet process a large amount of water contained in the slurry is to be evaporated. The disadvantages were, however, more than outweighed by the ease of handling and blending of the slurry by centralised kiln control and by the subsequent saving of labour. These advantages became more pronounced by further development of the rotary kilns which led to longer kilns. However, large rotary kilns necessitated heavier steel structures for their installation, heavy foundations and larger buildings, and their installation called for a large capital outlay.

Recognising the disadvantage of the early shaft kilns, a considerable amount of work has been done towards their improvement, for the heat transfer in shaft kilns was always more efficient than in the rotary kilns. In

the shaft kiln, heat is transferred from the gases to the materials mainly by convection and the material surface is relatively large, while in the rotary kiln, heat is mainly transferred by radiation to the relatively small surface as presented by the forward rolling material. It became evident, therefore, that if the shaft kilns were to become successful, a centralised kiln control similar to that found in rotary kiln had to be accomplished, the size, of the feed reduced and discharge from the kiln improved. A better way of burning cement would thus be achieved which would have several advantages over the rotary kiln burning methods.

5. In the shaft kiln process, the granulated raw materials are fed to the kiln through the upper revolving feeder chute. After burning they are taken out through the rotary grate and discharging device. The work of the past fifty years has resulted in special firebricks and high pressure ventilation system. Subsequently, the following improvements and changes have been made in the shaft kilns.

(i) Sintering zone is kept very high compared with that of the conventional shaft kiln.

(ii) Before reaching the rotary grate, the temperature of treated clinker comes down to as low as 2000° C., and can be taken out without causing damages to the rotary grate.

(iii) As the firebricks are of special type, they will not melt even when the temperature of the sintering zone rises.

(iv) Superior, uniform clinker can be produced as the supplied materials are hard and uniform in size, being granulated by the excellent granulator as aforesaid.

(v) Fuel consumption per ton of clinker is 95,000—10,00,000 Kcal.

(vi) Coke dusts (or Anthracite) with the heat value over 5,700 Kcal/Kg. may be used for the manufacture of cement.

(vii) Power consumption is cut down to 85 KWH per ton of cement as coal is not required to be pulverized so finely as in the case of a rotary kiln.

(viii) Being lined with special type firebrick, this shaft kiln stands much longer continuous work than the horizontal type kilns.

II. *Some advantages of a Shaft Kiln Plant:* While the earlier shaft kilns were quickly replaced by the rotary kilns on account of many advantages offered by them, there is again in evidence a shift in favour of the shaft kilns as a result of the improvements effected herein, mainly by the introduction of the noduliser and also by a series of other developments. It is now claimed that the vertical kilns can produce cement of the highest quality and uniformity very much similar to that produced from rotary kilns. The most important advantage of the

vertical kilns plant is comparatively low cost of installation. While the establishment of the rotary kiln plant in India is estimated to cost approximately Rs 120 per ton annual capacity, the cost of a vertical kiln plant is nearly Rs. 80 per ton annual capacity or even less depending upon local factors such as cost of raw materials, labour etc. Moreover, it is possible to make the operation of small cement plant of 50,000 to 60,000 ton capacity per annum nearly as economical as that of a larger rotary kiln plant. Smaller shaft kiln plants have another advantage over rotary kiln plants and that is in areas where either the demand is restricted or raw material (mainly limestone) availability is limited, a shaft kiln plant would be the obvious choice. In India, where the transport facilities are yet to be developed to cope with the demand adequately and where the need to conserve foreign exchange is likely to persist for many years to come, the shaft kiln cement factories appear to offer immense possibilities of quick development as would also be seen from the following comparative chart :—

	Rotary Kiln Plant (Wet Process)	Vertical Kiln Plant
i. Cost of plant/ton annual capacity.	Rs. 120—125	Rs. 65—70
ii. Time of delivery of the main plant and equipment. ...	24—30 months	8—12 months
iii. Time of erection. ...	30 months	12 months
iv. Fuel. ...	High grade bituminous coal or fuel oil.	Local grade slack coal anthracite or semi-bituminous coal, cokebreese or fuel oil
v. Amount of fuel used per ton of cement. ...	2,700—4,000 BTU	1,600—2,000 BTU
vi. Number of men employed per ton of cement year per man ...	1,000	800
vii. Power consumption in KWH/tons of cement. ...	105	110
viii. Amount of water needed in percentage of cement produced ...	65%	22%

III. *Economics of a shaft kiln plant:* Although it has been claimed that the working of a vertical kiln plant in its present modified form can be as efficient as that of a rotary kiln plant, it is not without certain reservations. The local conditions such as quality and total availability of limestone or other cement making materials, labour costs, transport charges, etc., would ultimately determine as to which of the two processes should be adopted. It is recommended, therefore, that the following factors, should be taken into consideration:

- (i) The proposed plant site indicating the type of soil and depth of water level.
- (ii) Location of the quarry in relation to the proposed plant site.
- (iii) The type of limestone and clay or shale available, their chemical compositional variation of moisture, physical properties like hardness, grindability, etc., and topographical information of the deposits.
- (iv) Availability and cost of power and water.
- (v) Type of coal available indicating its BTU, ash content, ash analysis, volatile matter, ignition point and moisture variation.
- (vi) Chemical composition of the gypsum and its physical characteristics.
- (vii) Availability of labour and prevalent wages for skilled and unskilled workers.
- (viii) Climatic conditions, average rainfall-maximum and minimum wind and dust storms, and barometric height.
- (ix) Existing road, rail and other transport communications.

It is only after the above factors are known and are properly assessed that the economics of production by the either method can be worked out. In general, for large production of 2 to 3 lakh tons per year, a rotary kiln plant would be decidedly advantageous as the rotary kiln plants are built upto 750 to 800 ton daily capacity, while the highest

output from a vertical kiln plant is only 175 to 200 tons per day.

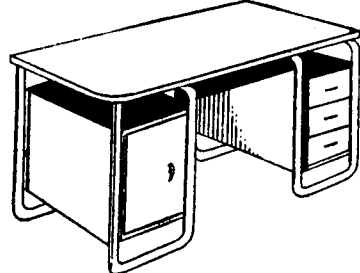
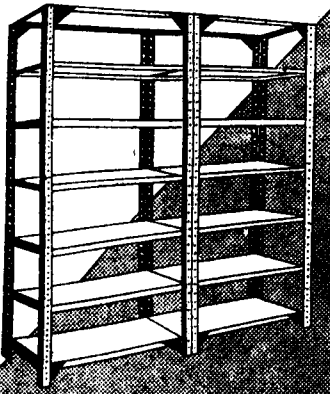
From the above it would be seen that unless all the basic data is available, it would not be possible to estimate with any full degree of accuracy the cost of production by the either method. It is, however, claimed that the cost of production of cement in the vertical kiln plant would be nearly Rs. 55 to 60 per ton of naked cement. A rough assessment of cost of production is given below:—

Item	Cost of cement in Rs.
Raw materials, i.e., limestone and clay ...	8 per ton
Gypsum ...	4 " "
Coal ...	12 " "
Power and water ...	12 " "
Spare parts, lubricants and maintenance ...	6 " "
Labour wages ...	6 " "
Staff salaries and overhead ...	4 " "
Depreciation ...	6 " "
Others including interest on capital etc. ...	2 " "
	<u>60 " "</u>

The plant and machinery for a 175—200 ton daily capacity unit would cost approximately Rs. 45 lakhs. A list of the main items of machinery is given in the appendix. There are a number of suppliers of plant and equipment and it is suggested that the parties interested in setting up cement factories based on the process described in this note may contact them, including the following.

Messrs. Morag Private Limited,
P.O. Box 31, East Brunswick,
69, Barkly Street, Brunswick.

Messrs. Itarco Private Limited,
339, Dadabhoy Naoroji Road, Bombay-1
(Agents of Messrs L. De Roll, S.A.
Switzerland).

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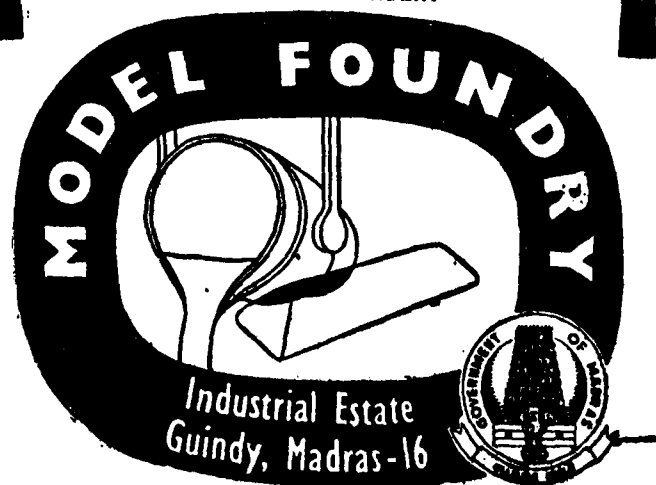
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APPENDIX

List of main items of plant and machinery for a
55,000 ton-per-year cement plant (vertical kiln)

1. Quarry: A portable compressor suitable to supply air for 3 pneumatic drill hammers.

2. Plant: Dumping ramp for road vehicles, dumping bin, variable speed feeder.

Non-clog type hammer mill, belt conveyors, motors, etc.

Hoppers, a travelling gantry crane (4 ton bucket capacity), shell dumping pit, belt conveyors, mortars, etc.

Hoppers for limestone and shell.

Raw meal for drying and grinding with sealed table boxes, elevator and accessories.

Two screw conveyors, aerated pneumatic discharge boxes, elevator and accessories.

Coal hopper, 50 ton capacity, feeder belt conveyors.

Raw meal proportioning system including tube screw conveyor, pneumatic proportioning boxes.

Raw meal/coal screw conveyors.

3. Vertical kiln including noduliser, water pump, water tank and sprays, nodule spreader, kiln top and stack, dust collector, refractories, discharge grates, work wheel drive with motor and accessories.

Clinker and gypsum hoppers, table feeders for clinker and gypsum.

Cement screw conveyors and elevators with drive and motors.

Pneumatic discharge boxes from silos with chutes to screw conveyors.

Cement screw packing plant elevator, packing hopper and dust collector for packing plant.

Mechanical electrical workshops, chemical laboratory and spares including refractories, grinding media, etc.

Total value approximately Rs. 45 lakhs.

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MADURAI

A NOTE ON THE ECONOMICS OF SMALL CEMENT FACTORIES

1. DAILY CAPACITY 12-15 Tons

(i) *General*: The equipment mentioned in this note is designed with a view to produce 12-15 tons of Portland cement per day of 24 hours. Such an offer would need the requirements of production of Portland cement on a small scale with a view to utilise limited resources of raw materials as also to avoid large scale transport of Portland cement over long distances. As such the equipment would provide a solution on the following three aspects of Cement manufacture in the present context:—

1. Low capital cost.
2. Limited availability of raw materials.
3. Problem of transport of raw materials as also finished products.

It may be noted that equipment listed in the note does not include the raw meal crushing and cement grinding mills. This could, however, be provided at an extra cost.

The scope of supply includes the following units:

	Net Weight appr. kg.	Price in Swiss Francs.
(a) Preparation of raw mix.	500	8,000
(b) Vertical Shaft Kiln.	6,500	35,000
(c) Production of combustion air.	1,200	9,350
(d) Measuring panel for combustion air.	150	4,950
(e) Structural Steel Construction.	17,400	37,700
	<u>25,750</u>	<u>95,000</u>

The scope of supply does not include the raw meal crushing and cement grinding mills but can be provided at an extra cost of about Sw. Frs. 50,000.

(ii) *Scope of Supply*:

(a) *Preparation of Raw Meal Mixture Fuel.*

1. *1 mixing conveyor*: for thorough dry mixing of raw meal and fuel (anthracite or coke) by paddles fixed on a rotating horizontal shaft.

Length ab.	1500 mm.
width	200 mm.

Comprising: the casing in welded steel construction with supports for bearings, the main shaft with individually adjustable paddles, the shaft turning in ball bearings.

1 driving unit, comprising:

1 motor reduction gear box, the gear with oil-tight casing, shafts turning in ball-bearings, elastic coupling between gear and conveyor shaft.

2. rated output of driving motor 1.2 hp.

1 *nodulizing disc* for producing nodules from raw meal and fuel by addition of a certain quantity of water.

diameter.	1000 mm.
-----------	----------

Disc with flat bottom, the main shaft turning in roller bearings and supported for adjustable inclination of the disc. The base plate in welded steel of stable and rigid profile, 1 level gear drive with machine teeth.



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A DIVISION OF
THE DEPARTMENT
OF INDUSTRIES
& COMMERCE.

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AND COTTON COVERED WIRES
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A DIVISION OF
THE DEPARTMENT
OF INDUSTRIES
& COMMERCE.

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4. The raw material charge in the old shaft kilns was in the forms of bricks of ordinary size which were made from raw meal, water and coal in suitable presses, situated on the feed platform of the kiln. These were fed into the kiln by manual labour. The bricks required a comparatively long time for proper burning and even so the core of the bricks often remained soft and inadequately burnt, thus affecting the quality of cement.

The rotary kilns when first introduced were about 100 ft. long and were fired by pulverised coal flame. Their daily output varied from 60 to 100 tons. The fuel consumption was rather high using upto 60% of high grade bituminous coal but this additional expense of coal was regarded as worthwhile in consideration of saving in labour and improved facilities of operation. In rotary kilns, heat transfer from the flame to the rolling material is not very efficient and besides, in the wet process a large amount of water contained in the slurry is to be evaporated. The disadvantages were, however, more than outweighed by the ease of handling and blending of the slurry by centralised kiln control and by the subsequent saving of labour. These advantages became more pronounced by further development of the rotary kilns which led to longer kilns. However, large rotary kilns necessitated heavier steel structures for their installation, heavy foundations and larger buildings, and their installation called for a large capital outlay.

Recognising the disadvantage of the early shaft kilns, a considerable amount of work has been done towards their improvement, for the heat transfer in shaft kilns was always more efficient than in the rotary kilns. In

the shaft kiln, heat is transferred from the gases to the materials mainly by convection and the material surface is relatively large, while in the rotary kiln, heat is mainly transferred by radiation to the relatively small surface as presented by the forward rolling material. It became evident, therefore, that if the shaft kilns were to become successful, a centralised kiln control similar to that found in rotary kiln had to be accomplished, the size, of the feed reduced and discharge from the kiln improved. A better way of burning cement would thus be achieved which would have several advantages over the rotary kiln burning methods.

5. In the shaft kiln process, the granulated raw materials are fed to the kiln through the upper revolving feeder chute. After burning they are taken out through the rotary grate and discharging device. The work of the past fifty years has resulted in special firebricks and high pressure ventilation system. Subsequently, the following improvements and changes have been made in the shaft kilns.

(i) Sintering zone is kept very high compared with that of the conventional shaft kiln.

(ii) Before reaching the rotary grate, the temperature of treated clinker comes down to as low as 2000° C., and can be taken out without causing damages to the rotary grate.

(iii) As the firebricks are of special type, they will not melt even when the temperature of the sintering zone rises.

(iv) Superior, uniform clinker can be produced as the supplied materials are hard and uniform in size, being granulated by the excellent granulator as aforesaid.

(v) Fuel consumption per ton of clinker is 95,000—10,00,000 Kcal.

1. reduction gear box in totally enclosed casing with three phase squirrel-cage motor, built for:

rated output 2 hp.
including V-belt drive.

(b) Vertical Shaft kiln.

1. *Kiln hood*: in welded steel construction with control doors and connection socket for the steel plate chimney (the latter is not included in this tender).

1 feeding device for the uniform distribution of nodules; comprising a welded rotary funnel with feeding chute for variable inclination.

1 driving unit consisting of a reduction gear box, totally enclosed with squirrel-gage motor.

rated output 1 hp.
including V-belt drive.

2. 1 *kiln shell* in welded sheet steel, upper part with conical funnel, and one large for assembling with the kiln hood, lower part inside protected by steel plates.

3. 1 *rotary grate equipment* for continuous discharging of clinker, comprising:

1 rotary grate base body in welded steel construction with strong arms to support the grate plate.

1 grate plate with eccentric middle part of steel casting, with caston scrappers covered by a welded protecting lining of abrasion resisting material, including the fixation bolts.

1 main grate shaft turning in a sleeve bearing.

1 elastic coupling and

1 safety coupling with shearing bolts, the coupling fixed on the elastic coupling and on the secondary reduction gear shaft hereafter.

1 combined reduction gear consisting of 2 gear box units, gears running in oil bath, shafts turning in roller bearings.

1 variable speed gear box for infinite speed variation within the range of 1:.

1 V-belt drive.

1 short circuit driving motor
rated output 0.95 hp.

4. 1 *discharging sluice equipment* to extract the clinker out of the kiln without losses of combustion air, comprising the following parts:

1 collecting funnel in welded steel sheet construction, to be fixed at the lower part of the kiln shell.

1 hand operated discharging sluice, comprising the upper part with feeding flap and lever.

1 upper and 1 lower sluice flap, each with the corresponding sealing frames of machines steel, the arrest devices and levers.

(c) Equipment for producing Combustion Air.

1. 1 *blower type "Roots"* of the one stage type, gear box completely closed with oil lubrication, gear wheels with precision machined teeth. Capacity and pressure adapted to the kiln.

1. *Directly driven by*: squirrel-cage motor for direct switching, designed for.

rated output 25 hp.

including the following accessories:

1 flexible coupling.

1 suction filter.

1 safety valve.

1 throttle valve for the control of air flow to the kiln, operated from the burners platform.

2. *The piping system for combustion air* between the blower and the kiln, including the necessary joints.

B. Estimated cost of Production per day :

(i) Raw Materials.		Per day	Remarks
1. 25 tons limestone @ Rs. 7 per ton	Rs. 175.00		Limestone may be available at Rs. 5 per ton.
2. Clay.	Rs. 25.00		
3. Gypsum. (1 ton)	Rs. 30.00		
	<u>230.00</u>		
(ii) Utilities and Power.			
1. Electric Power @ 100 kwh. per ton i. e. 1,500 kwh. @ 1 anna unit.	Rs. 90.00		
2. Water 10,000 gallons @ Rs. 1 50 per 1,000 gallons.	Rs. 15.00		
3. Fuel Coal 17% of capacity i. e. 2.5 tons @ Rs. 30 per ton.	Rs. 75.00		Coke rise is available at Coke Plants @ Rs. 4 per ton.
	<u>180.00</u>		

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Raw Materials	Per day	Remarks
(iii) Salaries and Wages.		
1. Works Manager Rs. 600 per month.	Rs. 20.00	
2. Other Technicians :		
1 Electrical Engineer	Rs. 40.00	
2 Mechanical Engineer		
3 Shift Supervisors		
3. 20 Workers @ Rs. 4 per day.	Rs. 80.00	
	<u>140.00</u>	
(iv) Maintenance. (including maintenance staff)		
1. At 5% of erected cost of Rs. 3 lakhs basis 300 working days a year.	Rs. 50.00	
2. Depreciation @ 10% on Rs. 3 lakhs-same basis.	Rs. 100.00	
3. Interest on working capital of Rs. 2 lakhs @ 6%-same basis.	Rs. 40.00	
4. Taxes and local cess insurance etc.	Rs. 50.00	
	<u>240.00</u>	
	<u>230.00</u>	
i. e. (i) Raw materials.	Rs. 180.00	
(ii) Utilities and power.	Rs. 140.00	
(iii) Salaries and wages.	Rs. 240.00	
(iv) Maintenance.	Rs. 790.00	
	<u>80.00</u>	
Add 10% for management.	Rs. 870.00	
	<u>50.00</u>	
i. e. Ex-factory per ton.		

JULY-SEPTEMBER 1962

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II. DAILY CAPACITY--75 TONS

(i) *General*: In this short note the production of Portland cement on a small scale has been envisaged on the basis of a plant operating on the basis of the dry process utilising vertical shaft furnaces. The capacity of the plant would be 75 tons of Portland cement per day and the equipment will include one small but economic vertical shaft furnace as a vital unit of the factory.

(ii) *Raw materials requirements*: The raw materials necessary for such a project will be limestone, laterite clay where the limestone is not properly constituted and coke bribe for fuel.

(iii) *Capital costs*: The capital cost of the installation of a factory producing 75 tons of Portland cement as mentioned above would be as follows: --

	Swiss Francs		Rs.
1. Preliminary crushing of raw material ...	176.400	C.I.F. charges on above ...	1,80,619
2. Raw material drying and grinding plant ...	435.400	Duty ...	90,000
3. Homogenising installation ...	99.600	Clearing and haulage to site ...	50,000
4. Vertical shaft kiln plant ...	333.800	Railway siding ...	1,00,000
5. Cement grinding plant ...	322.700	Quarry equipment ...	2,00,000
6. Equipment of cement silo and packing plant ...	53.500	Rolling stock for the transport from quarry to the factory ...	1,00,000
7. Gypsum crushing installation ...	29.900	Contour prospecting and quarrying ...	1,60,000
8. Electrical equipment such as motors, cables, switch-gears etc. ...	181.600	Roads, drains and works on site	1,00,000
Total equipmnt cost ...	1,632.900	Land for factory ...	50,000
i.e. Rs. 18,06,190 f.o.b.		Finished building for the plant with all accessories, chimneys etc. ...	6,00,000
		Erection charges ...	2,00,000
		Spares and workshop equipment...	1,50,000
		Laboratory equipment ...	50,000
		Preliminary expenses ...	1,00,000
			<u>38,76,809</u>
		Total cost of complete plant ...	40,00,000
		Working capital ...	5,00,000
		Project cost: ...	<u>45,00,000</u>

(iv) *Working costs*: (actual production of Portland cement about 25,000 tons).

Figures under this schedule are indicated on a yearly basis and have been computed on the requirements of raw materials, utilities, essential services, wages and salaries as also depreciation charges, maintenance costs, central organisation expenses per year.

For the purpose of this calculation the working period of the year is taken as 300-330 days.

