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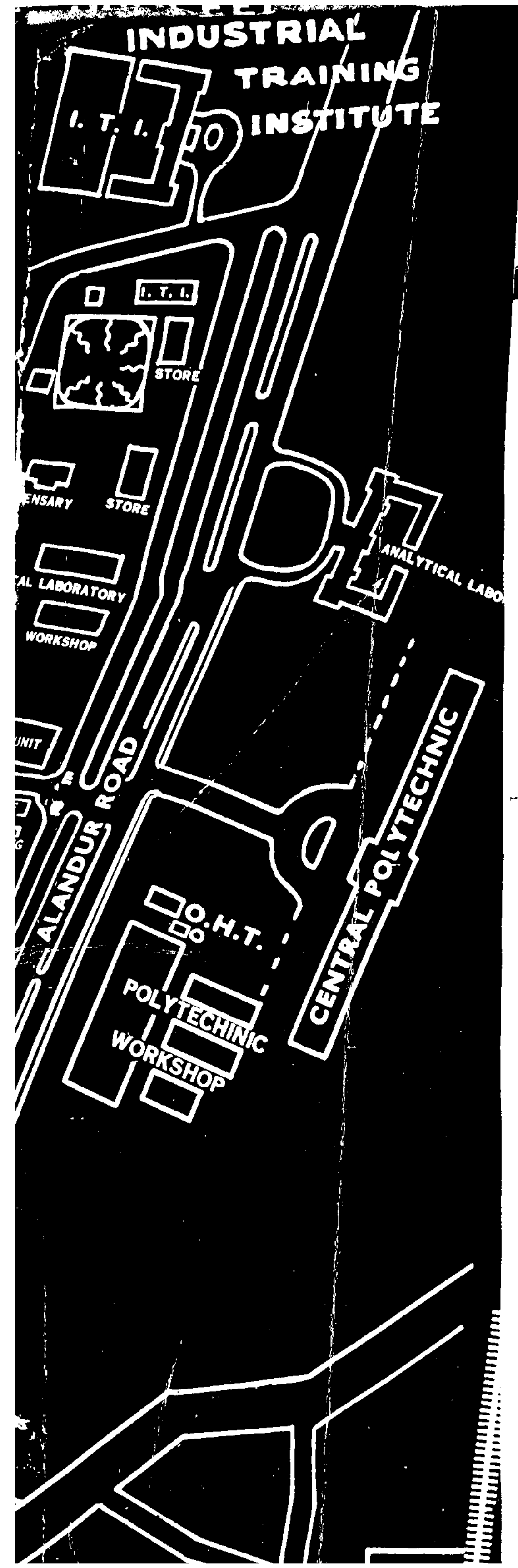

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ON THE COVER

GUINDY to-day presents a picturesque panorama of a thriving centre of industries. More than two hundred acres of barren land have been transformed into a magnificent Industrial metropolis within a short span of time.

Our cover shows the blue print plan of the expanding Industrial Estate at Guindy which has become the hub of metallurgical, chemical and engineering activities.

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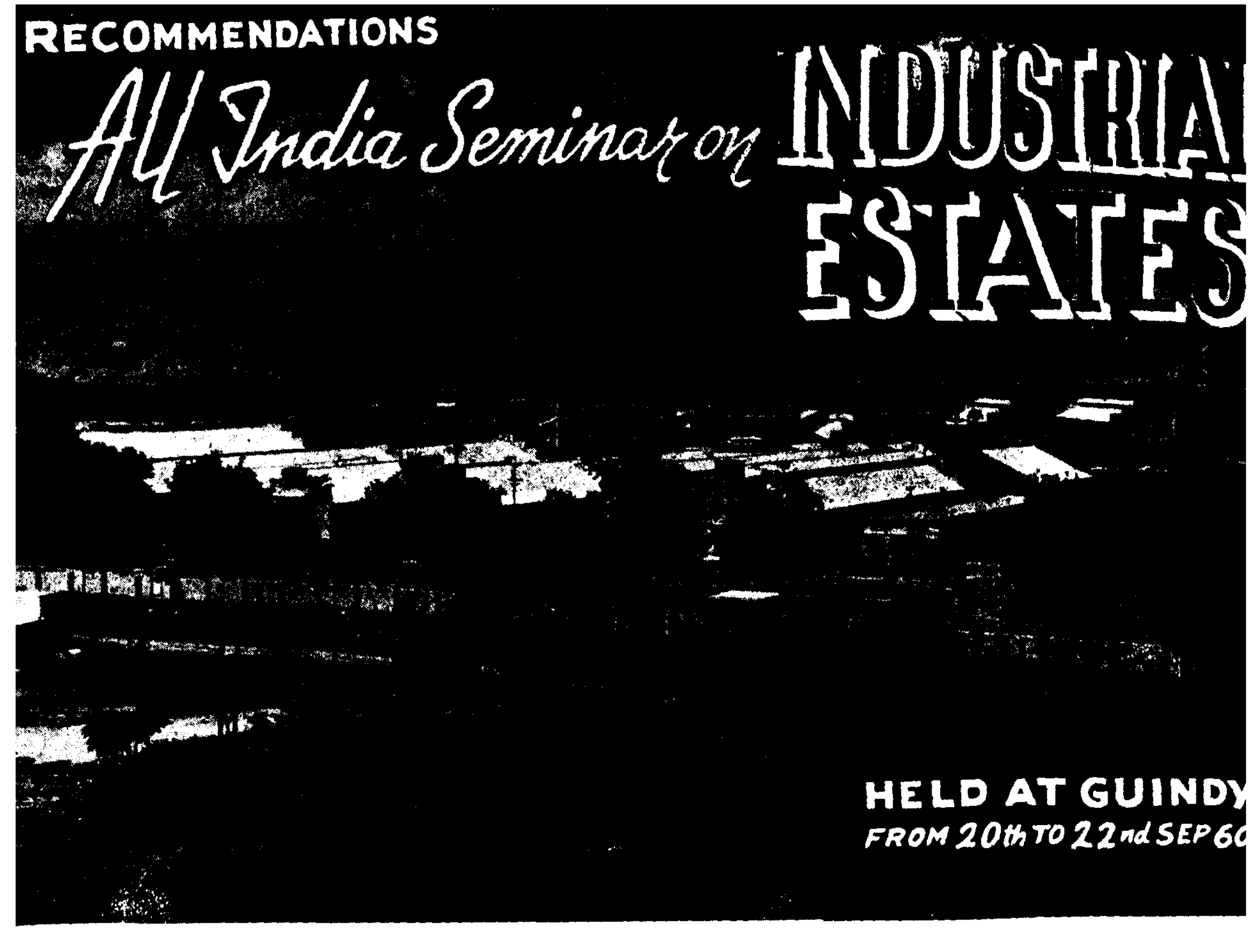


A periodical appraisal of progress in a developing national economy is manifestly useful in many ways. As India marches forward on the road to self-sufficiency and prosperity, problems of complex nature, unknown before, arise, which, to be solved, require serious thought and consideration. These complexities are best resolved by discussions amongst the planners, administrators, engineers and industrialists by bringing them together on a common platform. This, then, is the first and foremost objective of such seminar. A number of specific problems arising out of shortage of funds, scarcity of materials, paucity of trained personnel, etc., are discussed at seminars and measures devised for economical utilisation of available resources.

During the Second Five Year Plan, several Industrial Estates have been set up throughout the country for aiding and stimulating Small Scale Industries and many more are expected to come up during the Third Plan Period. Just as the rapid economic development of the country raised complex problems of varied kinds, the promotion of Small Scale Industries through Industrial Estates necessitated detailed study of the manifold administrative and technical issues peculiar to them. It had been suggested that a Seminar might be organised for the purpose of pooling the experience of the various officials, small industrialists and others connected with the Industrial Estate programmes and to lay down an uniform pattern for development. In pursuance of this suggestion, the First All India Seminar on Industrial Estates was held at the Guindy Estate from 20th to 22nd September, 1960.

Shri Lal Bahadur Shastri, Minister for Commerce and Industry, Government of India, inaugurated the Seminar and Shri Manubhai Shah, Union Minister for Industry, presided over the function. Over 200 delegates including Ministers from Punjab, Madhya Pradesh and Kerala participated in the Seminar. The Development Commissioner, Small Scale Industries, Government of India, the Director of Industrial Estates, Government of India, besides Secretaries, Directors of Industries of the various State Governments, Small Industrialists and their representatives from the Industrial Estates all over the country attended the function. A large number of special invitees were also present.

Welcome Address by Shri R. Venkataraman, Minister for Industry and Labour, Madras.

In his welcome address Shri R. Venkataraman, Minister for Industry and Labour, Madras said:

"It gives me great pleasure to extend on behalf of the Government of Madras and the Department of Industries and Commerce, a hearty welcome to the ministers from the Government of India, ministers from other States, delegates and the ladies and gentlemen who have responded to our invitation on this occasion of the inauguration of the All India Seminar on Industrial Estates.

"The Government of India as well as that of various States have realised the need to organise Small Scale Industries in a decentralised manner all over the country so that employment opportunities might be increased and economic development may take place in an even manner in all parts of the country including the less developed areas. The success of the policy has been reflected in the rapid progress that has been achieved in the Small Scale sector during the Second Five Year Plan. However, such development requires careful thought and planning so that unregulated and unorganised mushroom growth of industrial slums may be prevented. The development of Small Scale Industries has to be consistent with the needs of proper town and country planning.

"I shall not go through the distressing tale of the trials and tribulations which a small scale entrepreneur has to undergo in setting up his industrial unit. Capital is scarce; there are long delays and troubles involved in obtaining necessary facilities from a large variety of authorities; adequate supply of raw materials are not available either at reasonable

A view of the audience showing distinguished visitors, delegates and special invitees at the Seminar Hall.

prices or when required; and so on. All these initial worries in starting small industry are really beyond the resources of the average small scale industrialist. Hence Government have come forward to eliminate as many of the obstacles and hurdles in the path of the establishment of a small scale industry by providing adequate and properly designed factory space, common service, testing and training facilities, technical know-how, raw materials at cost price and financial aid under easy terms to the industrialist.

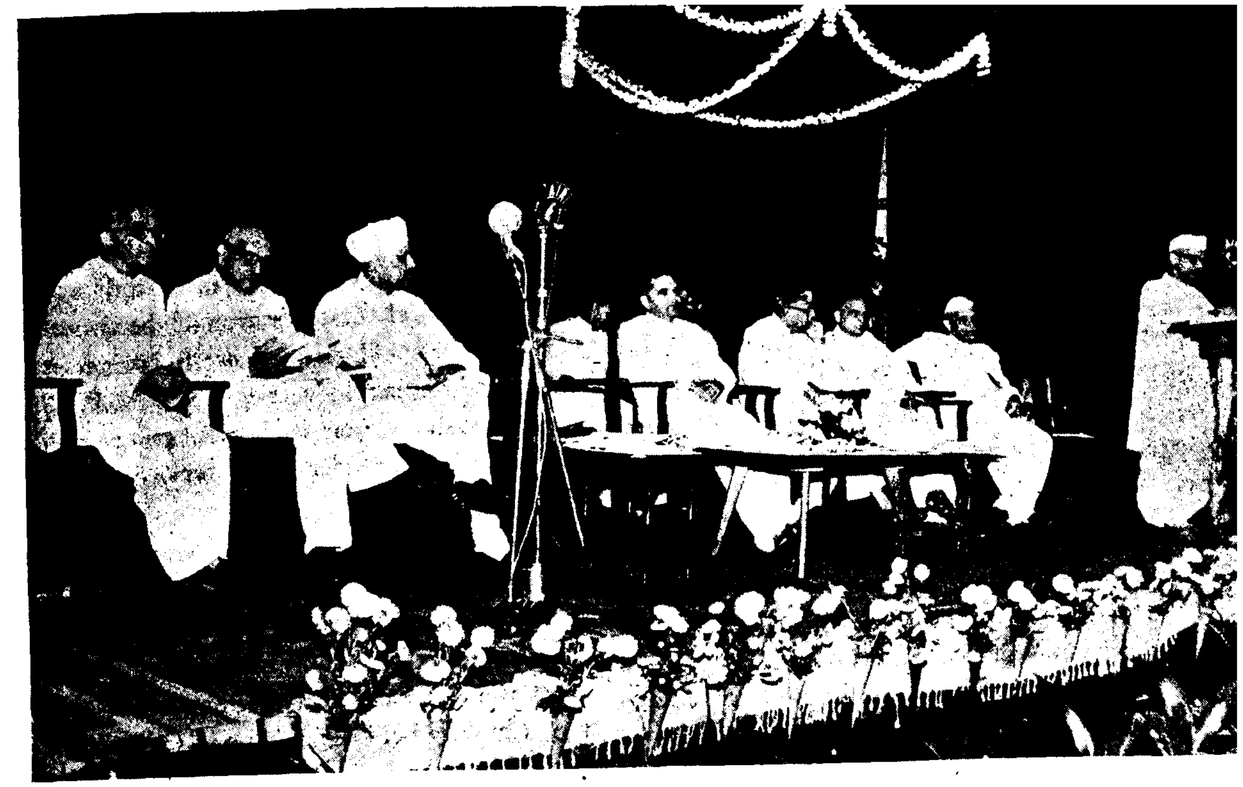
"The inspiration for this idea has come from the remarkable success of the United Kingdom in transforming dismal areas of pre-war Britain into prosperous "development areas" of postwar period by a planned development of light industries through the agency of what are known as Trading Estates now redesignated as Industrial Estates. Since the end of the First Five Year Plan, 100 Industrial Estates have been sanctioned throughout this country some of which have already started functioning. As far as my State is concerned, 10 Industrial Estates have been sanctioned out of which 7 are already functioning, while the other 3 are under construction. On account of the pressing demand for starting new industries, additional factory space is also being provided in certain places. The Industrial Estate at Guindy, where the Seminar is being held now, has made remarkable progress during the short period of two years. I do not propose to dilate on it but I would only request you all to visit the Exhibition organised in the Estate and see the variety of useful and new products produced here by young and enterprising Engineers. I am aware that the other States have also successfully implemented the Small Scale Industries levelopment programme by setting up Industrial Estates and we look forward to pool he experiences and share the knowledge.

"In the Third Five Year Plan, the allotnent proposed for all the States for setting ıp Industrial Estates is Rs. 27 crores as ıgainst 11·12 crores for the Second Plan. The success in the intensification of the ıctivity during the Third Plan would largely lepend on the adequate arrangements for he supply of capital goods and essential raw naterials. The object of the Industrial Estates is to attract new capital and encourıge new industries and not merely to shift he existing industries to the Estates prenises. If the above object is to be fulfilled, here should be a coordinated programme or the supply of necessary equipments and ıdequate raw materials. While I agree that carcity is a sign of progress, it becomes a ıandicap after a certain limit. At the noment, almost all the items of raw material ssentially required by Small Scale Industries uch as wire, rods, sheets, plates, tin plates, tainless steel sheets, non-ferrous metals, coal etc. are scarce. Even pig iron which we are exporting to other countries is not available n this region. To assist Small Scale Industries in getting their raw materials, the All India Working Group has recommended the etting up of raw material depots throughout he country. I am not sure as to how far hese depots will be useful because we annot distribute what we do not have. It is omparatively easy to construct Industrial Estates and fully utilise the Third Plan provision, but it is difficult to infuse life into hese Estates without sufficient raw materials. am sure the delegates who are conscious of his problem would discuss the same and nake suitable recommendations.

"The Government of India have now ightly stressed the importance of Functional nd Ancillary Estates and have also suggested hat some of them could be organised by co-operatives and private corporations. The Government of India have also indicated that the funds required for the purpose could be borrowed from the credit institutions at normal rates, the period of repayment of loan being from 7 to 10 years. Even in United Kingdom where the Estates have been functioning for over two decades, they are not being considered as commercial ventures, but the funds spent on them are treated as social expenditure. So far in our country, not even one Estate is functioning on a self-supporting basis and I feel that it is too early for the credit institutions to step in. If Estates by private agencies are to be encouraged, the Governments of the Centre and the States should take larger responsibility, treat such activities as promotional ones and sanction loans at subsidised rate of interest and extend the period of repayment to about 20 years. I hope this important subject would also come up for discussion during the Seminar.

"I am afraid I have strayed beyond my sphere of offering welcome to you all. Many of you have come at considerable sacrifice of your valuable time and I trust that our discussions here will be rewarding. I am aware that our arrangements for your comforts fall far short of our own desires in this behalf. But our shortcomings in this respect will be made up by the very valuable help and guidance that we shall be getting from Shri Lal Bahadurji and Shri Manubhai Shah, both of whom are inspired by a devotion to the cause of development of small industries in our country. We have found ready and sympathetic response from the Union Ministers for our requests, not always simple or easy to concede, on behalf of the small industries and I trust their continued help and assistance will be ensured to us.

"I have now great pleasure in requesting Shri Lal Bahadur Shastri to inaugurate the Seminar and Shri Manubhai Shah to preside over the function".



Inaugural address by Shri Lal Bahadur Shastri, Minister for Commerce and Industry, Government of India.

Shri Lal Bahadur Shastri, Minister for Commerce and Industry, Government of India, then formally inaugurated the Seminar. Addressing the gathering, the Commerce and Industry Minister said :—

"Guindy has already earned a name for itself as one of the best industrial estates in the country and there is perhaps no place better fitted for the holding of this Seminar. About the role and importance of small industries there can be no two opinions. Even those who believed in large scale industrialisation concede the need for the rapid building up of the small scale sector. And yet an effort is sometimes made to decry small scale industry on the ground that the cost of its products is higher while their quality is not upto the mark. There is often, therefore, a desire to try and concentrate all activities whether construction, conversion, fabrication etc., under one single roof. This will definitely set a limit to the scope of small industries and it is precisely this tendency which has to be discouraged.

"The example of some of the industrially advanced countries is revealing in this regard. In the United States, which is perhaps industrially the most advanced country in the world, small industries have a vital role to play, especially in the production of ancillaries. In some of the giant corporations such as General Motors and U.S. Steel etc., there are thousands upon thousands of small units engaged in the production of ancillary units. In one of the Corporations the number of small businesses run to as much as 55,000. Similar examples can be found in a number of European countries which are highly industrialised. We would, therefore, be turning the clock back if we do not learn from the mature experience of these countries.

"Much the most promising line for small industries and in which they can find an ever expanding market, lies in supplying semi-finished materials and parts and components to large industrial establishments. More and more, therefore, we have to go in for the production of ancillary items in the small scale sector. I have been laying repeated stress on this and have suggested that the Small Scale Industries Organisation should have a separate branch which should concentrate entirely on ancillaries. Similarly, directions have already been given that at the time of licensing large industrial units, we should examine what items can better be produced in ancillary units and we should try and take out such items for development in the small sector. The time has, however, now come when it is not sufficient that this work should be done only by the Development Wing. There should be an Expert Committee which should consider the question and go into each and every aspect of all possible ancillaries in regard to every new project. The Expert Committee may co-opt persons who may be specially familiar and possess rich experience about the particular branch of industry under consideration at the time. The Expert Committee might also send abroad a small delegation of selected persons to make a study, industry by industry, of the possibilities of development through the small scale sector. They will be able to study and see the practical demonstration of the important role the ancillaries and small businesses play in different industries. The N. P. C. could as well consider sending out one or two Teams and thus render great service to this class of industries.

"Apart from ancillary items, small industries will naturally go in for a number of finished goods. In respect of such items they will inevitably have to face some competition from the products of larger industries and they can only hold their ground if they concentrate on reducing costs and improving quality. It will also help if they develop craftsmanship and evolve distinct designs which will not be available in the mass-produced, standardised goods of the large scale sector. On the whole, however, it would be safer for the small industries to concentrate on goods which have a ready market in the neighbouring areas. Such items should be clearly thought out before-hand and the necessary plan and programme drawn up. The State Governments will no doubt have to do it mostly, but the Centre also could help. It might be useful to have some sort of general survey also done beforehand in different regions as to better enable us to plan our production.

"In extending the necessary help and assistance for the development of the Small Scale Industries, we do so both to individual entrepreneurs as well as to co-operatives or associations. There are also several schemes by which such assistance is rendered, mainly in the nature of financial help, provision of instruments and machinery, guidance in business management and techniques for training and technical skills and lastly marketing. You are already familiar with most of these measures and you would no doubt be considering how far each of them has helped and how best they can be further implemented. The recent announcement of the Credit Guarantee Scheme is a step in the right direction and I do hope it would be possible to extend it further. This will depend so much on both the receipient and those who will execute it. By far the most significant step, however, in the building up of Small Scale Industries has been the setting up of Industrial Estates and it is to this aspect that I particularly wish to refer.

"I would first like to mention about the Industrial Estates, which have no doubt caught somewhat the imagination of the people. A Japanese Delegation on Small Scale Industries which recently visited us called the system a unique one. This description was partly correct, because the industrial estate in the U.K. which perhaps inspired us to establish them in India, were prompted by and designed for a rather different purpose. In the U. K. they were part of a programme to assist the dispersal of industries and to help comparatively undeveloped areas to combat unemployment by attracting industries to those areas. On the other hand, in India, the main purpose in establishing the Industrial Estates was to remove the handicaps and obstacles which hamper the establishment and growth of small industries and to strengthen such industries. In fact, one of the important considerations so far in deciding the location of Industrial Estates has been the existence of a fairly good measure of industrial activity in the area. While hitherto there has been this distinct purpose, the time has, however, come when we have to plan for the setting up of a large number of Industrial Estates with the same purpose for which they were set up in Britain. I refer to the need for the setting up of Rural Industrial Estates so as to attract industries into the small towns and villages and to check the drift of skill and enterprise from rural areas to the urban areas. In this direction we can learn much from the programme of assistance to rural industries in the U.K. which consists of (1) financial assistance to Rural Industries through the agency of Rural Industries Aid Fund Ltd. and (2) Technical Assistance through the agency of Rural Industries. Even though conditions in our two countries are quite different, there is a close link in the common objective of building up the undeveloped areas. It is noteworthy that in the U.K. even though the unemployment in Britain was only in the region of 2·5% yet this caused so much concern that Government felt justified in pursuing a very liberal policy of assistance to industries. One cannot help wishing that something of the same urgency and the same emphasis on Industrial Estates was forthcoming in this country, where the unemployment and under-employment problem is so much more serious.