1. Raw materials:

	Rs.
(a) Limestone 40,000 tons delivered at site at Rs. 5 per ton	2,00,000
(b) Provision of laterite clay has not been made in this schedule as it is felt that suitable limestone would be available for the dry process so as to avoid the use of clay to supply silica and alumina factors of clinkers.	
(c) Coke bribe 5,000 tons at Rs. 35 per ton ...	1,75,000
(d) Gypsum 700 tons at Rs. 25 per ton ...	17,500
	<u>3,92,500</u>

2. Utilities:

(a) Power 20,00,000 units per annum for the cement plant at 80 kwh. per ton of cement at 1 anna per unit from the public supply system ...	1,25,000
(b) Power for other services of the factory at 10 kwh. per ton at 1 anna per unit from the public supply system ...	16,000
(c) Water for plant, general services for factory etc. at 25,000 gallons per day at Re. 1 per 1,000 gallons ...	7,500
	<u>1,48,500</u>

3. Maintenance and depreciation etc.

(a) Depreciation on the block Rs. 25,27,800 at 10 p.c. ...	2,82,780
(b) Depreciation on buildings etc. on Rs. 7,50,000 at 5 p.c. ...	37,500

	Rs.
(c) Maintenance of plant excluding labour etc. 4% on installed cost ...	1,60,000
(d) Interest on working capital Rs. 5,00,000 at 5½ p.c. ...	27,500
	<u>5,07,780</u>
4. Salaries and wages:	
(a) Superior and Technical Management ...	60,000
(b) Technical staff ...	40,000
(c) Commercial staff ...	40,000
(d) Transport staff ...	20,000
	<u>1,60,000</u>
40 Operatives at Rs. 4 per day ...	48,000
	<u>2,08,000</u>

Cost of production of 25,000 tons of Portland cement:

Item (1) Raw materials ...	3,92,500
(2) Utilities ...	1,48,500
(3) Maintenance and depreciation etc. ...	5,07,780
(4) Salaries and wages ...	2,08,000
Total cost of production of 25,000 tons of cement ...	<u>12,56,780</u>

Cost of production of 1 ton cement naked:

	Rs.
Cost of production ...	50-4-4 per ton
Bags for packing ...	12-0-0 „ „
Municipal tax etc. ...	1-0-0 „ „
	<u>63-4-4</u>

Total cost ex-works Rs. 63-4-4 per ton:

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Manufacture of Precision Instruments

The manufacture of precision instruments is of fundamental importance in relation to future growth of industries and covers a new ground in a highly specialised field. In the context of a rising demand for precision instruments, it would be worthwhile to develop large scale manufacture of these instruments required for various engineering industries in the country, particularly the manufacture of industrial machinery which has to ensure a high standard of precision. Quality precision instruments are also essential for manufacture of cars, motors, diesel engines, machine tools etc.

Many of these precision instruments are manufactured by selected companies in France. A list of items of precision instruments, their type of manufacture indicating makers' names and estimated demand of such instruments is given in the annexure. In regard to optical instruments, the approximate price of such instruments as estimated at the end of 1-9-1960 is also noted against each item.

Complete details and addresses of these French firms are not available, but the make indicated against each item of

precision instruments is well-known in France and particulars regarding these firms can perhaps be had from the Centre National Commerce Extérieur, 10 Avenue d' I' ena, Paris 16, Kleber 17-90, which will facilitate contacts with French manufacturers or producers. The Trade Commissioner for France in Madras, 4, Lamech Avenue, Spurtank Road, Chetput, Madras-31 (Telephone No. 84658) may also be in a position to give necessary assistance to contact the French producers.

Industrialists in Madras State who are interested in this line of manufacture may apply for licences under the Industries (Development and Regulation) Act, for manufacture of individual items of precision instruments and optical instruments shown in the annexure and negotiate for technical collaboration with the concerned French firms.

For further information, industrialists may contact the Director of Industries and Commerce, Chepauk, Madras, or the Secretary to Government, Industries, Labour and Co-operation Department, Fort St. George, Madras-9.

ANNEXURE

Present estimated demand	Rs.	Present estimated demand	Rs.
1. Tachometers :		4. Clock-work Mechanisms :	
(a) "Jaeger".		"Jules Richard"	20 lakhs
(i) Pocket type		Clock-work mechanism	
(ii) Electrical transmission		(i) 24-hour type	
(iii) Magnetic type	5 lakhs	(ii) 8-day type	
(b) "Le Controlographe"		5. Synchronous Motors :	
(iv) The Controlograph		"Lip"	
(3 types)	4 lakhs	Synchronous motors	
2. Taximeters :		6. Micrometers, Vernier Callipers and Dividing Machines :	
The French delegation will enquire if any simple meters costing between Rs. 150 and Rs. 200 are available, suitable for scooters. These meters will have no waiting time clocks and only one uniform tariff.		"Roch"	20 lakhs
3. Manometers :		(i) Micrometers from 0 to 400 m.m. full range including internal and depth measuring.	
"Jules Richard"	15 lakhs	(ii) Vernier callipers: full range	
I. Manometers with bourdon type :		(iii) Vernier height gauge	
(i) Dial type		II. Dividing machines :	
(ii) Recording type		"Roach"	
three types (a) Vertical cylinder		Same as will be used for dividing callipers	
(b) Disc		7. Gauges and Comprators :	
(c) Synchronous motor.		Labinal precision mechanics ("PM")	
II. Manometers for chemical industry :		(i) Plug and ring, both in steel and carbide full range.	
Dial type only			

Present estimated demand	Rs.	Present estimated demand	Rs.
(ii) Snap gauges in both steel and carbide (full range)		(detailed catalogue not available)	
(iii) Thread gauges: International metric and whitworth, full range including turning gauges.		(ii) Hardness testing machine (details not available)	
(iv) Slip gauges in steel and carbide (full range)		9. Testing Machines :	
(v) (a) Comparator horizontal (0 — 150 m.m.)		"Trayvou".	20 lakhs
(b) Comparator horizontal M. 53 M. (upto 3 meters)		(i) Universal vertical testing machine type D.U.A. Models 30 tons and 60 metric tons including dynamo meters.	
(vi) Bench centres :		(ii) Torsion testing machine type SH	
(a) 0 — 125 m.m.		(iii) Small machine for tension upto 250 (for rubber etc.) Type A.J.V.	
(b) 0 — 250 m.m.		10. Precision Balances :	
(c) 0 — 3 metres		"Adamel".	10 lakhs
(vii) Comparator vertical (Model A)		(i) Single pan balance vivancil-357.	
(viii) Hardness tester—Model "Microbilleur"		"Prolabo"	
(ix) Internal micrometer (precision type from 10 to 40 m.m.) in 2 sets		(ii) Chain balance (200 gm 1/10 mg)	
(x) Spline and taper gauges and reference discs (as in "PM" catalogue marked item 7 (x))		11. Vacuum Pumps :	
Note: Item for later option PM airoptic.		Beaudouin	10 lakhs (for items 11 & 12)
8. Dial Gauges and Hardness Testing Machines :		(i) Type 614—single stage	
"Malicet et Biln".	7 lakhs	(ii) Type 718—double stage	
(i) Full range including micro indicator type STF 30		(iii) Oil diffusion pump type PDO 60 (water cooled) with safety device for water)	
		12. X-ray Tubes and Diffraction Cameras	
		"Beaudouin"	
		Details to be supplied.	

OPTICAL INSTRUMENTS

S. No.	Item	Manu- facture	Approximate price in France (exclusive of taxes)
(1) <i>Microscopes:</i>			
1.1.	"Sterette" (leaflet No. [Binocular-viewer] 091-A) Built in 2—fold objective: 12x to 40x magnification Complete with lighting system	B. B. T.	388 511
1.2.	"Stereolab"—series G (def. No. 091. B) Stereoscopic microscope type "greenough" With lighting system	B. B. T.	703 893
1.3.	"Stereorar" (leaflet No. 092) Magnification 6 x to 160 x with optical drums complete with lighting system	B. B. T.	1902
1.4.1.	Universal microscope type u/R ^s (Ref. 082.05/) with inclined monocular head, large square stage with built-in-mecahnical movements and 1/10 verniers; complete with objective 5 x 10 x 40 x 100 x eyepieces 6 x & c. 6.11 (compensating) Quadruple revolving nose piece with two extra quick mount, centreable abbe condenser Iris diaphragms 4 filters on a turret.	B. B. T.	—4.— 3900 800
1.4.2.	Bino-photo-head (ref. 083.60) (inclined-binocular head)		
1.4.3.	Circular-round stage 120 mm in dis.		
1.4.4.	Phase contrast-equipment complete.		
1.4.5.	Metallographic (reflected light) condensers (ref. No. 087.20/087.22/087.50) (i) achromatic. (ii) dark field.		
1.4.6.	Microscope objectives. 124 x [NA 1.25] 100 x [NA 1.25] 60 x [NA 0.80] 40 x [NA 0.75] 20 x [NA 0.45] 2.0 x [NA 0.07] 5 x [NA 0.14]	B. B. T.	

S. No.	Item	Manu- facture	Approximate price in France (exclusive of taxes)
1.4.7.	Achromatic objectives with sliding mountings 100 x 60 x 40 x	B. B. T.	
1.4.8.	Achromatic for phase contrast (sliding mounting) 100 x 40 x	B. B. T.	
1.4.9.	Eye pieces 6 x 10 x 13 x 16 x 24 x (Huyghens)—Orthoscopic for 16 x 24 x (also compensating for binocular mounts)		
1.5.	Microscope	B. B. T.	
1.5.1.	Series B (Ref. 072.00) for all scientific work		
1.5.4.	Type MG (Ref. 079.09)—workshop metallurgical microscope		
(2) <i>Prism Binoculars</i>			
	8 m.m. x 25 m.m. 8 m.m. x 30 m. 8 m.m. x 32 with angle	H. V. Element	
(3) <i>Optical mechanical instruments</i>			
3.1.	Optical dividing heed	O. P. L.	
3.2.	Metals hardness tester	MORIN	138
3.3.	Mocometric reader	O. P. L.	480
3.4.	Profile projector	B. B. T.	4000
3.5.	Optical precision level	S. G. O.	980
3.6.	Auto-collimeter		

S. No.	Item	Manu- facture	Approximate price in France (exclusive of taxes)
(4) Survey Instruments :			
4.1.	Levels (clinometers) Type SN2 c.	SLOM	1360
4.2.	Level (Niveau A Lunette)	MORIN	600
4.3.	Pant—clisimetre Type SPC	SLOM	290
4.4.	Theodolite (tachymeter de chantier type STO 22)	SLOM	2500
4.5.	Optical squares (equerres optiques)	MORIN	140
(5) Laboratory Instruments :			
£			
5.1.	Electrophotometer with galvanometer	P. Meuner	2700
5.2.	Electro Colorimeter (Cheaper model)	J & Y	
5.3.	Flame—Pholometer	JOUAN	3600
5.4.	Optical—Pyrometer	J & Y	1850
5.5.	Spectro—Photometer type “Special Junior” with grating and P. E. Cell	JOUAN	3000
5.6.	Paper Electrophoresis	JOUAN	3200
5.7.	Spectro—scope for rapid analysis (without generator)	HUET	3900
5.8.	H. F. arc or spark generator	HUET	2800
5.9.	Polarimeter—more accurate type to be used with a monochrometer (without monochrometer)	J & Y	3500
Laboratory Instruments :			
5.10.	Monochrometer (“SAVOIE”) Bruhat 3,800—8,000 A. F./10		1500
5.11.	Spectrometer (visible) “Toseane”		3500
5.12.	Spectrometer—spectrograph (“Toscanar no”)	J & Y	4500
5.13.	Quartz spectrograph UV 30	HUET	9500
5.14.	Optical Cell with Holder	HUET	350
5.15.	Spectrum Projector	HUET	3100
5.16.	Densitometer for spectral lines	HUET	4500

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ARTICLES

MIRROR INDUSTRY

THE FIRST MECHANISED INDUSTRY IN SOUTH INDIA

By Sri K. Muthuvenkatachalam, B.A., (Hons.)
Retired Deputy Secretary
to Government of Madras

Every human being gifted with a vision is able to see all things in life excepting himself. For seeing himself he has to be content with looking at his image in a mirror. He naturally likes to see a real reflection of himself in a good mirror and not a distorted reflection of his self. A real reflection can be had only from mirrors made out of polished plate glass and there is no substitute for plate glass for making good mirrors. For the manufacture of good quality mirrors the silvering of plate glass is the main criterion which should be done with special technical knowledge based on experience.

In the post of war period mirrors were imported from abroad in large numbers, wasting a lot of foreign exchange thereby. After the attainment of Independence, however, some of the private sectors in India started the manufacturing of mirrors in India itself. The quality of mirrors was however, poor, to begin with, as there was no proper technical assistance forthcoming for the correct process of manufacture. With the development of our nation and advance of civilisation the demand for quality mirrors is ever increasing and every one who buys indigenous goods insists on superior quality mirrors equal to foreign standard. For a long time mirrors were made in India by manual labour and by hand processing on plate glass obtained from abroad. Thanks to the encouragement given by the Government of India, the private sectors in India are now producing superior quality mirrors on a mass scale with the aid of technical "Know How" and machines imported from foreign countries.

The Government Industrial Estate at Guindy can now boast of such a mechanised mirror industry, the first of its kind in the whole of South India. Although such industries have been functioning in Bombay, Calcutta and Delhi, there was no mirror manufacturing industry run by machines so far in the South. This long felt want has now been fulfilled by the opening of a mechanised factory at C-14, Industrial Estate, Guindy, Madras under the name and style of "Pilco-Mirror Industries" (Proprietors: M s. K Natarajan & Co.) with effect from 1st January 1962.

It is a well-known fact that Belgium mirrors are world famous. These mirrors are now manufactured in the above factory with the aid of costly machines imported from Belgium. "Pilco Brand" mirrors are now produced in the factory which are equal to, if not better than, foreign standard high quality mirrors. The mirror backs of the "Pilco Brand" are now silvered and copper protected in the latest method adopted by foreign countries such as Belgium, Ireland etc. The processes preliminary to silvering viz., bevelling, grinding and polishing are now done here perfectly and accurately by foreign machines. The subsequent processes of silvering coppering, electric heating and back protection are also done in accordance with secret and confidential formulas purchased from foreign sources and by means of special type of spray guns imported from abroad to ensure life long quality and service.

The above achievement was made possible by the encouragement and active support of the Madras Government. They have been good enough to grant a State aid loan for the purchase of the foreign machinery and have also provided factory space for locating the industry in the Government Industrial Estate at Guindy.

With a view to develop the indigenous products of mirrors, the Government of

India have banned the import of silvered mirrors from foreign countries from the year 1958. They are however allowing the import of plate glasses by actual users 'consistent with the foreign exchange position from time to time, since these glasses which are necessary for manufacturing good mirrors are not available in India. India is at present manufacturing only sheet glasses. Big size quality mirrors cannot be manufactured from sheet glass as they will present distorted reflection and the mirrors will have bubbles, specks etc. Further, the silvering on sheet glasses is found to fade away soon and produce black and white dots which develop gradually and such mirrors get spoiled very early.

It is rather unfortunate that plate glass, which is the indispensable raw material for manufacturing high quality mirrors, is not yet produced in India. Therefore, the mechanised factories in India have necessarily to depend on import of plate glass from abroad till such time as India is able to produce the same. Due to foreign exchange difficulties which have become more difficult in the recent past, this new factory in the Guindy Industrial Estate is faced with the problem of securing sufficient raw materials (plate glass) for maintaining itself. But it is hoped that in the long run, either by an ease in the foreign exchange situation or by the enterprises of Indian entrepreneurs in their effort to manufacture plate glass in India itself, this new industry started under good auspices will have a bright future in the industrial set up of the Country.

This industry has also an ambitious plan to export its quality mirrors to foreign countries and compete with foreign markets. When this plan fructifies, it will not only help to maintain itself but also help to ease the foreign exchange problem to that extent.

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JAPANESE MACHINERY ON HIRE PURCHASE

Small scale industries in the country will soon be in a position to obtain Japanese machinery on hire purchase basis through the National Small Industries Corporation according to Mr. T. Mseda, Acting Consul-General for Japan. He told that an agreement signed recently at New Delhi; a sum of Rs. 30 lakhs was set apart under the yen credit for the purchase of machinery by the National Small Industries Corporation.

★

SCOPE FOR ESTABLISHMENT OF LARGE SCALE INDUSTRIES IN NEYVELI AND SALEM AREA

1. *Manufacture of Porcelain and Ceramic ware for Electrical Goods.*

The target capacity fixed for Third Plan is 30,000 tons, out of which a capacity of 7,780 tons is still available for licensing. Two Units in Madras State have so far been licensed for manufacture of H.T. insulators. There is still scope for establishing additional units in this part of the country.

Hence, interested entrepreneurs may take up this line of industry.

2. *Manufacture of Firebricks.*

So far, no licence has been issued for the establishment of a factory for the manufacture of firebricks near Neyveli. Hence, interested entrepreneurs may take to this line of venture also in this area.

★

RUPEE PROJECT FINANCED OUT OF U. S. GRANTS UNDER P.L.—480 GRANT FOR CRAFTSMEN TRAINING

The P.L.—480 agreements signed with the Government of U.S.A., from time to time since 1956, have enabled the Government of India to purchase agricultural commodities from the U.S.A., against payment in rupees. The rupee payment is deposited in the U.S.

Government account in India. The agreements provide that a portion of the rupee funds so generated will be given back by the U.S. Government to the Government of India as grants for utilisation in promoting the economic development in the country.

One of the projects selected for the application of the aforesaid U.S. grants under P.L.—480 is "Craftsmen Training". The I.C.A., has allocated a grant of one crore for this project. This amount will be made available to reimburse the expenditure by Central and State Governments between 1-4-'61 and 31-3-'63 on Craftsmen Training Schemes, in the States and Union territories during the above period.

So far as Madras State is concerned, an allotment of Rs. 325 lakhs has been made for development of craftsmen training now under Third Plan providing for an additional 3532 seats in the State for training of craftsmen in the Third Plan. The assistance cover also the National Apprenticeship Scheme and the Scheme for evening classes for industrial workers.

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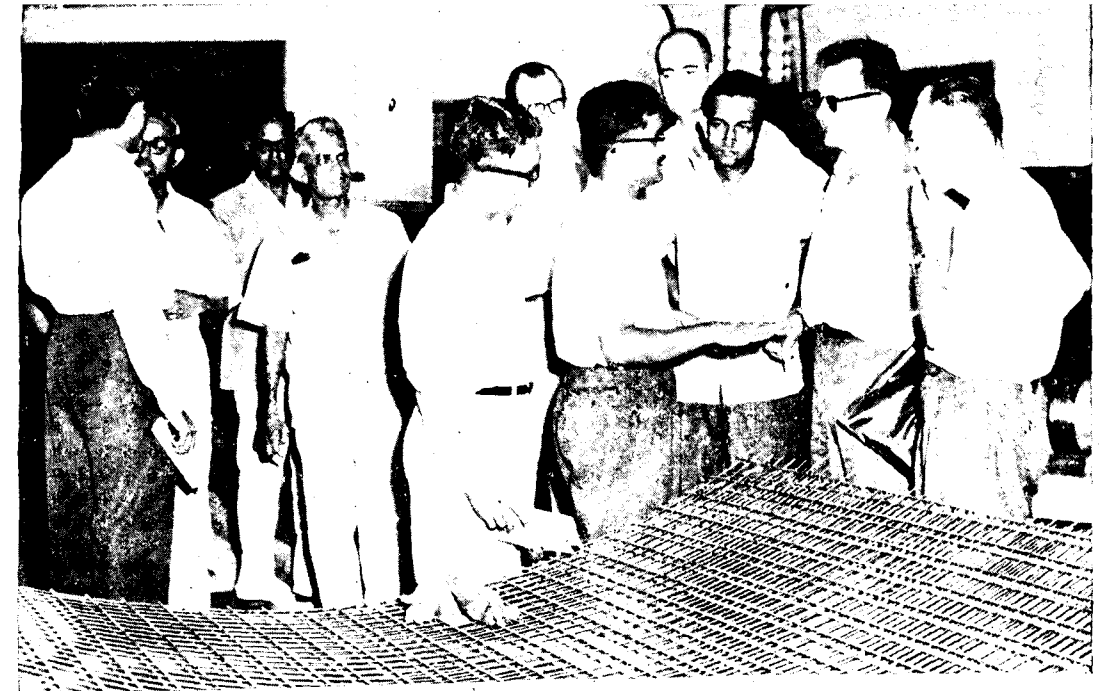
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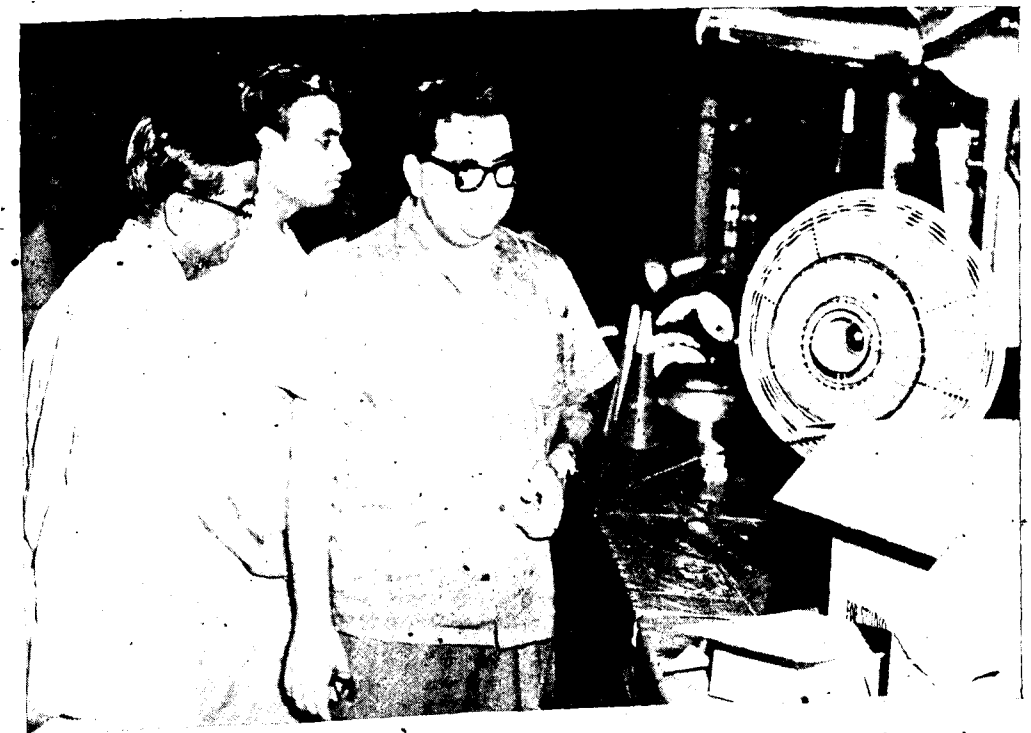
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A U.S. Steel Techno-Economic Survey Team recently visited Madras to study the industrial progress in the State. In the picture the members of the team are seen in a private unit at the Industrial Estate, Guindy.



Sri Billimoria, Director, Tata Iron & Steel Co. Ltd., while on a visit to the Guindy Estate, is seen at the Exhibition Hall.

COMMON LEASE SHOP

DEPARTMENT OF INDUSTRIES & COMMERCE, MADRAS



Sri R. Venkataraman, Minister for Industries, Government of Madras, recently paid a visit to the Kancheepuram Metal Workers' Co-operative Cottage Industrial Society Ltd. at Kancheepuram. Picture shows the Minister keenly examining brass vessels at the Society. On the left is Sri P. Sabanayagam, Director of Industries and Commerce, Madras.



A view of the Government Common Lease Shop at the Industrial Estate, Guindy, Madras.
(See report on page 81)

It is highly difficult and nearer to impossibility for a small scale industrialist to invest on specialised machines or on machines for which he cannot have full time work as per his line of production. Hence, it necessitates him to depend upon another industry that can do that operation alone according to its programme and schedule as and when he requires. No industrialist may come forward to take up such type of hard scheduled works and disturb his own line of production. This is the main factor which decides whether a small scale industrialist can go in for an additional or new line of production for which he is not having full machinery and equipment. The Government has realised this situation and has come forward in setting up this unit purely to do service to the small scale industrialists.

2. The Common Lease Shop is a servicing unit functioning under the control of the Director of Industries and Commerce, Government of Madras, at Industrial Estate, Guindy, Madras. The Technical Co-operation Mission of the United States was kind enough to spare about 31 specialised machines, free of cost, to Government of Madras to render useful service to small scale entrepreneurs.

3. These machines were housed at the Common Lease Shop, Industrial Estate, Guindy and leased out on hourly basis to small scale industrialists to enable them to undertake new and additional lines of manufacture.

4. This unit started functioning from Sep., 1958 and it was formally inaugurated by Sri M. A. Manickavelu, (former Revenue Minister of Madras) in February, 1959.

5. Since most of the machines are of specialised nature and are once used in early stage, much difficulty was experienced in commissioning them, and making them available to private industrialists. But however these initial difficulties were overcome and this unit started extending the real service to various small scale industrialists.

6. At present the following machines are available for lease:

1. Gisholt Turret Lather I ... 2½" dia
2. " " " II ... 1½" "
3. Midland " " ... 2 " "
4. Bardons and Oliver Turret Lathe ... 1½" "
5. Simmons Turret Lathe, Coolant ...
6. Bullard Vertical Turret Lathe 24 " swing
7. Sundstrand Milling M/C Coolant ... 18 " table Travel x 8" dia

8. Surface Grinder ...
9. Cincinnati Milling M/C ... 7" pites
dia x 2" face width
10. Fellows Gear Shaper ...
11. Norton External Cylindrical Grinder
Cap. 6" swing 30" cc.
12. Brow and Sharp Milling M/C

7. This unit is fully equipped to undertake any capston work (within 2½" dia capacity) milling, surface grinding, shaping etc., cylindrical grinding and sour gear cutting, and is equipped with the latest type of precision measuring instruments including slips.

8. This unit provides trained personnel to operate the machines and required tools and equipments, and necessary processing and economic methods are evolved to improve the production. All orders are

executed according to the customers drawing or samples and special care is taken to maintain the tolerances specified.

9. It is open to all enterpreneurs both in and around Industrial Estate, Guindy and outsiders to get any machine on hire provided that machine is free by contacting the officer in charge of the unit. The charges levied are moderate and the work is executed in time to the fullest satisfaction of the customers.

10. As it is found that there is more scope for serving the industrialists an expansion scheme was drawn up and the following machines are being added.

Machinery:

1. Herbert Capstan No. 4.
2. Vertical Surface Grinder.
3. Cooper Shaper 24" etc.

PROSPECTS FOR MANUFACTURE OF PLASTER (GYPSUM) BOARD

Gypsum board is a new product for India. It is made by moulding low grade gypsum. A rapid survey conducted by the Central Small Industries Organisation indicates that in view of the large resources of gypsum in the country and the growing pace of construction activities, there is good scope for manufacturing plaster boards in many States. Rajasthan, Jammu and Kashmir, Madras, Gujarat, Andhra Pradesh and Uttar Pradesh offer good prospects for establishing units in this industry because of reported deposits of gypsum. High grade gypsum having 51 per cent to 85 per cent purity is used in the manufacture of ammonium sulphate and cement whereas low grade gypsum is considered as waste. The manufacture of plaster boards in India will help in the utilisation of this low grade gypsum. The use of plaster board will also effect savings of bricks, cement and concrete. The product is a new one and people are not familiar with its use. Its utility in multi-story buildings, hotels and restaurants is still in an exploratory stage. However, considering its low cost of manufacture which is reported to be between 15 and 20 nP. per sq. ft., plaster board is like to become a popular building material.

There are reported to be only 17 units manufacturing plaster boards located in Maharashtra, West Bengal and Gujarat. Their capacity is 44 lakhs sq. ft. of plaster board. The production has rapidly

increased. It was 22.5 lakhs sq. ft. in 1960 as against 1.28 lakhs sq. ft. in 1957.

The process of manufacture is not difficult. The calcined gypsum is mixed with saw dust and wooden fibre or some other suitable additive depending upon the availability of local material. This mixing process is done on a conveyor belt and water is added to make the slurry. The wet mixed mass is spread on a sheet of paper on the forming belt and levelled to the proper thickness. The top layer of the paper is added and the edges are folded over. The term knife then cuts these large sheets to proper dimensions. The soft board then moves on to live rollers and is passed into a tunnel dryer. Necessary temperature in the tunnel dryer is maintained at the loading and unloading ends. The finished sheets are stacked on pallets for handling by lift trucks. The equipment required for setting up a plaster board manufacturing unit is:

- (i) Conveyors
- (ii) Feeds
- (iii) Screens
- (iv) Elevators
- (v) Separators
- (vi) Calciners

All these machines are indigenously available. ★

FOAM GLASS TO BE MANUFACTURED IN INDIA

India will be shortly producing foam glass developed by the Central Glass and Ceramic Research Institute of Calcutta. This will save the country valuable foreign exchange to the tune of Rs. 50 lakhs per year.

Foam glass is light thermal insulating material approaching cork in its performance. It has the advantage of being non-combustible and is unaffected by the action of moisture and moth. The process of production has so far been a closely guarded secret of the very few countries now producing it.

Covered under patent the new process has now been assigned to an Indian firm and a factory near Bombay will soon go into production. The country hereafter will not have to depend on imports for this material.

At present India imports cork-slabs (mainly from Portugal) worth about Rs. 50 lakhs annually for air-conditioning, cold storage and other developing industries. Foam glass is an excellent substitute for cork in this respect and can be extensively used in building, air-conditioning and cold storage industries, as well as for insulating hot and cold pipes and tanks.

Following the success of the Central Glass and Ceramic Research Institute in developing foam glass, a request has been received from the Glass Research Institute of Czechoslovakia for the exchange of the technical "know how" relating to the production of the material. The Council of Scientific and Industrial Research has agreed to exchange the technical information. ★

ILLUMINATING FUELS FROM COAL TAR

A process for the production of middle distillates (kerosene substitutes) and diesel fuels, from coal tar and its fractions has been developed at the Regional Research Laboratory, Hyderabad. The process consists in the extraction of coal tar and its fractions, before or after removal of tar acids and bases, by organic solvents or solvent mixture. The extract is distilled to recover the solvent for re-use. The residue is hydrogenated under pressure and the hydrogenated product is again extracted with suitable organic solvents to remove the bulk of saturated hydrocarbons.

The raffinated oil thus obtained can be used in wick lamps as illuminating fuel. It can also be used as diesel fuel. A distinctive feature of the process is that the

luminosity and smoke point of the fuel can be controlled by adjusting the solvent.

The production of middle distillates from coal is expected to bring about a marked change in the oil economy of the country. At present middle distillates, like diesel, kerosene and bitumen, are in short supply, and India imported in 1960-61, diesel and kerosene oil valued at Rs. 27 crores. The Third Five Year Plan estimates that even after the two public sector refineries are brought into operation, the deficit in kerosene supply would be about 300 million gallons. Once India is able to produce middle distillates like diesel and kerosene oil from coal tar, the present imbalance resulting from the surplus production of gasoline in oil refineries will be corrected. ★

OIL SEAL LEATHER

A process has been developed at the Central Leather Research Institute, Madras, for producing oil seal leathers by impregnating chrome-retanned leathers with polysulphide liquid polymers. The desired degree of impregnation is provided by using the different polymers and by pretreating the leathers with different chemicals such as cobalt hexogen, lead octate etc., No shrinkage during or after impregnation takes place in leathers processed properly. The shrinkage temperature of the impregnated oil seal leather in oil medium is between 150° and 160° C. The oil seal leathers produced at the Laboratory are cheaper than the imported oil seal leathers or synthetic oil seals. Their performance

is comparable to that of imported varieties.

Oil seal leathers are used for a wide variety of purposes in aeroplanes, automobiles and elsewhere as pneumatic or hydraulic packings subjected to high pressures, for example, in airbrakes and hydraulic rams. The main properties desired are retention of the impregnated material resistance to hot air, water and hot oils under high pressure (sometimes as high as 15,000 lb/sq. inch) and temperatures 53.9° C—121.1° C. The leathers have the advantage of lubricating due to capillary action without scouring the shaft and are resistant to solvents such as carbon tetrachloride, trichloroethylene, benzene and ketones. ★

DECOLOURISATION OF GLASS

Selenium has long been used for decolorising glass melted in tank furnaces. The Indian glass industry consumes about five tons of imported selenium annually for this purpose.

A new process developed by the Central Glass and Ceramic Research Institute, Calcutta, does away with the use of selenium

and used instead a base mix containing cerium dioxide, cobalt oxide and manganese dioxide. A glass free from colour is thus obtained, and it can be fabricated to the desired shape by blowing pressing or drawing or by a combination of these processes. The articles are then annealed at the appropriate temperature range.

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ELECTRICAL INSTALLATIONS IN FACTORIES

INFORMATION FOR INDUSTRIALISTS

1. All Electrical installations, High Tension, Medium Pressure and Low Voltage fall within the scope of the Indian Electricity Rules (Revised) 1956.

2. No installation will be permitted to erect and connect to the supply equipment which is not in accordance with the standards prescribed by the Indian Standards Institution, in capacity, in voltage and in frequency.

3. No equipment which does not satisfy the terms and conditions of the supplier will be permitted to be connected.

4. All the equipment should be installed by Licensed Contractors—High Tension equipment by ‘A’ Grade Contractors and Medium Pressure and Low Voltage at least by ‘B’ Grade Contractors.

Before planning up the installation or ordering equipment intending industrialists are advised to consult the Chief Electrical Inspector to Government and also the supplier.

They are advised to use the forms enclosed while applying for approvals for their proposals.

A. HIGH VOLTAGE INSTALLATION

I. Particulars of Installation:

1. Name of consumer with the official address to which all communications should be addressed.

2. Location of the H.V. Installation (full particulars of the Town/Village and name of street to be furnished).

3. Power requirements, with nature of load.

4. Sanction of Load with authority (Copy of sanction to be enclosed).

5. Name of Contractors (with Licence details) carrying out the installation and the name and certificate No. of the Supervisor who is directly to supervise the work.

II. Technical

1. *Details of the H.V. Installation:*

(a) Sub-station Indoor or outdoor.

(b) Transformer

Make and S. No. if available	K.V.A.	Voltage ratio.
---------------------------------	--------	-------------------

(1)

(2)

(3)

(c) Switchgear (details of normal and rupturing capacity should be (furnished).

(d) Are all equipment constructed in accordance with Standard I.S.I.

(e) Do all equipment satisfy conditions of the supplier.

(f) Other equipment

EXPORT INSPECTION ADVISORY COUNCIL CONSTITUTED

The Government of India have decided to constitute an Export Inspection Advisory Council to advise them on all matters relating to quality control and pre-shipment inspection of export goods. The Council, which has been set up after consultation with the Board of Trade, will particularly prepare an operational programme for quality control on export goods with priority for pre-shipment inspection measures.

The Special Secretary (Commerce) in the Ministry of Commerce and Industry will be the Chairman of the Council and the Joint Secretary in the Ministry of Commerce and Industry (Department of International Trade) will be the Deputy Chairman. The members of the Council are Director, Indian Standards Institution, New Delhi; Agricultural Marketing Adviser to the Government of India, Nagpur; Director-General of Commercial

Intelligence and Statistics, Calcutta; Managing Director of Export Risk Insurance Corporation, Bombay; Director of Quality Control, Ministry of Commerce and Industry and a representative each of the Directorate General of Supplies and Disposals, New Delhi, State Trading Corporation of India, New Delhi, and Cotton Textile Fund Committee, Bombay.

The appointment of the Council is in pursuance of a suggestion made by the Ad-Hoc Committee on Quality Control and Pre-shipment Inspection, which had been set up in November 1960, that the task of improving the quality of export goods would be facilitated if the Union Government had made available to it, the advice of persons intimately concerned with the day-to-day problems of quality control and with export promotion generally. ★

EXPORT PROMOTION SCHEME: PROCEDURE SIMPLIFIED

With a view to simplifying the procedure under Export Promotion Scheme, the scheme for enrolment of exporters has been abolished. No enrolment certificate will hereafter be asked for from any exporter in connection with his application for registration or for incentive licences under any export promotion scheme. An exporter will here after have only to register himself with an export promotion council, a commodity board or the export promotion officer at the port (as the case may be) in order to avail himself of the benefits of the

Export Promotion Scheme. An exporter once registered will not have to apply for registration every years. The present procedure of exporters having to re-register themselves annually will discontinue. In order to expedite the issue in incentive licences against exports, the export promotion councils have also been authorised to recommend direct to the licencing authorities, import of such raw materials, components and spares as an exporter is permitted to import as per this latest actual users licence. ★

B. MEDIUM PRESSURE INSTALLATION

I. Particulars of Installation:

1. Name of consumer with registered address.
2. Location of installation (full particulars of Town/Village and street to be furnished).
3. Load requirements.
4. Sanction of load with authority.
5. Name of contractors (with licence details) carrying out the installation.

II. Technical:

1. Details of Installation:

- (a) Motor or other equipment.
- (b) Switchgear
- (c) Distribution Mains, if any.

2. Drawings (in triplicate) to be sent:

- (a) Plan of layout of equipment.
- (b) Schematic (electrical) layout,
- (c) Elevation of major switchgear with erection details.
- (d) Earthing arrangements.

III. General

1. Have the equipment been ordered, if received, give details.
2. Probable date of completion of installation.

N.B.: Additional sheets to be used if needed for furnishing information against any item.

(g) Distribution mains, if any (details of line supports and conductor size to be furnished.)

(h) Are these to be erected entirely within the property of the consumer.

2. Drawings (in triplicate) to be sent:

(1) Site plan showing point of commencement of supply, H.T. installation routes of mains (O. H. and U.G.)

(2) Plan and elevation of substation with clearance to nearby buildings or structures to be always furnished in the drawing.

(3) Schematic layout of equipment.

(4) Sectional elevation of switchgear with erection details.

(5) Earthing arrangements.

III. General

1. Have the equipment been ordered—if received, details may be given—if not received probable date of receipt.

2. Probable date of completion of installation.

N.B.: Additional sheets to be used if needed for furnishing information against any item.

SCHEME OF ENROLMENT OF EXPORTERS

RE-ALLOCATION OF CERTAIN EXPORT ITEMS

In accordance with the latest decision of the Ministry of Commerce and Industry, Government of India, New Delhi, certain export items, which are mentioned below, have been re-allocated to various enrolling authorities. Firms desirous of enrolling themselves for these commodities may hereafter send their applications for enrolment to the enrolling authorities shown against the items:

(1) Secretary, Engineering Export Promotion Council, India Exchange (7th Floor), India Exchange Place, Calcutta-1:—Plastic switches, plugs and other electrical wiring accessories, plastic insulated cables, mica condenser films, steel poles for games, steel sections namely, bars, billets, blooms, sheets, plates, baling hoops, wire etc., but excluding iron and steel ingots; wooden furniture (other than art furniture), wooden cabinets for radios, gramophones and radio-grams, gramophone records (with music as well as blanks);

(2) Secretary, Chemicals and Allied Products Export Promotion Council, India Exchange (8th Floor), Calcutta-1:—Ceramic

insulators, refractory bricks and shapers ethyl alcohol, absorbent cotton, myrobalan extract, drugs (finished) derived from botanical sources;

(3) Secretary, Plastics and Linoleums Export Promotion Council, the Maharashtra Chamber of Commerce Building (3rd Floor), 12 Rampart Row, Bombay-1:—Fountain pens and spectacle frames—all kinds.

(4) Secretary, Spices Export Promotion Council, T. B. Road, Ernakulam:—Turmeric powder, oleoresin of pepper, oleoresin of cardamom;

(5) Secretary, Sports-Goods Exports Promotion Council, 5 Rani Jhansi Road, New Delhi-1:—Football bladders, rubber playball, other sports goods made of rubber, sports hosiery, cups, medals and trophies, carrom strikers, ping pong rubber sheet or sheath (cut to size);

(6) Director-General of Commercial Intelligence and Statistics, 1 Council House Street, Calcutta-1:—Crude opium, road tar, beer, rum, whisky, country liquors, paraf-

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vegetable oil, kulfa oil, linseed oil, lemon-grass oil, other essential oils, all vegetable non-essential oils.

(7) Secretary, Mica Export Promotion Council, 7 Dacres Lane, Calcutta-1:—Micanite.

(8) The Textile Commissioner, Witter Road, Ballard Estate, Bombay-1:—Lint.

(9) Secretary, Cotton Textile Export Promotion Council, Cecil Court (4th Floor), 20 Lansdowne Road, Appollo Bunder, Bombay-1:—Kit bags of canvas.

(10) Secretary, the All India Handicrafts Board, Taj Barracks, Janpath, New Delhi-1:—Metal artware (non-ferrous)

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only, art furniture, agarbatti, precious stones, semi-precious stones, synthetic stones, real pearls, cultured pearls, hand embroidered fabrics, jewellery and ornaments;

(11) Secretary, Coir Board, Post Box No. 80, Ernakulam :—Cricket matting.

(12) The Jute Commissioner, P-8 Mission Row Extension, Calcutta-1-Paper lined Jute bags and plastic lined jute bags. ★

INCENTIVE TO EXPORTERS

As a measure of export promotion the Government of India has decided to allow drawback of customs and/or Central excise duty on exports of 22 more items. They are tarboilers, duplicators, detonators, machine tools, pistons, Gudgen pins, cyclinder lines, piston rings, centrifugal castings, hydraulic brake fluid not otherwise specified, fountain pen nibs, switch gears and control gears and

components, capacitors, cocoa powder, chocolate, cocoa butter, stainless steel, copra cake, deoiled copra cakes, storage batteries and steel barbed wire. Certain changes have also been made in items relating to textile machinery, radio receivers, voil yarn, paints, chemicals, pharmaceuticals and plastic goods. ★

IMPORT OF CAUSTIC SODA FROM U. S. A.

The State Trading Corporation of India has secured a licence to import caustic soda worth Rs. 25 lakhs from the U.S.A. It has also secured licences for import of rock phosphate (valued at Rs. 2.15 lakhs) from Morocco, Sulphanilamide etc., (Rs. 1.04 lakhs) from Poland, fine chemical (Rs. 1.11 lakhs) and also some strontium nitrate from Russia. Among the other important items,

which will be imported by the Corporation, are one oxygen gas producing and decenting plant from East Germany. The corporation will also import Moghurt dampers (worth Rs. 17.29 lakhs) from Czechoslovakia, ball, roller and taper roller bearings from Rumania (Rs. 8.5 lakhs) and components for motor cycles (Rs. 3.38 lakhs). ★

IMPORTS FROM RUPEE COUNTRIES

An Import Trade Control Public Notice says that it has been decided that applications from actual users borne on the books of the Development Wing, Government departments and public sector corporations for licences for import of goods from Rupee countries, in pursuance of the trade agreements made with them, may, at their option, be submitted direct to the Chief Controller of Imports and Exports, New Delhi. These applications will be examined for issue of licences from Rupee area countries on merits and taking into account the availability of

the particular goods applied for under the Rupee payments agreements. The applications, complete in all respects, should be accompanied by the necessary essentiality certificates from the sponsoring authorities. Applications from firms borne on the books of the Development Wing have to be submitted through the Development Wing, while applications from public indicate that the approval of the Ministry of Finance for sanction for there lease of foreign exchange has been obtained. ★



PROCUREMENT OF IMPORT LICENCES

Procedure for assistance to various categories of industrial units in the procurement of import licences for capital goods, raw materials, etc.

At present all industrial units which are in receipt of a licence under the Industries (Development and Regulation) Act, 1951, and in addition, certain other units which were registered in the past with the Development Wing of the Ministry of Commerce & Industry, Government of India, are sponsored by the Development Wing for the grant of import licence or other forms of assistance required by them to enable them to carry on their manufacturing operations—such as in the matter of procurement of controlled raw materials, fuel, etc. Owing to the fact that even small units (*i.e.*, units having fixed assets less than Rs. 5,00,000) employing more than 100 persons, which are at present looked after by the State Governments in consultation with the Development Commissioner, Small Scale Industries at the Centre, were till recently required to obtain a licence under the Industries (Development and Regulation) Act, before establishment, there has apparently been some doubt as to whether the Development Wing or the State Government would look after such units. A similar doubt seems to have arisen with regard to units which are not covered by the definition of small scale units but which are at the same time exempted from obtaining a licence under the Industries (Development and Regulation) Act, before establishment. In order to remove any possible misunderstanding and to clarify the procedure to be followed in each case, the whole matter has recently been considered by the Ministry and the following decisions have been reached.

Small Scale Units *i.e.* units with less than Rs. 5,00,000 fixed assets, irrespective of the number of persons employed :

All such units should be exempted from the licensing provisions of the Industries and should be looked after by the Development Commissioner, Small Scale Industries, in consultation with the State Government concerned and not by the Development Wing. Action has since been taken to exempt such units from the licensing provision of the Industries, Development and Regulation) Act. See the copy of the notification issued in this respect on page 95.

Certain units falling under this category, which were previously registered with the Development Wing and are being looked after by the Development Wing at present due to their old association with the Development Wing, should be transferred to the Small Scale Sector so that the Director of Industries concerned and the Development Commissioner, Small Scale Industries should look after them in future.

2. Units having fixed assets of value between Rs. 5,00,000 and Rs. 10,00,000 irrespective of the number of persons employed :

It will be observed that the notification on page 95, referred to the above exemptions, all

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such units also from the licensing provisions of the Industries Act. All such units should be looked after by the Development Wing for purposes of grant of import licences for the capital goods, raw materials etc., irrespective of whether such units are engaged in an industry covered by the Industries Act or not, provided the manufacturing programme of such units received the approval of the Development Wing; otherwise, they should continue to be looked after by the State Governments

3. Units not covered by the definition of Small Scale Units, which are at present registered with the Development Wing in respect of some of the items only and not all of their items of manufacture :

(i) In such cases the Development Wing should look after the requirements of the units in respect of all the items manufactured by them provided the manufacture of all such items receives the approval of the Development Wing otherwise, in respect of the items the manufacture of which is not approved by the Development Wing, the State Government will continue to look after the unit's requirements.

(ii) If, however, an owner (either a company or proprietor) has a number of units, some of which fall within the definition of a small scale unit, i.e. having fixed assets less than Rs. 5,00,000, the small scale units in such cases should be looked after by the

State Government and the Development Commissioner, Small Scale Industries, and the other units will be looked after according to paras (2) and (3) (i) above.

4. Exceptions.

In special cases where the Ministry of Commerce and Industry so decide, an industry as a whole may be looked after by the Development Wing, irrespective of the fixed assets and employment of any of its individual units.

(2) It is added that further clarification that 'fixed assets' for the purposes of the above mentioned arrangements will include investments in land, buildings, machinery and equipment of the unit. Where units are functioning in rented premises, the capital value of such building is taken into account in assessing 'fixed assets' but workers housing and welfare amenities are excluded from the capital estimates for this purpose.

While calculating the value of machinery and equipment, the original price paid by the owners, irrespective of whether it was new machinery and equipment or second-hand, is taken into account.

(3) The decisions and clarifications embodied in the preceding paragraphs may be noted for necessary action accordingly in future in the matter of grant of assistance to the various categories of industrial units.