"The programme in the Third Plan provides for an outlay of Rs. 27 crores on Industrial Estates, which is much less than we had hoped for. We should, however, try to set up as large a number of estates within this allotment as possible. There should be less expenditure on buildings and more on the basic facilities. The States would also, I am sure, like to spread the available funds on a larger number of Industrial Estates. We should aim at setting up not less than 300 Industrial Estates in the Third Plan a lotment and I shall be happy if this number could even be exceeded. In particular, the number of small Industrial Estates to be established in smaller towns should be substantial. Many of them could as we l be set up in the Community Development Blocks.

"As far as Industrial Estates in large towns are concerned, these are no doubt very necessary because of the number of educated unemployed. In these cases, however, Government should develop the areas, work out the plans and try to make the estates as self-sufficient as possible. They can always take advantage of all the concessions offered to small industries and the technical advice tendered by Government.

"In smaller towns, however, Government might have to give some more help and the degree of help wil' naturally vary with the area and with the response that may be expected. It might be necessary to give some subsidy in the form of reduced rent, but as far as possible the entrepreneurs should manage without other forms of subsidies.

"In the Rural Industrial Estates, Government might have to go much further in the direction of giving help. It is in the setting up of these estates that we shall face the greatest difficulty, but it is here that the true test will lie of our success or our failure. There should be a more positive approach of creating the conditions and climate which will facilitate the growth of industries. It may be necessary to make a beginning with only 8 or 10 factory sheds, or perhaps even a smaller number. But the beginning has to be made and we have to make conscious efforts to induce the location of small industries in such areas.

"So vital is the need to take small industries to the villages that where even a rural estate is not possible I would not hesitate to suggest the setting up of work sheds or 'industries in sheds'. We should have an ambitious programme of such work sheds in hundreds of villages, wherever power can be made available. In these worksheds we should try and give facilities to the village artisans like the blacksmith, carpenter and others to improve their work and output. The work and output of these artisans has a very important bearing on the village life and economy and any improvement in this direction will have significant results in agricultural production and rural life. In the U.K. some of these village industrial units manufacture small agricultural equipment and very often they produce components and parts on the orders of medium and large industries located in urban areas. This may be too much to hope for just at present in India, but if we can build up even a few industries in the villages and improve the work of the existing estates, then our programme of work-sheds would have more than justified itself.

"Our idea of setting up of Industrial Estates in Universities and Colleges would, I am sure, be useful. It is not my intention that large sized Industrial Estates with fancy factories should be established in the Universities or Colleges. In fact I will be happy to see only a few factories in the Universities and Colleges where the young under-graduates can get initiated into this great movement of industrialisation. I have already suggested to the officers of the Central Small Industries Organisation that they should arrange to conduct Seminars on Small Industries in the Colleges and Universities so that our young boys will become interested in this subject. There are a number of educated young men who are eager to venture on enterprises of their own and I am sure that their experience of working in the factories of Industrial Estates in the Universities and Colleges wil prove to be of great encouragement and assistance to them.

"We have also called upon our large-scale public sector units to help in the promotion of small industries by setting up Industrial Estates in their areas. I believe, a beginning in this direction has already been made in the Hindustan Machine Tools, Bangalore. The factories in such Estates can no doubt be encouraged to produce a large number of ancillary items which will be required by the State Undertaking. This should give a lead to big industries to parcel out their fabrication and other small items of production to the small scale sector.

"There are also schemes for functional Industrial Estates. Amongst such functional types can be those of foot-wear, leather goods, ceramics, precision instruments, motor-cycle parts etc.

"One of the most important features of the Industrial Estates is the common facilities that they provide. These facilities include repair works, raw material depots, display of equipment and finished goods, godown facilities and such other services. I understand that in some Estates arrangements have been made by the entrepreneurs working there for the collective purchase of raw materials, quality marking and common service facilities like heat treatment, electro-treatment etc. The success of the Industrial Estates programme will, to a large extent, depend on the growth and efficiency of such facilities and common services. It would be possible only when there is a growing feeling of co-operation and co-ordination amongst all the units working in an Estate.

"Another important advantage of Industrial Estates lies in what may be called the 'inter-trading', opportunities which they provide. Since there are several units at the same site, some of these units will be able to use the goods and services of one another so that they become inter-dependent and complementary to one another.

"One of the things that is constantly occupying my thoughts is how to make our Industrial Estates really effective. They had a very slow start to begin with but they are now catching up. In most of the States their outlays have run faster than the Central allotment and several of the State Governments have put in the r own funds. Good work has been done in many places, of which Guindy is a fine example. But despite all this I must confess that I am not fully satisfied. If shops and factories remain unallotted or unused, it is a sad commentary on the success of our schemes. Of course, this is not the case in the Punjab and Madras and some other States; and yet there are States of which this could be said to be true.

"I understand that some enquiries have been made as to when the Prototype Centre with French collaboration is going to be set up at Guindy and that some anxiety has been expressed lest the project may have been dropped altogether. There is no idea whatever, of giving up this project. As you know, a delegation from India had visited France some time back, and now a French team of experts is to come here for the same purpose. Their visit is expected in a few weeks and thereafter I hope that it will be possible to have the Prototype Centre set up in this very Estate at the earliest. As you know, we have already set up 3 other Prototype Training Centres—at Rajkot with T. C. M. aid, at Okhla with West German help, and recently the work has started at Howrah with Japanese collaboration. I do hope that with help from other industrially advanced countries we shall be able to increase the number of such Centres.

"The number of small industries established in the country and outside the Industrial Estates is somewhat prodigious. There is a spurt for such enterprises amongst our people who are in for this class of industries. It would be desirable for these industries to stand on their own, trying to take advantage of the different schemes of assistance framed by Government. Inspite of many handicaps such small businesses are coming up even in areas where many facilities are not available with the result, it will be necessary for Government to try and cater to the needs of these people. Their path has to be cleared of obstacles and obstructions in their way should be removed. We have simplified our procedures and yet perhaps we may not have gone far enough. I know the responsibilities of Government are great and they cannot afford to take risks especially when financial assistance has to be given. However, every Department has to realise that its objective is to encourage entrepreneurs and new industries. If they come in the way the very purpose is lost. It is also essential that necessary information and technical advice should be furnished to these people. The scope of investment in different industries should be clearly assessed and extensively publicised. Marketing facilities should also be provided to the extent possible through the N.S.I.C. and other agencies.

"In any discussion regarding small industries the question of raw materials comes to the forefront and justifiably so. I know that small industries are facing difficulties in this regard and we have been trying to do everything possible within our limited resources to help them. Import licensing procedures for small industries have been greatly simplified and larger quotas are being allotted to them. But the very growth and expansion of small industries which we so ardently desire, only increase our own difficulties in maintaining the supply of raw materials to them. Even here the situation

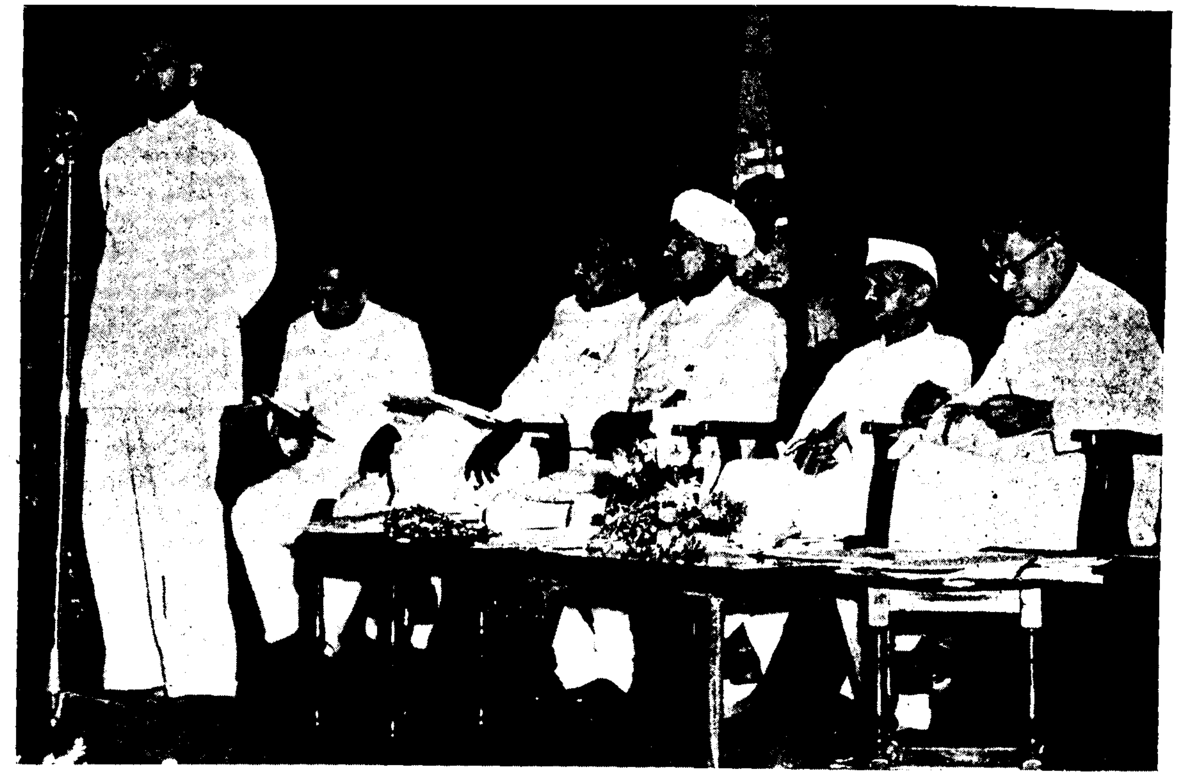
is a little more hopeful than it was sometime back. I had recently laid stress on urgent need of the friendly countries extending help for imports of raw materials, parts, components etc. which would be utilised for the building up of industries as also for the maintenance of their present production. Additional production can only be made possible if raw materials in adequate quantities are available. The increased production will help in the building up of industries and also in the stepping up of our exports. Some doubts were expressed in the Press and at other places in regard to our securing this kind of assistance. However, I am glad that there is a significant change in this regard especially in the U. S. A. and some other countries. There seems now a possibility that these countries might agree to allow a part of their aid being utilised for this purpose and thus keep the wheels of industry moving. Let us hope that this help will be of a sizeable nature.

"It will be realised from what I have said above regarding extending our assistance programmes that the establishment of Industrial Estates will mean dispersal and decentralisation of industries. This will require a more effective organisation to reach every one of them and give assistance for maintenance of their machines and also for supervision. The Estates should try to make themselves self-supporting and yet the assistance of the State Government and the Central organisations will be equally needed. It has also to be borne in mind that wasteful expenditure is avoided. There is often a fear of this where there is extensive and decentralised working. It is not possible for the Central Government to look after this kind of development and the organisations pertaining to them. It is obvious that the State Governments will have to be given the fullest scope to initiate, expand and organise these activities. I would especially like to mention here that the State Governments should also consider immediately about cutting out delays in the setting up of the Industrial Estates. There should be some agency to co-ordinate the different departments concerned and it would be better to have a small board of these departments to take decisions across the table. If necessary the Industries Minister could sometimes take the meetings. I might also add that if there are delays in the allotment of shops in the States on account of procedures, they should also be simplified.

"I have often mentioned recently, and will not like to miss opportunity today, to re-emphasize that there are some industries in which the small scale sector could play a very important part. Without going into details, I would merely quote the example of the paper industry and machine tools. There is great scope for setting up these industries in the small and medium size sector thereby increasing our production and making a big saving in foreign exchange.

"Before I conclude, I would like to humbly suggest that there is no doubt that your organisation and your assistance etc. play an important part. But it is not the buildings, the factories and the machines that will ultimately make or mar the small Industries or Industrial Estates. Their success or failure will depend on the spirit and faith, the energy and enterprise displayed by those who are participating in the programme. Our officers who are working in the field will have to be imbued with this faith, and only then can the success of the small industries programme be assured. We should meet here in the Seminar for the critical survey and assessment of what we have done up till now. It will not help if we merely look at the bright side of the picture. We must examine the drawbacks of our schemes and our shortcomings in their working.

I have given expression to a few thoughts which have been upper most in my mind, and have posed some of the basic problems as I see them. I have no doubt that in the course of your detailed discussion you will be examining each and every aspect of this fascinating subject, and that you will be able to suggest many constructive mea ures for removing impediments and speeding up progress. I shall look forward to the results of your deliberations.



Shri Manubhai Shah, Minister for Industry, Government of India, delivering the presidential address.

In his presidential speech, Shri Manubhai Shah, Minister for Industry, Government of India, said:

" It is a matter of great pleasure to me and to all of us here this morning to have amongst us Shri Lal Bahadur Shastri who has always been a great friend, guide and philosopher, particularly of the Small Scale Industries. It was in the fitness of things that we took advantage of his visit to Madras to request him to inaugurate the Seminar, and we heard the wise words of wisdom which he has told us this morning. The whole movement of the Industrial Estates development with which you are more familiar than many of us, has had his blessings, even when he could not directly participate in these conferences. Therefore, on behalf of all of you and myself, I thank him heartily for his inaugural address and many broad hints and instructions that he has been pleased to make this morning.

" Coming to this great movement of Industrial Estates, many of you are familiar with the history of this work. Way back before a decade, this idea was born, not wholly born in this country, but adopted from the experience of many countries including the United Kingdom. The circumstances in which this movement started in the United Kingdom were wholly different from the circumstances prevailing in this country; and therefore, this movement took quite a different turn in this country and we today see that, what I call every time, " The University of Life " namely the Industrial Estate, has caught firm roots into the soil of this country.

"When we began this movement, there were many Doubting Thomases. Many friends raised their eye-brows and thought it was a very expensive experiment being transplanted from a foreign soil to a country which is highly under-developed. But we, some of us, who were very thick in the movement of industrial development even before we entered administration, were fully convinced about the potentialities and the potent force behind this movement to industrialise a vast country of under-developed resources such as India. Here is a country of 400 million people with an area of 13½ lakhs square miles so under-developed that there is not a single indicator of economy in which we are not lowest in the whole world; and therefore with scarce financial and capital resources, we have to convert the vast human man power of this country into productive channels. We and many of us pose these questions more than once: "How are we to go about this great task in industrialising and carrying the message of industrialisation to every nook and corner of our great country?" Now, you see here a big Rourkela, Bhilai and Durgapur plants costing 200 crores of rupees giving direct employment to 10,000 to 12,000 men. Was it possible for this great country of ours with such vast population to have such gigantic enterprises in every part of this country in order to bring home the message of industrialisation to our people? Obviously, the answer was "No". Therefore, we had to go on the Gandhian line of approach, that is, labour intensive schemes of development and production which alone is suitable for a country of vast man power and lack of liquid resources. We have man power resources in plenty, but when it comes to the liquid resources for investment and the savings of the community in a country of low savings and low incomes, we have to resort to this matter. Therefore, I have been telling many of my friends, several times, that Mahatma Gandhi was not only a political or philosophical leader, but a man with great insight into the economic structure of our great country and when he talked of Small Industries, Village Industries and Cottage Industries, he was pin-pointing the real method of economic development of this country. Therefore, we conceived of many programmes—Khadi and Village industries, handicrafts, coir, silk and handloom, with which we are all familiar and the most modern of them all was the programme of Small Scale Industries Development.

"Now this (Small Scale Industry) is a bit more difficult than the traditional production programme which we are doing. It requires skill, it requires expertise, it requires training. Where are we to give it from? Are we in a position to afford Engineering Colleges, Polytechnics and Universities, where boys could be converted into scientists and technologists with modern arts and skills of functions or are we to devise some method by which the skill of the hand, expertise of the finger and the nimbleness of the brain could be transmitted to productive apparatus. Therefore, we thought that if we can have an integrated picture of small industries providing all the common facilities which a small entrepreneur could normally not afford, we can bring about the cohesion and a marriage between man power on the one hand, technical and scientific advancement on the other and the scarce financial resources on the third side. With this end in view, we copied to some extent and enlarged the experiment of Industrial Estates. Now what do we find here? If I may say so, the Small Industries are the highway to industrialisation of this great country and if massive industrialisation has to result within the shortest possible time, nothing could be more powerful than the instrument of Small Scale

Industries. Here is an instrument, which you can take to the remotest corner of this country of ours. I went the other day to Virudhunagar, Madurai and Pettai, and I have been travelling now to so many places and seen 79 such Industrial Estates, either wholly functioning or partly functioning and everywhere I have seen a new throb of life. This University of life is converting raw young men, not very educated; some of them not educated at all, some of them having never entered the portals of college or a high school or a scientific course turning on a machine, a lathe, a milling machine a shaping machine and a planing machine. I saw yesterday a boy working on an automatic screw machine with 36 motions and I was surprised at the genius the boy had developed just only in 6 months, as to how each movement of that machine was working, and I was convinced if any proof was necessary, how science and the message of technology could be carried to all these brethren of ours, millions of them who cannot have any opportunity to go to the Engineering Colleges. Here was an integrated picture of a machine behind which the man was working not only to earn his living but, to develop his own country through the great capacities, and of the inherent abilities that the young men and women of this country possess in very ample measure.

"Various experiments we have done. As you know, you have all been working in Industrial Estates. We have, therefore, provided in every Industrial Estate a composite picture of technology. We do not consider this instrument either wholly for only employment or wholly only for production, but it has several facets. No. 1 is that it is to industrialise this country that we are setting up the small industries and particularly the Industrial Estates. No. 2 is that in a country of scarce resources, it is to provide employment to a vast number of our people that we are resorting to this experiment. No. 3 of our philosophical approach to this problem is, that if we have to carry the message of science and technology and to train young men to become the future Nobel, the future Krupp, or the future Sir William Morris or Lord Nuffield of this country, it is only through these Universities of life into which young men enter absolutely unaccompanied with any equipment, either in science or learning and gradually within a few years you will find new type of technicians coming out of the Estates. I was, therefore, reminded, whenever I see these Estates, of how in western countries uneducated men rose to the top of the ladder and almost challenged their counterpart of university educated young men. There are many instances. Thomas Alwa Edison is one—where a deaf man, who almost hardly could hear, with very little practical or theoretical experience anywhere—invented the first tele-communication machine out of purely working in a Garage shop. He was working in an assembly shop, working on a battery, dry battery, which thanks to Faraday, was invented then. How within a short course of time by knowing the various mechanical methods of connecting the various wires, he came across an experiment, which produced a sound. I have no doubt that our boys here, as we see them in H. M. T. in Bhopal, in T. I. Cycles, in Simpsons and in various factories, are going to be the future technicians and scientists of this country through these industrial enterprises, and these industrial enterprises when they are going to Virudhunagar, when they go to Pettai and when they go to very remote parts of the country like the Rural Industrial Estates that we are taking, within a period of 10 years or a generation, we should have before us a large number of young men and women of this country highly qualified in technical expertise even though they had not the opportunity to go to the university.

"Then we come to the other questions. Many friends have been telling me that we are trying to discriminate between the Small Scale Units outside the Estates and the Small Scale Units inside the Estates. I can give them a categorical reply and assurance on behalf of the Government of India that we mean nothing of this sort. These are not our favoured entrepreneurs just because only they are in the Industrial Estates. Why we give them a little raw material for a year is that, after having invested so much money of the State and Central Governments and after having brought about fusion and co-ordination of the different facilities and Common Service Centres, we consider it our moral duty to ensure that the money of the community is not wasted. Hence, to begin with, proper raw materials are supplied to them for only one year for a single shift. After the Industrial Estate is properly rehabilitated, they will be put on the same test and on the same availability of the materials as any other entrepreneurs in this country. This was the fear which Mr. Iwatake, the leader of the Japanese Delegation had mentioned to me and in his report, he has been very kind to make it very clear that we are not creating a new chosen class of entrepreneurs through these Estates, but only the messengers and the harbingers of a new order of things for this country, that we are establishing these common industrial facilities, that is the Industrial Estates.

"Then the question comes "How are we going to technically train the boys"? I am rather distressed to see, whenever I see the Extension Centres, and I have been telling repeatedly Mr. Iyer, the Development Commissioner and our new Commissioner Dr. Alexander, that it will not be correct to let the machines lie idle. All the boys or the workmen working in Industrial Estates must be given a rigorous training of a technical nature through all the machines and investments that we have done in the Common Facility Centres. I am quite sure and I am seeing the change that gradually these extension centres are coming to their own; the Service Institutes are coming to their own, and I would wish that not only one shift but two shifts or even if necessary, three shifts training should be undertaken so that the boys who work in the Industrial Estates and outside, in Madras or other cities or villages where these Estates are established, are given the proper advantage of the machines and the training staff that we have got. I am boldened to suggest here also the experiment, the Madras Government is doing. Sometime back, I had suggested to the Labour Ministry, that the Industrial Training Institutes, the Trade Schools of the Labour Ministry, should be coupled and integrated with the Industrial Estates. Then will be the advantage of the raw young men, being trained in the trade school, coming to work for a time in the factories of the Industrial Estates, and *vice versa* the worker, the working class men of the Industrial Estates, going to the Industrial Training Institute. I am glad to see that in Virudhunagar, Pettai and everywhere in Madras and some places in U.P., M.P. and also in Gujarat and Maharashtra this experiment has started with great success. I am quite sure that during this deliberation of three days, we might evolve a recommendation through which we can tell the State Government and Central Government to closely co-ordinate the activity of these two important wings that is, Industrial Training Institute of the Labour Ministry and the Industrial Estate, and Extension Centres of the Ministry of Commerce and Industry, so that we can get the maximum advantage of the training facilities that are thrown up by these enterprises.