PROCUREMENT OF IMPORT LICENCES

MINISTRY OF COMMERCE AND INDUSTRY NOTIFICATION

New Delhi, 30th January, 1962

S. O. 312/IDRA/29-B/2/62—In exercise of the powers conferred by Sub-section (1) of Section 29B of the Industries (Development and Regulation) Act, 1951, (65 of 1951) and in supersession of the Notification of the Government of India in the Ministry of Commerce and Industry No. S. O. 523/IDRA/29B/1.60, dated the 26th February, 1960, published in Part II Section 3 Sub-section (ii) of the Gazette of India Extraordinary, dated the 26th February, 1960 as amended by Notification No. S.O. 1788/IDRA/29 B.1/61, dated the 28th July, 1961 published in Part II, Section 3 Sub-

section (ii) of the Gazette of India Extraordinary dated the 28th July, 1961, the Central Government hereby exempts from the operation of sections 10, 11, 11A and 13 of the said Act and the rules made thereunder, all industrial undertakings pertaining to an industry specified in the first Schedule to the said Act, other than an undertaking pertaining to coal falling under (i) coal, lignite, coke and their derivatives' under the heading '2' fuels', which have fixed assets, that is, investments in land, buildings and machinery not exceeding rupees ten lakhs in value, irrespective of the number of workers employed.

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EAST INDIA TANNED

SHEEP SKINS	★	GOAT SKINS
COW HIDES	★	COW CALVES
BUFF HIDES	★	BUFF CALVES

Also WET CHROME and PICKLED GOATSKINS

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DIE SINKER
TURRET LATHES
VERTICAL TURRET, ETC

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The General Superintendent incharge of



VISITORS TO THE ★ ★ ★ ★ GUINDY ESTATE

Among the distinguished visitors, who visited the Guindy Estate, during the quarter — July-September 1962, were Sri C. Subramaniam, Union Minister for Steel and Heavy Industries; Sri H. D. Shourie, Executive Director, National Productivity Council, New Delhi; Sri P. N. Shahni, Director of Industries, Punjab and Mr. Robert F. Cramer, U. N. T. A. O. Expert. Besides, a team of United States Steel Tecno-Economic Survey consisting of Mr. H. R. Nye, Manager, Market Economic Commercial Research, Mr. J. F. Healy, Manager, Product Planning Commercial Research and Mr. J. D. Dorrach, Assistant Manager, Market Operation, Commercial Research, also visited the Estate.

Others, who visited the Estate during the quarter, included Brig. K. A. S. Raja, Air Commodore Y. V. Molse and Captain R. S. David, I. N., from the National Defence Academy, New Delhi.

JULY-SEPTEMBER 1962

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A Unique Service to Brassware Industry

To help the age-old Brassware Industry at Kumbakonam, the Government of Madras has started a Brassware Servicing Centre to give technical assistance to artisans with modern machinery.



It also manufactures House-hold utensils in Brass and Stainless Steel, Dusters, Sprayers, Hospital equipments, Brass building fittings, Radio components, Loud-speaker frame assembly horn cup, Transformer end cover, Steel furniture, Almirahs, Racks, Non-ferrous casting for electric water heaters and all other sheet metal works in ferrous and non-ferrous metal.

Contact us for all types of deep drawing and pressings. A trial will convince you

Service Centre for

BRASSWARE AND CUTLERY INDUSTRY, KUMBAKONAM.

TECHNICAL INFORMATION SECTION LIBRARY

INDUSTRIAL ESTATE, GUINDY

List of Books Added

1. Britten's watch and clock makers' handbook dictionary and guide. Edn. 15. *Playce. Rev.*
2. Second Five Year Plan *by Government of India Planning Commission.*
3. Third Five Year Plan *by Government of India Planning Commission.*
4. Indian Standard specification for galvanized steel sheet (plain and corrugated) IS: 277-1951 *by I.S.I.*
5. Indian Standard specification for Zinc plating IS. 1573-1960 *by I.S.I.*
6. Business charts. Edn. 5. *by Rose.*
7. Fundamentals of carpentry. Vol. 2. practical construction *by Durbahn.*
8. Das mobil buch *by Bermphol and Winkelmann.*
9. Zweck Gerechte Arbeits mobil fus Buro and Wohuraum *by North.*

HOUSE SERVICE METERS

There are no units manufacturing House Service Meters at present in the Madras State. During 1960, 75,000 meters valued at Rs. 45,00,000 were imported. Total installed power generating capacity of the Madras grid is expected to increase from 5,71,000 kilowatts (in 1960-61) by two times by the end of the Third Five

Year Plan. The demand for House Service Meters by 1965 is estimated at 1.5 lakhs numbers. One large scale unit with a capacity of 60,000 Nos. of single phase and 20,000 Nos. of three phase meters has been granted an industrial licence. The future scope could only be determined on an all-India basis.

★

ROLLING SHUTTERS

There are three small scale units engaged in the manufacture of Rolling Shutters in the Madras State with an annual installed capacity of 300 numbers. During 1961, Rs. 4,70,000 worth of Rolling Shutters were consumed in the State, the contribution of the units situated in the State to this consumption amounting to only Rs. 2,00,000. The demand for the product has been increasing at the rate of 20 to 25% per annum during the last few years and it is expected that this rate of increase will be higher in future. On this basis, the demand for Rolling Shutters is expected to increase from Rs. 4,70,000 in 1960 to about Rs. 12,00,000 in 1965.

Rolling Shutters are both technically and economically suitable for manufacture on a

small scale basis. M. S. Sheets of different gauges, M. S. Strips of 4½", M. S. Bars of different sizes, galvanised sheets of different gauges and miscellaneous stores such as bolts, nuts, rivets, bearings, paint etc. are the requisite raw materials for the Industry. M. S. Strips and steel spring wire, which are required to be imported, are in short supply.

In view of the increase in demand envisaged, the scope for setting up new units in addition to working the existing units to full capacities appears to be bright. It would appear that there is justification for another two or three units in Madras State with an estimated capacity of 200 numbers each per annum.

AUTOMOBILE ACCESSORIES

DEVELOPMENT OF ANCILLARY INDUSTRIES

A list of items for manufacture by automobile ancillary industries as prepared and finalised by the Sub-Committee of the Development Council on "Standardization and Assessing of Demand of Raw Materials" is published below for the information of the manufacturers of automobile accessories.

LIST 'A'

Items normally expected to be manufactured by the ancillary industry.

Engines

1. Pistons.
2. Piston Pins.
3. Piston Pin Bushings.
4. Piston Pin Retainer Rings.
5. Piston Rings.
6. Crankshaft Bearings (Steel backed white metal or copper lead).
7. Roller Chain.
8. Valves.
9. Valve Springs.
10. Radiator.
11. Radiator Cap.
12. Fuel Tank Cap.
13. Exhaust Muffler.
14. Exhaust Pipe.
15. Tail Pipe.
16. Fuel Lines.
17. Carburettor.
18. Fuel Pump.
19. Injection Pump.
20. Fuel Filter.
21. Oil Filter.
22. Fuel Hose.

23. Oil Hose.
24. Air Cleaner.
25. Cylinder Gasket (All types of gaskets and packings).
26. Nozzles.
27. Nozzle Holders.
28. Fuel Pump Elements.
29. Delivery Valves.
30. Thin Walled Bearings.
31. Ball Bearings.
32. Boden Cables.
33. All types of Oil Seals.
34. Bolts, Nuts, Screws etc.

Clutch, Transmission, Propeller Shaft and Differential.

1. Clutch Plates.
2. Clutch Facings.
3. Clutch Carbon or Bearing.
4. Clutch Spring.
5. Clutch Pressure Plate.
6. Clutch Cover.
7. Universal Joint.
8. Propeller Shaft.
9. Transmission Bearings.
10. Disc Wheel.
11. Wheels.
12. Wheel Bolts and Nuts.

13. Front and Rear Wheel Bearings.
14. Differential Bearings.
15. Oil Seals.
16. Brake Linings.
17. Crease Nipples.
18. Bolts, Nuts, Screws, etc.

Chassis Frame, Front Axle and Steering.

1. Leaf Springs.
2. Spring Brackets, Shackles, Hangers (cast type).
3. Shock Absorbers.
4. Hydraulic Brake System.
5. Vacuum Servo or Air Brakes.
6. Brake Cables.
7. Brake Fluid.
8. Ball Bearings.
9. Roller Bearings.
10. Taper Roller Bearings.
11. Bolts, Nuts, Screws, etc.

Electrical Equipments.

1. Dynamos.
2. Starter Motors.
3. Battery.
4. Starter Cables.
5. Wiring Harness.
6. Ignition Coil.
7. Sparking Plugs.
8. Distributor with Vacum Control.
9. Voltage Regulator.
10. All types of Electrical Cables.
11. All types of Ignition Switches.
12. Head Lamps.
13. Tail Lamps.
14. Side Lamps.
15. Fog Lamps.
16. Stop Lamps.
17. Spot Lights.
18. Control Lamps.
19. Direction Indicator.
20. Flashers.
21. Stop Lamp Switches.
22. Horn Electrical.
23. Horn-Buttons.
24. Electric-Bulbs.

25. Bulb Sockets.
26. Wind Shield Wipers.
27. Electrical Fuses.
28. Electrical Fuse Boxes.
29. Contact Brake Points.

Rubber Parts.

1. Tyres.
2. Tubes.
3. Flaps.
4. Fan Belts.
5. All types of Rubber Hoses.
6. Bulb Horn.
7. Weather Strip.
8. Door Buffers and similar other rubber components.
9. Silent block or resilient mountings.

Body.

1. Door Locks.
2. Hinges.
3. Windows for Buses and Trucks.
4. Seats for Buses and Trucks.
5. Safety Glass (Laminated or Toughened).
6. Window Regulators.
7. Window Guides.
8. Ornamental Fittings.
9. Upholstery Materials.
10. Trimming Materials.
11. Rear View Mirrors.
12. Dash Board Instruments.
13. Ammeter.
14. Speedometer.
15. Flexible Shafts for Speedometers.
16. Oil Pressure Gauge.
17. Fuel Gauge.
18. Air Pressure Gauge.
19. Thermostat.
20. Paints, Lacquer, Varnishes.
21. Sun Shade.
22. Sun Visor.
23. Luggage Carrier.
24. Mascots and Motifs.
25. Ash Trays.
26. Door Handles.
27. Bolts, Nuts, Screws, etc.

Service Equipments.

1. Tool Kits.
2. Starter Handle.
3. Tyre Levers.
4. Mechanical and Hydraulic Jacks.
5. Hand and Foot Tyre Inflators.
6. Air Pressure Gauges.
7. Lubricating Equipment.

N. B.:—“The Vehicle Manufacturers were expected to purchase the items listed above from the ancillary industry subject to considerations of quality, delivery and price; it being understood that the vehicle manufacturers would give the necessary assistance and technical guidance to the ancillary industry to enable the latter to cater to the O.E. market. If these essential conditions were not fulfilled Government would give consideration for the manufacture of one or more of the above listed items to the vehicle manufacturers also. Further, the vehicle manufacturers had the option to continue with the manufacture of those of the items which were produced in their own works under their existing production programmes.”

LIST 'B'

Items which may be manufactured either by the vehicle manufacturers or by the ancillary industry.

Engine

1. Cylinder Liners.
2. Connecting Rod Bolts.
3. Starter Gear Ring.
4. Oil Pan.
5. Timing Gear.
6. Valve Seat Inserts.
7. Valve Guides.
8. Water Pump.
9. Fuel Tank.
10. Oil Pump.

11. Engine Mountings.
12. Tappets.
13. Valve Seat.

Clutch, Transmission, Propeller Shafts and Differential.

1. Clutch Lever.
2. Clutch Housings.
3. Flywheel Housings.
4. Transmission Case.
5. All types of Transmission Gears (Excluding Bearings).
6. Crown Wheel and Pinion.
7. Differential Gear.
8. Differential Housings.
9. Rear Axle Shafts.
10. Brake Drums.
11. Hubs.

Chassis Frame, Front Axle and Steering.

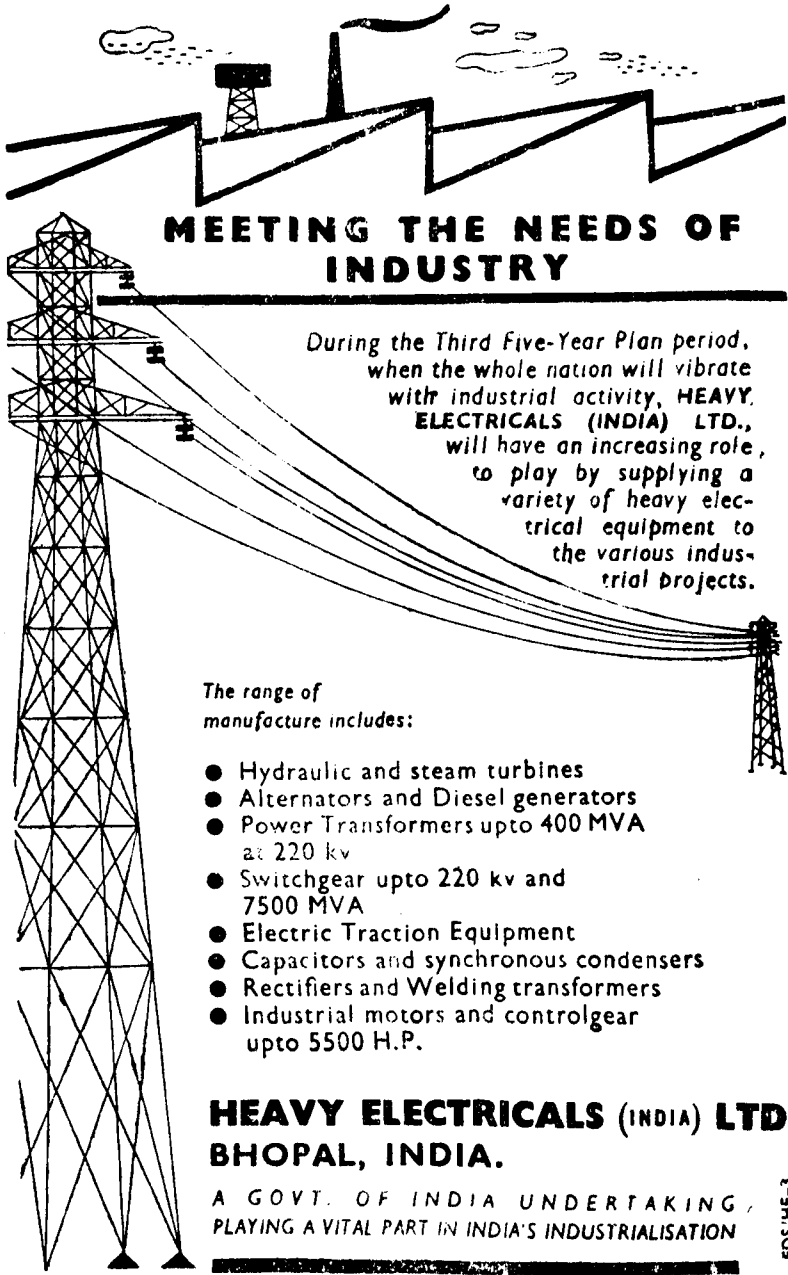
1. Tie Rods.
2. Tie Rod Ends.
3. King Pin.
4. Steering Arm.
5. Steering Column.
6. Steering Gear.
7. Spring Shackle (forged type).
8. Suspension Leaf Springs.
9. Suspension Coil Springs.
10. Torsion Bars.
11. Spring U. Bolts.
12. Spring Centre Bolts.
13. Spring Shackle Bolts.
14. Spring Shackle Pins.
15. Spring Clips.
16. Spring Bushes.
17. Spring Seat.

Body.

1. Cabs.
2. Bus Bodies.
3. Truck Bodies.
4. Car Seats.
5. Hub Caps.

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MEETING THE NEEDS OF INDUSTRY

During the Third Five-Year Plan period, when the whole nation will vibrate with industrial activity, **HEAVY ELECTRICALS (INDIA) LTD.**, will have an increasing role to play by supplying a variety of heavy electrical equipment to the various industrial projects.

The range of manufacture includes:

- Hydraulic and steam turbines
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- Power Transformers upto 400 MVA at 220 kv
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HEAVY ELECTRICALS (INDIA) LTD.
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A GOVT. OF INDIA UNDERTAKING,
PLAYING A VITAL PART IN INDIA'S INDUSTRIALISATION

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

FEBRUARY 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			
Tarack Nath & Casting Works, 20/2 B, Maharishi Debendra Road, Calcutta 7, (Shibpurchar, West Bengal)	Cast iron castings 6,000 tons per annum	L 1A 3-51-62 EI-M 17-1-62	
	Steel forgings 2,400 tons per annum—N U		
Schd. Ind. No. 1A (7)—Other Products of Iron & Steel			
Shri Radheshyam Khemka, P 21/22 Radha Bazaar Street, Calcutta, (Barauni, Bihar)	Bars, rods including wire rods 15,000 tons per annum—N U	L 1A 7-N-259-62 29-1-62	
Schd. Ind. No. 2 (1)—Coal Lignite Coke and their Derivatives			
The Administrator, Durgapur Project, Govt. of West Bengal, New Secretariat Buildings, Calcutta 1, (West Bengal)	Capacity per annum	Tons	
	Crude naphthalene	2,160	
	Wash oil	3,600	
	Anthracene oil	7,200	
	Pitch	20,880	
	Carbolic oil (Phenol) S E	900	
Schd. Ind. No. 8 (A-9)—Chemical Machinery			
Gansons Private Ltd., 6, West View, Dadar, Bombay 14, (Maharashtra)	Annual capacity on single shift (Nos.)	L 8 A-9-30-62-MEI 11-1-62	
	*1. Agitators driven by 1/3 H.P. to 10 H.P. Motors fitted with or without speed reduction gears. Agitator blades to be of any of the following types (a) anchor (b) propellor (c) turbine (d) rake		15
	2. Condensers offering heating or cooling surface from 1 to 50 sq. ft. of the following types : (a) shell & tube type (b) spiral plate type (c) helical type		20
	3. Cyclone separators—For the separation of solid particles from gaseous particles which present in dust or mist—laden gases or air. Specifications according to applications, approximate diameter 5 ft.		5

(Contd)

(Contd.)

Name and full address of the undertaking and location	Articles of manufacture, capacity and type of licence	Licence number and date
	4. Distillation plants—operating under normal pressure or under vacuum or steam distillation processes for the manufacture of (a) pyrogen free distilled water (b) recovery of solvents after extraction process (c) purification of solvents like alcohol etc.	10
	5 Double cone blenders and mixers: For blending of dry powders in the pharmaceutical, food, and dye industries. Capacity from 10 kg. to 200 kg. material	10
	6 Evaporators for the pharmaceutical, food and fine chemical industries of the following types (a) natural circulation units (b) forced circulation units (c) film type units, operating under normal pressure or under vacuum. Evaporating capacity upto 1,000 lbs per hr.	15
	7. Jacketted tanks and kettles with heating by steam or oil and with or without agitation assembly. Capacity from 10 gallons to 500 gallons	20
	8. Filters knutze or pressure type. Suitable for working under air pressure of 100 p.s.i. and offering upto 100 sq. in filtering area	25
	9. Pressure and reaction vessels with or without agitation assembly closed or open type capacity 500 gallons. Pressure vessels to withstand upto 200 p.s. in	20
	10. Film Developing process tanks and equipments according to customers specification	50
	11. Stainless steel milk transport Tankers from 100 gallons to 1,000 gallons capacity	20
	12. Precolators for extraction of crude drugs from 5 gallons to 100 gallons	30
	13. Tanks for the storage of pharmaceutical, petreleum and five chemical products	150
	N A	
Schd. Ind. No. 8 (A-11)—Paper Machinery National Wire & Wire Products, 36. Tamarind Lane, Bombay, (Maharashtra)	Paper machine, wire mesh from 50-70 mesh-1,29,000 sq.ft. per annum on single shift—N U	L 8-A-11-13-62-MEI 22-1-62

(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 Khandelwal Udyog Ltd., Khandelwal Bhawan, 166, Dr. D. Naroji Road, Bombay, (Maharashtra)	Industrial furnances—capacity will be determined one year after the unit goes into production—N A	L 9-69-MEI-62 4-1-62
Schd. Ind. No. 22—Drugs & Pharmaceuticals Dey's Medical Stores (Manufacturing) Private Ltd., 6 D, Lindsay Street, Calcutta 16, (West Bengal)	Magnesium Hydroxide 200 tons per annum—S E	L 22-104-62-Ch. III 27-1-62
Schd. Ind. No. 23 (1)—Cotton Textiles Orissa Cotton Mills Ltd., Debi Niwas, Karcheri Road, Cuttack, (Orissa)	4,500 spindles for the manufacture of cotton yarn—C O B	L 23-1-189-Tex B-62 2-2-62
Schd. Ind. No. 26 (1)—Fermentation Industries (Alcohol) Kesar Sugar Works Ltd., 45-47, Apollo Street, Fort, Bombay, (Baheri Dist. Bareilly, Uttar Pradesh)	Absolute and industrial alcohol 2.95 million gallons p.a. after expansion—S E	L 26-1-1-62-Ch. II 20-1-62
Carew & Company Ltd., Rosa, District Shahjahanpur, (Uttar Pradesh)	Rectified spirit—1 million gallons per annum after expansion—S E	L 26-1-2-61-Ch. II 20-1-62
Ganganagar Sugar Mills Ltd., Sriganganagar, (Rajasthan)	Rectified spirit and impure spirit—907200 gls. per annum after expansion—S E	L 26-1-3-62-Ch. II 24-1-62
Schd. Ind. No. 34 (1)—Ceramics (Fire Bricks) Gangadhar Baijnath 55/115, Generalganj, Kanpur, (Dist. Dhanbad, Bihar)	Annual capacity on single shift in tons 1. Silica bricks and shapes 12,000 2. Silica cement (ganister) 6,000 3. Basic bricks 3,000 4. Insulating bricks 1,200 N U	L 34-1-68-62-Ch. IV 16-1-62

(Contd.)

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JULY-SEPTEMBER 1962

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(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 Jamnadas N. Daga, The Ballarpur Collieries Co. Bisesar House, Temple Road, Nagpur (Maharashtra)	Annual capacity I. Main products: Coalite or semi coke 3,60,000 tons II. By-products Crude tar acids 3,600 .. Ammonia 2,400 .. Crude motor spirit 6,000 .. Road tar 24,000 .. Cresote oil 18,000 .. Light oil 1,200 .. Fuel oil 6,000 .. Surplus Produce Gas of 200 BTU/c ft./Hr. 3,00,000 c.ft. N U	L 2-1-N-37 62 6-2-62
Schd. Ind. No. 5 (2)—Electrical Motors		
Gandhi Electric Industries Private Ltd., 94, Medows Street, Bombay (Maharashtra)	Annual capacity 1. Flame proof electric motors 2,000 Nos. } on single shift 2. Alternators 5 to 3 KVA 2,000 .. } S E	L 5-2-14-EEI-62 15-1-62
Schd. Ind. No. 6 (4)—Radio Receivers Including Amplifying and Public Address Equipment		
Shri Dineshchandra Mohanlal Desai, 5, Mahalaxmi Society, Ahmedabad-7 (Gujarat)	Capacity per annum (in numbers) 1. Tenralum Electrolytic capacitors 1,80,000 2. Electrolytic capacitors for fans and fractional H.P. Motors 78,000 N U	L 6-4-44-EEI-61 18-1-62
Schd. Ind. No. 22—Drugs and Pharmaceuticals		
Ciba of India Ltd., Royal Insurance Building, 14, J. Tata Road, P.O. Box 1123, Bombay (Maharashtra)	Monthly capacity (Kgs.) 1. Esidrex (hydrochlorothiazide) 21 2. Nepresol (dihydralazine) 21 3. Entobex (phanquone) 85 4. Dianabol (methandrostenolone) 2.5 5. Testosterone esters } expansion from 1.5 Progesterone esters } to 8.5 S E	L 22-100-62-Ch. III 8-1-62
Chemical Industrial & Pharmaceutical Laboratories Ltd., 289, Bellasis Road, Bombay 8 (Maharashtra)	Item Monthly capacity 1. Hypnotics—tablets of phenobarbitone 2,00,000 tablets 2. Antispasmodic— (a) Tablets containing total alkaloids of belladonna and phenobarbitone 1,00,000 .. (b) The above with ergotamine tartrate 1,00,000 ..	L 22-105-62-Ch. III 3-2-62

(Contd.)

(Contd.)

Name and full address of the undertaking and location	Articles of manufacture ; capacity and type of licence	Licence number and date
	3. Antidiabetic—tablets of tolbutamide and chlorpropamide 2,00,000 ..	
	4. Antifilarial—tablets of diethylcarbomazine 2,00,000 ..	
	5. Tranquilizer—tablets of meprobramate 2,00,000 ..	
	6. Steroid Preparations : (a) Prednisolone 50,000 .. (b) Hydrocortisone 50,000 .. (c) Progesterone 50,000 .. (d) Oestradiol 50,000 ..	
	7. For the treatment of cirrhosis Injections and oral preparations containing spleen extract, liver extract, Cysteine Hydrochloride and Niacinamide. 2,000 litre	
	8. Enzyme preparations—contain bile acids with essential enzymes, special enteric coated tablets 2,00,000 tablets	
	9. For the treatment of duodenal and gastric ulcer—tablets containing extract of Belladonna, Aluminium Hydrochloride and Phenobarbitone 2,00,000 ..	
	10. Some Vitamin preparations : (a) Vitamin K tablets 1,00,000 .. Injections 10,000 ampoules (b) Vitamin A tablets 1,00,000 tablets Injections 10,000 Ampoules (c) Iron vitamin combination for children 1,000 litres	
	11. Antibiotics—capsules and tablets of : (a) Chloramphenicol 1,00,000 tablets (b) Chloramphenicol with Vitamin B complex 1,00,000 .. (c) Penicillin with sulphha 1,00,000 ..	
	12. Anti-tuberculosis— (a) Tablets containing INH 2,00,000 .. (b) Tablets containing Calcium and PAS 2,00,000 .. N A	
Dey's Medical Stores (Manufacturing) Private Ltd., 6/D, Lindsay Street, Calcutta 16 (West Bengal)	(Annual capacity in tonnes) Chloramphenicol 18 only. NU	L 22-8-62-A & I 5-2-62

(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. 23 (1)—Cotton Textiles Ajudhia Textile Mills Ltd., Azadpur, Delhi 6 (Delhi)	4675 spindles for the manufacture of cotton yarn—S E	L 23 1-190 Tex. B-62 5-2-62
Schd. Ind. No. 27 (3)—Malted Foods Jagatjit Distilling & Allied Industries Ltd., P. O. Jagat Jitnagar, Railway Station, Hamira (Punjab)	Malt extract 1 800 tons per annum N A	L 27-3-1-62-Ch. II 1-2-62
Schd. Ind. No. 33 (6)—Glass: Miscellaneous Ware Amin Brothers, 'PARIJAT' Vithalnagar Co operative Housing Society Ltd., Juhu Development Scheme, Vile-Parle, Bombay-57 (Baroda Gujarat)	Annual capacity Glass tubings (for fluorescent tubes 1,440 tons Glass Shells 180 tons N U	L 33-6-2-62-Ch. II 3-2-62
Schd. Ind. No. 1A (3)—Iron & Steel Castings & Forgings C. Keshav Goptal Pithawala, 9, Shankar Niwas, 117, Shivaji Park Road, No. 3, Dadar, Bombay-28, Choriyashi, Dist. Surat, Gujarat]	Tons per annum i. Malleable castings 1,200 ii. Cast iron castings 1,800 iii. Steel forgings 600 N U	L 1A-3-53-62 EI-M 19-1-62
Crescent Iron & Steel Corporation Ltd., Industrial Estate, Lal Baugh, Bombay-12 Bombay, Maharashtra]	Grey iron castings 6,000 tons per annum—C O B	L 1A-3-56-62 EI-M 27-1-62
Schd. Ind. No. 1A (7)—Other Products of Iron & Steel Chhatrapati Associates, 6, Noble Chambers, Parsi Bazaar Street, Bombay-1 Baroda, Gujarat]	Cold rolled steel strips [30 to 40 swg.] } 3,600 tons Coated with lead or } per annum other metals or other- } one shift wise]—N U	L 1A-7 N 260-62 13-2-62
Schd. Ind. No. 2 (1)—Coal, Lignite, Coke and their Derivatives Parasea Collieries Ltd., 25, Netaji Subhas Road, Calcutta Mouza Bahadurpur, Dist. Burdwan, West Bengal]	Annual capacity Year in tons Coal 1st year 24,000 2nd year 48,000 3rd year 78,000 4th year 1,02,000 5th year 1,20,000 N U	L 2-1 N 35-62 13-2-62
D. Mandal & Co., 135, Canning Street, Calcutta 1, Tehsil Pandra, Dist. Dhanbad, Bihar,	Annual capacity Coal 60,000 tons per annum N U	L 2-1 N 36-62 13-2-62
Schd. Ind. No. 5 (6)—Electrical Cables and Wires Radio & Electrical Manufacturing Co., Ltd., Mysore Road, Bangalore [Mysore]	D. C. C. and Paper covered conduc- tors 360 tons per annum N A	L 5-6-39-EEI-62 3-2-62

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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 (5)—Automobiles Indian Standard Metal Co., I. S. M. Estate, Chinchpokli Cross Lane, Bombay 27, [Bombay, Maharashtra]	Components used in Automobiles etc. 1. Different kinds of plugs and drain plugs 2. Impellers 3. Adjusting plates 4. Tee pieces 5. Banjo 6. Nut rocker covers 7. Ring flingers oil 8. Water pump impellers N U	L 7-5-2-62 AEI 9-2-62 24 tons per annum
Schd. Ind. No. 8 (A 9)—Chemical Machinery Mysore Machinery Mfrs. Ltd., 5th Mile, Mysore Road, Bangalore 2 [Bangalore, Mysore]	Cotton seed delinting machines 144 Nos. per annum—N A	L 8-A-9-32-62 MEI 12-2-62
Schd. Ind. No. 9—Machine Tools Crescent Iron & Steel Corporation Ltd., Industrial Estate, Lalbaugh, Bombay 12 [Maharashtra]	Nos. per annum 1. Surface grinders 144 2. Flexible shaft grinders 120 S E i. Grinding machines ii. Lathes iii. Shaping do iv. Drilling do v. Milling do vi. Slotting do vii. Economic presses viii. Cutting of machines N U	L 9-72-MEI 62 24-1-62 Capacity will be determined one year after the unit goes into production
Babu & Co., Cheekanta Road, Ahmedabad-1 [Ahmedabad, Gujarat]		L 9-73-MEI 62 3-2-62
Hindustan Gas Co. Ltd., 22, New Tangra Road, Calcutta 15 [West Bengal]	i. Furnaces—Capacity will be deter- mined ii. Blowers —One year after produc- tion commences S E	L 9-74-MEI 62 3-2-62
Schd. Ind. No. 12 (1)—Plastic Moulded Goods Jaga Burton Industries Ltd., Mettupalayam Road, Coimbatore 1 Madras] [Coimbatore, Madras]	Plastic buttons—1,96,560 gross per annum—S E	L 12-1-3-62-Ch. V 8-2-62
Schd. Ind. No. 12 (2)—Hand Tools, Small Tools and the Like Shri Balmokand Mayor, 8/11, W.E.A. Karolbagh, New Delhi 5 [Punjab]	Nos. per annum i. Motor cycle and auto- mobile chains 50,000 ii. Measuring steel tapes 27,000 S E	L 12-2-52-MEI 62 3-2-62
Schd. Ind. No. 13 (5)—Sewing & Knitting Machines Excelsior Needles Industries [P] Ltd., Gool Mansions, 5th Floor, Homji Street, Fort G. P. O. Box No. 1469, Bombay [Maharashtra]	Shifting from Bombay to Ludhiana [Punjab]	L 13-5 LEI B-1 62 2-2-62

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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 (1)—Inorganic Heavy Chemicals		
Gagalbhai Jute Mills Private Ltd. Capacity (Annual)		
Mafatlal House, i. Synthetic Cryolite 3,000 tons		L 19 1-63 NI-Ch. I 62
Backbay Reclamation, ii. Aluminium flouride 1,200 ..		13-2-62
Bombay-1 iii. Sodium flouride 400 ..		
(Choryasi, Distr Surat, Gujarat) N U		
Schd. Ind. No. 19 (4)—Synthetic Resins & Plastics		
The Alkali & Chemical Corporation of India Ltd., Alkyd, oleo modified P. F. Resins		L 19 4-2-Ch. V 62
34, Chowringhee 900 tonnes per annum—C O B		2-2-62
Calcutta-16		
(Rishra, West Bengal)		
Schd. Ind. No. 19 (5)—Paints, Varnishes and Enamels		
Noble Paint and Varnish Co. Per annum		L 19 5-1-62-Ch. II
(P) Ltd., Paints and enamels 1,05, tons		7-2-62
Ferguson Road, Lower Parel, Varnishes 36,000 Gls.		
Bombay-12 Distempers 420 tons		
(Madras) (N U)		
Schd. Ind. No. 23 (1)—Cotton Textiles		
Ajudhia Textile Mills Ltd., 4676 spindles for the manufacture of		L 23-1-190-62 Tex. B
Azadpur, Delhi-6 (Delhi) cotton yarn—S E		5-2-62
New Commercial Mills Co. Ltd., 5,200 spindles for the manufacture of		L 23-1-191-62 Tex. B
Railwayapura, Ahmedabad-2 cotton yarn—S E		13-2-62
(Ahmedabad, Gujarat)		
Schd. Ind. No. 28 (1)—Vegetable Oils Including Solvent Extracted Oils		
B. R. Herman & Mohatta Cottonseed oil 100 tons of cottonseed		L 28-1-4-62-Ch. II
(India) Pvt. Ltd., per day—N U		9-2-62
Mustafa Building, Sir, P. M. Road, Bombay-1 (Indore, Madhya Pradesh)		
Schd. Ind. No. 33 (4)—Glass Wool		
Shri V. S. Vaidya, Annual capacity in tons		
438/3, Gokhale Road, Glass fibre strand mat for plastic		L 33-4-1-62-Ch. II
Poona-5 reinforcements 180		5-2-62
(Poona, Maharashtra) Glass fibre rovings for plastic rein-		
forcements 180		
Glass fibre continuous fillament yarns 60		
N U		
Schd. Ind. No. 1A (3)—Iron & Steel Castings & Forgings		
Indraprastha Steel Industries, Location from Delhi to Senepet for		L 1A-3-55-62 EIM
39-D, Kam Ianagar, Delhi 6 the manufacture of steel forgings		25-1-62
(Sonepet, Punjab) and steel castings—(Shifting)		
Schd. Ind. No. 1A (7)—Other Products of Iron & Steel		
Khem Chand Raj Kumar, Annual capacity		
33, Netaji Subhash Road, High tensile precision		L 1A-7-1-IEI-B 62
Calcutta 1 (West Bengal) bolts nuts & rivets 1,200 tons		15-2-62
N U		

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Name and full address of the undertaking and location	Articles of manufacture : capacity and type of licence	Licence number and date
Apee Jay Private Ltd., 135, Canning Street, Calcutta (Kumhari, Baigrt. Madhya Pradesh)	Installed capacity on two shifts Rounds, Bars 1" & up flats, angles, gate chan- nels, fish plates, tie bars flats and carbon steel sections 7,500 tons N U	L 1A-7 N-261-62 16-2-62
Schd. Ind. No. 4 (2)—		
India Pistons Ltd., Fly wheel ring gears 102,000 Nos.		L 4-2-1-62 AEI—17-2 62
Huzur Gardens, Sembiam, per annum—N U		
Madras (Madras)		
Schd. Ind. No. 5 (1)—Equipment for Generation Transmission Etc. (Electricity)		
India Supplies Engineering Works Annual capacity		L 5-1-54-EEI-62—5-2-62
& Behari Niwas, 1. Busbar Chambers		
Kanpur (Kanpur, U. P.) and Distribution		
Boards Rs. 4,20,000 value		
2. L. T. Isolators 3,600 Nos.		
3. Overhead busbar trun- king 12,000 feet		
4. Instrument transformers welding transformers and other low voltage transformers including ballasts for fluorescent lamps etc. 12,000 KVA		
S E		
Schd. Ind. No. 5 (4)—Electrical Lamps		
Great Eastern Electroplaters Ltd., Annual capacity		
28, South Road, Miniature lamps specially for		L 5-4-29-EEI 62—5-2-62
Allahabad 1 (Allahabad U.P.) electric hand torches		
6-0 million Nos.		
N A		

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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 7)—Metallurgical Machinery		
New Standard Engineering Co. Ltd., Carroll Road, Bombay 13 Goregaon, Maharashtra	Metallurgical Machinery Annual capacity in Nos. i. Cupolas 10 Cwt to 8 tons per hour 25 ii. Blowers from 300 to 5000 c.ft. per minute zero delivery pressure 16" WG to 30" WG pressure 600 25 iii. Inspection platforms for the above cupolas 25 iv. Spark arresters for above cupolas 25 v. Mechanical chargers for the above cupolas 25 vi. Foundry sand mill 54" dia pan & 2 tons per hour mixing capacity 30 vii. Core sand mixers, 1 cwt. & 3 cwt. capacity per batch 40 viii. Tilting furnaces, 200 lb, 400 lb, 600 lb. and 1000 lb. brass molting capacity per charge 36 ix. Gyrotors 24	L 8-A-7-1-62-MEI 9-2-62
Chemical Machinery		
	i. Ball Mill 2'-6" dia to 6' dia 6 ii. Rubber plant machinery 3 iii. Bleachers, 10 ton capacity 12 iv. Extractors 100 tons per day plant 3 v. Wet dust catchers 10 vi. Pug Mill 1 ton per hour capacity 12 vii. Dry dust catchers for 100 tons day solvent tank 12 viii. Cake breaker for 100 ton per day solvent plant 6	
Pharmaceutical Machinery		
	i. Lead lined vessels 3' dia to 8 dia 24	
Filtration Equipment		
	i. Filter presses of sizes 12", 18", 24, 30" and 36" square plates and frames 24 ii. Thickeners 18" dia 12 iii. Condensors for water treatment and sewage plant 10 iv. Feed mixers for water treatment and sewage plant 24 v. Lifting device for water treatment and sewage plant 12 vi. Clarifloucaters 18" dia 12 vii. Overflow tanks 6' dia 24	

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Name and full address of the undertaking and location	Articles of manufacture, capacity and type of licence	Licence number and date
Distillation Equipment		
	i. Scrubbers for steel plant sizes to be indicated by customers 3 ii. Acid storage tanks from 3 ft. dia to 10 ft. dia 24 iii. Autoclave 6' dia 6 iv. Reaction vessels 3' to 10' dia 24 v. Neutralisers 3' to 10' dia 12 vi. Crystallisers 6 vii. Driers 6 tubes 3' dia 30' long 4 N. A.	
Schd. Ind. No. 8 (C 3)—Grinding Wheels and Abrasives		
Shevaroy Bauxite Products Co. (P) Ltd., 4, Scindia House, New Delhi-1 (within the Maharashtra State)	Capacity per annum Aluminium oxide grains 36,000 tons N U	L 8-C 3-1 IEI-B 62, 16-2-62

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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		
Parke Davis (India) Ltd., Saki Naka, Bombay-70 (Bombay, Maharashtra)	Monthly capacity Humatin capsules 75,000 capsules Humatin syrup 1,500 litres Adroyd tablets 1,00,000 tablets S E	L 22-106-62-Ch. III 15 2-62
Biological Products Private Ltd., 18/3, Azarabad, Hyderabad-20 (Andhra Pradesh)	Monthly capacity ISO Nicotinic acid hydrazide 830 kgs. Tolbutamide 80 kgs. S E	L 22-107-62-Ch. III 15 2-62
Schd. Ind. No. 27 (3)—Malted Foods		
Foods, Fats & Fertilizers Ltd., Goenka Chambers, 67, Godown Street, Madras-1 (Prathipadu Village, Tadepalligudem Taluk, West Godavari Dist Andhra Pradesh)	Malted milk food 600 tons per annum N U	L 27-3-1-62-Ch. II 8-1-62
Schd. Ind. No. 28 (1)—Vegetable Oils. Including Solvent Extracted Oils		
Shri S. R. Narayana Raja, B.A., Managing Agent, Gitanjali Mills Ltd., Rajapalayam. (Srigomathipuram P.O., Sankarankovil Tehsil, Tirunelveli Dist., Madras)	Cottonseed oil 60 tons of cottonseed per day—N U	L 28-1-2-61-Ch. II—9 2-62
Khemchand Nemichand, Subhas Road, Raipur, (Raipur, M.P.)	Rice bran oil by solvent extraction 50 tons of rice bran per day—N U	L 28-1-5-62-Ch. II 13-2-62
Schd. Ind. No. 29 (3)—Cosmetics		
The Vegetable Soap Works, Big Bazaar, Post Box No. 36 Calicut-1 (Calicut, Kerala)	Capacity sanctioned per annum Hair oil 6 Metric tons Toilet powder 60 " " Brilliantine, Eude- cologne, face creams etc. 60 " " N A	L 29-3-1-62-Ch. II 2-2-62
Schd. Ind. No. 30 (4)—Other Rubber Goods		
Jatia Cotton Mills Ltd., 15, Netaji Subhas Road, Calcutta (Mourigram, Dist. Howrah, West Bengal)	Reclaimed rubber 3,400 tons per annum N U	L 30-4-17-61-Ch. IV 6-2-62
Schd. Ind. No. 1A (1)—Iron & Steel (Metal)		
Chase Bright Steel Ltd., Vaswani Mansions, Dinshaw Vachha Road, Bombay-1 (Majiwada, Thana Maharashtra)	Tons per annum Ignots, billets, bars etc. of free cutting quality steel 18,000 Rolling of various steel sections 14,400 N A	L 1A-1 N 36-62—22-2-62
Schd. Ind. No. 1A (3)—Iron & Steel Castings & Forgings		
J. B. & M. M. Concerns, No. 1, West Aregiyaswamy Road, R. S. Puram, Coimbatore-2 (Coimbatore, Madras).	Ton per annum i. Steel forgings 2,400 ii. Cast iron castings 3,600 N U	L 1A-3-52-62 EI-M 17-1-62

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Name and full address of the undertaking and location	Articles of manufacture : capacity and type of licence	Licence number and date
Andhra Steel Corporation (P) Ltd., 140, Chittaranjan Avenue, Calcutta-7 (Visakhapatnam, Andhra Pradesh)	Chilled iron shots and grits 1,200 tons per annum—N A	L 1A-3-58-62 EI-M 15-2-62
Schd. Ind. No. 1A (7)—Other Products of Iron & Steel		
Kamani Brothers (P) Ltd., Kamani Chambers, Nicol Road, Ballard Estate, Bombay (Visakhapatnam or Hyderabad in Andhra Pradesh)	Tons per annum i. Galvanised steel trans- mission line towers 4,000 ii. M. S. Light and medium structurals, sub-station structures 4,000 N U	L 1A-7-21-62 EI-M 15-2-62
Bhartial Sons Ltd., 23/24, Radha Bazaar Street, Calcutta-1 (Sukehar Dist., 24 Parganas, W. Bengal)	Steel structurals 3,000 tons per annum—N U	L 1A-7-22-62 EI-M 15-2-62
Shri Satyasheel Gupta, 138, Canning Street, Calcutta-1 (Cochin, Kerala).	Tinplates 10,000 tons per annum on three shift—N U	L 1A-7 N 262-62—21-2-62
Schd. Ind. No. 5 (8)—Electronic Equipment		
Eastern Machinery & Trading Co. Imperial Chambers, Wilson Road, Ballard Estate, Bombay-1 (Kalyan, Maharashtra)	Magnetic recording tapes 36 million feet initially 120 million feet finally N U	L 5-8-7-EEI 62—16-2-62
Schd. Ind. No. 9—Machine Tools		
Shivaji Work Ltd., at & Post Shivashahi, Tal : North Sholapur, Dist. Sholapur (Sholapur, Maharashtra)	Tool and cutter grinding machines 180 Nos. per year—N A	L 9-76-MEI 62—16-2-62
Schd. Ind. No. 12-2 : Hand Tools, Small Tools and the Like		
Hindustan Gas Co. Ltd., 20/22, New Tangra Road, Calcutta 15 (West Bengal)	Metallic abrasive dresses for grinding wheels 6,00,000 set per annum—S E	L 12-2 54-MEI 62—23-2-62

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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		
Shambhu Nath & Sons Ltd., G. T. Road, Post Box No. 12, Amritsar [Punjab]	<i>Name of the Products</i> <i>Capacity per annum</i> 1. Acid hydrochloric A R 15 260 lbs. 2. Acid nitric A R 5,120 .. 3. Acid sulphuric A R 781 .. 4. Ammonia oxalate* 7 .. 5. Barium nitrate* 42.5 cwt 6. Benedict solution qualitative* 162 lbs 7. Benedict solution quantitative* 134 .. 8. Copper carbonate pure 94 .. 9. Copper acetate* 120 .. 10. Caustic soda sticks* 2,168 .. 11. Disinfectant 2,381 glns 12. Ferrous ammonia citrate* 7,623 lbs. 13. Lead acetate comml.† 474 .. 14. Lead acetate pure 637 .. 15. Lead nitrate comml. 25.5 cwt 16. Liquor ammonia [specific gravity 0.88]* 2,048 lbs. 17. Liquor ammonia [specific gravity 0.92] 2,185 .. 18. Liquor ammonia [specific gravity 892]* 5,376 .. 19. Potash bi-sulphate* 183.5 cwt 20. Silver nitrate B P 341.5 lbs. 21. Sodium nitrate comml.‡ 59.5 cwt 22. Strontium nitrate* 30 .. 23. Salt rochello* 2,936 lbs. 24. Zinc sulphate* 594 .. 25. Turkey red oil 924 .. 26. Zinc sulphate comml.§ 152 cwt 27. Zinc chloride* 1,669 lbs. 28. Sodium sulphite* 544 cwt 29. Sodium bi-sulphite* 329 .. 30. Sodium thiosulphate* 603 ..	L 19-3-2-62-Gh. II 23-1-62
* It is presumed that this conforms to B P/C P or A R grades. † Subject to the condition that import of lead will not be allowed. ‡ Subject to the condition that no intermediate chemical for its manufacture would be allowed to be imported and no foreign exchange would be spared. § Subject to the condition that import of zinc will not be allowed—C B O.		