"A complaint or a suggestion from the various friends in the Small Industries comes to us that they have submitted a scheme to the Development Commissioner and the same scheme is granted by them not only to him but to several other people. I am rather, sometimes, not only surprised but pained at this type of feeling among small entrepreneurs. After all none of us is born with original knowledge. Even the industry which we are setting up not only here but elsewhere comes out of traditional experience and the knowledge which we received from sire to son. The person, who submits a new scheme—really it is not a new scheme—has copied either from our own books or from various enterprises which he sees or from several enterprises in this country or an enterprise given to him by a technical collaborator. It will not lie in his mouth to be the secretive person, as we in India in the last 200 to 300 years have been to keep his knowledge to himself and not to part with to his counterparts. As a matter of fact, when I joined the industry myself, the first thing I saw was that all educated men were outcasts in Industry because the traditional boss always had some formula hidden in his pocket book, unlike Veda of old, and would not pass on the knowledge from father to son. That is exactly what we are fighting in these Industrial Estates. These are open forums or areas for free exchange of technical knowledge where men from all caste, creed, religion, province and States of India should be freely allowed to walk in and learn the technology that the community has provided to the entrepreneur. If we work the other way round; that because I have copied from some—where else a small scheme for manufacturing a nut or bolt or a spring, the Government should consider it a hidden art and should not proceed to licence more factories, it is wrong. Firstly it is wrong to believe that it was his own idea. There are thousands of commodities known to everybody and then when we translate it into large mass scale production, we should be glad of not one unit, but 10, 20 or 100 units. All we can assure is this—he will not be given less preference or a scheme which comes later than his scheme, will not be given earlier approval by us before his scheme is sanctioned. But, having sanctioned the scheme, any improvement, any changes or any number of multiplications, that we want to do, we just cannot avoid. I would request all industrialists who have collected here, because this is an excellent opportunity to tell them, that knowledge has no frontiers. Technology and Science are universal. They have no frontiers, either geographical, racial, or national and provincial. They must be open and your knowledge must be exchanged not only through your enterprise but your own experience in the form of a newsletter. I was suggesting to Mr. Venkataraman, this very morning, that as a result of the Estate Seminar we might take out a Journal of Industrial Estates where experiences of different entrepreneurs must be shared, and widely shared, so that I profit by your experience and you profit by my experience, and vice versa the whole nation profits by the experience of all entrepreneurs in these Industrial Estates.

"These are the several broad features which we have to discuss at the Seminar. I am not taking too much of your time because Shri Lal Bahadur Shastri has to leave (for Delhi) soon. We will have three days to discuss but what I would caution is this, that our discussions have to be business-like. What we want to know from you is, whether the sheds we are constructing are sufficiently lighted, whether these sheds are scientifically done, whether we are wasting too much money on these constructions, whether we can effect more economy, whether you get the proper working space and the proper layout of the machines and whether we should give you more room for office or keeping the scrap, the junk and raw materials because it is very important that the elegance of the Industrial Estate is not destroyed.

"We do not want to create new slums. I have seen some Estates, I am sorry to say, where the entrepreneur thinks it is high opportunity for him to mint money and collects all sorts of junks and puts the machines in such a distorted way that it looks like a new slum. We are not spending crores of rupees to create new slums. "A thing of beauty is a joy for ever" An elegantly done job will last a generation, may last, hundreds of years, and will become the real laboratory for future generations to come. So I do wish that the garden space which you have kept behind the Estates should not be removed and some old junks placed there as I have experienced in a few Estates. When I went there the gentleman said "we were short of space: so we have removed the banana plantations and some other trees and we have put these old junks, or drums, or tin sheets, or black sheets etc." I said: "I am very sorry to know this. If you are short of space, you could have taken another shed. If you are very rich and big, you could have walked out of the Estate because it is meant for small men, build up your own factory as so many big and middle class of people are doing. Here is an Estate which has to be preserved in all its ethical value along with its production of economic apparatus. Economy or life is not only one sided or lopsided; it has to be an integrated whole, and unless you learn in your own factory to work with elegance, with cleanliness, with neatness, with frugality and with comprehension, you will not be able to translate, in generations to come, or in your larger factories, the planned mind and the planned approach to these problems. These were some of the points which we will discuss.

"I know that what you are all thinking today is more of raw materials than anything else and we are all fully aware that, whether the ghost which was sleeping has been awakened too much or whatever has happened, you are running faster than we today and I am very happy to see that. There was a time before 4 or 5 years, when we thought that all of you were all asleep and if we shake you up, it will be a good thing for the country. The Government both in the State and the Centre and the various organisations have awakened you so much that now you are running where we are not even able to walk and the difficulties of raw material today are not because that we are giving you less; we are giving you 3 times, 4 times and even 10 times raw materials today than what we were able to give to small Industries some 5 or 6 years back; but you have moved in a momentum. India is on the march and nobody can stop the onward march of Indian people to which the people have pledged themselves. Therefore we are happy. These difficulties are the worst pangs of a new order. Those difficulties we shall solve by either producing more or trying to divert you into more selective channels and that is what I wanted to urge before you this morning.

We have done too much with the nails, too much with the bolts and nuts, too much with the canister and cans, and too much with the simple things of life. We will have to go for selective industrialisation. That is where the skill function of the Indian man is going to come like Switzerland. For instance Re. 1·00 worth of raw materials in Switzerland is being turned out to a finished product of Rs. 10. What are we doing here? The first thought comes in when we get a black sheet is how to make a box or how to make a canister, or a bucket, or an agricultural implement or tool out of it which are undoubtedly very necessary. But the conversion ratio to an Indian enterprise, if I may say so, is not more than 30 to 40% *i.e.* Rs. 100 worth of product is being finished to Rs. 140 or 150 worth of product. What I would like you to put your mind to and think of more details is that Rs. 100 worth of the raw materials must yield Rs. 1000 worth finished products. Take a machine tool in Ludhiana. The man uses hardly 100 lbs. of pig iron and 10 lbs. of steel which would not cost more than Rs. 80 to 90 and he produces a lathe for Rs. 1,200. That is what we exactly now expect from Indian entrepreneurs. Let us bend our energies. Some of us more experienced in enterprises in small scale sector should produce more selective industries which will go to save foreign exchange on the one hand and which also in turn would generate faster and more massive industrial development than the traditional industries. I am not saying anything against traditional industries, because if canisters or cans are required somebody has to produce it. It is better the small man produces as compared to the richman or the big man. But it is the millions of the small entrepreneurs who will be the pioneers and the vanguards and the torch bearers of the new selective industrialisation, as has happened in Japan, in Germany and in other countries of the world.

"Lastly we should have an export promotion angle to these Industrial Estates. I am not saying that it is too early at all because I have seen some of your products in Guindy. Shri Lal Bahadur Shastri is going to see the Exhibition and I am quite sure he will be pleased to see some of the products here. The other day, I was in Sanath Nagar and I saw some of the products which I never dreamt in my life could be produced in the Industrial Estate; so elegant, so beautiful, so precise and yet so very reasonable in their cost structure, that we may now attach a little attention to the export angle of Small Scale Industries. You will be surprised that in Japan 65% of the manufactured articles are exported and the export thereof is contributed by the Small Scale Industries. Every small scale entrepreneur thinks himself like a bride to be married in a father-in-law's or mother-in-law's house. There, you have to equip her with the best, educate her, give good clothes, put on proper ornaments and then, and then only she is received in her father-in-law's house. Similarly is the foreign market. The foreign buyer is very choosey; he is very selective. It is the small man who, through his individual skill, will be able to give a personality to his product and the beauty which a large mass scale production will lack. Therefore, I would request that every State Government should enforce the quality marking schemes and couple to it the export promotion schemes.

"Once more, I thank you all for having responded to our invitation. We shall have not only the Seminar on Industrial Estates but on different problems of Small Scale Industry in different parts of the country. I am glad your federation is now coming up very well and thanks to the work of Mr. Iyer, Mr. Alexander, Mr. Bhatnagar and Mr. Bhatt. This movement is gathering a momentum which gives some satisfaction to all of us. Once more I thank Shri Lal Bahadur Shastriji, on behalf of all of you for having given us this wonderful opportunity to be associated with this movement. His blessings have always been there and with him at the helm of affairs we are quite sure that more foreign exchange will be allocated to the Small Scale Industry than every other industry".

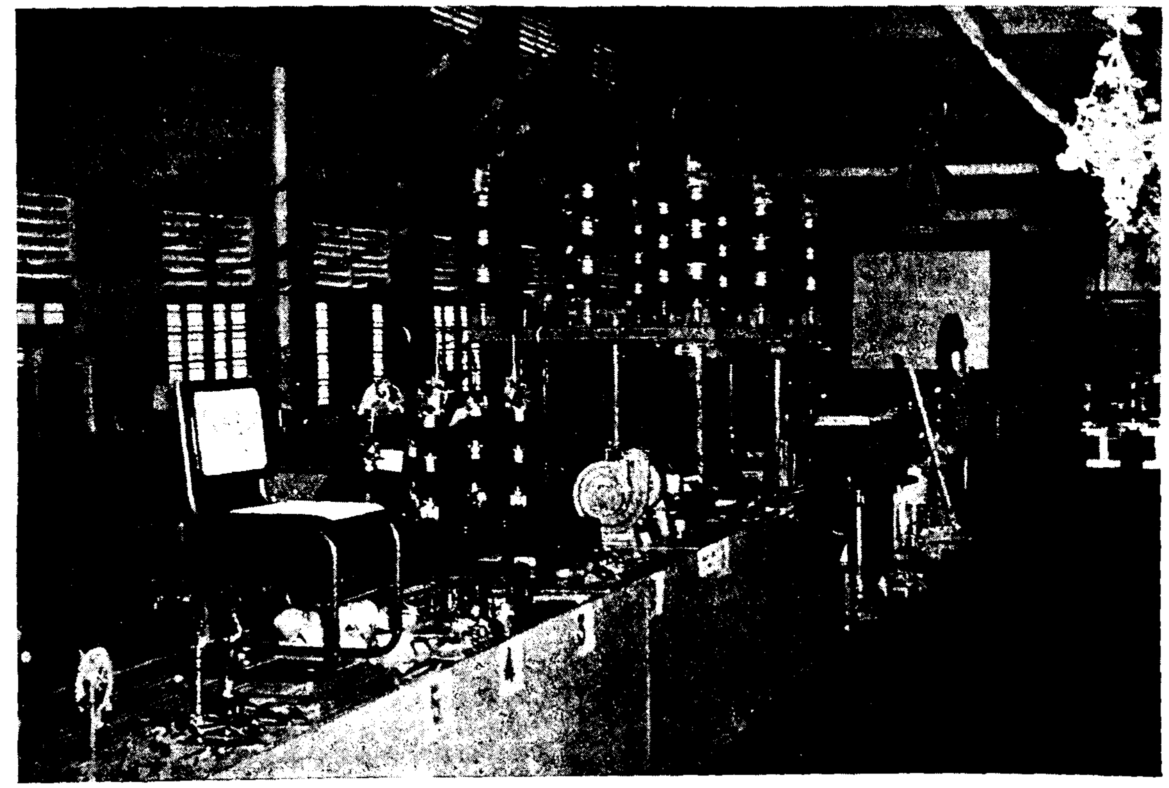
Vote of thanks by Shri T. K. Palaniappan, Secretary to the Government, Industries, Labour and Co-operation Department, Madras.

The inaugural session of the Seminar concluded with a vote of thanks, by Shri T. K. Palaniappan, Secretary to the Government, Industries, Labour and Co-operation Department, Madras.

Proposing a hearty vote of thanks, Shri T. K. Palaniappan said :—

"First and foremost I should like to express our grateful thanks to the Honourable Minister for Commerce and Industry, Shri Lal Bahadur Shastriji for having inaugurated this function and to Shri Manubhai Shah, Minister for Industry, for having consented to preside over this function. It was you, Sir, (Shri Manubhai Shah) who suggested that Madras should be the venue of the Industrial Estates Seminar. This suggestion came from you nearly a year ago, but due to some reason or other we have not been able to conduct the Seminar so long. Our Minister for Commerce and Industry has been very sympathetic to us. It is after all only a year and a half ago that he came down to Madras and inaugurated the second phase of development of the Industrial Estate at Guindy. Mr. Manubhai Shah has been at every one of his visits here, visiting the Industrial Estate and giving us guidance. Therefore, we are immensely thankful to them for all the encouragement that they have given. Mr. Manubhai Shah has infused his dynamism into the programme of Small Scale

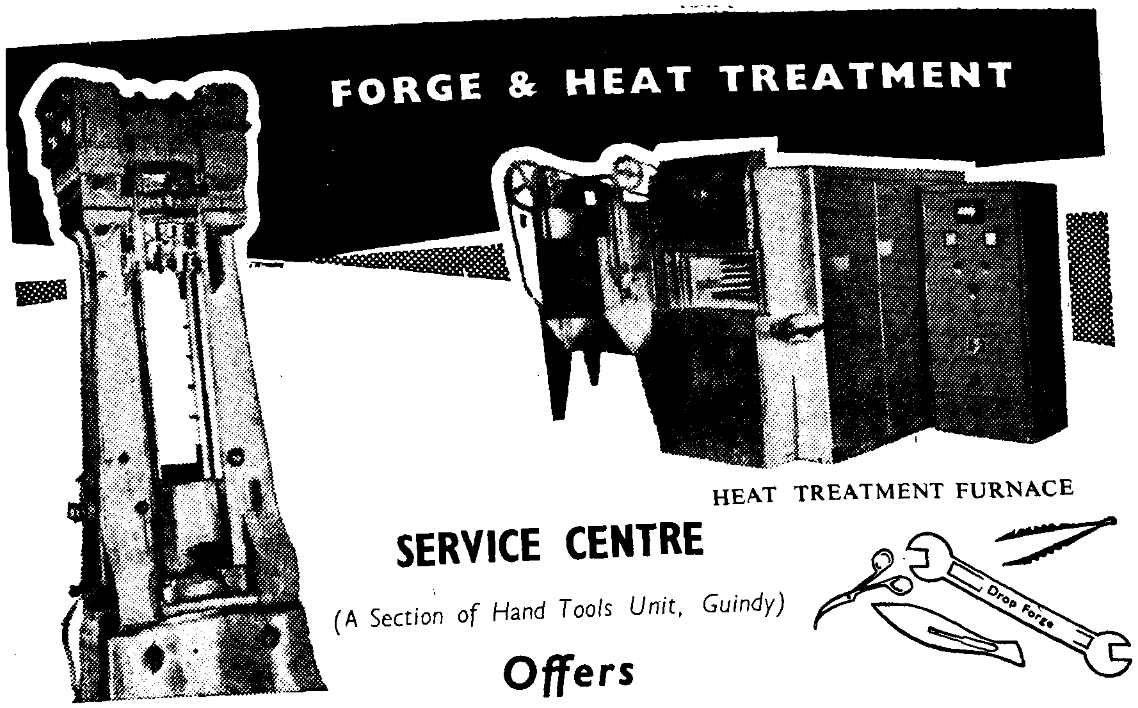
Industries. We forget our woes of the shortage of raw materials when we are in the presence of his hypnotic spell, though as soon as he departs, we always find that the industrialists mob the Industries Department. We are immensely thankful also to the Ministers from the various States who have come over here from long distances at very considerable inconvenience to themselves, my colleagues and officers of both Government of India and Government of the various States and the industrialists housed in the various Industrial Estates of the Country and the various other delegates who have come over here. I am equally thankful to the distinguished guests, who have come over here in response to our invitation. Finally I should thank all the Officers and the staff of this Department and the energetic industrialists housed in the Madras Industrial Estate for their kind co-operation which they have extended to us in making this function a success."



EXHIBITION HALL

A View of the Exhibition Hall where the products manufactured by the Small Scale Industrial Units are kept in view.

On the occasion of the Seminar, an exhibition of the several articles and components made by the private firms and Government Common Service Facility Centres housed in the various Estates was organised at Guindy. The Minister for Commerce and Industry, Government of India, Minister for Industry, Government of India, Ministers from the States, Officials, Delegates, Industrialists and several Entrepreneurs visited the Exhibition.



DROP HAMMER

HEAT TREATMENT FURNACE

DISCUSSIONS IN THE OPEN SESSION

Summary of preliminary discussions in the open session under the Chairmanship of Shri Manubhai Shah, Minister for Industry, Government of India.

Initiating the general discussions on Industrial Estates, **Shri Manubhai Shah,** Minister for Industry, Government of India, stated that inspite of several shortcomings, the Government were planning the Industrial Estates on a scientific and comprehensive manner to satisfy the basic needs and the demands of the different parts of our country. He invited the Industrialists to hold discussions and pool their views and form a well integrated concept of the basic industrial needs of the country as a whole. He expressed the view that this Seminar should devote its attention on planning out model and healthy programme by which Industrial Estates and their activities could be organised in a business-like manner. He referred to the socio-economic conditions prevailing in the country and the extent to which Small Scale Industries needed encouragement. Regarding the inadequate supply of raw materials, he stated that the Government were doing all that was possible. He requested the members from various States to give their views on the different problems in the light of their experience on Industrial Estates.

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Shri Mohanlal, Minister for Industries, Punjab, informed that his State will be having five Industrial Estates by the end of the 2nd Five Year Plan, the largest among them having 224 Units and the smallest 14 Units. These Estates consist of three types of Factory buildings having, 4000, 2000 and 1000 square feet plinth area. He further informed that the demand for the buildings is considerable, the applications received being about six times the available accommodation. He also pointed out that the major difficulty in Punjab in implementing the Industrial Estates programme is the very long delays involved even in planning on producers the quota certificates issued for iron and steel required for the construction of the Estates. The Minister also pointed out that during the 3rd Five Year Plan in Punjab one Estate will be set up in each District headquarters. He also mentioned that three Industrial Estates in Military areas for Ex-Servicemen are being started out of the Postwar reconstruction funds. With regard to the starting of private Industrial Estates, the Minister expressed that the State should bear a larger burden and that they should not expect the private companies to raise more than 1/5th of the total amount of investment. He suggested that the limit of loans by Banking Institutions should be raised to 6 times and that the rate of interest charged by Banks should not be more than what Government charges on loans. The Government are expected to give incentives to private agencies to do something substantial and therefore even if that incentive is only a small percentage by way of subsidy, it should be there. He further urged that for the intensive development of Small Scale Industries throughout the country, a minimum provision of Rs. 400/- crores should be made for the Third Five Year Plan.

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Shri R. Venkataraman, Minister for Industries & Labour, Madras, who next addressed the gathering informed that the target for Madras was to start one Industrial Estate in each Taluq and suggested that the pattern can be different for various Estates, the type of Estate in rural areas being of lesser standards and the rent for the Units ranging from Rs. 25 to 50. He also recommended that exclusive allotment of iron and steel should be made for the construction of Industrial Estate. He also cautioned that mere construction of more Industrial Estates is not sufficient and that trained personnel should be made available. It is for this reason that Madras Government have located all Training Institutes in or near the Industrial Estates. The young students who come there for training course should have a background of the machines available in the Estates, so that they can know how to use those machines. In Madras there are 10 Industrial Schools and it is proposed to start more such Institutes. The number of part-time courses should be increased and the workers should be given theoretical foundation in these courses. The Minister felt that apprentices should be paid adequate stipends during training. The part-time courses should also be spread over a longer period and the workers should be given certificates at the completion of the course. In Madras State about 4,000 artisans are being trained per year and the Minister suggested that the trainees should be doubled in the various Schemes. In the case of raw materials, the Minister regretted that pig iron is being exported when our industries are closing down due to shortage. In the last meeting at Jaipur the same difficulty on the problem of Iron and Steel was raised when the Chairman suggested that a sub-committee with some of the industrialists may be constituted to go into the question and suggest ways and means of allocating Iron and Steel to Small Scale Industries in the States. The Minister hoped that the committee would examine the several aspects and submit a report early. In conclusion, the Minister repeated that there should be separate allocation of Iron and Steel for the construction of work-sheds in the Industrial Estates.

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Shri T. K. Palaniappan, Secretary to the Government, Industries, Labour and Co-operation Department, Madras, then explained the details of working of the several Industrial Estates in Madras State. He informed that when the Industrial Estate programme was started, the department actually took into confidence all the leading industrialists and convened a meeting. The proposed designs were shown to them and their opinions were taken and finally the particular patterns were adopted in the light of the views expressed by the Industrialists. He further explained that initially only twin sheds with central partition and ground floor office were constructed so that when the Industries expanded, both portions of the shed could be made available and first floor office could also be constructed. He also informed that in smaller places, separate office portion was not considered initially and were taken up later when there was specific demand. He then referred to the criticism made in the report of the Selected Buildings Projects Team on Industrial Estates to the effect that the areas under roads in certain Estates are high. He regretted that the Team had not taken into account the long term requirements of the Estates and pointed out that unless larger areas are provided for the Estates, though the metalling of the roads can be confined to the immediate needs, there is bound to be traffic problems later. In the light of the experience gained, Shri Palaniappan informed that building designs should be suitably altered to suit to the different types of Industries such as Chemical Industry, Precision Instrument, Foundry etc. In the case of the Industry such as Foundry, the buildings could be of much simpler designs. He then explained the various utilities provided in the Estates of Madras and also recommended the construction of Common Godowns for storing bulky materials. As regards Industrial Services he informed that the main problem is to get proper dies for the Industries. Though there is a good Tool room in Guindy, the needs of the Industry are not being fully met. There is a serious bottle-neck for the Small Scale entrepreneur. It is only in such of those items that the Small Industries Service Institutes can give necessary assistance and the Institutes should not merely duplicate the simpler items of work taken up by the State Government. He also urged that atleast on regional basis foreign specialists should be employed by the Institutes so that they can go periodically to the various Estates and organise Die and Tool making Units properly and give suitable training. Regarding Rural Estates he said that he was holding a different view and felt that we are not yet ready for starting Industrial Estates at Rural areas. The Industrial Estates can only be spread gradually from City to district towns, municipal towns and later on to places with population of 5 to 6 thousand but cannot be started from the Village end. He explained that even at Virudhunagar, an important commercial centre, which has got all the facilities required for an ideal Estate, there is not much response and the Estate is not as successful as expected and hence it may not be desirable to start in much smaller places. In the matter of relaxation of the Factory Act and Rules, he said that every one must apply his mind to these problems and see how best, we can liberalise these rules, consistent with the safety of the workers. In respect of power supply, the procedure for sanction should be simplified. The factory cost also can be made cheap by certain modification and in this connection, he suggested that the committee of Engineers which reported on the selected Industrial Estates projects should construct either at Delhi or in some other place a Model factory so that the economics can be studied and the design adopted.

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Shri Damodara Menon, Minister for Industries, Kerala, then informed the gathering that the Kerala State has six Industrial Estates and that more have been planned during the Third Plan. He said that they had some initial difficulties in attracting Industrialists to these Estates. He pointed out that the type of education in Kerala was not suitable for Industries. They get about 20,000 graduates and 60,000 boys from High Schools every year. He wanted a new orientation to be given to the educational system so as to adopt training programme to suit Industrial development. He stressed the need to reduce the expenditure on buildings and sheds and wanted the State to launch out ambitious programmes. He stated that sufficient inducements and incentives should be provided to attract Industrialists particularly as unemployment of the educated was their major problem. He appraised the Seminar of the serious shortage of raw materials in Kerala State.

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Shri Jayprakash, Executive Engineer, Kanpur Industrial Estate, outlined the various developmental programmes in U.P. He explained the difficulties in the construction of Units and roads in minimum time and advocated the construction of Military type building at a low cost. He informed that including all amenities, cost of the sheds in Industrial Estate at Kanpur worked out to Rs. 11 per. sq. ft. He wanted special attention to be paid for the Lay-out of the Estate and provision for expansion. He mentioned that there were about 400 applications for 32 plots in his Estate. He stated that Power supply was another major problem. He endorsed the view that an Expert Committee of Engineers should go into the types and designs of building for Industrial Estates.

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Shri Nageswaran, Industrialist, Guindy Estate, felt that the present buildings in Guindy were adequate and expressed that we should go in for better buildings, than cheap types at low cost, as the former would last longer. He said that different types of buildings should be designed for different parts of the country. He pleaded that there should be no cut in the amenities and wanted that they should form part of the Estate from the very beginning and not thought of after the factory sheds are constructed and occupied. He also mentioned the need for dust free roads as many Units use precision machine tools.

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Shri Surana, Industrialist, Sanatnagar Estate, wanted incentives to industrialists by giving tax-relaxations and extending the subsidised rents for over five years. He wanted technical assistance through a panel of Experts under the Government. He also wanted the sales-tax to be simplified and reduced.

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Shri Sriramamurthy, Estate Engineer, Andhra Government, outlined the programme of work in Andhra State. He said that they have built good buildings but the cost was high. They have given sufficient provision for expansion. He stated that they have revised their plan and that they are now building units at nearly half the cost in certain places without north roof lighting arrangement. He informed the Seminar that they are planning Assisted Private Industrial Estates, in which atleast 25 Industrialists should join. The Government would buy the land and construct the buildings and give them on lease for 99 years. About 25% of the cost of building would be met by the user and 75% by the Andhra Finance Corporation. The repayment will be in 15 years and the instalments will be collected only from the 8th year of starting with an interest of 6%. He stressed that the problem of raw materials should be solved and wanted special steps to be taken in this regard.

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Shri Purkayastha, Secretary, Industries Department, Orissa, said that their main difficulty was to get industrialists. They are planning to give 90% of Capital in the form of loan to attract Industrialists. They also propose to form Joint Stock companies in which the Director & Joint Director of Industries will be nominated members in the Board of Directors. He also hoped that the Seminar would discuss the impact of small industries on farmers and the pattern for the introduction of Rural Industrial Estates.

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Shri Agarwal, Industrialist, Agra Estate spoke of the shortage of power. He referred to the construction of buildings in the Estates on hire purchase system with repayment in 15 to 17 years at 5% interest. He said that the deposit of 10% should be recovered after 2 years and that there should be instalment payment than lump-sum payment. He suggested that we must find ways and means for exporting our products. He pleaded for railway sidings and full amenities before the Industrialists get into the Estate.

Shri Eshwaran, Industrialist, Guindy Estate, stated that the problem of shortage of raw materials will disappear in course of time. He explained the system prevalent in Japan and stressed the importance of making available semi-finished products which would be useful raw materials for other Industries. He mentioned that the Small Industries can be compared to the middle class of a society. He suggested that much importance should be given for training of technicians. He said that trainees should attend 2½ days school and 2½ days workshop during their training period which should be extended over a period of four to seven years. He also mentioned that the Hire Purchase Scheme of the National Small Industries Corporation was capable of considerable improvement. He pointed out the advantages of sharing common facilities like tool rooms, central cycle shed, car sheds etc. He proposed that similar units should be constructed in rural areas and given at the same rent. He wanted provision for warehouses for storing purposes. He indicated that the services of foreign Tool Experts for assisting the small industries could be secured collectively by the Industrialists.

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Shri Nanjappa, Director, Small Industries Service Institute, Bangalore, explained the work done by the Small Industries Organisation of the Government of India and wanted that raw materials available should reach the right persons.

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Shri Mukerjee, Works Manager, Industrial Estate, West Bengal, spoke of the construction of structures with tubular frame. Their cost works out to Rs. 8 per sq. ft. He mentioned that Industrial Estates have been started in his State for the rehabilitation of refugees. He suggested different designs for different climates.

Representatives from **Bihar and Maharashtra** spoke of the programme of work in their Estates, and explained the problems they had in construction, organisation and location.

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Shri Mandloi, Minister for Industries, Madhya Pradesh, mentioned that the new State was the biggest in the Union. He said that about 2/5th of the State consisted of forest areas. He stressed the need for technical guidance, export of products, trained personnel and Industrial Estates in University Centres.

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Shri Lakshminarayan, Industrialist, Madura Colony, laid emphasis for the need to revise factory rules and Municipal rules and regulations. He wanted that the Inspection by different set of officers from various Government departments and Local Boards should be reduced.

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Shri Raman, wanted that the Government of India should bring out a brochure about the Building designs. He wanted a technical committee to examine and report about the plant layout. He stressed the need for warehousing facilities, product finishing and conformity to Indian Standards Institution standards.

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Shri Sreenivasa Rao, Industrialist, Guindy Estate, pointed out the lack of technical know-how in certain industries and suggested that foreign collaboration should be encouraged to ensure proper growth of such industries.

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Shri G. Krishnamurthi, Industrialist, Vizagapatnam Estate, spoke about the shortage of raw materials and the difficulty in importing them.

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Shri Mullick, Industrialist, Guindy Estate, mentioned about the importance of production for export market.

In his concluding remarks, the Chairman, **Shri Manubhai Shah** said that the Industrial Estates have come to stay and it is an accepted fact. This is not a mere conglomeration of factory sheds but an instrument in the development of our country. Many Industrialists have failed to understand the concept of Industrialisation. Various common services facilities have been offered in these Industrial Estates which are the temples of industrial development in our country. Small Scale Industries cannot thrive without the support of the Community and the Government. These Industrial Estates play a vital role in the Socio-economic policy of India. The Chairman promised to take special steps to supply structural steel for the constuction of Industrial Estates. Shri Manubhai Shah commended the programme of technical training and promised all assistance. He also stated that the Government will take its due responsibility in promoting Co-operative Industrial Estates and Estates under Private agency. He promised to introduce Extension Centres in each of them and said that the State will offer other facilities like tool room, godowns etc. He mentioned that they have prepared a scheme for a Model Industrial Estate and wanted the comments of all industrialists. He added that each State can modify the same according to the requirements. He wanted Industrial Estates to be started in backward regions and desired that the Industrialists should be vigilant during this transition period. He emphasised that we have to choose between something and nothing in certain spheres. He exhorted the Industrialists to have faith in the programme and have an open mind so that we may achieve success in our development programmes. He then suggested that four working groups could be formed for a detailed study of the several problems connected with the Industrial Estates.

The Subjects Allotted to the Four Groups are Furnished Below.

Group I. Construction and Physical Environment.

Selection of sites, pattern of layout, cost and design, Development cost and Utilities, Water Supply, Drainage, Electricity, problem of effluents etc.

Group II. Management of Industrial Estates and Public Relationship.

Agencies for management—Government, Private Corporations, Co-operatives—Financing the Projects, Functional and Ancillary Estates, Selection of Industries and entrepreneurs for allotment of space, position of Service Industries, Assemblers and Established Industries, lease, rental purchase or outright purchase of factory sheds, allotment of developed sites, Rural Estates, rent, power supply, unrestricted growth to become medium or large Industries, amenities to be provided for the Estates etc.

Group III. Technical Training and Assistance.

Technical Training and assistance, Role of Small Industries Service Institutes, Technical facilities to be provided by Government Agencies, Training Classes, Role of Manufacturers' Associations etc.

Group IV. Commercial, Financial, Raw materials etc.

State Aid to Industries Act, Institutional Credit, Credit Guarantee Scheme, Simplification of Procedure for loans, Hire purchase of machines and D. L. F. Loans, assessment and distribution of raw materials, Inspection, Marketing assistance, Government Contracts, delay in payment of supply bills, Export promotion etc.

Report of Group I

CONSTRUCTION AND PHYSICAL ENVIRONMENTS OF INDUSTRIAL ESTATES

I. Selection of Sites

In the selection of sites the following factors should be taken into account:

(1) Availability of adequate electric power supply.

(2) Water supply.

(3) Drainage facilities including the reaction of the effluent discharge.

(4) Soil conditions (Suitability for the foundations etc.)

(5) Proximity to road and Railway Communications.

(6) The sites should be such as to require minimum cost for development.

(7) Scope for future expansion.

(8) Labour tenements should be conceived as a part of the scheme in the Industrial Estate programmes and the possibility of housing the labourers near the Industrial Estate sites may also be explored.

II. Pattern of Layout

The percentage of areas to be set apart for each item in Industrial Estates is given below:

	Large	*Medium*	*Small*
Plot area	65%	55%	40%
Road and open places	25%	30%	40%
Administration, ancillary and amenity buildings	10%	15%	20%

A portion of the area may be kept apart for specific industries, such as, castings, forgings, foundries, chemical or other special industries and the rest for typical buildings.

A portion of the developed land may be reserved for construction of factory units by the entrepreneurs themselves according to the plans to be approved by the Estate authorities.

The sizes of plot and buildings—office, factory and open space—may have to be decided according to local conditions and demand.

Minimum Road's width may be as given below

	Land	Ultimate metal width	Immediate metal width
Arterial roads	60′	40′	22′
Secondary	50′	30′	22′
Service	40′	22′	11′

III & IV. Cost and Design

Foundation for walls-concrete 1:5:10 with hard stone jelly.

For stanchions, plain cement concrete or reinforced cement concrete as may be necessary. Brick work in super structure—First class bricks 1:6

Damp proof course $\frac{3}{4}''$=1:4 with pudlo, sice or crude oil.

Plastering 1/2" thick—1 :5 or 1 :6.

Height of walls—Minimum as per Factory laws preferably 14.'

Trusses: Tubular trusses up to 40' span should be preferred because of less consumption of steel, less cost, lightness in structure and easier procurement.

North light not considered necessary. But sufficient openings provided to give sufficient light.

Doors and window frames—R. C. C. frames for doors and windows for smaller sizes.

Roof: Asbestos corrugated sheets.

Flooring brick on edge base and 1½" cement on top, as in Bengal and U. P. where stone jelly is costly. In Madras and Orissa and other places where stone jelly is not so costly, 5¼ stone concrete and 1:5:10 and ¾" granolithic. Double storied buildings should be constructed for offices.

V. Water Supply, Drainage, Electricity and Problems of Effluents

Water Supply: Municipal supply or tube wells or shallow open wells 500 gallons per unit approximately.

Drainage: Underground sewage system with suitable disposal works for underground sewage and proper surface drainage facilities.

Effluents: Objectionable effluents from factories, like chemicals etc. should be dealt with separately.

Electricity: No standards could be laid down as these depend upon the requirements of the Installations.

Shri K. A. Damodara Menon, Minister for Industries, Kerala, at the Government Tool Room Shop, Guindy Estate.

Shri Mohanlal, Minister for Industries, Punjab, who attended the Seminar, is seen keenly observing the products in the Estate Exhibition Hall.

3. The re-payment of the first instalment of the loan may commence from the fourth year of the disbursement of loan.

PRIVATE INDUSTRIAL ESTATE CORPORATIONS

4/5th of the amount required for the setting up of the Industrial Estates should be advanced by the Governments as loans.

The period of re-payment may also be fixed as 20 years and the re-payment of the first instalment may commence from the 4th year of the disbursement of loan.

(c) **Functional and Ancillary Estates:** As by and large, fractional Industrial Estates will have to be treated as promotional in character, Government may have to set up such Estates and manage them till such time as these Estates are able to carry on the activities without Government assistance.

(d) **Selection of Industries:** The Group felt that it would be difficult to evolve a uniform set of rules applicable to all States or for that matter to all Industrial Estates in the same State.

The consensus of opinion was that:

1. Only Small Scale Industries using power should be preferred.

2. New Industries should be preferred as against industries, existing in some other area and seeking to shift to the Industrial Estate.

3. Industries which promote export should be preferred.

4. Industries which are unable to expand in their own premises should also be provided accommodation.

The Group felt that industries producing harmful effluents should not be encouraged along with other units. But, however, where it is unavoidably necessary to provide accommodation for such units, they may also be located in some suitable area in the Industrial Estate.

Industrial servicing units such as maintenance and finishing units are essential for the proper development of the Industrial Estate and they may be given preference after all the needs of production units are met with.

Assembling units may also be allotted space, but such units will have only the last priority.

RENTAL OR LEASE OR HIRE PURCHASE:

The Group felt that where promotional aspect is more important on account of its promotional character of Government's managing the Estates, the rental system may continue. Further, lease arrangements for fairly long periods may also be considered. It was felt that the group character of Industrial Estate should be maintained and therefore, hire purchase of individual units in the Industrial Estates may be left to the decision of the respective State Governments. However, if private Corporations were coming up to take up the Industrial Estate as a whole, the entire Estate may be transferred to such Corporations.

Opinion was divided on the question whether developed sites should be made available to Small Scale Industrialists. One view was that developed sites need be made available only to large and medium industries. In the case of Small Scale Industries, built up accommodation should be provided. But the other view was that there are areas where Small Scale Industrialists are willing and are able to put up their own buildings much more cheaply than the buildings put up by the Government. In such areas, developed sites should be made available to Small Scale Industrialists also. The Group felt that where developed sites are made available to Small Scale Industrialists, it should be on the basis of long term lease and not on outright sale.

Rural Industrial Estates: The Group felt that the conception "Rural Industrial Estates" was not quite clear and it required to be clarified further. There was a view that in towns having a population of less than 20,000 Industrial Estates should not be attempted; but another view, which was equally strong, was that in order to remove under-development in the rural areas, Industrial Estates should be taken up in rural areas irrespective of population, and suitable encouragement should be given to Industrialists to come forward for starting industries.

The Group was unanimously of the opinion that, while licences are issued for Large Scale Industries under the Industries (Development and Regulation) Act 1951, a condition should be imposed making it obligatory on the part of the licensees to set up their factories in rural areas so that Small Scale Industries can grow around them.

Rent: The Group felt that Industrial Estates should be considered basically promotional in character during the Third Five Year Plan period also. Therefore, the Group is of opinion that the subsidised rent may continue till the end of the Third Five Year Plan.

Power supply: The Small Scale Industries Units should be supplied power without any restriction during all the hours of the day and throughout the year. Where the existing Electric supply system is short of power, separate generating sets should be installed in the Industrial Estates and the capital cost of the same should be written off by the Governments, Central and State Governments sharing the loss on 50:50 basis. The rate of power consumed by the Small Scale Industries in the Industrial Estate should be assessed and these Units should be charged only subsidised rates.

(e) **Amenities to be provided for the Estates: Facilities for Small Scale Industries to grow:** The Group felt that consistent with the facilities available in the Industrial Estates, and the need for expansion of the Units, the Small Scale Industries should be assisted to grow into Medium and Large Scale Industries.

Amenities: The Group felt that the following amenities may be provided to the Industrialists:

- Post Office
- Telephone
- Steam
- Gas
- Technical Library
- Common Tool Rooms
- Warehouse etc.

The following facilities may be provided to the workers:

- Canteens subsidised by the Industrialists
- Transport facilities
- Reading Rooms
- Recreation Centres
- First Aid Centres/Hospitals etc.

It was also felt that the State Governments should try to co-ordinate to the extent possible the Industrial Housing scheme with the Industrial Estates.

It was brought to the notice of the Group that various provisions in the Municipal Act are proving to be obstacles to the rapid development of the Small Scale Industries. It was recommended that the State Governments may be requested to initiate action to see that the relevant provisions in the Municipal Act are suitably amended.

TECHNICAL TRAINING AND ASSISTANCE

Role of the Small Industries Service Institutes

The Sub-Committee considered that, in addition to its present role, the Small Industries Service Institutes could be entrusted with the following responsibilities :—

(*i*) To make available technicians of the specialists class for specific trades. These specialists should form a pool and be made available to meet the requirements of small scale units who are served by these pools. Wherever necessary the services of the specialists can also be made available to other units not normally served by them.

(*ii*) Provision of adequate testing facilities right from the raw material stage to the finished product.

(*iii*) Implementation of a Quality Marking Scheme under the auspices of the Small Industries Service Institute.

(*iv*) Setting up of a Cell for the Development of prototypes. The location of this Cell should preferably be in a particular Industrial Estate chosen for this purpose in each of the States.

(*v*) Setting up of a Special Cell for the compilation and dissemination of statistics pertaining to the growth of the activities in the small scale sector in order to assist in the selection of new industries.

(*vi*) To undertake a continuous review of the schemes prepared with a view to drop obsolete ones and publicise new schemes having future potentialities.

Technical Facilities to be Provided By Government Agencies

The Sub-Committee recommends that the following facilities be provided by Government Agencies. In respect of Light Engineering Industries, the following facilities are essential at each Industrial Estate :

1. Model Foundry.

2. Forge Shop.

3. Machine Shop and Tool Room facilities.

4. Heat Treatment.

5. Common lease shop (Wherein graded machines should be provided ; all the items of machinery should be carefully chosen to cater to the needs of the particular Industrial Estate).

6. It is also suggested that in each Industrial Estate, a Sub-Committee be appointed to examine the necessity for setting up of Finishing Sections (if required) to meet the requirements of that particular Industrial Estate (e.g.) Electroplating section.

Training Classes

This subject was considered in great detail and after much discussion it was decided that owing to the policy laid down by the Government of India it would not be possible to commit this important aspect to any private agencies which are not recognised by the Government. It was therefore, decided that where a shortage of technicians is experienced special efforts should be made to obtain their requirements of technicians from State Government Training Institutions. There is also the scope for Small Scale Units selecting some of the operators who could be taken in as apprentices under the Apprenticeship Training Scheme.

Where it is found necessary to meet the requirements of producing machine operators at short notice they would have to be worked out in liaison with the State Government so that the State Government Training Institutions could arrange for training in adhoc short term courses. The Sub-Committee also recommended that every Industrial Estate should be provided with a Training Institution of the type envisaged.

Role of Manufacturers' Associations

The Sub-Committee having considered this subject, recommends that the Manufacturers' Association can effectively help by supplementing the training facilities provided by the State Government Agencies. Such help would include the selection and financing of selected individuals either for training in States outside their own or may be even overseas.

2. With regard to technical assistance, the Committee felt that wherever the conditions so warrant, the Associations could either obtain the services of specialists and guest speakers as and when necessary. It would also be possible to finance the visits of selected industrialists to other States in the country and where considered necessary to foreign countries.

COMMERCIAL, FINANCIAL, RAW MATERIALS ETC.

1. **Export Promotion:** During the discussion it was pointed that some State Governments insist on security over and above the assets created out of the loans. This affects the small industries in as much as they have no assets left to be pledged for the loan which they have to take for the working capital. It was recommended that loans to the extent of 75% of the assets, to be created out of the loan, should be advanced on the security of assets themselves. No further security for these loans should be demanded. In order to safeguard the Government money it was suggested that the small unit which wants to purchase machinery out of the loan to be advanced by the Government may pay 25% of the cost of the machine and 75% money be paid by the Government.

2. **The creditworthiness of the loanee:** The certificates for the creditworthiness of the loanee have to be taken under the Rules of State Aid to Industries Act. This is a very lengthy process. The agencies used for this purpose are Revenue authorities. It was suggested that as far as Industrial Estates are concerned, an Adhoc Committee consisting of the representative of the Director of Industries and two Industrialists of the Industrial Estate be formed which should decide the creditworthiness of the loanee.

3. **Institutional Finance:** Though it is desirable that the normal financing institutions should take over the financing of the Units, the time has however not yet come when the Government can divest itself of this responsibility. It was recommended that for some time more to come, the Director of Industries and Commerce should continue to give loans directly to the Small Units. This Group was informed that some States have liberalised their loan rules; their Director of Industries is authorised to sanction loan upto Rs. 1 lakh.

The Group recommends the States which have not liberalised their loan rules may also authorise their Directors to advance loan atleast upto Rs. 25,000 direct.

The District and Taluk authorities should also be authorised to sanction loan atleast upto Rs. 5000.

It was observed that the credit guarantee scheme has been made applicable to certain districts in India only. It was recommended that credit guarantee scheme should be extended to all functioning Industrial Estates.

The State Bank is giving cash and credit facilities. This credit is supplied mostly on lock and key basis. In certain cases open credit is also given. It was recommended that the policy of giving open credit be liberalised and larger number of units in Industrial Estates should be brought within its purview.

II. Hire Purchase:

There was a general complaint of delay in the supply of machinery by the National Small Industries Corporation. It was also observed that due to delays in supply of machinery earnest money is kept locked. It was suggested that the National Small Industries Corporation should accept bank guarantee in lieu of the earnest money in cash. A complaint was also made that the National Small Industries Corporation charges sales tax on the hire purchase value of the machinery. The Group noted with satisfaction the steps taken by National Small Industries Corporation to cut down procedural delays. The Group was however of the opinion that still considerable delays occur and the machineries are not supplied in time. It was suggested that the National Small Industries Corporation should streamline the process further and should arrange to supply the machinery as early as possible and in any case the time taken by them should not exceed more than 6 months. It was also recommended that the National Small Industries Corporation should consider the acceptance of the Bank Guarantee in lieu of the payment of the earnest money in cash.