Schd. Ind. No. 22—Drugs and Pharmaceuticals

Pfizer Private Ltd., P. O. Box No. 667, Bombay 1 [Maharashtra]	Diabenese [chloropropamide tablets] 10,00,000 tablets monthly capacity after expansion—S E	L 22-108-62-Ch. III 21-2-62
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Name and full address of the undertaking and location	Articles of manufacture; capacity and type of licence	Licence number and date
Schd. Ind. No. 33 (6)—Miscellaneous Ware		
Shri P. Ganguli, Director, Enamelnagar Development Corporation Ltd., P.O. Bengal Enamel, 24, Parganas [Titagarh, 24, Parganas, West Bengal]	<i>Monthly Capacity</i> Enamel frits 500 tons Industrial ware e.g. chemical vats or tanks, caution boards, housing materials, street lighting fittings, refrigerator bodies etc. 150 tons Domestic enamelware including enamelled sanitary ware 300 tons N U	L 33-6-3-62-Ch. II 7-2-62
Schd. Ind. No. 1A (7)		
Amin Chand Pyarelal, Tanda Road, Jullunder City, Punjab M/s. Guest Keen Williams, 41, Chowringhee Road, Calcutta 16	Tubular structures 600 tons per annum N U <i>Metric tonnes per annum</i> Rolling of ingots, bars and rods 97,344 [after expansion]—S E	L 1A-7-25-61-EI-M 26-2-62 L 1A-7 N 264-62—3-3-62
Schd. Ind. No. 8 (A) (6)—Minining Machinery		
Meamco Private Ltd., 5, Clive Row, Calcutta 1 Patna [Bihar]	<i>Nos. per annum</i> Rotary compressed air and electric drills 840 Gate and boxes 840 Drilling bits 1,20,000 Drill rods 12,000 S E	L 8-A 6-10-MEI-62 3-3-62
Schd. Ind. No. 22 Drugs and Pharmaceuticals		
Teddington Chemical Factory Ltd., Ralli House, 21, Ravelin Street, Bombay 1	Diastase Lipoclastic preparation N A <i>Annual capacity</i> 12 tonnes 60 ..	L 22-109-62-Ch. III 5-3-62
Schd. Ind. No. 28 (2) Vanaspathi		
The Delhi Cloth & General Mills Co. Ltd., Bara Hindu Road, Delhi, [Najafgarh Road] Delhi	<i>Name of brand & descriptions</i> Uttam [containing permissible flavours] Sartaj [containing upto 50% cottonseed oil] Shakti [50% soyabean oil] Kohinoor [made from only groundnut oil and seame oil] Veena [grainless material suitable for bakeries—N A]	L 28-2 N 15-62—2-3-62 within existing capacity
The Jai Hind Oil Mills, 387-89, Narsi Natha Street, Bombay 9 [Bombay]	Vanaspathi [N A] and [also change of location from Shegaon to Sewree] Bombay—shifting Daily capacity 24 tons	L 28-2 N 16-62—2-3-62
Schd. Ind. No. 1A (7)—Other Products of Iron & Steel		
Jagatjit Engineering Works, Industrial Area, P. B. No. 20, Kapurthala [Punjab]	Wood screws 5 lakhs gross p.a. (after expansion)—S E	L 1A-7-2 IEI B-62 3-3-62

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Name and full address of the undertaking and location	Articles of manufacture ; capacity and type of licence	Licence number and date
A. K. Steel, C/o M/s. Central Woollen Mills, Industrial Area A, Ludhiana (Punjab)	Tons per annum High tensile bolts, nuts and studs 600 N U	L 1A-7-3 LEI-B-62 -1-3-62
Delhi Auto and General Finance Private Ltd., 3/15 A, Asaf Ali Road, New Delhi [Gurgaon, Punjab]	High tensile bolts, nuts and rivets 900 N U	L 1A-7-4 LEI-B-62-1-3-62
Sarbjit Industries, Ram Tirath Road, Amritsar [Amritsar, Punjab]	Wood screws 2 lakh gross per annum (after expansion)—S E	L 1A-7-5 LEI-B-62-3-3-62
Punjab Steel Rolling Mills, Old Station, [Baroda 3] [Baroda, Gujarat State]	Wood screws 15 lakh gross per annum (after expansion)—S E	L 1A-7-6 LEI-B-62-3-3-62
Lallubhai Aminchand Private Ltd., 48/50, Kansara Chawl, Bombay 2 [Bombay, Maharashtra]	Wood screws 1,50,000 gross per annum (after expansion)—S E	L 1A 7 7 LEI-B 62-3-3-62
Bengal Screw Manufacturing Co., Ltd., 2, Clive Row, Calcutta, [Calcutta, W. Bengal]	Wood screws 6.75 lakhs gross per annum (after expansion)—S E	L 1A-7-8 LEI-B-62 -3-3-62
Gowrihouse Metal Works, P. B No. 13, Rajapalayam [S I.] [Rajapalayam, Madras]	Wood screws 4 lakhs gross per annum (after expansion)—S E	L 1A-7-9 LEI-B-62-3-3-62
Southern Industrial Corporation Ltd., No. 6, Armenian Street, Madras-1 [Red Hills, Madras]	Wood screws 9,25,000 gross per annum (after expansion)—S E	L 1A-7-10 LEI-B-62 -3-3-62
Steel & Allied Products Ltd., 17, Brabourne Road, Calcutta-1 [Calcutta, W. Bengal]	Wood Screws 6.75 lakh gross per annum (after expansion)—S E	L 1A-7 11 LEI-B-62 -9-3-62
Schd. Ind. No. 5 [1]—Equipment for Generation, Transmission and Distribution of Electricity including Transformers		
English Electric Company of India Private Ltd., P. B. No. 2392, Madras [Madras]	1. 11 K. V. Oil circuitbreakers 300 nos. p.a. 2. 11 K. V. Oil immersed isolaters 120 nos. p.a.—S E	L 5 1-55 EEI-62—12-3-62
English Electric Company of India Private Ltd., P. B. No. 23 2, Madras [Madras]	1. 33 K.V. Oil circuit breakers 204 nos. p.a. 2. 66 K.V. Oil circuit breakers 35 nos. p.a. 3. Control panels 420 nos p.a.—S E	L 5 1-56 EEI 62—12-3-62
Schd. Ind. No. 5 [2]—Electrical Motors		
K.S B. Pumps Ltd., 173, Jashedji, Tata Road, Bombay, (Bombay, Maharashtra)	1. Pole changing high efficiency motors for sugar centrifugals 96 nos. p.a. 2. Switchgear & panels 96 sets per annum—S E	L 5-2-15-EEI-62 -19-2-62

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Name and full address of the undertaking and location	Articles of manufacture ; capacity and type of licence	Licence number and date
Schd. Ind. No. 5 (8)—Electronic Equipment		
Solartron Electronic Group Ltd., 70, Janpath New Delhi, [Poona, Maharashtra]	Item Capacity per annum 1. Oscilloscopes, all types 200 nos. 2. Memoscopes 5 nos. 3. Laboratory amplifiers and wide band power amplifiers—10 nos. 4. Signal generators—10 nos. Pulse Generators (15 Nos.) and Square wave generators (15 Nos.) 40 nos. 5. Precision valve voltmeters. 100 Nos. 6. Digital voltmeters 25 „ 7. Analogue computers, 10, 24 and 30 DC amplifier capacity analogue tutors and constituent items. 10 Nos. 8. Serve system instruments Viz., 165 Nos. i. Resolved components indicators 6 Nos. ii. Oscillators 50 „ iii. Reference resolvers 3 „ iv. Mechanical reference generators 2 „ v. Sub-sonic power amplifiers 2 „ vi. Carrier convertors 2 „ vii Attenuators 100 „ 165 „ ix. Power supplies, transistorised and V valve type, variable and fixed output, highly stabilised 200 „ N U	L 5-8 8 EEI-62 22-2-62
Schd. Ind. No. 7 (5)—Automobiles		
Oriental General Industries Ltd., Bara Nagar, Calcutta-35 (West Bengal)	Dynamos 24,000 Nos. per annum (after expansion)—S E	L 7-5-3-62-A.E.I. 9-3-62
Schd. Ind. No. 8 (A-1)—Textile Machinery		
Associated Bearing Co. Private Ltd., Pandyan House, Bombay-1 (Poona, Maharashtra)	1. H. F2 Centre sleeve inserts 3,60,000 pcs. p.a. 2. SR 7 Tape tension pulleys 1,20,000 pcs. p.a. N A	L 8 A-1-31-62 MEI 9-3-62
Schd. Ind. No. 8 (B-3)—Size Separation Units		
Larsen & Toubro Ltd., Dougal Road, Bombay-1 (Bombay, Maharashtra)	1. Feed milling plants 25 tons per hour 2. Flour milling plant 100 tons in 24 hours 3. Grain Silos 10,000 tons storage capacity N A	One or several feed/flour silo miles p.a. L 8 B-3-3-62 MEI 23-2-62

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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 (C-3)—Grinding Weels and Abrasives		
Shri Jaysukhlal Ratilal Shah, Gujarat Steel Ball Manufacturing Corporation, Main Market, Gujarat (Surendra Nagar, Gujarat)	Annual capacity 1. Grinding media forged steel balls 2. Cylpebs 3. Special heat resistance cast iron parts N U 1,600 tons	L 8 C-3-2-LEI-B-62 26 2-62
Kanshi Ram Kidar Nath Model Electro-Corundum Manufacturing Co., 4-C, Vulcan Insurance Building, Bombay-4 (Gujarat State)	1. Electro-Corundum (fused alumina) 3,600 tons per annum 2. Ferro-silicon merely as a bye-product N U	L 8 C-3-3-LEI-B-62 1-3-62
Schd. Ind. No. 10 (2)—Agricultural Implements		
Watkins Mayor & Co., Empress Garden Road, Jullundur City (Jullundur, Punjab)	Chaff Cutter Blades 6,00,000 pcs. per annum N U	L 10-2-1 LEI-B 62 3-3-62
Schd. Ind. No. 12 (1)—Plastic Moulded Goods		
Bombay Burmah Trading Corporation Ltd., 9, Wallace Street, Bombay (Poona, Maharashtra)	Industrial laminates, including copper clad laminates and surfacing laminates 1,020 tons per annum N U	L 12-1 4 62-Ch. V 7-3-62
Schd. Ind. No. 14—Medical & Surgical Appliances		
Indian Drugs & Pharmaceuticals Ltd., N.I. Building, Parliament Street, New Delhi (Madras)	Name Product Annual Capacity of pcs. 1. Different types of surgical knives and scalpels 2. Scalpels with removable blades (20 blades and 1 handle in a set) 3. Forceps 4. Bone cutting forceps and others 5. Surgical scissors 6. Needle holders 7. Clamps 8. Speculums and wound retractors 9. Surgical hooks 10. Different types of curettes and bone scoops 11. Raspatories for detach- ing periostom from bone 12. Gouges 13. Surgical saws 14. Wire saws and guides for them 15. Spatulas 16. Probes	L 14 1 62-IEI-A 7-3-62 2,00,000 1,00,000 5,00,000 1,00,000 7,00,000 40,000 5,00,000 20,000 25,000 50,000 10,000 9,000 10,000 15,000 20,000 30,000

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Name and full address of the undertaking and location	Articles of manufacture ; capacity and type of licence	Licence number and date
Schd. Ind. No. 15 (1)—Electricity Meters and the like		
Motwane Manufacturing Co., Private Ltd., 127, Mahatma Gandhi Road, Bombay-1 (Bombay Maharashtra)	(1) Avion electrical, electronic and nucleonic testing instruments 5,000 Nos. per annum (2) Insulation resistance testers 12,000 Nos. per annum N U	L 15-1-30-EEI 62 27-2 62
Schd. Ind. No. 22—Drugs and Pharmaceuticals		
Teddington Chemical Factory Ltd., 21, Ravelil Street, Bombay-1 (Bombay Maharashtra)	Vitamin B-complex cum vitamin C injection composite pack- ing of two 1 m. 1 ampoules N A	Capacity per annum Ampoule No. 1 12 lakhs Ampoule No. 2 12 lakhs L 22-110-62-Ch. III 7-3-62
Indian Drugs & Pharmaceuticals Ltd., N.I. Building, Parliament Street, New Delhi (Rishikesh, U.P.)	Name of Products Annual Production tons 1. Pottasium salt of penicillin Which will be completely converted into sodium salt 2. Streptomycin sulphate 3. Dihydrostreptomycin sulphate 4. Chlorotetracycline 5. Oxytetracycline base 6. Tetracycline base 7. Tetracycline hydrochloride 8. Nistatin N U	85 30 55 70 15 70 25 25 10 Total 300 L 22-111-62 Ch. III 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
Indian Drugs & Pharmaceuticals Ltd., N.I. Building, Parliament Street, New Delhi, (Sanatnagar, A.P.)	<i>Name of Products</i> 1. Sulpha drugs 510 tons 2. Acetazelanide (diacarb) 25 3. Isonicotinic acid hydrazide 20 4. Luminal 10 5. Phenacetin 100 6. Diethyl carbanazine (ditrazine) 30 7. Aminopyrine (pyramidone) 40 8. Dipyrone (analgin) 10 9. Piperazine adipate 50 10. Vitamin B1 50 11. Vitamin B2 5 12. Nicotinamide (Vitamin PP) 20 13. Folic acid 1 850 Also essential intermediates 4,560 tons per annum required for production of the above. N U	L 22 112 62 Ch. III 9 3 62
Indian Drugs & Pharmaceuticals Ltd., N.I. Building, 5, Parliament Street, New Delhi [Neria Mangalam, Kerala]	<i>Name of Products</i> 1. Caffeine from light top-prunings and tea wastes 60 tons 2. Vitamin P 1 .. 3. Reserpine from Rawolfia roots 200 kg. 4. Cardiac glycosides of Digitatis purpurea and lanate 50 .. each 5. Ergot alkaloids 50 6. Atropine sulphate from hyoscyamus leaves 50 .. 7. Scopalamine hydrobromide from seeds of Indian stramonium 10 .. 8. Papaine from papaya juice 10 tons N U	L 22-113 62 Ch. III 9 3 62
Schd. Ind. No. 23 (1)—Textiles, made wholly or in part of Cotton		
Nagri Mills Co., Ltd., Rajpur Road, Ahmedabad [Ahmedabad, Gujarat]	Cotton yarn 1,600 spindles—S E	L 23-1-192-62 Tex. B 21-2-62
Shree Yamuna Mills Co. Ltd., Industrial Area, Baroda-4 [Baroda, Gujarat]	Cotton yarn 3,200 spindles—S E	L 23-1-193-62 Tex. B 21-2-62
Gaekwar Mills Ltd., Mehta House, Bombay-1 [Bombay, Maharashtra]	Cotton yarn 2,400 spindles—S E	L 23-1-194-62 Tex. B 21-2-62

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(Contd.)

Name and full address of the undertaking and location	Articles of manufacture; capacity and type of licence	Licence number and date
Shri Amarsinghji Mills Ltd., Vankaner, Gujarat [Vankaner, Gujarat]	Cotton yarn 800 spindles—S E	L 23-1-195-62 Tex. B 21-2-62
Himabhai Manufacturing Co., Ltd., Railway Pura Post Ahmedabad-2 [Ahmedabad, Gujarat]	Cotton yarn 2,800 spindles—S E	L 23-1-196-62 Tex. B 23-2-62
Marden Spinning Manufacturing Co., Ltd., Rakhial Road, Ahmedabad-10 [Ahmedabad, Gujarat]	Cotton yarn 1,600 spindles—S E	L 23-1-197-62 Tex. B 21-2-62
Bharat Vijay Mills Ltd., Kalol, Gujarat State [Kalol, Gujarat]	Cotton yarn 3,200 spindles—S E	L 23-1-198-62 Tex. B 21-2-62
Sarangpur Cotton Manufacturing Co., Ltd., Amraiwadi Road, Ahmedabad (Gujarat)	Cotton yarn 4,000 spindles—S E	L 22-1-199-62 Tex. B 21-2-62
Commercial Ahmedabad Mills Co., Ltd., Asarva, Ahmedabad (Ahmedabad, Gujarat)	Cotton yarn 2,000 spindles—S E	L 23-1-200-62 Tex. B 21-2-62
Prabha Mills Ltd., Viramgam, Gujarat State (Viramgam, Gujarat)	Cotton yarn 3,200 spindles—S E	L 23-1-201-62 Tex. B 21-2-62
Maneckchock & Ahmedabad Manufacturing Co. Ltd., Asarza, Ahmedabad (Ahmedabad, Gujarat)	Cotton yarn 3,200 spindles—S E	L 23-1-202-62 Tex. B 21-2-62
Ajit Mills Ltd., Rakhial Road, Ahmedabad [Ahmedabad, Gujarat]	Cotton yarn 2,400 spindles—S E	L 23-1-203-62 Tex. B 21-2-62
Shree Madhusudan Mills Ltd., Wandli Road, Bombay-1 [Bombay, Maharashtra]	Cotton yarn 3,600 spindles—S E	L 23-1-204-62 Tex. B 21-2-62
Sarsoon Spg. & Wvg. Co. Ltd., Mafatlal House, Bombay-1 [Maharashtra]	Cotton yarn 2,200 spindles—S E	L 23-1-205-62 Tex. B 21-2-62
V.P.S. Ayyemperumal Nadar & Sons Private Ltd., 38, M. C. Chidambar Nadar Street, Virudhunagar [S.I.] [Madras State]	Cotton yarn 12,000 spindles and also change of location, from Pudukottai to Virudhunagar, (Madras State)—S E	L 23-1-206-62 Tex. B 26-3-62

(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. 23 (5)—Textiles made wholly or in part of Synthetic, Artificial Fibres		
Kashi Ram Jagdish Heavy Factory, Sulabatpura Ambawadi Near Kalipur Nare Sadak Surat, [Surat Gujarat State]	Art silk fabrics 174 powerlooms (after expansion)—S E	L 23-5-24 Tex. D-62 12-3-62
Schd. Ind. No. 28 (2)—Vanaspati		
Hindustan Lever Ltd., Scindia House, Bombay-1 [Sewri, Maharashtra]	Manufacture of new article viz, "SPRY" vegetable shortening within the existing capacity.	L 28-2 N-14 62 1-3-62
Schd. Ind. No. 1 A (3)—Iron and Steel Castings and Forgings		
Hindustan Malleables & Forgings Ltd., Jalan House, P.B. No. 115, Post Office Jharia, District Dhanbad [Bihar State] [Jalannagar, Bihar]	Malleable iron castings Tons per annum 1,200 S E	L 1-A-3-60 E I-M 22-2-62
Associated Iron & Steel Industries Private Ltd., Ramganjmandi (Rajasthan) Kotah Division (W. Rly.) (Ramganjmandi, Dist. Kotah, Rajasthan)	(i) Malleable iron castings 1,500 (ii) Cast iron castings 7,500 N U	L 1 A-3-63-62 E I-M 7-3-62
Schd. Ind. No. 1 A (7)—Other Products of Iron and Steel		
Metropolitan Springs Private Ltd., Antop Hill, West Wadala, Bombay-31 (Maharashtra)	1. Torsion Bars 120 2. Axle hub shafts 120 N A	L 1 A-7-24-62 E I-M 26-2-62
Schd. Ind. No. 4 (2)—Internal Combustion Engines		
Escorts Limited, Automotive Division, H-2, Connaught Circus, New Delhi (Bahadurgarh, Punjab)	Gudgeon pins Nos. per annum 6.6 lakhs N U	L 4-2-9-62 E I-M 13-3-62
India Pistons Ltd., Huzur Gardens, Sembiam, Madras (South India) (Madras)	1. Pistons 15 lakhs 2. Piston rings 90 lakhs 3. Gudgeon pins 16.5 lakhs 4. Cylinder liners 3.6 lakhs S E (after expansion)	L 4-2-10-62 E I-M 13-2-62
Schd. Ind. No. 12 (1)—Plastic Moulded Goods		
Podar Plastics Private Ltd., Podar Chambers, Fort, Bombay-1 (Bombay, Maharashtra)	Annual capacity Plastic moulded goods: 1. Compression moulding 3,000 tons 2. Extrusion moulding 8" (eight inches) (4 extruders) S E	L 12-1-5-62 Ch. V 17-3-62

(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. 15 (1)—Water Meters, Steam Meters, Electricity Meters and the like		
Shri R. D. Bangar Director, Agencies (Rajasthan) Private Ltd., Jaipur (Rajasthan) (Proposed name M/s. Apex Electricals Ltd.) (Jaipur, Rajasthan)	House service meters single—phase 60,000 House service meters poly—phase 18,000 N U	L 15-1-31-E E I 62 9-3-62
Schd. Ind. No. 19 (14)—Miscellaneous Chemicals		
The Indian Hume Pipe Co., Ltd., Construction House, Ballard Estate, Bombay-1 (Wadala, Bombay, Maharashtra)	Welding fluxes (submerged arc welding type) N A	L 19-14-2-62 Ch. II 16-3-62
Schd. Ind. No. 21—Dye-Stuffs		
Indian Dyestuff Industries Ltd., Mafatlal House, Backbay Reclamation, Bombay-1 (Maharashtra)	Anthraquinone N A	L 21-17-62 Ch. III 20-3-62
Schd. Ind. No. 23 (1)—Textiles made wholly or in part of Cotton		
Tirupati Cotton Mills Ltd., P.B. No. 1269, Indian Chamber Buildings Madras (Andhra Pradesh)	9,000 spindles S E	L 23-1-208-62 Tex. B 24-3-62
Schd. Ind. No. 26 (1)—Alcohol		
Sri Sarvaraya Sugars Ltd., 11-A/4, Mount Road, Madras-2 (Chelluru, Andhra Pradesh)	1. Industrial alcohol 4,80,000 Gallons 2. Acetone 600 tons N A	L 26-1-4-62 Ch. II 3-3-62
Schd. Ind. No. 1 A (3)—Iron and Steel Castings and Forgings		
India Forge & Drop Stampings Ltd., C/o. M/s. Maconochie & Co., Mercantile Bank Building, Madras-1 (Chinglepet, Madras)	1. Steel forgings and drop stampings 3,600 2. Non-ferrous stampings 120 S E	L 1 A-3-62 62-E I-M 26-2-62
Schd. Ind. No. 1 A (7)—Other Products of Iron & Steel		
Sowri Engineering Works, 15-D, Parel Tank Road, Bombay-12. (Bombay, Maharashtra)	Steel structurals S E	L 1 A-7-26 62-DI-M 7-3-62
Schd. Ind. No. 5 (1)—Electrical Equipment for Generation, Transmission and Distribution of Electricity including Transformers.		
Jyoti Limited, Post Chemical Industries, Baroda (Baroda, Gujarat)	33 KV. Circuit breakers S E	L 5-1-57 EEI-62 26-3-62

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(Contd.)