There was a difference of opinion about the chargeability of sales tax. Two different High Courts have differed as to the amount of the sale value on which the tax should be charged. One High Court has said that the sale value consists of the basic value only and not the interest charged by the National Small Industries Corporation for making goods available on hire purchase system. The other opinion was that the sale value is the basic value plus the interest. In view of this difference of opinion it is recommended that the State and Central Governments should be requested to get the question examined by their legal advisers and if necessary, amend the laws so that the Small Industries have to pay sales tax only on the basic value of the machinery and not on the interest.

Raw Materials :

The Group had the advantage of hearing Sri C. R. Krishnaswami Rao Sahib, Joint Chief Controller of Imports, Madras. He informed the Group that in most of the cases the Essentiality Certificates given by the Director of Industries are respected. It is only in very hard cases that cuts have to be imposed. This was considered very satisfactory. The most difficult problem left there was the assessment of the correct requirement. It was decided that so far as Industrial Estates are concerned, an Adhoc Committee of representatives of Director of Industries and two Industrialists out of which one is technical personnel specialised in the subject concerned should be appointed. This body should make the assessment of the raw material. This body should also look to the correct use of the material supplied.

The Group was informed that the Small Scale Industries Board has appointed a Study Committee under the Chairmanship of Shri G. D. Bansal, Secretary of the All India Federation of Chambers of Commerce and Industry. It was decided that a Committee of 5 or 7 representatives of larger Industrial Estates of the country, viz, Guindy, Sanatnagar, Okhla, Indore, Kanpur etc., should be appointed. The inmates of these Estates should nominate the member. This committee should draft out a memorandum and submit it to the Study Group appointed by the Small Scale Industries Board. It was decided that the President of the Guindy Industrial Estate Manufacturers' Association should act as the Convener of this Committee.

It was also decided that every Industrial Estate should have an association which would undertake supply of raw materials required. In cases where necessary, these associations should be declared as stockists of controlled commodities.

It was pointed out during the discussions that the Government of India is declaring import policy every six months. But the policy of import of Iron and Steel is not declared. It would be helpful if the policy of import of Iron and Steel is also simultaneously declared along with the other import policy.

The stores purchase policy of the Government have gone a long way in encouraging the Small Scale Industries. But still a lot has to be done. The several recommended steps are :

1. More items should be included in the list of the articles exclusively reserved to be purchased from Small Scale Industries.

2. The scope of the purchase from the Small Scale Industries should be spread widely and more Small Units should be brought within the Government purchase system.

3. Wider publicity should be given to Government tenders and copies of the tenders should be sent to all Industrial Estates and be displayed at the office of the Industrial Estate.

Payment of Bills :

The payment of bills for the supply of goods to the Government are generally delayed. It is recommended that Government should study the question of payment and procedure and stream-line the same. 90% of the bills should be paid against R.R., the balance of the payment should be expediated and all claims settled within 3 months of the supply.

Every Industrial Estate should have separate cell for promotion of exports.

SUMMARY OF DISCUSSIONS IN THE CONCLUDING OPEN SESSION ON THE GROUP REPORTS UNDER THE CHAIRMANSHIP OF SHRI R VENKATARAMAN, MINISTER FOR INDUSTRIES & LABOUR, MADRAS

The discussions in the open session started on the morning of 22nd September 1960 when the Chairman announced that the Group Reports would be taken up for consideration and that as soon as the concerned convener had explained the salient points in the reports, the delegates would be free to express their views at the end of which the conveners would offer their further comments, if necessary.

Shri M. K. N. Pillai, Convener of Group I presented the recommendations of his group on the construction and physical environments of Industrial Estates and amplified certain points contained in the report. He said that the various factors to be considered in selecting a site cannot all be had in respect of any particular site that may be selected. It should, therefore, be a question of balancing the various advantages that alternate sites may be offered and to select the site considered most suitable on the whole. He instanced the case of the Guindy Industrial Estate itself, where the soil had not been particularly good for foundation and extra cost had therefore to be incurred. But Guindy had all the other advantages to a very large extent. While dealing with the pattern of layout, it was mentioned by him that he was not in agreement with the very large percentage provided as plot area. In Madras, the plot areas had been roughly about 1/3rd only. As regards the provision of 60' width for the arterial roads and 50' and 40' for other roads, the Convener felt that much wider land widths are necessary as had been adopted in the Madras State.

While on the cost and design subject, he particularly recommended the use of tubular trusses in view of the low consumption of steel, the cheap cost, and the absence of any difficulty in procuring the required scarce materials, namely, iron and steel. Taking 30' truss, he said that the structural truss with angles and tees, is $2\frac{1}{2}$ times heavier than a tubular truss, as compared to a similar truss made of angle and tees. In cost, the truss with angle and tees will be 30% more than the tubular truss. As regards materials he said that most of the recommendations of his group will have to be modified with reference to the local conditions.

Shri Nageswaran agreed with the convener with regard to the provision for road and added that the recommendation of the group could be taken as the minimum standard and that larger provision should be made wherever possible.

Shri Narayana Rao mentioned that though initially the minimum requirements of power should be met, provision should be made for increasing supplies later according to demand. He also suggested that separate lanes by the side of factory units may be allowed for the transmission lines and transformers. He suggested that enough space may be provided for parking cars of the Industrialists and visitors as near the factory unit as possible.

A delegate from Andhra suggested that double storied buildings may be provided for office and desired that 4/5ths of the area may be covered for factory shed leaving the remaining 1/5th open. He also suggested that the occupants should be allowed to put up their own sheds in the open space. He expressed that the 15' by which the building has been set back from the road limit should be owned by the occupant and suggested car parks, and provision for warehouses.

Shri A. D. Bohra suggested the use of prefabricated materials, pre-stressed concrete and foam concrete as has been done in Delhi.

In replying to the discussions, the Convener said that he agreed with the remarks of Shri Narayana Rao. As for the Andhra Delegate's remarks, he mentioned that in Madras State, the foundations and structures have been designed to take up an ultimate first floor. He also mentioned that it will not be desirable to cover 4/5ths of the area as that would mean that adequate space will not be available for storing bulky materials. This may necessitate the throwing in the materials inside the factory building itself. He further mentioned that warehouses have been thought of and started already in Madras State. As for Shri Bohra's suggestions, the Convener said that a good deal of facilities for the manufacture of pre-fabricated materials would become necessary, which are not available at present. High tensile steel costing Rs. 1,800 to Rs. 2,000 is required for pre-stressed concrete and has to be imported. As regards the foam concrete, highly specialised technical skill will be necessary as also for the pre-fabrication. These facilities will not be available especially as we are now contemplating the setting up of factories, etc. in smaller places in the districts and hence their adoption may be difficult.

The report of Group I was then taken as adopted.

Initiating the discussions on the subject of management of Industrial Estates and Public Relationship, Shri M. Abdussalam, Convener of Group II, explained the report of his group and also pointed out that he could not produce an unanimous report on the several important issues as the divergent views expressed during the group discussions were equally forcible.

Shri Chakrapani pleaded for the hire purchase of Units in Industrial Estates instead of on rental basis.

The Chairman expressed that the idea of setting up Industrial Estates by Government was to help those who did not have sufficient finance. He suggested that if an industrialist in the Estate made a fortune, he should put up his own shop outside the Estate leaving the space in the Estate for another budding entrepreneur.

A Delegate regretted that the working group was not unanimous in recommending the setting up of the State Corporations for managing the Estates as he felt that the State Corporations would function more effectively than the Government Departments.

Shri Purkayastha pointed out the disadvantage of setting up State Corporations and made special mention of the need to pay deputation allowance to the Government Officers working in the State Corporations and also of the problem of getting consent from the Officers to work in such corporations.

Shri Eswaran, Joint Convener of Group II stated that as one of the occupants of the Guindy Estate, he was all along holding the view that corporations should be set up to manage the Estates and that the allotment of factory sheds should be on rental purchase basis. But he added that after hearing the views expressed during the Group discussions on the previous day, he was convinced that in the case of promotional Estates the management should be by the State Government and that to maintain the Group character the allotment of factory sheds should be made on rental basis only. He also championed the cause for the establishment of Rural Industrial Estates and stressed the need to provide the necessary ameneties and common facilities in the Rural Estates. He believed that this would go a long way to arrest the inflow of people from Rural to Urban areas and create new employment potential.

Shri Sankar stated that the concept of Rural Industrial Estate was not defined properly. He said that sufficient encouragement should be given for setting up of Rural Industrial Estates and explained the need for Rural Industrialisation.

The Chairman intervened and said that nobody questioned the need for Rural Industrialisation.

Shri T. K. Palaniappan said that there could be no two opinions on the need for the Rural Industrialisation and setting up of Rural Industrial Estates. The only question was whether we should take it up now during the initial stage of Industrial Development of the country, when the response from the entrepreneurs was not at all encouraging in such places. He assured that if the exponents of Rural Estates come forward with concrete Schemes, the Madras Government will not hesitate to extend their full support. He sounded a note of caution stating that the Governments are answerable to the Public and Legislature and that the available limited resources of the Governments should be spent usefully.

In conclusion, the Chairman said that the various States should consider the recommendations and they themselves take final decisions for implementation. He also stressed the need to consider factors like the availability of power, raw materials, economic development of the particular area, water supply and market before launching their schemes. As regards the suggestion of Shri Lakshminarayan to amend the Factory and Municipal Laws, the Chairman informed the house that the Madras Government have appointed a committee consisting of Chief Inspector of Factories, Director of Public Health and State Officials to go into the question of relaxing the Factory and Municipal rules and regulations to the extent possible.

The report of the Second Group was taken as adopted. The Chairman then welcomed Mr. M. M. Farookhi, Managing Director of Small Industries Corporation, Karachi, who had come as an observer for this Seminar on Industrial Estates. Mr. Farookhi commended the progress of small industries in India. He informed the delegates that in Pakistan the definition of small scale industry covered only units employing upto 20 workers and having a maximum capital of one lakh rupees. He proposed to suggest the revision of ceilings and limit to workers, immediately on return to Pakistan so that they may gain by India's experience. He also proposed to suggest to his Government the idea of setting up Industrial Estates like the one at Guindy under their Third Plan.

Opening the discussions on Technical Assistance and Technical Training, Col. E. P. Raju, Convener of Group III, explained the Group's recommendation on the role of Small Industries Service Institute in developmental activities and the common service facilities to be provided by the Governments along with technical training programmes. The Group's recommendation was accepted without any discussion and the Chairman congratulated the convener for producing a non-controversial report.

Shri Bhatnagar, Convener of Group IV introduced the recommendations of his Group regarding Finance, Hire Purchase, raw materials and marketing.

Shri G. S. Raju, suggested that a committee consisting of one representative from the Ministry of Commerce and Industry, Government of India and six representatives from among the delegates may be constituted to examine the problem of raw materials shortage and take suitable steps to overcome the same.

Shri Nageswaran pointed out that the Working group has already recommended that some of the Industrialists from the various States could discuss and draft a report and that he proposed to convene a meeting on the evening of the same day to avoid delay.

A member from Andhra Pradesh spoke of the variations in Sales Tax charged by various States and sought the opportunity to take up the matter with the Government of India.

As some of the delegates levelled charges of delay against the National Small Industries Corporation for the supply of machines under hire purchase and as some complained of the high rate charged for the machines, Shri A. D. Bohra explained the working of his organisation which is neither a Government Department nor a private Corporation and as such had certain limitations. He further informed that the procedure for hire purchase has been simplified and that arrangements have been made for early supply of machines. He also promised to give increased allotment of ordinance brass scrap if the Small Scale Industrialists can submit a complete list of their requirements in the proper form. The report of the last Group was then taken as adopted.

In his concluding remarks the Chairman expressed his happiness at the gradual 'vanishing' of the dividing line between the Government authorities and the Industrialists. This change in the outlook, which indeed was a good augury, would help them to take the country forward in industrial advancement. He was also happy that the delegates devoted much time in detailed discussions on vital issues for the development of Small Scale Industries. He thanked all the delegates for their presence and contribution for the success of the Seminar. He also thanked the Government Officials and the organisers who were responsible for shaping this Seminar to success. The Minister hoped that there would be many more such Seminars in India.

Shri Bhatnagar and Shri Nanjappa thanked the Minister for Industries, Madras and the officials of the Madras Government for organising the Seminar and for taking care of the delegates who had come from all parts of the country. They hoped that in future similar Seminars on Industrial Estates would be held regularly at the different Estates

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

During the open sessions and group meetings from 20-9-'60 to 22-9-'60, there were free and frank discussions on the several problems connected with the construction and management of the Industrial Estates and the functioning of the small-scale units housed therein. The defects in the present systems, the steps to be taken to remove them and the assistance required to improve the productive efficiency of the small-scale units in the Estates were also discussed.

The general opinion at the Seminar on the more important issues was as follows :—

1. In any Industrial Estate programme, subsidised Industrial Housing Scheme should be integrated.

2. In the Industrial Estates, specific areas should be earmarked for foundries, forgings, chemical and other special industries, and the buildings constructed only in those areas and not mixed up with the general light engineering industries.

3. In each Estate, developed sites also should be reserved for the constuction of factory units by the entrepreneurs themselves according to the plans to be approved by the Estate authorities.

4. While constructing factory sheds upto 40' span, tubular trusses should be preferred because of less consumption of steel, less cost, lightness in structure and easier procurement.

5. Comprehensive schemes for water supply, sewage system and surface drainage should be prepared well in advance and the work taken up simultaneously with the construction of factory sheds and not after the factory sheds are completed and occupied.

6. While providing roads, power and other utilities, the long term requirements including the scope for the expansion of the Estate should be kept in view and not merely the urgent and immediate requirements.

7. High priority should be given for the supply of steel required for the construction of the Estates.

8. During the Third Five Year Plan also, the Industrial Estates should generally be considered promotional in character and subsidised rent continued upto the end of Third Plan period.

9. In the cases of States or Estates where the existing arrangements are satisfactory the management by Government may continue, particularly if the Estates are of promotional types. State Corporations may also be set up to manage the existing Estates, if the State Governments concerned find them more advantageous.

10. Generally, Ancillary Estates for supplying components to large scale industries could be set up by private agencies.

11. In the cases of Estates to be set up by private corporations and co-operatives, the Governments should advance loans repayable in 20 years. It would normally take one year for the completion of the Estate construction and 3 years for the private units housed there to function on a stable basis. Therefore, the repayment of

the first instalment should commence from the fourth year of the disbursement of the loan.

12. Functional Estates are promotional in character and the State Governments may set up such Estates and manage them till such time the activities can be carried on without Government assistance.

13. Even though uniform set of rules applicable for all Industrial Estates connot be evolved, only Small-Scale Industries using power and modern machines should be provided factory space in the Industrial Estates.

14. Though the State Governments are free to allot the factory sheds on rental, rental purchase or outright purchase basis, it is felt that in the Estates, particularly of the promotional type managed by the Government, the group character has to be maintained and it is, therefore, desirable to allot factory sheds only on rental basis. When after a few years, the Estates function on a self supporting basis, the entire Estate can be transferred to a private corporation. When developed site is made available to the Small-Scale Industrialist, it should be on the basis of long term lease and not outright sale.

15. Even though the ultimate aim is to industrialise rural areas, on account of several limiting factors, it is not desirable to set up Industrial Estates during the Third Five Year Plan in areas with a population of less than 20,000 unless there be specific and firm demands from entrepreneurs.

16. While licences are issued for Large Scale Industries (Development and Regulation) Act 1951, a condition should be imposed making it obligatory on the part of the licensees to set up their factories in rural areas so that Small Scale Industries can grow around them.

17. In Industrial Estates, where existing power supply system is inadequate, generating sets may be provided, the capital cost being written off by the Governments; the Central and the State Governments sharing the loss on 50 : 50 basis.

18. Utilities and amenities such as post office, telephones, steam, gas, warehouses, canteens subsidised by industrialists, transport facilities, reading rooms, recreation centres, first aid centres, hospitals etc. should be provided in the scheme for each Estate so that they may be made available when there is adequate demand for them.

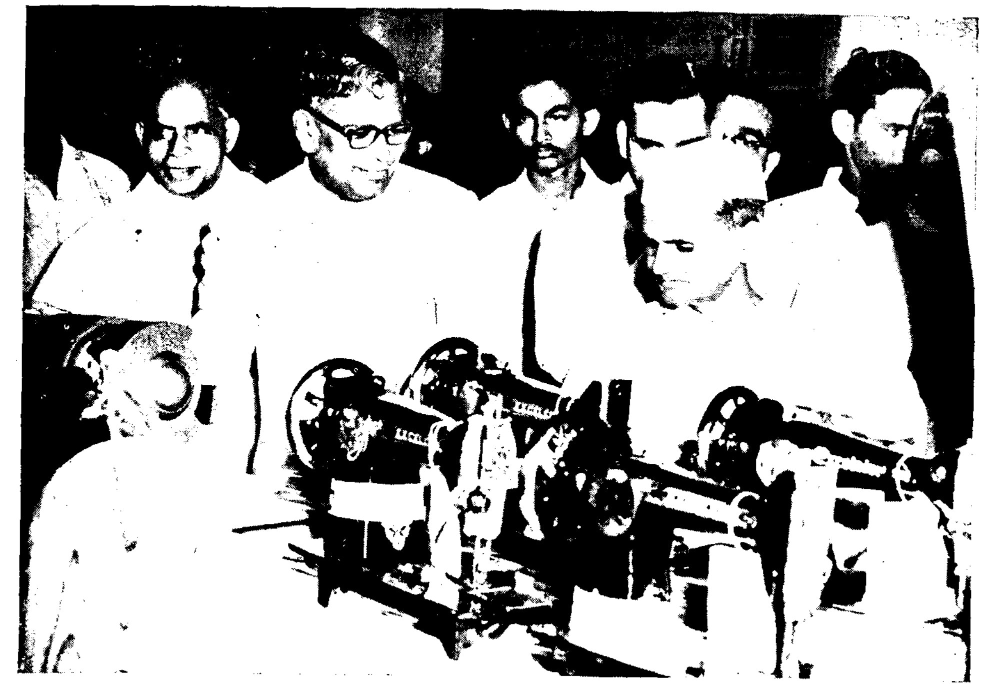
19. The Municipal and Factory laws should be suitably amended to the extent possible, so as not to adversely affect the proper working of the small scale units.

20. The Small Industries Service Institutes may maintain a pool of specialists for specific trades to meet the requirements of small scale units served by those pools. The Institutes should take up specialised items of work only, such as assistance in designing and making tools, dies etc. and not merely duplicate the simpler items of work undertaken by the State Governments.

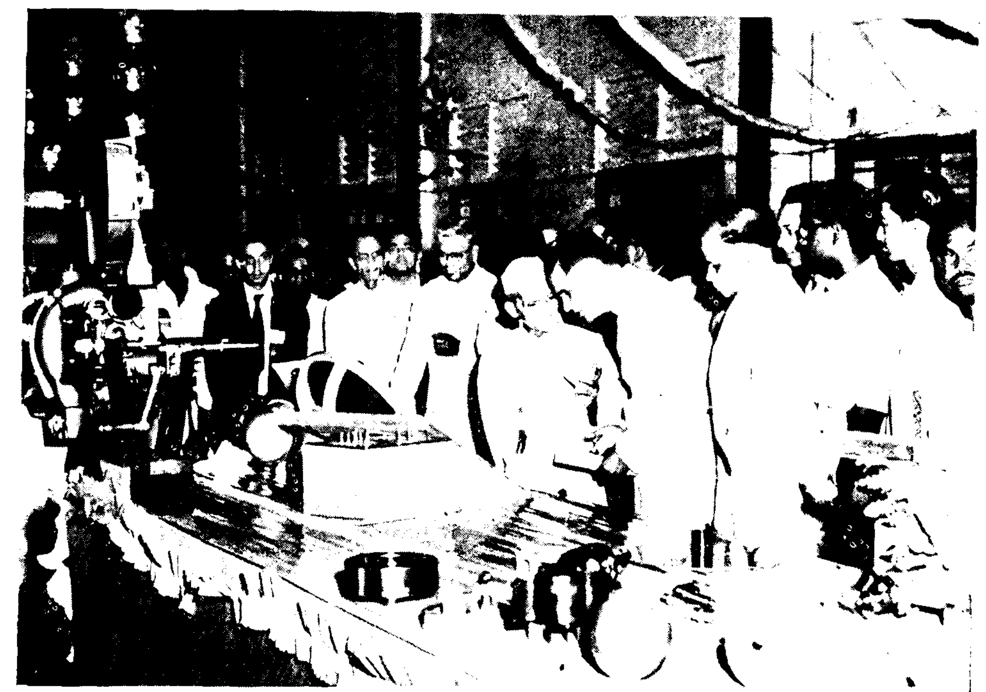
21. Instead of the State Governments, the Small Industries Service Institutes may provide testing facilities right from the raw materials to the finished products and also undertake quality marking. This would facilitate Inter-State trading and ensure uniform standards throughout the country.

22. The Small Industries Service Institutes may set up in larger Estates, cells for the development of prototypes and for the compilation and dissemination of statistics pertaining to small scale sector.

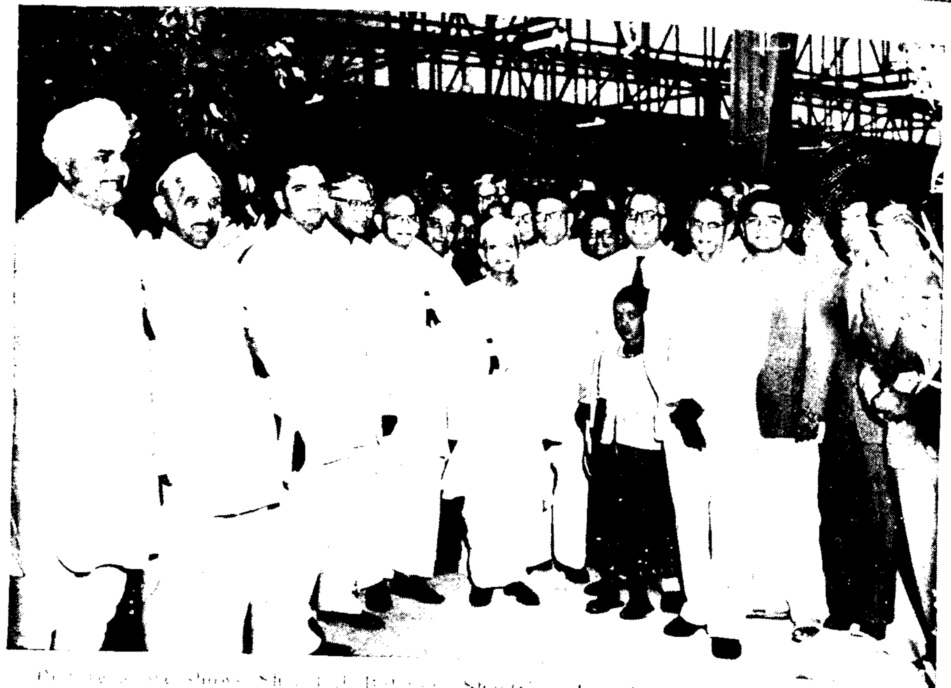
23. Industrial services such as foundry, forge shop, machine shop, tool room, heat treatment shop, common lease shop, finishing shop, technical library etc. may be



Shri Lal Bahadur Shastri is seen ... Sewing Machines kept in ...



Shri Lal Bahadur Shastri and Shri Manubhai ... inspecting the ...



[illegible] shows Shri [illegible] Shastri and Shri Manubhai Shah with the Delegates to the Seminar.

Shri K. [illegible], Member of Parliament, who visited the Guindy Estate, is seen in the Exhibition Hall.

provided by Government in each Estate when there is adequate demand for them.

24. Every Industrial Estate should be provided with a State Government Training Institute.

25. The number of part time courses in these training institutes should be increased and required facilities provided for training the workers from the small scale units housed in the Estates.

26. The Estates Manufacturers Associations could also effectively help the Government by supplementing the training facilities provided by the Government agencies.

27. While sanctioning loans under the State Aid, Government should not insist on security over and above the assets created out of the loans as otherwise the small industries will have no assets left to be pledged for the loan required for working capital.

28. An Adhoc committee consisting of representatives of the Director of Industries and the Industrialists in the Estate may be formed to decide the creditworthiness of the loanee, as the present system of consulting Revenue authorities involves considerable delay.

29. For sometime more, the Directors of Industries should continue to give loans direct to the small scale units. The powers of the Directors in this regard should be increased to atleast Rs. 25,000 while the District and Taluk authorities should be authorised to sanction loans atleast upto Rs. 5,000/-.

30. The credit guarantee scheme should be extended to all the Estates and the policy of giving open credit by the State Bank should be liberalised and larger number of units in the Estates should be brought within its purview.

31. The National Small Industries Corporation should streamline the procedure and arrange for the supply of machines under Hire Purchase within 6 months.

32. Due to the present delay in the supply of machines, the earnest money in cash paid by the small units is locked up for considerable time and hence the NSIC should accept bank guarantee in lieu of cash.

33. The State and Union Governments should amend the sales tax rules, if necessary, so that small industries have to pay sales tax only on the basic value of the machinery and not on the interest.

34. Supply position of iron and steel, both indigenous as well as imported, is extremeiy bad and unless effective steps are taken urgently, Small Scale Industries will not survive. Even pig iron which is being exported has become scarce in many of the regions. In this connection a committee of industrialists from the larger Estates should go into the question in detail and prepare a report for the consideration of the 'study committee' appointed by the All India Small Scale Industries Board. (The Industrialists committee met on the afternoon of 22—9—60).

35. The policy of import of iron and steel should also simultaneously be declared along with other import policies.

36. More items should be included in the list of articles exclusively reserved to be purchased from Small Scale Industries.

37. Wider publicity should be given to Government tenders and copies of such tenders should be sent to all Industrial Estates.

38. Payments of supply bills are badly delayed by the Government departments with the result that the meagre capital of small scale units is locked up indefinitely. Therefore, Government departments should pay 90% of the bills against Railway receipts and the balance within 3 months of the supply.

39. Each Estate should have separate cell for promotion of exports.

REPORT OF THE ESTATES INDUSTRIALISTS COMMITTEE ON RAW MATERIALS

The Group on Raw Materials etc., recommended, among other things, that a Committee of five or seven representatives of larger Industrial Estates of the country should draft a report on the raw material problems and submit the same to the Study Group appointed by the All India Small Scale Industries Board. In pursuance of the above recommendation, a committee of Estates Industrialists, with Shri K. Nageswaran, President of the Guindy Estate Manufacturers' Association as the Convener, met on the evening of 22nd September 1960 and drafted the following report.

The Government have accepted the principle that they should supply raw materials in full for atleast one eight hour shift requirements. This has been more or less implemented in the case of imported raw materials; this however has not been implemented at all even to a meagre fraction in the case of imported steel requirements; in the case of indigenous steel and iron, though quota certificates have been given to their full requirements the quotas have not been convertible into material due to delays in production, bottleneck in transport etc. The position in the case of non-ferrous materials is also very acute. These suggesstions below are given with a view to overcoming of these difficulties.

Iron and Steel Items: Buffer stocks of iron and steel items of categories that are in great demand and are in short supply or delayed supply in the country should be allowed to be imported collectively by the Industrial Estate Manufacturers' Associations or Servicing Corporations or Raw Materials depots attached to the Industrial Estate. This stock is to be used as a buffer stock for assistance in getting over critical emergencies of the Industrialists such as provision for new Industrialists before they fall in to the regular categories of fabricators and become eligible for quotas and also for supply to other units when they have to meet an emergency.

2. Even when the Steel plants in the country go into full production and are able to supply the requirements, transport of the materials by ship rather than by rail should be considered to areas which have to pass through Railway bottlenecks. The extra cost of such transport should be met from the equalization funds.

3. The licensing authority for all imports whether they be for raw materials or for iron and steel items should be the Joint Chief Controller of imports and Exports. The policy for iron and steel materials also should be stated in the Red Book.

4. Import licences for iron and steel materials for a succeeding period should not be refused in total just because material against the previous licence is received during the current period, the licensing policy of which is announced later. This appears to have happened in the case of some industries and this surprise stoppage of the issue of licences leads to great

difficulties as the industry is not able to keep up its promised deliveries.

5. Imported tool and alloy steel items available on rupee basis from certain countries may be allowed to be imported through the Industrial Estate Manufacturers' Associations.

6. Wherever manufacturers in the Industrial Estate are able to make arrangements for import of their raw material requirements which are normally allowed on rupee basis, they may be enabled to do so.

7. Wherever Government are not able to licence in full imported iron and steel or arrange for physical delivery of indigenous iron and steel to the full extent of the capacity of the manufacturer, they should make it up by giving licences for the rest of the quantity in the form of Industrial Scraps.

8. Every Industrial Estate Manufacturers' Association should be registered as controlled stockists for standards and defectives and registered as Stock-holders for standard items.

Indigenous Iron and Steel Materials: It is suggested that we could revert to the distribution of indigenous iron and steel materials through the Commerce and Industry Ministry which was the method before 1952. That arrangement was working satisfactorily and there would be better response to the demands and needs of the industry.

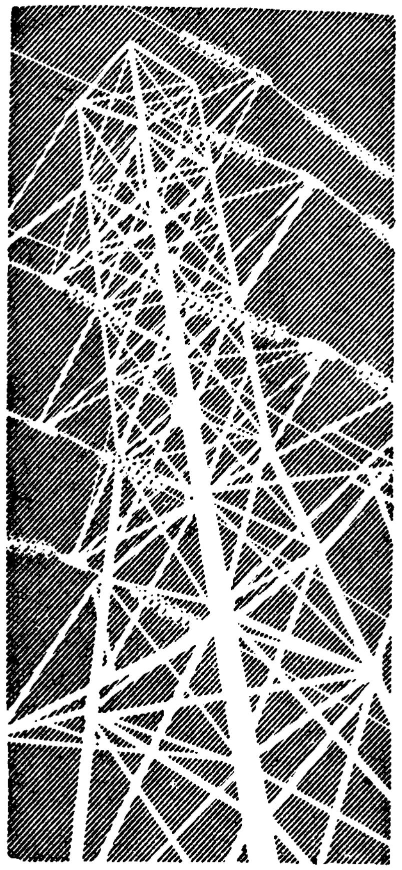
2. Usable defectives and sheet cuttings produced from the factories are at present distributed round the producing areas only. It is suggested that arrangements should be made for distribution of these more equitably all over the country. In this connection it may be stated that no quota of usable defectives has been fixed for the various states like standard steel.

Non-ferrous Materials: In the case of non-ferrous materials like brass, zinc, etc. established manufacturers have to suffer and put up with getting reduced quotas in successive years because the total available quantity seems to be limited and new industries come in and there is a share-out of the limited quantity leading to a reduction to those who have been in the industry. In such cases where the quantity allotted to a State is limited and not increased, new industries should not be allowed to come in using these materials. This should apply to stainless steel also except in the case of surgical instrument factories. With regard to stainless steel, priority should be given to surgical instruments and industrial uses only.

2. In the case of indigenous materials such as aluminium, copper and brass sheets produced in the country, a proportion of the production in the country should be set apart for manufacturers in the Industrial Estates and this should be distributed to them.

Pig Iron: Pig iron is produced in the country in large quantities. The position regarding this item in several zones is difficult due to transport bottlenecks. This could be got over by arranging for transport by ships, and the extra cost met from the equalization funds.

Coal and Coke: Price of these items should be the same all over the country on the same basis as in the case of steel.



New Patterns of DEVELOPMENT

The programme of establishing Industrial Estates has caught the imagination of the people of India and there has been increasing demand for new Estates from all over the country.

A sum of Rs. 11 crores was allocated for setting up Industrial Estates, in the Second Five Year Plan. This sum was hardly sufficient to meet the growing demand for these Estates. It was, therefore, considered that in addition to the Estates approved to be established by the State Governments, the private bodies may also be encouraged to establish Industrial Estates wherever possible.

The Government of India have suggested to State Governments that action might be taken to set up Industrial Estates in each State organised by private industrialists. It was, however, felt that such co-operatives or corporations wishing to set up Industrial Estates may not have enough resources for this purpose. It was, therefore, decided that long term loans may be advanced to them by co-operative and other scheduled Banks.

The Government of India have, in consultation with the Reserve Bank of India, worked out the financial aspects of organising such Estates. The Reserve Bank had stated that there was no objection to commercial banks advancing to limited extent loans to companies and co-operative societies organising the Industrial Estates against security of land and factory sheds with the guarantee of the State Governments concerned.

The Union Government have suggested that industrialists should raise by way of share capital one-sixth to one-fifth of the total amounts needed for Industrial Estate Co-operatives and one-fourth to one-third of the amounts in the case of Industrial Estate Companies. The balance would be advanced by credit institutions. The period of repayment of the loans might extend from seven years to ten years.

The Model Bye-laws of Co-operative Industrial Estates, Memorandum of Association of Industrial Estates Company Limited and Articles of Association of Industrial Estate Company Limited are given below for the general information of the interested public.

Appendix I

MODEL BYE-LAWS
OF
CO-OPERATIVE INDUSTRIAL ESTATES

Name, Constitution and Address :

1. The________Co-operative Industrial Estate Ltd.________is registered as a Co-operative Society under the ________ Co-operative Act and its operation shall be confined to________

Its registered address is :—

____

____

It shall be referred to in these Bye-laws as " Estate ".

OBJECT

2. The object of the estate is to carry on a business of establishing and running of Industrial Estates for Small Scale Industries. For the purpose of attaining these objects, it shall be competent to the estate :

(*a*) to acquire land either by purchase or gift or take it on lease and develop it by levelling and dressing it and divide it into plots.

(*b*) to lay roads, electric lines, water supply, drainage sewage disposal, parks and to plant trees.

(*c*) to do any other thing which might be necessary to make the land suitable for putting buildings for the use of and ancillary to the small industries to be established therein.

(*d*) to construct factory buildings, offices, canteens, banks, dispensaries, labour welfare centres, residential quarters for its staff and workers, godowns, museums, guest houses etc. for the use of its members or persons connected with their business.

(*e*) let out these plots or buildings to its members either on rent or rent-cum-hire purchase or hire purchase or sell them by outright sale.

(*f*) to arrange and establish common facilities such as electric supply, water, gas, steam, compressed air, repair shops, services common facility workshops, transport.

(*g*) to purchase machinery and equipment either by cash or credit or on hire-purchase and supply the same to their member-units established in Industrial Estate.

(*h*) to run raw material and general stores Depot for the benefit of the members of the estate.

(*i*) to canvass orders on behalf of the member-units and sell their products.

(*j*) to raise funds in such manner as the Board of Management of the Estate shall think fit ;

(*k*) to make, accept, endorse and execute promisory notes, bills of exchange and other negotiable instruments ;

(*l*) to subscribe for and hold shares in Co-operative Institutions ; and

(*m*) to do all such things as are industial or conducive to the attainment of all or any of the above objects.

AUTHORISED CAPITAL

3. The authorised capital of the estate shall for the present be Rs.________ Lakhs made up of________shares of Rs. 5000/-each.

4. The liability of the members of the Estate shall be limited to the share capital subscribed by them.

MEMBERSHIP

5. Membership will be open for—

(1) Existing small Industrial units, individuals, Co-operative Societies or other body corporates and partnership firms who want to start small Industries in the estate;

(2) Persons intending to start small Industries;

(3) Any other individual over 18 years of age.

6. Application for admission as member and for allotment of shares shall be made to the General Manager of the Estate in the form prescribed for the purpose. Every such application shall be disposed of by the Board of Directors who shall have power to grant admission or to refuse it without assigning reasons.

Explanation :

The persons who have qualification prescribed by bye-law 5 and who join in the application for registration and purchase the shares of the Society will be deemed to be *ipso facto* members of the Society on payment of admission fees.

7. Every member shall pay an entrance fee of Rs.100/-at the time of admisson.

8. A share certficate bearing a distinctive number shall be issued for every share or such numbers of shares as will be subscribed.

9. Any member of the Estate may by writing under his hand deposited with the Estate nominate any persons (other than a servant or officer of the Estate) to whom the whole or any part of his interest in the Estate should be transferred in the event of his death. A fee of Rs. 2 will be charged for recording such nomination and any subsequent revocations or variations.

Transfer or withdrawal of shares :

10. No member shall be permitted to withdraw any of its shares. Transfer of shares may, however, be permitted but no member shall be permitted to transfer any share held by it unless the transferee be a member or one whom the Board is willing to admit as member. The transfer shall not be operative until it is sanctioned by the Board of Directors. When the registration of any affiliated Society is cancelled, the Board of Directors may refuse all or any of the shares held by the Society to the liquidator of that Society.

11. The membership of the Estate ceases:

(a) On expulsion; and

(b) On death.

12. A member may be expelled from membership by a majority vote of members of the Estate who are present and vote at the General Meeting.

(1) If he is a persistent defaulter in payment of dues of the Estate.

(2) If he is found guilty of having deliberately deceived the Estate and caused loss to Estate and gain to himself or for someone through him.

(3) If he is declared insolvent by a Court of Law.

(4) If he is convicted for an offence under the I. P. C. or such other offences involving moral turpitude.

(5) If he intentionally does any act likely to injure the credit of the Estate.

Expulsion may involve forfeiture of any or all shares held by him as may be decided by the Registrar of Cooperatives.

13. A member who voluntarily withdraws from the Estate or one who is expelled from the Estate or one who is is expelled being lessee on the land and building where he organised or carried on his industry will be required to vacate and remove his plant and Industry from the land out of the premises of the Estate within one year of his ceasing to be such a member. The provisions of this bye-law apply to member who cease by death and whose shares are not taken by his sons and heirs and who fail within one year to continue the industry after the death of such members.

14. The liabilities of a past member for the debts of the Estate as they exist at the time when he ceases to be a member shall continue till such debt is repaid.

15. On the death of a member, the value of the shares held by such member together with the dividends, if any, after deductions of the dues to the Estate, if any, shall on application be paid within one year of the death to the nominee, or if there is no person so nominated to such person as it may appear to the Board to be the heir or legal representative of the deceased member or where the Board is unable to decide the heir, production of a succession certeficate of a compotent court. The Estate shall also subject to provisions of the Co-operatives Act and unless prevented by an order of a compotent court on application, pay to the nominee heir or legal representative as the case may be, all other money due to the deceased member from the Estate within one year of the deceased member on executing deed of indemnity to the Society, if so required by the Board. The deposits of the deceased may at the discretion of the Board be withdrawn by such nominee heir or legal representative as the case may be even if the period of the deposit has not expired, the rate of interest payable be either the agreed rate or such lower rate as the Board may decide.

FUNDS

16. The Estate will ordinarily obtain funds from the following sources :—

(i) Share Capital.

(ii) Deposits from the Co-operative Societies and members of the Estate on the terms as may be decided by the Board of Directors.

(iii) Borrowings from the Apex Co-operative Bank or the State Bank of India or any joint Stock Bank subject to the approval of Registrar of Co-operative Societies in the case of non-Co-operative Banks.

(iv) Borrowings from the Financial Corporation.

(v) Grant or subsidy or other financial assistance from Government and Institutions.

17. The Board of Directors may raise loans or deposits on such terms as may be agreed upon between them and the creditor.

18. The total borrowings of the Estate shall not at any time exceed 10 times paid up share capital and reserve fund, without the previous sanction of the Registrar.

19. The management of the Estate shall vest in a Board of Director consisting of the following 12 members :—

3 Directors nominated by the State Government.

9 Directors to be elected by the Shareholders.

20. The period of the Board constituted under bye-law 19 shall be three years.

21. The Board shall elect from amongst its members its Chairman and Vice-Chairman. The Chairman when present, shall preside at the meeting of the Board. In his absence, the Vice-Chairman shall

perform the duties of the Chairman. In the absence of both the Chairman and Vice-Chairman, the members present shall elect a Chairman of the Meeting.

22. Vacancies in the Board occurring through death, resignation, retirement, expulsion, non-attendance at certain meetings of the Board, removal from office as a Director, or any other reasons, may be provisionally filled in by co-option by the remaining Directors by appointing a person possessing the requisite qualifications to hold the office, till the next annual general meeting at which meeting in any case the vacancy shall be filled in by elections and such a Director shall hold office till the time, the elected Director whose place he takes would have ordinarily held it. He shall also retire at such time as the elected Director whose place he takes would have retired, had such an elected Director continued in office.

23. Subject to the Bye-laws and the resolutions passed at a General Meeting, the Board of Directors shall have full authority to carry on the business of the Estate.

24. The Board of Directors shall meet once in a quarter or often if necessary, to conduct the affairs of the Estate. The quorum for a meeting of the Board shall be four. If there be no quorum within half an hour from the time appointed for holding the meeting, the meeting, shall be adjourned for at least 7 days and at the adjourned meeting, the business of the original meeting shall be disposed of, whether there is a quorum present or not. All questions before the Board shall be decided by a majority of votes. Should there be an equality of votes, the Chairman or other presiding member shall have a casting vote. No member of the Board of Directors shall be present at a meeting of the Board when any matter in which he is personally interesed is being discussed.

25. Should any Director be absent without the permission of the Chairman from three consecutive meetings of the Board of Directors, he shall cease to be member of the Board, but he may be re-instated by the Board for satisfactory reasons.

26. In case of urgency where there may not be sufficient time to convene a meeting of the Board of Directors and in all cases in which such a procedure may from time to time be prescribed by the Board, the General Manager or any officer authorised by him, may obtain the order of the Board of Directors by circulation of papers among the Directors, decisions arrived at by circulation shall be placed before the next meeting of the Board for their information. Should a difference of opinion arise in the course of circulation, the matter should not be decided by circulation but shall be placed before the meeting of the Board for decision.

27. It shall be competent to the Board of Directors to do all such things as are necessary and conducive to the attainment of the object of the Estate. In particular the Directors shall have powers :—

(*i*) to purchase or otherwise acquire lands, buildings etc., to construct buildings, godowns, sheds, quarters for the staff etc.

(*ii*) to purchase and sell machinery and stores;

(*iii*) to rent or lease the premises or sell it by hire purchase or on an out right sale.

(*iv*) to mortgage any property or assets of the Estate.

(*v*) to institute, conduct, defend, compound or abandon any legal proceedings;

(*vi*) to determine the strength of the superior and subordinate staff and scales of pay and allowances, and the security to be obtained from each, and to generally regulate their conditions of service;

(*vii*) to appoint, or remove or dismiss the member of the superior and subordinate staff;

(*viii*) to give pension, gratuity or compensation to any employee of the Estate or his dependents;

(*ix*) to open accounts with Banks and to authorise an officer or officers of the Estate to operate on them as well as to draw, accept, make, endorse and execute cheques, bills of exchange;

(*x*) to set apart the required sums towards depreciation funds, insurance fund or any special fund to meet contingencies;

(*xi*) to appoint agents, brokers, etc., for the purchase of land, buildings, etc. and the disposal of waste products;

(*xii*) to transact all other businesses incidental to the management and development of the Estate.

and it shall be competent to the Board of Directors to delegate from time to time any or all of its powers to the Chairman, the General Manager or such other officer of the Estate as may be found necessary for the efficient administration of the affairs of the Estate.

28. It shall be the duty of the Board of Directors to maintain true accounts of the assets and liabilities of the Estate, of the sums of money received and expended and of the sales and purchases of goods in the forms prescribed by the Registrar. They shall also maintain such books and registers, as are prescribed by the rules framed under the__________Co-operative Societies Act and place before the General Body Meeting of the members of the Registrar's notes of audit.

29. The Board of Directors shall maintain a list of members on the rolls of the Estate who are qualified to vote at the general body meetings and shall bring such lists upto-date within a fortnight before each meeting of the General Body. It shall be the duty of the General Manager to supply copies on such lists as may be prescribed in this behalf.