Name and full address of the undertaking and location	Articles of manufacture; capacity and type of licence	Licence number and date
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Schd. Ind. No. 6 (4)—Radio Receivers including Amplifying and Public Address Equipment

Flash Lights (India) Private Ltd., 135, Prinsep Street, Calcutta 13. (West Bengal)	Capacity same as before shifting (Shifting from Barrackpore to Suren Sarkar Road, Calcutta, West Bengal)	L 6-4-45 EEI-62 13-3-62
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Schd. Ind. No. 7 (5)—Automobiles (Motor Cars, Buses, Trucks, Motor Cycles, Scooters and the like)

Murarka Engineering Works, 28, Najafgarh Road, New Delhi (Delhi)	Coil springs for auto- mobiles & railways and industrial coil springs N A	Tons per annum 300 L 7-5 2-62 EI-M 26-2-62
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Schd. Ind. No. 8 (A-4)—Sugar Machinery

Andhra Sugars Ltd., Post Box No. 2, Venkatarayapuram, Tanuku (Andhra Pradesh)	(a) Sugar mill machinery (b) Accessories re- quired for sugar industry (c) Pumps for sugar industry (d) All turning parts for sugar indus- try (Shifting from Kovvur, West Goda- vari Dist. to Moulali, Hyderabad Dist.)	Annual capacity Same as indi- cated in Licence No. L/8/A-4/N- 10/60 dated the 6th Feb., 1960. L 8 A-4-2 62-MEI 24-3-62
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Schd. Ind. No. 9—Machine Tools

Mysore Kirloskar Ltd., Yantrapur Post Harihar, [Mysore State] [Hubli, Mysore]	Lathes	Capacity to be deter- mined after the unit actually goes into production N U	L 9-63 MEI-61 5-12-61
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Mysore Kirloskar Ltd., Yantrapur Post Harihar, Mysore State (Harihar, Mysore State)	(i) Cone pulley lathes (ii) Light geared head lathes (iii) Heavy geared head lathes (iv) Other machine tools such as hacksaw machines, pillar drilling machines (v) Capstan lathes (vi) Turret lathes S E	Nos. per annum (After expansion) 2,000 620 360 420 250 200	L 9-64-MEI-61 5-12-61
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(Contd.)

Name and full address of the undertaking and location	Articles of manufacture; capacity and type of licence	Licence number and date
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Western Mechanical Industries Private Ltd., 5-D, Vulcan Insurance Building Church Gate, P. B. No. 1531, Bombay-1 (Maharashtra)	1. Melting plants 2. Moulding machines 3. Casting cleaning machines 4. Sand preparation & conditioning plants 5. Indication type tyre heaters 6. Handles 7. Mould & cone dying ovens 8. Crushers 9. Vacuum impregnat- ing plants 10. Vibrating screws N A	Capacity will be determined one year after production starts L 9-75-MEI-62 13-2-62
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Bhogilal Menghraj & Co., Private Ltd., Shree Ram Mills Premises, Ferguson Road, Lower Parel, Bombay-13 (Surat, Gujarat)	Tool bits (Square and Rounds) N U	Dozens per annum 10,000 L 9-79 62 7-3-62
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Schd. Ind. No. 12 (1)—Plastic Moulded Goods

Shri M.R. Maniar, Kapur Mahal, Marine Drive, Bombay-1 (Bhavanagar, Gujarat)	Laminated industrial and decorative boards N U	Tons per annum 600 L 12-1-6-62-Ch. V 29-3-62
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Schd. Ind. No. 14—Medical and Surgical Appliances

Shri R. N. Vig. Director, Iscomed Industries Private Ltd., 4, India House, Fort Street, Bombay-1 (Bhandup, Maharashtra)	1. Dental chair 2. Dental units 3. Dental engine mobile 4. Dental pedestal spittoon 5. Dental operating steel 6. Dental air rotor 7. Mobile dental light N U	Nos. per annum 144 120 120 120 120 120 120 L 14-2-LEI-A 62 27-3-62
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Schd. Ind. No. 15 (1)—Water Meters, Steam Meters, and the like

Excelsior Needles Industries Private Ltd., Gool Mansion, 5th Floor, Homji Street, Fort, G. P. O. Box No. 1469, Bombay-1 (Bahadurgarh, Punjab)	$\frac{1}{2}$ " water meters $\frac{3}{4}$ " water meters N U	Nos. per annum 25,000 15,000 L 15-1-5-LEI-A 62 9-3-62
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Schd. Ind. No. 19 (2)—Organic Heavy Chemicals

Suhrid Geigy Ltd., Post Box No. 28, Ahmedabad [Gujarat]	Phthalic anhydride N U	Tons per annum 3,000 L 19-2-2-62-Ch III 20-3-62
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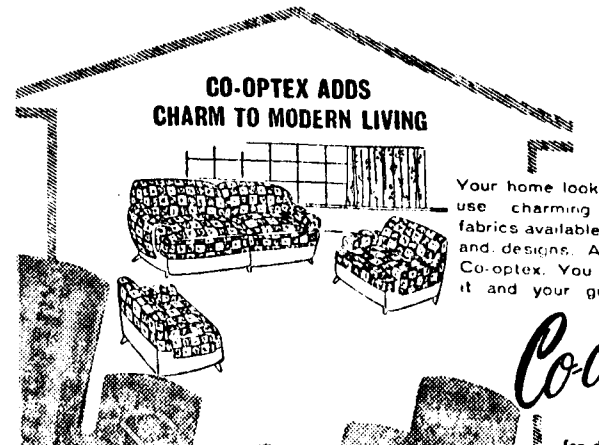
JULY-SEPTEMBER 1962

(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		
Jindaram Harbilas, 9, Jagmohan Mullick Lane, Calcutta-7 (Lilloah, West Bengal)	1. Dissolved acetylene gas 2. Nitrogen Cu. Ft. per annum 12.75 million 56.00 million N A	L 19-14-3-62-Ch. II 14-3-62
Schd. Ind. No. 22—Drugs and Pharmaceuticals		
Pfizer Private Ltd., P. O. Box 667, Bombay-1 (Bombay, Maharashtra)	Renese (polythiazide) tablets S E Tablets per annum 24,00,000	L 22-114 62-Ch. III 23-3-62
Schd. Ind. No. 23—(1)—Textiles—made wholly or in part of Cotton		
Orissa Textile Mills Ltd., Dhowdwar, Cuttack (Chowdwar, Cuttack, Orissa)	Cotton yarn N U 21,600 spindles	L 23-1-209-62 Tex. B 24-3-62
Modi Spg. & Wvg. Mills Co., Ltd., Modinagar (U.P.) (Modinagar, U.P.)	Cotton yarn S E 18,800 spindles	L 23-1-210 62 Tex. B 26-3-62

(Contd.)

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Society Limited,
Egmore, Madras-8

**selling units
all over India**

(Contd.)

Name and full address of the undertaking and location	Articles of manufacture ; capacity and type of licence	Licence number and date
Western Mechanical Industries Private Ltd., 5-D, Vulcan Insurance Building Church Gate, P. B. No. 1531, Bombay-1 (Maharashtra)	1. Melting plants 2. Moulding machines 3. Casting cleaning machines 4. Sand preparation & conditioning plants 5. Indication type tyre heaters 6. Handles 7. Mould & cone drying ovens 8. Crushers 9. Vacuum impregnating plants 10. Vibrating screws N A	L 9-75-MEI-62 13-2-62 Capacity will be determined one year after production starts
Bhogilal Menghraj & Co., Private Ltd., Shree Ram Mills Premises, Ferguson Road, Lower Parel, Bombay-13 (Surat, Gujarat)	Tool bits (Square and Rounds) N U Dozens per annum 10,000	L 9-79 62 7-3-62
Schd. Ind. No. 12 (1)—Plastic Moulded Goods		
Shri M.R. Maniar, Kapur Mahal, Marine Drive, Bombay-1 (Bhavanagar, Gujarat)	Laminated industrial and decorative boards N U Tons per annum 600	L 12-1-6-62-Ch. V 29-3-62
Schd. Ind. No. 14—Medical and Surgical Appliances		
Shri R. N. Vig. Director, Iscomed Industries Private Ltd., a, India House, Fort Street, Bombay-1 (Bhandup, Maharashtra)	1. Dental chair 2. Dental units 3. Dental engine mobile 4. Dental pedestal spittoon 5. Dental operating steel 6. Dental air rotor 7. Mobile dental light N U Nos. per annum 144 120 120 120 120 120 120	L 14-2-LEI-A 62 27-3-62
Schd. Ind. No. 15 (1)—Water Meters, Steam Meters, and the like		
Excelsior Needles Industries Private Ltd., Gool Mansion, 5th Floor, Homji Street, Fort, G.P.O. Box No. 1469, Bombay-1 (Bahadurgarh, Punjab)	1/2" water meters 3/4" water meters N U Nos. per annum 25,000 15,000	L 15-1-5-LEI-A 62 9-3-62
Schd. Ind. No. 19 (2)—Organic Heavy Chemicals		
Suhrd Geigy Ltd., Post Box No. 28, Ahmedabad (Gujarat)	Phthalic anhydride N U Tons per annum 3,000	L 19-2-2-62-Ch III 20-3-62

(Contd.)

JULY-SEPTEMBER 1962

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(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		
Jindaram Harbilas, 9, Jagmohan Mullick Lane, Calcutta-7 (Lilloah, West Bengal)	1. Dissolved acetylene gas	Cu. Ft. per annum 12.75 million
	2. Nitrogen	56.00 million
		N A
Schd. Ind. No. 22—Drugs and Pharmaceuticals		
Pfizer Private Ltd., P. O. Box 667, Bombay-1 (Bombay, Maharashtra)	Renese (polythiazide)	Tablets per annum 24,00,000
		S E
Schd. Ind. No. 23—(1)—Textiles—made wholly or in part of Cotton		
Orissa Textile Mills Ltd., Dhowdwar, Cuttack (Chowdwar, Cuttack, Orissa)	Cotton yarn	21,600 spindles N U
Modi Spg. & Wvg. Mills Co., Ltd., Modinagar (U.P.) (Modinagar, U.P.)	Cotton yarn	18,800 spindles S E

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Co-operative
Society Limited,
Egmore, Madras-8

**selling units
all over India**

(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 (3)—Textiles—made wholly or in part of Wool		
Pearl Woollen Mills No. 1, G.T. Road, Millerganj, Ludhiana (Ludhiana, Punjab)	Wool tops	Pounds per annum 13,00,000
		S E
Schd. Ind. No. 24 (4)—Paper for Packaging (Corrugated Paper, Kraft Paper, Paper Bags, Paper Containers and the like).		
Metal Box Co., of India Ltd., Barlow House, 59-C, Chowringhee, Calcutta-20 (Bombay, Maharashtra)	Waxed and laminated papers and boards and containers thereof	Tons per annum 1,980
		N A
Schd. Ind. No. 24 (5)—Pulp—Wood Pulp, Mechanical, Chemical, including Dissolving Pulp		
India Paper Pulp Co., Ltd., P. B. No. 150, 8, Clive Row, Calcutta-1 (Hazinagar, West Bengal)	Pulp	Metric tons per annum 16,200 (after expansion)
		S E
Schd. Ind. No. 28 (2)—Vanaspathi		
Prag Ice & Oil Mills, Ramghat Road, Aligarh, U.P. State (Aligarh, U.P.)	Vanaspathi	Tons per day 20
		N A
Schd. Ind. No. 36 (2)—Hardboard, including Fibre-Board, Chip-Board and the like		
The Conservator General of Forests, Government of West Bengal, Writers' Buildings, Calcutta-1 (Proposed name : Government Particle Board Factory, Directorate of Forests, West Bengal) (Siliguri, West Bengal)	Chipboard (particle board)	Capacity per annum 6.0 (six million) square feet or 6,000 tons
		N U

(Contd.)

JULY-SEPTEMBER 1962

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**STATEMENT SHOWING THE CHANGES IN THE NAMES OF THE
OWNERS/UNDERTAKINGS EFFECTED DURING FEBRUARY—MARCH 1962**

FEBRUARY 1962

<i>The name of the original owner/ the original name of the undertaking</i>	<i>The name of new owner/ the new name of undertaking</i>	<i>Licence No. and date</i>
S. Nath & Co., Delhi	Central Distributors Ltd., Bombay	L 7-6-5-61-IEI-A 20-4-61 (Shifting from Delhi to Bombay)
Black Woods India Ltd., Calcutta.	J. K. Business Machines Ltd., Calcutta	L 13-1-N1-58 9-5-58 [Calcutta]
Shri J. N. Iyer, Bombay	Universal Chemicals & Industries Private Ltd., Bombay	L 19-1-61-NU-Ch. I 61 20-11-61 [Maharashtra]
Lucas Indian Service Private Ltd., Madras.	Lucas—T.V.S. Private Ltd., Madras	L 7-5 N 78-60 21-3-60 [Madras]
Lucas Indian Service Private Ltd., Madras.	do	L 7-5-30-60 AEI 27-10-60 [Madras]
Tractors & Bulldozers Private Ltd., Bombay.	Construction Equipment Co. Ltd., Bombay	L 11 N 4-57 2-8-57 [Bombay]
Madhavlal Industries (Private) Ltd.	Everest Ceramic Corporation Ltd.	L 34-5-29-60 Chem. IV 14-11-60 (Ahmedabad, Gujarat)
Seshasayee Bros. (Travancore) Private Ltd.	Seshasayee Wire Ropes Ltd.	L 1A-7-3-61-EI M 3-6-61 (Jabril, Dist. Ernakulam, Kerala)
National Engineering works	Somani & Co. Private Ltd.	L 1A-4 N 20-58—22-3-58 [Bombay]
do	do	L 1A-4-N 21-58—24-3-58 [Bombay]
American Refrigerator Co. Private Ltd.	American Refrigerator Co. Ltd.	L 8-B 13 N 2-58—18-9-58 [Calcutta]
do	do	L 8-B 13 N 8-59—30-11-59 [Calcutta]

(Contd.)

(Contd.)

<i>Name and full address of the undertaking and location</i>	<i>Articles of manufacture ; capacity and type of licence</i>	<i>Licence number and date</i>
Schd. Ind. No. 23 (3)—Textiles—made wholly or in part of Wool		
Pearl Woollen Mills No. 1, G.T. Road, Millerganj, Ludhiana (Ludhiana, Punjab)	Wool tops S E	<i>Pounds per annum</i> 13,00,000 L 23-3 N-8 Tex. D 62 31-3-62
Schd. Ind. No. 24 (4)—Paper for Packaging (Corrugated Paper, Kraft Paper, Paper Bags, Paper Containers and the like).		
Metal Box Co., of India Ltd., Barlow House, 59-C, Chowringhee, Calcutta-20 (Bombay, Maharashtra)	Waxed and laminated papers and boards and containers thereof N A	<i>Tons per annum</i> 1,980 L 24-4-12-62 Ch. I 27-3-62
Schd. Ind. No. 24 (5)—Pulp—Wood Pulp, Mechanical, Chemical, including Dissolving Pulp		
India Paper Pulp Co., Ltd., P. B. No. 150, 8, Clive Row, Calcutta-1 (Hazinagar, West Bengal)	Pulp S E	<i>Metric tons per annum</i> 16,200 (after expansion) L 24-5-12-62 Ch. I 27-3-62
Schd. Ind. No. 28 (2)—Vanaspathi		
Prag Ice & Oil Mills, Ramghat Road, Aligarh, U.P. State (Aligarh, U.P.)	Vanaspathi N A (Also shifting from Bobbili, Andhra Pradesh to Aligarh, U. P.)	<i>Tons per day</i> 20 L 28-2 N-17 62 23-3-62
Schd. Ind. No. 36 (2)—Hardboard, including Fibre-Board, Chip-Board and the like		
The Conservator General of Forests, Government of West Bengal, Writers' Buildings, Calcutta-1 (Proposed name : Government Particle Board Factory, Directorate of Forests, West Bengal) (Siliguri, West Bengal)	Chipboard (particle board) N U	<i>Capacity per annum</i> 6.0 (six million) square feet or 6,000 tons L 36-2-34 61-Ch. IV 20-3-62

(Contd.)

STATEMENT SHOWING THE CHANGES IN THE NAMES OF THE OWNERS/UNDERTAKINGS EFFECTED DURING FEBRUARY—MARCH 1962

FEBRUARY 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
S. Nath & Co., Delhi	Central Distributors Ltd., Bombay	L 7-6-5-61-IEI-A 20-4-61 (Shifting from Delhi to Bombay)
Black Woods India Ltd., Calcutta.	J. K. Business Machines Ltd., Calcutta	L 13-1-N1-58 9-5-58 [Calcutta]
Shri J. N. Iyer, Bombay	Universal Chemicals & Industries Private Ltd., Bombay	L 19-1-61-NU-Ch. I 61 20-11-61 [Maharashtra]
Lucas Indian Service Private Ltd., Madras.	Lucas--T.V.S. Private Ltd., Madras	L 7-5 N 78-60 21-3-60 [Madras]
Lucas Indian Service Private Ltd., Madras.	do	L 7-5-30-60 AEI 27-10-60 [Madras]
Tractors & Bulldozers Private Ltd., Bombay.	Construction Equipment Co., Ltd., Bombay	L 11 N 4-57 2-8-57 [Bombay]
Madhavlal Industries (Private) Ltd.	Everest Ceramic Corporation Ltd.	L 34-5-29-60 Chem. IV 14-11-60 (Ahmedabad, Gujarat)
Seshasayee Bros. (Travancore) Private Ltd.	Seshasayee Wire Ropes Ltd.	L 1A-7-3-61-EI-M 3-6-61 (Jabril, Dist. Ernakulam, Kerala)
National Engineering works	Somani & Co. Private Ltd.	L 1A-4 N 20-58—22-3-58 [Bombay]
do	do	L 1A-4-N 21-58—24-3-58 [Bombay]
American Refrigerator Co. Private Ltd.	American Refrigerator Co. Ltd.	L 8-B 13 N 2 58—18-9-58 [Calcutta]
do	do	L 8-B 13 N 8 59—30-11-59 [Calcutta]

(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
American Refrigerator Co. Private Ltd.	American Refrigerator Co. Ltd.	L 13-3-9-60 AEI—2-9-60 [Calcutta]
do	do	L 8-B 13 2-60 AEI 9-8-60
do	do	L 13-3-10-60 AEI—8-11-60
Aeronautical Services Ltd.	Veegal Engines & Engineering Ltd.	L 32-8-55 L 4-2-7—12-9-55 [Calcutta]
do	do	L 4-2-9-60 AEI—10-10-60 [Calcutta]
do	do	L 7-2-N 1-57—6-3-57 [Calcutta]
do	do	L 36-20-56 L 12-2-20 11-12-56 [Calcutta]
do	do	L 5 7-14-60 AEI—4-7-60 [Calcutta]
do	do	L 1-2-56 L 7-1-2—3-5-56 [Calcutta]
Shri N. R. Krishnamaraja	Madras Chip Board Ltd.	L 36-2-19-Ch. I—4-2-61 [Madras]
Shri V. N. Somani, Bombay	Electro Ceramic Products Ltd. Bombay	L 34-6-48-61-Ch. II 30-1-61 [Maharashtra]
Great Eastern Electroplaters Ltd.	Geep Flashlight Industries Ltd.	L 5-9 N 10-59—30-6-59 [Allahabad, U. P.]
MARCH 1962		
Simpson Repco Private Ltd.	Bimetal Bearings Ltd.	L 4-2 N 20 59—6-10-59 [Madras]
T. Maneklal Manufacturing Co., Ltd.,	SIM—Maneklal Industries Ltd., Ahmedabad	L 3B-12-7-60 AEI 21-11-60 [Kurla, Andheri Maharashtra]
T. Maneklal Manufacturing Co., Ltd.	SIM—Maneklal Industries Ltd., Ahmedabad	L 4-2-18-60 AEI 19-1-61 [Ahmedabad, Gujarat]
Beni Engineering Works, Ltd.,	Beni Ltd	L 5-1 N-24 58 31-7-58 [Kamarhatti, West Bengal]

(Contd.)

(Contd.)

<i>The name of the original owner/ the original name of the undertaking</i>	<i>The name of new owner/ the new name of undertaking</i>	<i>Licence No. and date</i>
Kesoram Cotton Mills Ltd., Calcutta	Kesoram Industries & Cotton Mills Ltd., New Delhi	L 10.E 328 6—L 19-7-7 6-2-56 [Calcutta, West Bengal]
Arsi Textile Mills Private Ltd.,	Arsi Textile Mills Ltd.	L 23-1-58 Tex B 60 28-10-60 Ahmedabad, [Gujarat]
Indfoss Automatic Control and Equipment Manufacturing Co., Private Ltd.,	Danfoss (India) Ltd.	L 13-3 N 10-59—21-11-59 Bombay [Maharashtra]
Blundell Bomite Paints Private Ltd.,	Blundell Bomite Paints Ltd.	L 19-4 N 11-58—24-11-58 Mazagaon, [Maharashtra]
Blundell Bomite Paints Private Ltd.,	Blundell Bomite Paints Ltd.	L 19-4 N 21-59—14-10-59 Mazagaon [Maharashtra]
Blundell Bomite Paints Private Ltd.,	Blundell Bomite Paints Ltd.	L 19-4 7-60 Chem. II 28 12-62 Kolshit, Dist. Thana [Maharashtra]
National Engineering Works [India]	Modern Machine Tools & Engineering Works	L-IA 3-27 MEI 60 20-8-60 Ludhiana, [Punjab]
Bhavana Metal Chemie, Baroda	Bhavana Chemical Private Ltd., Baroda	L 19-3 N-8 60 10 2-60 [Baroda]
South India Tube Co. Ltd.	Madras Tube Company Ltd.,	L 1 A-5-36 MEI 61 6-4-61 (Madras)
Beni Engineering Works Ltd.	Beni Limited	L 7-3 N-1-59 12-6-59 (Kamarhati, West Bengal)
East Coast Enterprisers Ltd.	Magnets & Appliances Manufacturers Ltd.	L 15-1-15-EEI 5961 16-6 61 (West Bengal)
Globe Motors Private Ltd	Globe Motors Ltd.	L 7-5 51-61-EI 10-2-61 (Uttar Pradesh)
Beni Engineering Works Ltd.	Beni Limited	L 5-1 N-80 60 2-7-60 (Calcutta West Bengal)
National Engineering Works [India]	Modern Machine Tools & Engineering Works	L 1A-3-27-MEI-60 20- -60 (Ludhiana, Punjab)

(Contd.)