30. It shall be competent to the Board of Directors to frame regulation for the conduct of the business of the Estate, consistent with the Act, the Rules framed under the Acts and these bye-laws. Such regulations shall be entered in the minute book of the Estate and they shall take effect on approval of the Registrar of Co-operatives/Director of Industries.

31. The Board of Directors shall have power to constitute one or more Committees consisting of the Directors of the Estate and to frame regulations to regulate the work of these Committees.

32. The services of the members of the Board of Directors shall be gratuitous except that they may receive such travelling allowances and sitting fees as may be fixed in the regulations.

33. The Board shall prepare the Annual Budget of the Estate and place it before the General Body for its information.

34. **General Manager:** The General Manager shall be appointed by the Board of Directors. He shall be responsible for the day to-day administration of the Estate Subject to the control of the Board, he shall have custody of all the records and properties of the Estate, shall be responsible for its proper organisation and efficient running All documents executed in favour of the Estate shall be in his name. He shall exercise such powers as may be delegated to him by the Board of Directors or the Chairman from time to time. He shall have power

appoint the members of the subordinate establishment in accordance with the strength of each cadre and the scale of pay approved by the Board. He may fine, suspend, remove or dismiss them. In the last case, an appeal may lie to the Chairman of the Board of Management. Leave of all kinds of the superior and subordinate staff may be granted by the General Manager.

35. **Chairman:** The Chairman of the Estate shall have an overall control over the day-to-day management of the Estate. He shall preside over the meetings of the Board of Management and the General Body. In the absence of Chairman, Vice-Chairman would function as Chairman. In their absence, the body concerned choose a Chairman of the meeting from among the members present. The Chairman of the Estate shall have a general control over the affairs of the Estate. He shall exercise such of the powers of the Board as may be delegated to him. It shall be competent for him to fine or suspend the members of the superior staff.

36. **General Body:** The General Body of the Estate shall consist of

1. Shareholders of the Estate;
2. Other members of the Board of Directors of the Estate.

In case of Co-operative Societies, which are shareholders of the Estate, a representative duly appointed by such Co-operative Societies as per rules prescribed in this behalf shall be a member of the General Body of the Estate.

Each representative of the Co-operative Societies shall have one vote. The remaining members shall have one vote each.

37. **General Meeting:** The first general meeting of the members shall have the same powers as are herein given to the annual General Meeting:

38. The annual General Meeting shall be held within 3 months of the close of the Co-operative year. Its duties shall be.

i) to receive and consider the annual Report and audited statements and the audit report of accounts of the Estate including the profit and loss statement and to review the work of the Estate during the preceding year and to sanction the distribution of profits.

ii) to elect Directors;

iii) to appoint Auditors for the ensuing year and to fix their remuneration;

iv) If necessary to fix the maximum limit upto which the Board may contract loans for the business of the Estate.

v) To consider audit memorandum or any communication that may have been received from the Registrar of Co-operatives/Director of Industries or any other business duly brought forward, and

vi) To consider appeal against the decisions of the Board of Directors and generally to exercise supreme authority in any matter relating to the business of the Estate, subject to the orders of the Registrar of Co-operatives/Director of Industries.

39. In the case of an Annual General Meeting, 14 days notice and in the case of a special General meeting 7 days notice shall be given by ordinary post and by posting a copy of it on the Board of the Estate and in a newspaper widely read in the District. The notice shall specify the hour and place of the General Meeting and the business to be transacted thereat.

40. With the permission of the 2/3rd of the Members present at a general meeting any member may bring forward a proposal not mentioned in the notice covening the meeting provided that such proposal does not relate to the expulsion of a member.

41. (a) A special General Meeting may be summoned by the Chairman or by a majority of the Board of Directors and shall be summoned on a written request of the Director of Industries or Registrar of Co-operatives or on receipt of a written requisition from 1/5th of the total number of members. It shall be the duty of the Chairman to call such a meeting within one month of the receipt of such a request or requisition.

(b) Unless approved by the Board of Directors, a resolution disturbing the election of the office bearers or cancelling any subject previously decided upon at a general meeting cannot be brought forward for consideration in a general meeting within a period of six months from the date of passing, without the previous written sanction of the Director of Industries/Registrar of Co-operatives.

42. Each member shall have one vote only.

i) The vote shall be by show of hands and by a majority.

ii) If any member present at the meeting demand poll on any subject secret voting by ballot shall decide that particular subject. In case of equality of votes Chairman of the meeting shall have Casting Vote.

43. The Chairman shall have a casting vote in addition to his ordinary vote.

44. 1/5th of the total number of members shall constitute a quorum at a General Meeting. If there be no quorum within half an hour from the time appointed for holding the meeting, the meeting shall be adjourned for at least 7 days and at the adjourned meeting, the business of the original meeting shall be disposed of, whether there is a quorum present or not.

No member present will be allowed to vote on any matter in which he has a personal interest.

45. The first Board of Directors shall be nominated by the Director of Industries/Registrar of Co-operatives. This Board will function till it is replaced by the Board of Directors elected by the first General Meeting. The Chairman of the Board of Directors shall call a meeting of the General Body within 3 months of its registration for election of Board of Directors.

46. All acts done in good faith by the Board of Directors or by a Committee or by a sub Committee or by any person acting as Director shall notwithstanding that it is afterwards discovered that there was some defect in the election or appointment of such Board, A Committee, a Sub Committee, or a person, be as valid as if the Board, the Committee, the Sub-Committee or the person had been duly elected or appointed.

Business:

47. (1) The Estate will, as its funds permit, acquire land, develop it and build buildings for letting them out or sell them to its members.

(2) May instal and run Power Houses and supply electricity to the inmates of the Estate, install water pumping station and work the same and supply water to the inmates of the Estate.

(3) May run any such common facility services which are necessary for the efficient working of the Estate.

(4) May levy charges for the services rendered and material supplied to the inmates of the Estate.

48. **Profits:** At the Annual General Meeting, the gross profits earned in the

previous year shall be announced and the following deductions shall be made :—

(1) Instalments payable on loans and interest thereon ;

(2) Working expenses ;

(3) Losses ;

(4) Depreciation on building plants, machinery and other wasting assets ; percentage of which to be fixed ;

(5) Land assessments, cesses and rents ;

(6) All other expenses incidental to the working of the Estate.

The balance remaining after these deductions shall be treated as net profits. The net profits shall be disposed of as under :—

(*i*) 25% shall be carried to the Reserve Fund ;

(*ii*) 25% shall be set apart towards "Replacement Fund".

(*iii*) Out of the remainder, such amount as may be decided upon by the General Body may be distributed as dividends to the members subject to a maximum of 6¼% calculated on the paid up value of each share held by them in the Estate.

(*iv*) Out of the remainder—

(a) a sum not exceeding 7½% may be set apart towards common Good Fund to be spent on Education and Medical Relief ;

(b) An amount not exceeding 1/6th of the salary earned by the staff members in last co-operative year may be given as salary bonus to the staff working in that year ;

(*v*) Any profits not allotted in the manner aforesaid and the balance, if any, shall be added to the Reserve Fund.

49. The Reserve Fund shall belong to the Estate, as a whole, and is intended to meet unforeseen losses. The Estate shall invest it in such manner as the Registrar of Co-operative Societies may prescribe and it shall not be drawn upon except with his previous sanction.

On the dissolution of the Estate, the Reserve Fund and other funds contributed by it under the provisions of these bye-laws, shall be disposed of according to provisions of the Co-operative Societies Act of 19—— etc.

50. **Miscellaneous :** Any amendment to, or alteration or cancellation of a by-law, shall be made only at a meeting of the General Body of members of the Estate. It shall take effect only when it is registered by the Registrar of Co-operative Societies.

51. Should any doubt arise as to the construction or interpretation of the Co-operative Societies Act or the rules framed thereunder or any bye-law, the Board of Directors may refer the same to the Registrar of Co-operative Societies for advice and such advice shall be final and binding.

52. The Estate shall prepare annually in such form as may be prescribed by the Registrar of Co-operative Societies or Government :—

(*a*) A statement showing the receipts and disbursement for the year,

(*b*) a trading account,

(*c*) a profit and loss account,

(*d*) a balance sheet, and

(*e*) such other statement as may b[illegible] scribed by the Registrar of [illegible] operative Societies and the Stat[illegible] the Union Government.

The statements shall be made upto 30th June and a copy of it shall be sent to the Registrar of Co-operative Societies within a month thereafter. After the Registrar of Co-operative Societies has verified the statements and granted his audit certificate, the Estate shall publish such of the statement as he may direct.

53. The minutes of the proceedings of all meetings of the General Body and Board of Directors shall be entered in a book kept for the purpose and signed by the Chairman of the Meeting and shall be communicated by the General Manager to the members of the Board and Registrar of Co-operative Societies.

54. **Interpretation Clause :** (1) The term 'small industries' will have such meaning as is ascribed to it by the Government of India.

(2) The term 'Board of Management' would mean 'Board of Directors'.

As approved and Registered,

Dated : Registrar,

Co-operative Societies.

MEMORANDUM OF ASSOCIATION
OF
INDUSTRIAL ESTATE COMPANY LTD.

(NAME OF THE PLACE)

1. Name of the Company is__________

2. Its registered office shall be________ (name of the State where registered office is situated)

3. The objects of the Company are

(*a*) to acquire land either by purchase or gift or take it on lease and develop it by levelling and dressing it and divide it into plots.

(*b*) to lay roads, electric lines, water supply, drainage sewage disposal, parks and to plant trees.

(*c*) to do any other thing which might be necessary to make the land suitable for putting buildings for the use of and ancillary to the Small Industries to be established therein.

(*d*) to construct factory buildings, offices, canteens, banks, dispensaries, labour welfare centres, residential quarters for its staff and workers, godowns, museums, guest houses, etc. for the use of its members or persons connected with their business.

(*e*) let out these plots or buildings to its members either on rent or rent-cum-hire purchase or hire purchase or sell them by outright sale.

(*f*) to arrange and establish common facilities such as electric supply, water, gas, steam, compressed air, repair shops, services common facility workshops, transport.

(*g*) to purchase machinery and equipment either by cash or credit or on hire purchase and supply the same to its member-units established in Industrial Estate.

(*h*) to run raw material and general stores depot for the benefit of the member of the Estate.

(*i*) to convass orders on behalf of the member-units and sell their products.

(*j*) to raise funds in such manner as the Board of management of the Estate shall think fit;

(*k*) to make, accept, endorse and execute promisory notes, bills of exchange and other negotiable instruments;

(*l*) to subscribe for and hold shares in Co-operative Institutions; and

(*m*) to do all such things as are identical or conclucive to the attainment of all or any of the above subject.

4. The liability of the members is limited.

5. The capital of the company is______ lakhs divided into______shares of Rs. 1,000/- each with power to issue any of the shares in the Capital, original or increased, with or subject to any preferential, special, or qualified rights or conditions, as regards dividends, repayment of capital, voting or otherwise.

We, the several persons, whose names and addresses are subscribed, are desirous of being formed into a Company in pursuance of this memorandum of Association and we respectively agree to take the number of shares in the capital of the Company set opposite to our respective names.

Name, address, descriptions and occupations of subscribers	Number of shares taken by each subscriber

Dated the *Day of* 19

Witness to the above signatures.

Address

ARTICLES OF ASSOCIATION
OF
INDUSTRIAL ESTATE COMPANY LTD.

(INTERPRETATION)

1. (1) In these regulations—

(*a*) "the Act" means the Companies Act, 1959.

(*b*) "the seal" means the common seal of the company.

(2) Unless the context otherwise requires, words or expressions contained in these regulations shall bear the same meaning as in the Act or any statutory modification thereof in force at the date at which these regulations become binding on the company.

Share Capital and Variation of Rights

2. Subject to the provisions of section 80, any preference shares may, with the sanction of an ordinary resolution, be issued on the terms that they are, or at the option of the company are liable, to be redeemed on such terms and in such manner as the company before the issue of the shares may, by special resolution, determine.

3. (1) If at any time the share capital is divided into different classes of shares, the rights attached to any class (unless otherwise provided by the terms of issue of the shares of that class) may, subject to the provisions of sections 106 and 107, and whether or not the company is being wound up, be varied with the consent in writing of the holders of there-fourths of the issued shares of that class, or with the sanction of a special resolution passed at a separate general meeting of the holders of the shares of that class.

(2) To every such separate general meeting, the provisions of these regulations relating to general meetings shall mutatis mutandis apply, but so that the necessary quorum shall be two persons at least holding or representing by proxy one-third of the issued shares of the class in question.

4. The rights conferred upon the holders of the shares of any class issued with preferred or other rights shall not, unless otherwise expressly provided by the terms of issue of the shares of that class, be deemed to be varied by the creation or issue of further shares ranking pari passu therewith.

5. (1) The company may exercise the powers of paying commissions conferred by section 76, provided that the rate per cent or the amount of the commission paid or agreed to be paid shall be disclosed in the manner required by that section.

(2) The rate of the commission shall not exceed the rate of five per cent of the price at which the shares in respect whereof the same is paid are issued or an amount equal to five per cent of such price, as the case may be.

(3) The commission may be satisfied by the payment of cash or the allotment of fully or partly paid shares or partly in the one way and partly in the other.

(4) The company may also, on any issue of shares, pay such brokerage as may be lawful.

6. Except as required by law, no person shall be recognised by the company as holding any share upon any trust, and the company shall not be bound by, or be compelled in any way to recognise (even when having notice thereof) any equitable, contingent, future or partial interest in any share, or any interest in any fractional part of a share, or (except only as by these regulations or by law otherwise provided) any share except an absolute right to the entirety thereof in the registered holder.

7. (1) Every person whose name is entered as a member in the register of members shall be entitled to receive within three months after allotment or registration of transfer (or within such other period as the conditions of issue shall provide)—

(a) one certificate for all his shares without payment; or

(b) several certificates each for one or more of his shares, upon payment of one rupee for every certificate after the first.

(2) Every certificate shall be under the seal and shall specify the shares to which it relates and the amount paid up thereon.

(3) In respect of any share or shares held jointly by several persons, the company shall not be bound to issue more than one certificate, and delivery of a certificate for a share to one of several joint holders shall be sufficient delivery to all such holders.

8. If a share certificate is defaced, lost or destroyed, it may be renewed on payment of such fee, if any, not exceeding eight annas, and on such terms, if any, as to evidence and indemnity and the payment of out-of-pocket expenses incurred by the company in investigating evidence, as the directors think fit.

Lien

9. (1) The company shall have a first and paramount lien—

(a) on every share (not being a fully-paid share), for all moneys (whether presently payable or not) called, or payable at a fixed time, in respect of that share; and

(b) on all shares (not being fully-paid shares) standing registered in the name of a single person, for all moneys presently payable by him or his estate to the company:

Provided that the Board of directors may at any time declare any share to be wholly or in part exempt from the provisions of this clause.

(2) The company's lien, if any, on a share shall extend to all dividends payable thereon.

10. The company may sell, in such manner as the Board thinks fit, any shares on which the company has a lien:

Provided that no sale shall be made—

(a) unless a sum in respect of which the lien exists is presently payable; or

(b) until the expiration of fourteen days after a notice in writing stating and demanding payment of such part of the amount in respect of which the lien exists as is presently payable, has been given to the registered holder for the time being of the share or the person entitled thereto by reason of his death or insolvency.

11. (1) To give effect to any such sale, the Board may authorise some person to transfer the shares sold to the purchaser thereof.

(2) The purchaser shall be registered as the holder of the shares comprised in any such transfer.

(3) The purchaser shall not be bound to see to the application of the purchase money, nor shall his title to the shares be affected by any irregularity or invalidity in the proceedings in reference to the sale.

12. (1) The proceeds of the sale shall be received by the company and applied in payment of such part of the amount in respect of which the lien exists as is presently payable.

(2) The residue, if any, shall, subject to a like lien for sums not presently payable as existed upon the shares before the sale, be paid to the person entitled to the shares at the date of the sale.

Calls on Shares

13. (1) The Board may, from time to time, make calls upon the members in respect of any moneys unpaid on their shares (whether on account of the nominal value of the shares or by way of premium) and not by the conditions of allotment thereof made payable at fixed times:

Provided that no call shall exceed one-fourth of the nominal value of the share or be payable at less than one month from the date fixed for the payment of the last preceding call.

(2) Each member shall, subject to receiving at least fourteen day's notice specifying the time or times and place of payment, pay to the company, at the time or times and place so specified, the amount called on his shares.

(3) A call may be revoked or postponed at the discretion of the Board.

14. A call shall be deemed to have been made at the time when the resolution of the Board authorising the call was passed and may be required to be paid by instalments.

15. The joint holders of a share shall be jointly and severally liable to pay all calls in respect thereof.

16. (1) If a sum called in respect of a share is not paid before or on the day appointed for payment thereof, the person from whom the sum is due shall pay interest thereon from the day appointed for payment thereof to the time of actual payment at five per cent per annum or at such lower rate, if any, as the Board may determine.

(2) The Board shall be at liberty to waive payment of any such interest wholly or in part.

17. (1) Any sum which by the terms of issue of a share becomes payable on allotment or at any fixed date, whether on account of the nominal value of the share or by way of premium, shall, for the purposes of these regulations, be deemed to be a call duly made and payable on the date on which by the terms of issue such sum becomes payable.

(2) In case of non-payment of such sum, all the relevant provisions of these regulations as to payment of interest and expenses, forfeiture or otherwise shall apply as if such sum had become payable by virtue of a call duly made and notified.

18. The Board—

(a) may, if it thinks, fit, receive from any member willing to advance the same, all or any part of the moneys uncalled and unpaid upon any shares held by him; and

(b) upon all or any of the moneys so advanced, may (until the same would, but for such advance, become presently payable) pay interest at such rate not exceeding, unless the company in general meeting shall otherwise direct, six per cent per annum, as may be agreed upon between the Board and the member paying the sum in advance.

Transfer of Shares

19. (1) The instrument of transfer of any share in the company shall be executed by or on behalf of both the transferor and transferee.

(2) The transferor shall be deemed to remain a holder of the share until the name of the transferee is entered in the register of members in respect thereof.

20. Shares in the company shall be transferred in the following form, or in any usual or common form which the Board shall approve:—

"I, A. B of...........in consideration of the sum of rupees.........paid to me by C. D. of........(hereinafter called "the transferee"), do hereby transfer to the transferee the share (or shares) numbered.........to.........inclusive, in the undertaking called the.........Company, Limited to holo unto the said transferee, his executors, administrators and assigns, subject to the several conditions on which I held the same immediately before the execution hereof; and I the transferee, do hereby agree to take the said share (or shares) subject to the conditions aforesaid.

As witness our hands this .... day of ....
Witness to the signatures of, etc."

21. The Board may, subject to the right of appeal conferred by section 111, decline to register—

(a) the transfer of a share, not being a fully-paid share, to a person of whom they do not approve; or

(b) Any transfer of shares on which the company has a lien.

22. The Board may also decline to recognise any instrument of transfer unless—

(a) a fee of two rupees is paid to the company in respect thereof;

(b) the instrument of transfer is accompanied by the certificate of the shares to which it relates, and such, other evidence as the Board may reasonably require to show the right of the transferor to make the transfer; and

(c) the instrument of transfer is in respect of only one class of shares.

23. The registration of transfers may be suspended at such times and for such periods as the Board may from time to time determine:

Provided that such registration shall not be suspended for more than forty-five days in any year.

24. The company shall be entitled to charge a fee not exceeding two rupees on the registration of every probate, letters of administration, certificate of death or marriage, power of attorney, or other instrument.

Transmission of Shares

25. (1) On the death of a member, the survivor or survivors where the member was a joint holder, and his legal representatives where he was a sole holder, shall be the only persons recognised by the company as having any title to his interest in the shares.

(2) Nothing in clause (1) shall release the estate of a deceased joint holder from any liability in respect of any share which had been jointly held by him with other persons.

26. (1) any person becoming entitled to a share in consequence of the death or insolvency of a member may, upon such evidence being produced as may from time to time properly be required by the Board and subject as hereinafter provided, elect, either—

(a) to be registered himself as holder of the share; or

(b) to make such transfer of the share as the deceased or insolvent member could have made.

(2) The Board shall, in either case, have the same right to decline or suspend registration as it would have had if the deceased or insolvent member had transferred the share before his death or insolvency.

27. (1) If the person so becoming entitled shall elect to be registred as holder of the share himself, he shall deliver or send to the company a notice in writing singned by him stating that he so elects.

(2) If the person aforesaid shall elect to transfer the share, he shall testify his election by executing a transfer of the share.

(3) All the limitations, restrictions and provisions of these regulations relating to the right to transfer and the registration of transfers of shares shall be applicable to any such notice or transfer as aforesaid as if the death or insolvency of the member had not occured and the notice or transfer were a transfer signed by that member.

28. A person becoming entitled to a share by reason of the death or insolvency of the holder shall be entitled to the same dividends and other advantages to which he would be entitled if he were the registered holder of the share, except that he shall not, before being registered as a member in respect of the share, be entitled in respect of it to exercise any right conferred by membership in relation to meetings of the company:

Provided that the Board may, at any time, give notice requiring any such person to elect either to be registered himself or to transfer the share, and if the notice is not complied with within ninety days, the Board may thereafter withhold payment of all dividends, bonuses or other moneys payable in respect of the share, until the requirements of the notice have been complied with.

Forfeiture of Shares

29. If a member fails to pay any call, or instalment of a call, on the day appointed for payment thereof, the Board may, at any

time thereafter during such time as any part of the call or instalment remains unpaid, serve a notice on him requiring payment of so much of the call or instalment as is unpaid, together with any interest which may have accrued.

30. The notice aforesaid shall—

(a) name a further day (not being earlier than the expiry of fourteen days from the date of service of the notice) on or before which the payment required by the notice is to be made; and

(b) state that, in the event of non-payment on or before the day so named, the shares in respect of which the call was made will be liable to be forfeited.

31. If the requirements of any such notice as aforesaid are not complied with, any share in respect of which the notice has been given may, at any time thereafter, before the payment required by the notice has been made, be forfeited by a resolution of the Board to that effect.

32. (1) A forfeited share may be sold or otherwise disposed or on such terms and in such manner as the Board thinks fit.