LICENCES REVOKED DURING FEBRUARY—MARCH 1962

FEBRUARY 1962

<i>Name of the Industrial undertaking</i>	<i>Articles of manufacture</i>	<i>Licence No. and date</i>
Hindustan Wire Netting Co., (P) Ltd., Bombay	Paper machine, wire mesh	L 8-A-11-11-61 AEI 5-8-61 (Maharashtra)
Shri J. T. Mehta & Co., Bombay	Printing & Writing paper	L 24-1-N-39-60—12-5-60 (Surat, Gujarat)
Everest Paper Mart, Calcutta	Paper & Pulp	L 24-1-4-60-Ch. 1—26-4-60 (Rohtak, Punjab)
Shri Anil Kumar Nandy, Calcutta	Straw Board	L 24-3 N 16-60 23-2-60 [Pandooah, Dist. Hooghly, West Bengal]
Modi Sugar Mills Ltd., Modinagar	Paper and Pulp	L 24-1-29-60-Ch. I 7-12-60 [N A] [Modinagar U.P.]
R. S. Madho Ram & Sons, New Delhi	do.	L 24-1-N-60-60 17-8-60 [N.U.] [Ghaziabad, U.P.]
Assam Pulp Mills Ltd., Calcutta	Pulp	L 24-5 N 7-58—10-12-58 N U—[Assam]
Girdhari Lal, Jagdish Lal, Ludhiana	Printing & writing paper	L 24-1 N 58-60—10-8-60 N U [Chandigarh, Punjab]
Rajasthan Paper Mills Private Ltd., Jaipur	Paper and pulp	L 24-1 N 32-60—7-5-60 N U—[Jaipur, Rajasthan]
Kolhapur Sugar Mills Ltd., Kolhapur	Vegetable oil by solvent extraction process	L 28-1 N 116-60—29-5-60 S E [Kolhapur, Maharashtra]
Brahmaputra Pulp & Paper Mills, Gauhati	Paper and pulp	L 24-1 N 44-60—12-5-60 N U—[Gauhati, Assam]
Bishun Dayal Kajriwal & Sons, Kanpur	Paper and pulp	L 24-1 N 29-60—5-5-60 N U [Kanpur, Uttar Pradesh]
Chamanlal & Bros., New Delhi	Paper and pulp	L 24-5-60 Ch I—22-6-60 N U [Kalyan, Maharashtra]
Swadeshi Sugar Suppliers [P] Ltd., Calcutta	Printing paper—writing paper straw board & pulp	L 24-1-16 Ch I—18-7-60 N U [Varanashi, Uttar Pradesh]

(Contd.)

JULY-SEPTEMBER 1962

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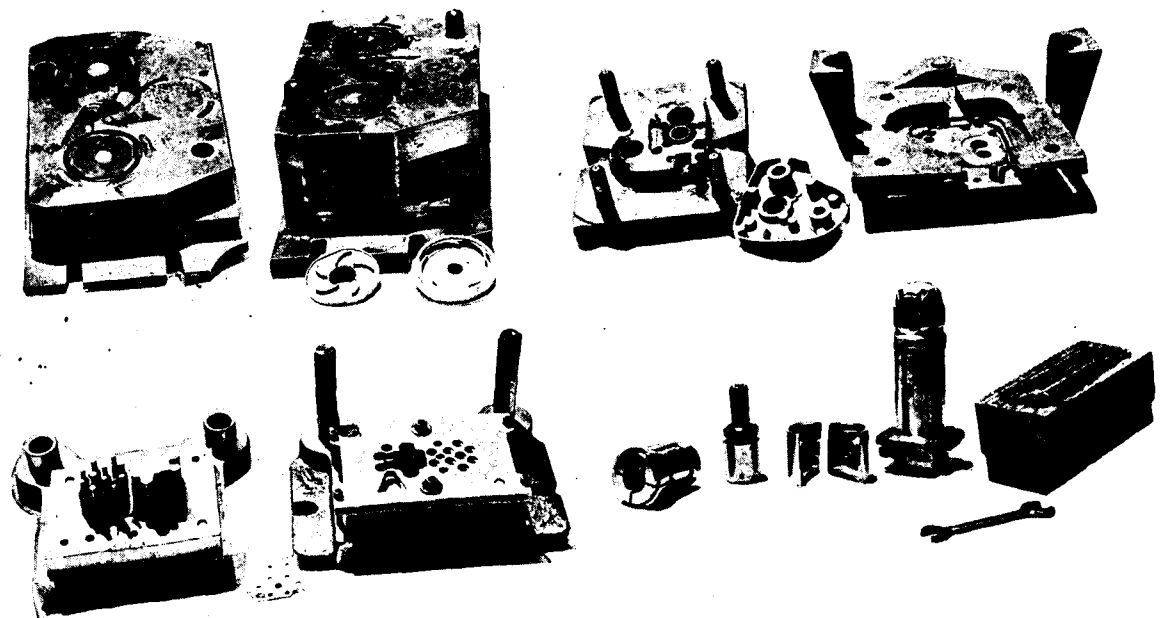
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(Contd.)

Name of the Industrial undertaking	Articles of manufacture	Licence No. and date
Amin Chand Payare Lal, Jullunder	Paper & Pulp	L 24-1-8-60 Ch I—14-7-60 N U [Chandigarh, Punjab]
Testeels Ltd., Ahmedabad	Bolts, nuts & ferrous castings	L 1 A 7 N 32-58—26-2-58 S E [Ulhasnagar, Maharashtra]
Testeels Ltd., Ahmedabad	Steel structurals	L 4-69-55—14-10-55—N U [Ulhasnagar, Maharashtra]
Duncan Bros. Co. Ltd., Calcutta	Synthetic rubber	L 19-6-1-60-Ch. II 26-12-60 [Assam]
K. T. Steel Industries [P] Ltd., Bombay	Black or galvanized wire	L 1A-7 N 213-60—26-8-60 [Ambaranath, Dist. Thana, Maharashtra]
Bharat Thermometers, New Delhi	Capillary tubes, glass tubings and thermometers	L 16-N 14-59—26-11-59 [Faridabad, Punjab]
R. B. Seth Shreeram Durgaprasad, Bombay	Paper and pulp	L 24-1-25-60-Ch. I 31-10-60 [Tumsar, Maharashtra]
Belur Glass Works, Calcutta.	Crystal glass, semi-crystal glass, double coloured glass etc.	L 37-31 55 L 33-6-22 17-3-55 [Balur, West Bengal]
MARCH 1962		
Modi Industries, Modinagar	Vegetable oil including solvent extraction process	L 28-1 N 103-60—12 1-60 [Modi Nagar, Dist. Meerut, U.P.]
Prayagdas Kanhaiyalal & Co., Delhi	Grease proof and glassine paper	L 24 4 N 16-60—10 8-60 Faridabad, Punjab
Vegetable Oil Manufacturing Co. Private Ltd.,	Vegetable oil by solvent extraction process	L 28-1 N 138-60—5-9-60 [Badnera, Dist. Amravati, Maharashtra]
Raja Bahadur Motilal Poona Mills Ltd., Bombay	Paper and pulp	L 24 1-26-60 Ch. I 22-11-60 [Kalyan, Maharashtra]
Orissa Paper Mills Private Ltd., Cuttack	Printing, writing paper and allied products	L 24-1 N 57-60—10 8-60 [Bemra, Dist. Sambalpur, Orissa]
Khaitan Hard Board Co., Calcutta	Hard board	L 36-2 N 63-60—25-3-60 [Visakhapatnam, Andhra Pradesh]
Vegetable Oil Mfg. Co. Ltd., Badnera	Vegetable oil by solvent extraction process	L 28 1 N 138-60—5-9-60 S E, Badnera Dist. Amravathi, Maharashtra

(Contd.)

(Contd.)

Name of the Industrial undertaking	Articles of manufacture	Licence No. and date
Premier Paper Mills, New Delhi	Tissues, bonds, banks, index and specialities and pulp	L 24-1-22-60-Ch. I 11-10-60 N.U. Kalyan— Maharashtra
Duncan Brothers & Co. Ltd., Calcutta	Polythylene	L 19-4-5-60-Ch. II 26-12-60 N.U. Gauhati, Assam
Afco Ltd., Bombay	Marine gear boxes	7 2 N 3-60—16-6-60 N.A.T Arangal, Bombay
Kumar Industries, Palghat	Electric motors	L 5-2 N 29-5—23-6-59 (New Article) [Edathara, Palghat Kerala]
New Cawnpore Flour Mills	Vegetable oil by solvent extraction process	L 28-1-19-60 Ch. II 11-8-60—S. E. (Kanpur, U. P.)
Venus Silk Mills, Bombay	Art silk fabrics	L 23-5 N-6-57 10-5-57 [C. O. B.] [Bombay, Maharashtra]
Modern India Construction Co., Private Ltd., Calcutta	Oil seeds	L 30-4 N-25-60 30-5-60—N.A. [Sukchar, West Bengal]
Associated Agencies (Bombay), Bombay	Oxalic acid, formic acid	L 19-2 N-18 60 8-1-60—N. U. [Bombay, Maharashtra]
Biological Products Private Ltd., Bombay	Calcium gluconate	L 22-N-95-59 30-7-59—N. A. [Mushirabad, Andhra Pradesh]
The Indian Hume Pipe Co. Ltd., Bombay	Welded steel penstocks	L-IA 7 N 72-59—14-5-59 Rihand, Dist. Mirzapur, U.P.
Commonwealth Spinning & Knitting Mills Ltd., Ludhiana	Insulating cable paper	L 24-1-15-60 Ch. I 15-7-60—S. E. [Ludhiana, Punjab]
India Pistons Ltd., Madras	Fly wheels ring gears	L 4-2-1—2 AEI 17-2-62—N. A. [Madras]
Shri R. Ramamurthi Reddi (Rayalaseema Industries Private Ltd.)	Vegetable oil from oil cakes by solvent extraction process	L 28-1 N-142-60 14-9-60—N. U. [Cuddaph, Andhra Pradesh]
Shakkar Udyog Private Ltd., Bombay	Malleable Iron Castings	L 1A-3-92-MEI-60 1-2-61—N U [Maharashtra]
Assam Cements Ltd., Shillong	Portland Cement	L 12-57 56—L 35-1-54 7-12-56—S. E. [Cherrapunji, Assam]

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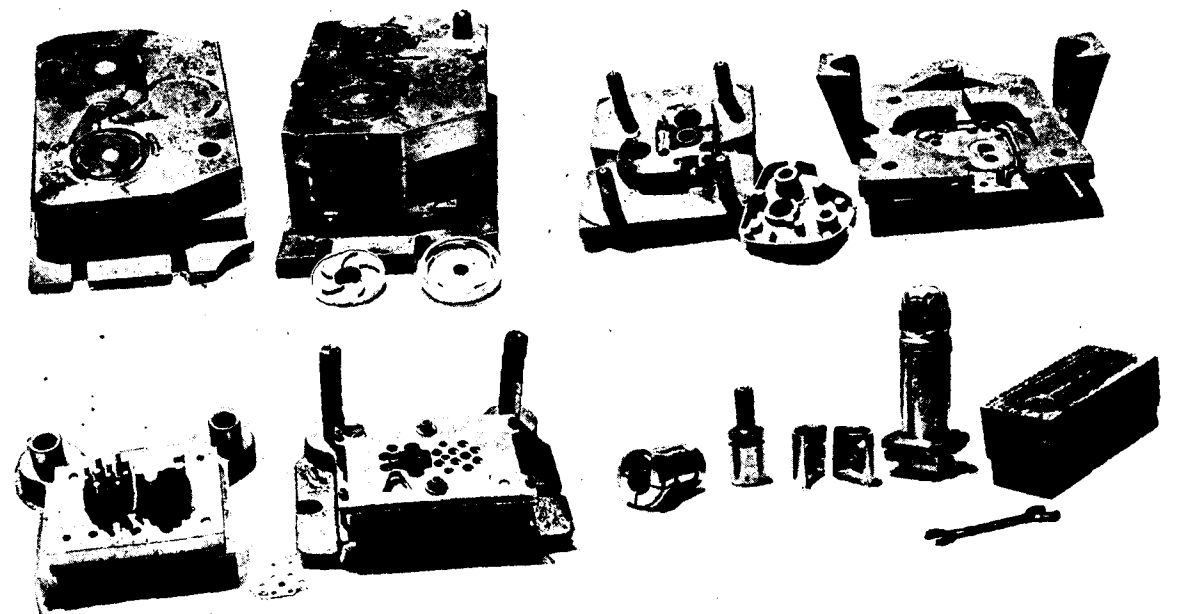
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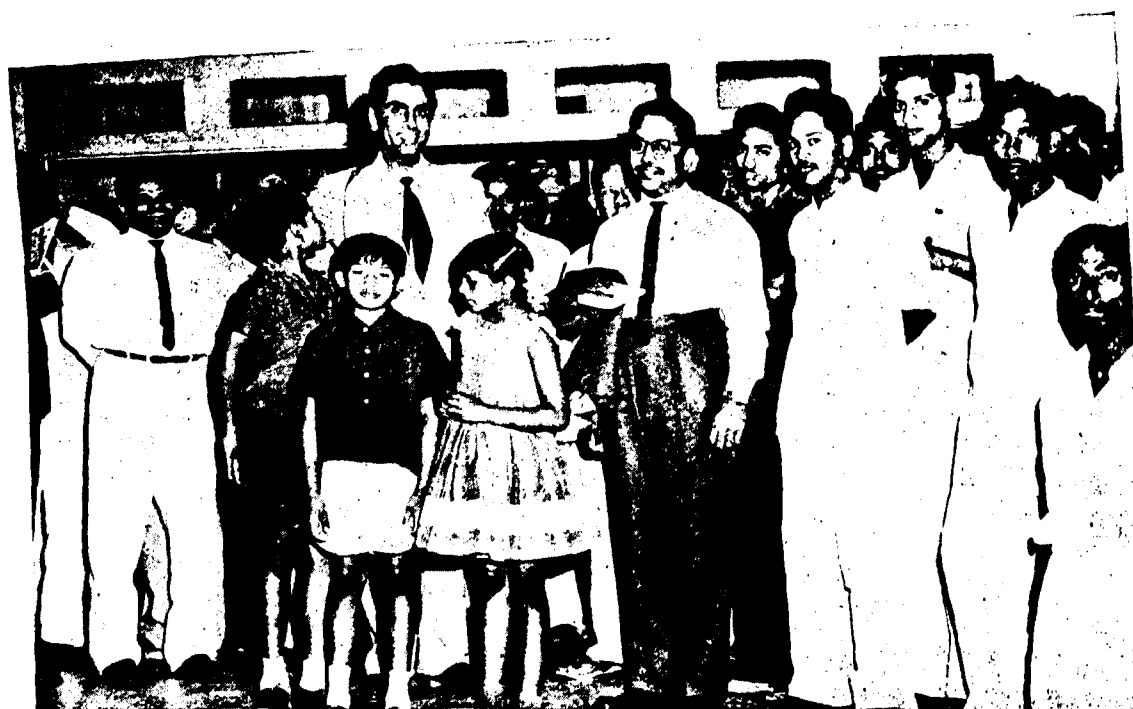
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Sri P. Sabanayagam, Director of Industries and Commerce, Madras and Sri T. V. Antony, Deputy Secretary to Government, Industries, Labour and Co-operation Department, Madras, recently visited Czechoslovakia to explore the possibility of setting up ancillary industries for the manufacture of bought out components needed by the High Pressure Boiler Plant near Trichy. A large number of officials and friends saw them off at Madras Air Port on September 13, 1962.



A team of senior officers from the National Defence College, New Delhi visited the Guindy Estate on September 12, 1962. Picture shows the officers at the Exhibition Hall.

HIGH PRESSURE BOILER PLANT NEAR TIRUCHI

ESTABLISHMENT OF AN ANCILLARY INDUSTRIAL ESTATE

AN OPPORTUNITY TO INTENDING ENTREPRENEURS TO SET UP UNITS

The Government of India are setting up a High Pressure Boiler Plant Project in the Public Sector under the aegis of the Heavy Electricals (India) Limited near Thiruverambur in Tiruchirapalli District in technical collaboration with the Czechoslovakian Government and a vast stretch of almost barren and shrubby land along Tiruchirapalli-Thanjavur Road will soon be transformed into an industrial metropolis.

In this context, it is proposed to procure quite a good number of items of component parts needed by the plant from small scale units and for this purpose, the Government contemplate to establish an Ancillary Industrial Estate in the vicinity of the project for allotment of sites to intending entrepreneurs who can manufacture and supply the bought-out components to the plant.

Visit abroad

Sri P. Sabanayagam, Director of Industries and Commerce and Sri T. V. Antony, Deputy Secretary, Government of Madras, undertook, in this connection, a ten-day tour of Czechoslovakia during September last. The visit, which was arranged at the invitation of the Techno-export, was made to explore the possibility of establishing ancillary industries near the Tiruchi Boiler Plant and also to study how ancillary

industries attached to big projects are run in that country.

Here and there

The Director of Industries, who recently returned from his tour after visiting the factories of the Czech collaborators, said that the ancillary industries in that country were found to be of the nature of integrated production units getting the necessary facilities from the main factory for the purpose of obtaining components to the required degree of precision. On the other hand the programme of economic development in India laid emphasis on starting a large number of small units to provide employment to as many people as possible. The Director felt confident that the manufacture of components required for the Tiruchi Boiler Plant could well be entrusted to small industries without losing the precision set up by the collaborators. He hoped that these ancillary industries would spring up in time

JULY-SEPTEMBER 1962

to feed the main boiler plant which is scheduled to commence production in about a year and a half. He also revealed that the first batch of Indian technicians, who are now having their initial six-month training at Bhopal in connection with the setting up of the Tiruchi Boiler Plant, is expected to proceed to Czechoslovakia in November this year for specialised training.

Components needed

A list of bought-out items required for the project as obtained from Heavy Electricals Limited is given below and parties interested in setting up production units for manufacturing these components may send their applications to the Regional Deputy Director of Industries and Commerce, Tiruchirapalli.

LIST OF BOUGHT-OUT ITEMS

Name of items	Quantity in tons	Name of items	Quantity in tons
Gear boxes	151.556	Rectifiers and switches	21.129
Electric motors	710.778	Springs	53.032
Bearings	36.709	Toothed rims	105.600
Chains	0.100	Measuring instruments	205.190
Bolts and nuts	426.968	Water treatment plant	127.900
Packings	9.120	Valves and fittings	131.009
Couplings	75.194	Linings	4700.000
Pumps	3.096	Insulation	1700.000
Besalt piping	360.000		

It may be mentioned here that the quantities marked against the various items are for the first stage of production and for the ultimate stage the quantities required are expected to be two times these figures.

It has been recently reported that twelve numbers of boilers of the type that are at present working at Neyveli are likely to be produced in the first stage of production and it will be doubled during the second stage.

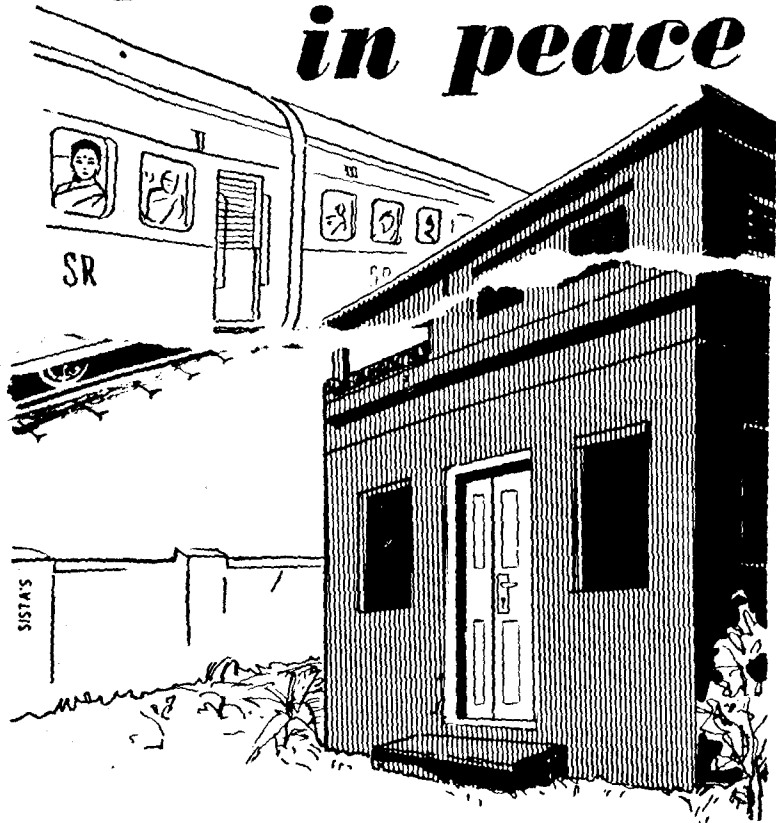
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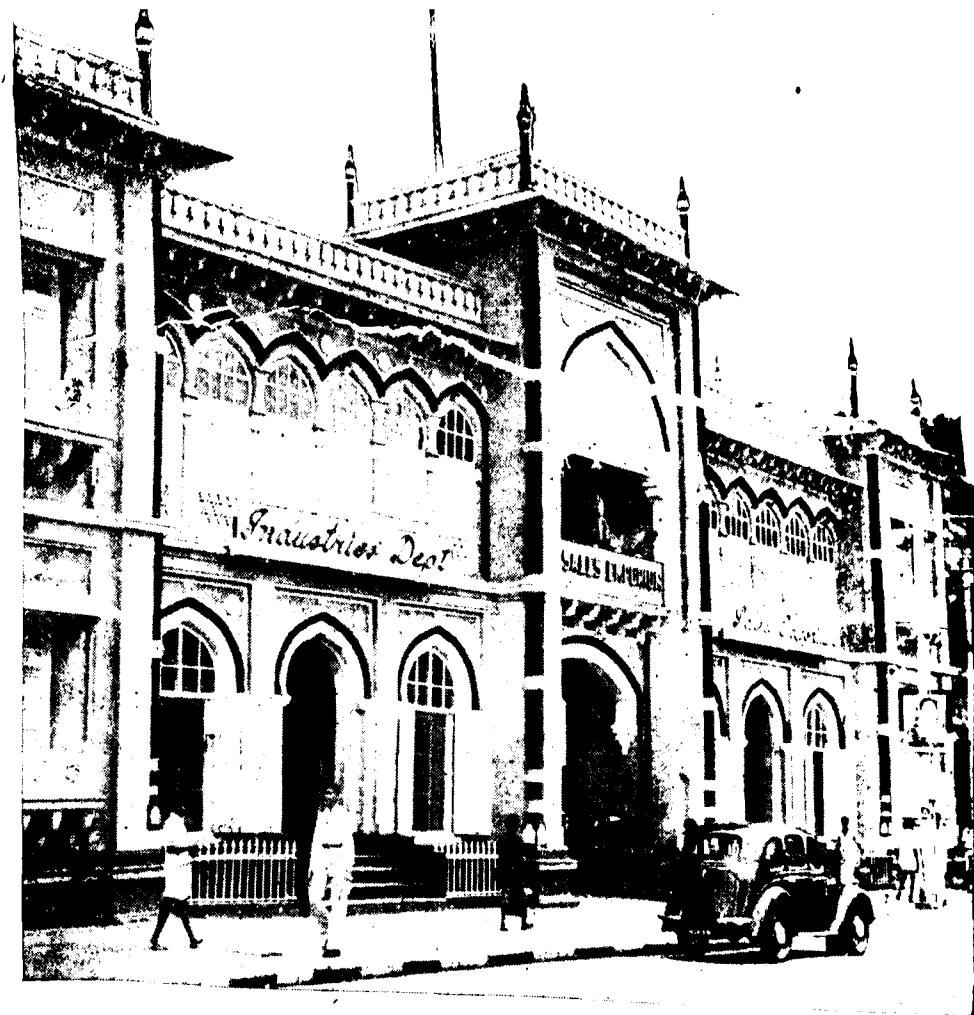
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