(2) At any time before a sale or disposal as aforesaid, the Board may cancel the forfeiture on such terms as it thinks fit.

33. (1) A person whose shares have been forfeited shall cease to be a member in respect of the forfeited shares, but shall, not-withstanding the forfeiture, remain liable to pay to the company all moneys which, at the date of forfeiture, were presently payable by him to the company in respect of the shares,

(2) The liability of such person shall cease if and when the company shall have received payment in full of all such moneys in respect of the shares.

34. (1) A duly verified declaration in writing that the declarant is a director, the managing agent, the secretaries and treasurers, the manager or the secretary, of the company, and that a share in the company has been duly forfeited on a date stated in the declaration shall be conclusive evidence of the fact therein stated as against all persons claiming to be entitled to the share.

(2) The company may receive the consideration, if any given for the share on any sale or disposal thereof and may execute a transfer of the share in favour of the person to whom the share is sold or disposed of.

(3) The transferee shall thereupon be registered as the holder of the share.

(4) The transferee shall not be bound to see to the application the purchase money, if any, nor shall his title to the share be affected by any irregularity or invalidity in the proceedings in reference to the forfeiture sale or disposal of the share.

35. The provisions of these regulations as to forfeiture shall apply in the case of non-payment of any sum which, by the terms of issue of a share, becomes payable at a fixed time, whether on account of the nominal value of the share or by way of premium, as if the same had been payable by virtue of a call duly made and notified.

Conversion of Shares into Stock

36. The company may, by ordinary resolution.

(*a*) convert any paid-up shares into stock; and

(*b*) reconvert any stock into paid-up shares of any denomination.

37. The holders of stock may transfer the same or any part thereof in the same manner as and subject to the same regulations under which the shares from which the stock arose might before the conversion have been transferred, or as near thereto as circumstances admit:

Provided that the Board may, from time to time, fix the minimum amount of stock transferable, so however, that such minimum shall not exceed the nominal amount of the shares from which the stock arose.

38. The holders of stock shall, according to the amount of stock held by them, have the same rights, privileges and advantages as regards dividends, voting at meetings of the company, and other matters, as if they held the shares from which the stock arose; but no such privilege or advantage (except participation in the dividends and profits of the company and in the assets on winding up) shall be conferred by an amount of stock which would not, if existing in shares, have conferred that privilege or advantage.

39. Such of the regulations of the company (other than those relating to share warrants) as are applicable to paid-up shares shall apply to stock and the words "share" and "shareholder" in those regulations shall include "stock" and "stockholder" respectively—

Share Warrants

40. The company may issue share warrants subject to, and in accordance with, the provisions of sections 114 and 115; and accordingly the Board may in its discretion, with respect to any share which is fully paid up, on application in writing signed by the person registered as holder of the share, and authenticated by such evidence (if any) as the Board may from time to time, require as to the identity of the person signing the application, and on receiving the certificate (if any) of the share, and the amount of the stamp duty on the warrant and such fee as the Board may from time to time require, issue a share warrant.

41. (1) The bearer of a share warrant may at any time deposit the warrant at the office of the company, and so long as the warrant remains so deposited, the depositor shall have the same right of signing a requisition for calling a meeting of the company, and of attending, and voting and exercising the other privileges of a member at any meeting held after the expiry of two clear days from the time of deposit, as if his name were inserted in the register of members as the holder of the shares included in the deposited warrant.

(2) Not more than one person shall be recognised as depositor of the share warrant.

(3) The company shall, on two days' written notice, return the deposited share warrant to the depositor.

42. (1) Subject as herein otherwise expressly provided, no person shall, as bearer of a share warrant, sign a requisition for calling a meeting of the company, or attend, or vote or exercise any other privilege of a member at a meeting of the company, or be entitled to receive any notices from the company.

(2) The bearer of a share warrant shall be entitled in all other respects to the same privileges and advantages as if he were named in the register of members as the holder of the shares included in the warrant, and he shall be a member of the company.

43. The Board may, from time to time, make rules as to the terms on which (if it shall think fit) a new share warrant or coupon may be issued by way of renewal in case of defacement, loss or destruction,

Borrowing Powers

44. The Directors may from time to time at their discretion raise or borrow or secure the payment of any sum or sum of money for the purposes of Company.

45. The Directors may raise or secure the payment or payment of such sum or sums in such terms and conditions in all respects as they think fit and in particular by the issue of debentures or debenture stock of the Company charged upon all or any part of the Company, both present and future,

including its uncalled capital for the time being.

46. The Debentures, debenture stock and other securities may be made assignable free from any equities between the Company and the persons to whom the same may by issued.

47. Any debentures, debenture stock, bonds or other securities may be issued at a discount, premium or otherwise and with any special privileges as to redemption, surrender, drawings, allotment of shares, attending, voting at general meetings of the Company, appointment of Directors and otherwise.

Alteration of Capital

48. The company may, from time to time, by ordinary resolution increase the share capital by such sum, to be divided into shares of such amount, as may be specified in the resolution.

49. The company may, by ordinary resolution,

(a) consolidate and divide all or any of its share capital into shares of larger amount than its existing shares;

(b) Sub-divide its existing shares or any of them into shares of smaller amount than is fixed by the memorandum, subject, nevertheless, to the provisions of clause (d) of sub-section (1) of section 94:

(c) cancel any shares which, at the date of the passing of the resolution, have not been taken or agreed to be taken by any person.

50. The company may, by special resolution, reduce in any manner and with, and subject to, any incident authorised and consent required by law,—

(a) its share capital;

(b) any capital redemption reserve fund; or

(c) any share premium account.

General Meetings

51. All general meetings other than annual general meetings shall be called extra-ordinary general meetings.

52. (1) The Board may, whenever it thinks fit, call an extraordinary general meeting.

(2) If at any time there are not within India directors capable of acting who are sufficient in number to form a quorum, any director or any two members of the company may call an extraordinary general meeting in the same manner, as nearly as possible, as that in which such a meeting may be called by the Board.

Proceedings at General Meetings

53. (1) No business shall be transacted at any general meeting unless a quorum of members is present at the time when the meeting proceeds to business.

(2) Save as herein otherwise provided, five members present in person (in the case of a public company, two members present in person, in the case of a private company) shall be a quorum.

54. The chairman, if any, of the Board shall preside as chairman at every general meeting of the company.

55. If there is no such chairman, or if he is not present within fifteen minutes after the time appointed for holding the meeting or is unwilling to act as chairman of the meeting the directors present shall elect one of their number to be chairman of the meeting.

56. If at any meeting no director is willing to act as chairman or if no director is present within fifteen minutes after the time appointed for holding the meeting, the members present shall choose one of their number to be chairman of the meeting.

57. (1) The chairman may, with the consent of any meeting at which a quorum is

present, and shall, if so directed by the meeting, adjourn the meeting from time to time and from place to place.

(2) No business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place.

(3) When a meeting is adjourned for thirty days or more, notice of the adjourned meeting shall be given as in the case of an original meeting

(4) Save as aforesaid, it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.

58. In the case of an equality of votes, whether on a show of hands or on a poll, the chairman of the meeting at which the show of hands takes place, or at which the poll is demanded, shall be entitled to a second or casting vote.

59. Any business other than that upon which a poll has been demanded may be proceeded with, pending the taking of the poll.

Votes of Members

60. Subject to any rights or restrictions for the time being attached to any class or classes of shares,—

(a) on a show of hands, every member present in person shall have one vote; and

(b) on a poll, the voting rights of members shall be as laid down in section 87.

61. In the case of joint holders, the vote of the senior who tenders a vote, whether in person or by proxy, shall be accepted to the exclusion of the votes of the other joint holders.

For this purpose, seniority shall be determined by the other in which the names stand in the register of members.

62. A member of unsound mind, or in respect of whom an order has been made by any Court having jurisdiction in lunacy, may vote, whether on a show of hands or on a poll, by his committee or other legal guardian, and any such committee or guardian may, on a poll, vote by proxy.

63. No member shall be entitled to vote at any general meeting unless all calls or other sums presently payable by him in respect of shares in the company have been paid.

64. (1) No objection shall be raised to the qualification of any voter except at the meeting or adjourned meeting at which the vote objected to is given or tendered, and every vote not disallowed at such meeting shall be valid for all purposes.

(2) Any such objection made in due time shall be referred to the chairman of the meeting, whose decision shall be final and conclusive.

65. The instrument appointing a proxy and the power of attorney or other authority, if any, under which it is signed or a notarially certified copy of that power or authority, shall be deposited at the registered office of the company not less than 48 hours before the time for holding the meeting or adjourned meeting at which the person named in the instrument proposes to vote, or, in the case of a poll not less than 24 hours before the time appointed for the taking of the poll; and in default the instrument of proxy shall not be treated as valid.

66. An instrument appointing a proxy shall be in either of the forms in Schedule IX to the Act or a form as near thereto as circumstances admit.

67. A vote given in accordance with the terms of an instrument of proxy shall be valid, notwithstanding the previous death or insanity of the principal or the revocation of the proxy or of the authority under which

the proxy was executed, or the transfer of the shares in respect of which the proxy is given.

Provided that no intimation in writing of such death, insanity revocation or transfer shall have been received by the company at its office before the commencement of the meeting or adjourned meeting at which the proxy is used.

Board of Directors

68. The number of the directors and the names of the first directors shall be determined in writing by the subscribers of the memorandum or a majority of them.

69. (1) The remuneration of the directors shall, in so far as it consists of a monthly payment, be deemed to accrue from day to day.

(2) In addition to the remuneration payable to them in pursuance of the Act, the directors may be paid all travelling, hotel and other expenses properly incurred by them.

(a) in attending and returning from meetings of the Board of directors or any committee thereof or general meetings of the company; or

(b) in connection with the business of the company.

70. The qualification of a director shall be the holding of at least one share in the company.

71. The Board may pay all expenses incurred in getting up and registering the company.

72. The company may exercise the powers conferred by section 50 with regard to having an official seal for use abroad, and such powers shall be vested in the Board.

73. The company may exercise the powers conferred on it by sections 157 and 158 with regard to the keeping of a foreign register; and the Board may (subject to the provisions of those sections) make and vary such regulations as it may think fit respecting the keeping of any such register.

74. All cheques, promissory notes, drafts, hundis, bills of exchange and other negotiable instruments, and all receipts for moneys paid to the company, shall be signed, drawn, accepted, endorsed, or otherwise executed, as the case may be, by the managing agent or secretaries and treasurers of the company, or where there is no managing agent or secretaries and treasurers, by such person and in such manner as the Board shall from time to time by resolution determine.

75. Every director present at any meeting of the Board or of a committee thereof shall sign his name in a book to be kept for that purpose.

76. (1) The Board shall have power at any time, and from time to time, to appoint a person as an additional director who shall hold office until the next following general meeting.

(2) Such person shall however, be eligible for appointment by the company at that meeting as a director, after the meeting has, if necessary, increased the number of the directors.

Proceedings of Board

77. (1) The Board of directors may meet for the despatch of business, adjourn and otherwise regulate its meetings, as it thinks fit.

(2) A director may, and the managing agent, secretaries and treasurers, manager or secretary on the requisition of a director shall, at any time, summon a meeting of the Board.

78. (1) Save as otherwise expressly provided in the Act, questions arising at any meeting of the Board shall be decided by a majority of votes.

(2) In case of an equality of votes, the chairman of the Board if any, shall have a second or casting vote.

79. The continuing directors may act notwithstanding any vacancy in the Board; but, if and so long as their number is reduced below the quorum fixed by the Act for a meeting of the Board, the continuing directors or director may act for the purpose of increasing the number of directors to that fixed for the quorum, or of summoning a general meeting of the company, but for no other purpose.

80. (1) The Board may elect a chairman of its meetings and determine the period for which he is to hold office.

(2) If no such chairman is elected, or if at any meeting the chairman is not present within five minutes after the time appointed for holding the meeting, the directors present may choose one of their number to be chairman of the meeting.

81. (1) The Board may, subject to the provisions of the Act, delegate any of its powers to committees consisting of such member or members of its body as it thinks fit.

(2) Any committee so formed shall, in the exercise of the powers so delegated, conform to any regulations that may be imposed on it by the Board.

82. (1) A committee may elect a chairman of its meetings.

(2) If no such chairman is elected, or if at any meeting the chairman is not present within five minutes after the time appointed for holding the meeting, the members present may choose one of their number to be chairman of the meeting.

83. (1) A committee may meet and adjourn as it thinks proper.

(2) Questions arising at any meeting of a committee shall be determined by a majority of votes of the members present, and in case of an equality of votes, the chairman shall have a second or casting vote.

84. All acts done by any meeting of the Board or of a Committee thereof or by any person acting as a director, shall not-withstanding that it may be afterwards discovered that there was some defect in the appointment of any one or more of such directors or of any person acting as aforesaid, or that they or any of them were disqualified, be as valid as if every such director or such person had been duly appointed and was qualified to be a director.

85. Save as otherwise expressly provided in the Act, a resolution in writing, signed by all the members of the Board or of a committee thereof, for the time being entitled to receive notice of a meeting of the Board or committee, shall be as valid and effectual as if it had been passed at a meeting of the Board or committee, duly convened and held.

Manager or Secretary

86. (1) A manager or secretary may be appointed by the Board for such term, at such remuneration and upon such conditions as it may think fit; and any manager or secretary so appointed may be removed by the Board.

(2) A director may be appointed as manager or secretary.

87. A provision of the Act or these regulations requiring or authorising a thing to be done by or to a director and the manager or secretary shall not be satisfied by its being done by or to the same persons acting both as director and as, or inplace of, the manager or secretary.

The Seal

88. (1) The Board shall provide for the safe custody of the seal.

(2) The seal of the company shall not be affixed to any instrument except by the

authority of a resolution of the Board or of a committee of the Board authorised by it in that behalf, and except in the presence of at least two directors and of the secretary or such other person as the Board may appoint for the purpose; and those two directors and the secretary or other person aforesaid shall sign every instrument to which the seal of the company is so affixed in their presence.

Dividends and Reserve

89. The company in general meeting may declare dividends, but no dividend shall exceed the amount recommended by the Board.

90. The Board may from time to time pay to the members such interim dividends as appear to it to be justified by the profits of the company.

91. (1) The Board may, before recommending any dividend, set aside out of the profits of the company such sums as it thinks proper as a reserve or reserves which shall, at the discretion of the Board, be applicable for any purpose to which the profits of the company may be properly applied, including provision for meeting contingencies or for equalising dividends; and pending such application, may, at the like discretion, either be employed in the business of the company or be invested in such investments (other than shares of the company) as the Board may, from time to time, think fit.

(2) The Board may also carry forward any profits which it may think prudent not to divide, without setting them aside as a reserve.

92. (1) Subject to the rights of persons, if any, entitled to shares with special rights as to dividends, all dividends shall be declared and paid according to the amounts paid or credited as paid on the shares in respect whereof the dividend is paid, but if and so long as nothing is paid upon any of the shares in the company, dividends may be declared and paid according to the amounts of the shares.

(2) No amount paid or credited as paid on a share in advance of calls shall be treated for the purposes of this regulation as paid on the share.

(3) All dividends shall be apportioned and paid proportionately to the amounts paid or credited as paid on the shares during any portion or portions of the period in respect of which the dividend is paid; but if any share is issued on terms providing that it shall rank for dividend as from a particular date such share shall rank for dividend accordingly.

93. The Board may deduct from any dividend payable to any member all sums of money, if any, presently payable by him to the company on account of calls or otherwise in relation to the shares of the company.

94. (1) Any general meeting declaring a dividend or bonus may direct payment of such dividend or bonus, wholly or partly, by the distribution of specific assets; and the Board shall give effect to the resolution of the meeting.

(2) Where any difficulty arises in regard to such distribution, the Board may settle the same as it thinks expedient, and in particular may issue fractional certificates and fix the value for distribution of such specific assets or any part thereof and may determine that cash payments shall be made to any members upon the footing of the value so fixed in order to adjust the rights of all parties, and may vest any such specific assets in trustees as may seem expedient to the Board.

95. (1) Any dividend, interest or other moneys payable in cash in respect of shares may be paid by cheque or warrant sent through the post directed to the registered address of the holder or in the case of joint holders, to the registered address of that one of the joint holders who is first named on the register of members, or to such person and to such address as the holder or joint holders may in writing direct.

(2) Every such cheque or warrant shall be made payable to the order of the person to whom it is sent.

96. Any one of two or more joint holders of a share may give effectual receipts for any devidends, bonuses or other moneys payable in respect of such share.

97. Notice of any dividend that may have been declared shall be given to person entitled to share therein in the manner mentioned in the Act.

98. No dividend shall bear interest against the company.

Accounts

99. (1) The Board shall from time to time determine whether to what extent and at what times and places and under what conditions or regulations, the accounts and books of the company, or any of them, shall be open to the inspection of members not being directors.

(2) No member (not being a director) shall have any right of inspecting any account or book document of the company except as conferred by law or authorised by the Board or by the company in general meeting.

Capitalisation of Profits

100. (1) The company in general meeting may, upon the recommendation in the Board, resolve—

(a) that it is desirable to capitalise any part of the amount for the time being standing to the credit of any of the company's reserve accounts, or to the credit of the profit and loss account, or otherwise available for distribution; and

(b) that such sum be accordingly set free for distribution in the manner specified in clause (2) amongst the members who would have been entitled thereto, if distributed by way of dividend and in the same proportions.

(2) The sum aforesaid shall not be paid in cash but shall be applied, subject to the

provision contained in clause (3), either in or towards—

(i) paying up any amounts for the time being unpaid on any shares held by such members respectively ;

(ii) paying up in full, unissued shares or debentures of the company to be allotted and distributed, credited as fully paid up to and amongst such members in the proportions aforesaid ; or

(iii) partly in the way specified in sub-clause (i) and partly in that specified in sub-clause (ii).

(3) A share premium account and a capital redemption reserve fund may, for the purposes of this regulation, only be applied in the paying up of unissued shares to be issued to members of the company as fully paid bonus shares.

(4) The Board shall give effect to the resolution passed by the company in pursuance of this regulation.

101. (1) Whenever such a resolution as aforesaid shall have been passed, the Board shall—

(a) make all appropriations and applications of the undivided profits resolved to be capitalised thereby and all allotments and issues of fully paid shares or debentures, if any ; and

(b) generally do all acts and things required to give effect thereto.

(2) The Board shall have full power—

(a) to make such provision, by the issue of fractional certificates or by payment in cash or otherwise as it thinks fit, for the case of shares or debentures becoming distributable in fractions ; and also

(b) to authorise any person to enter, on behalf of all the members entitled thereto, into an agreement with the company providing for the allotment to them respectively, credited as fully paid up, of any further shares or debentures to which they may be entitled upon such capitalisation, or (as the case may require) for the payment up by the company on their behelf, by the application thereto of their respective proportions of the profits resolved to be capitalised, of the amounts or any part of the amounts remaining unpaid on their existing shares.

(3) Any agreement made under such authority, shall be effective and binding on all such members.

Winding up

102. (1) If the company shall be wound up, the liquidator may with the sanction of a special resolution of the company and any other sanction required by the Act, divide amongst the members, in specie or kind, the whole or any part of the assets of the company, whether they shall consist of property of the same kind or not.

(2) For the purpose aforesaid, the liquidater may set such value as he deems fair upon any property to be divided as aforesaid and may determine how such division shall be carried out as between the members or different classes of members.

(3) The liquidator may, with the like sanction, vest the whole or any part of such assets in trustees upon such trusts for the benefit of the contributories as the liquidator, with the like sanction, shall think fit, but so that no member shall be compelled to accept any shares or other securities whereon there is any liability,

103. Every officer or agent for the time being of the company shall be indemnified out of the assets of the company against any liability incurred by him in defending any proceedings, whether civil or criminal, in which judgment is given in his favour or in which he is acquitted or in connection with any application under section 6333 in which relief is granted to him by the Court.

THE ROLE OF INDUSTRIAL ESTATES IN SMALL INDUSTRY DEVELOPMENT

By Shri T. K. PALANIAPPAN, M.A., I.A.S.,
Secretary to Government, Industries, Labour and Co-operation Department, Madras.

The idea of establishing Industrial Estates in India was first mooted by the All India Small Scale Industries Board at its meeting held in January 1955 and by the end of the first Five Year Plan, work on ten Industrial Estates was started at Rajkot, Guindy, Virudhunagar, Kanpur, Agra, Palghat, Trivandrum, Kottayam, Quilon and Trichur. Since then, 100 Industrial Estates have been sanctioned throughout the country covering important cities, Industrial centres, trading centres, semi-urban areas and rural centres. There has been widespread interest in the problems and possibilities of these Estates and their working has been subject to careful study by visitors from other highly industrialised as well as newly industrialising countries. Some have expressed that the best method of aiding and stimulating small industries is to establish a larger number of Industrial Estates throughout the country while yet others have considered the Estates as luxuries and the occupants as the pet sons of rich perents. On account of these conflicting views, it seems necessary to enumerate the functions of the Industrial Estates in relation to the Small Industries Development Programme of this country in general and Madras State in particular.

In U. K. during the period before the Second World War, there was intense unemployment among the skilled workers in certain areas. With a view to attract to these areas, some of the expanding and new Industries and thereby secure proper distribution of industry and remove unemployment, Industrial Estates were opened. Though the idea of Industrial Estates was borrowed from U. K, the conditions in India are quite different, as the unemployment here is not among the skilled but among the unskilled; our basic problem being development and not distribution of Industries. When our country has a low level of living and is striving to raise the level by introducing modern manufacturing and other modern methods of production, it becomes necessary to encourage the development of well selected industries that are truly adapted to the circumstances of the country, and thereby make for speedier advancement in living levels. In the process of encouragement, it has to be realised that scarce resources such as investment capital and the energy of enterprising persons, good managers, technical personnel and skilled workers, usually lacking in industrially inexperienced countries need to be economised. For achieving the above objects, Industrial Estates consisting of ready made factory sheds, utilities and wide range of industrial services are ideal, provided they are reserved exclusively for new or nascent industries and well merited extension of *deserving* existing industries, which have a definite programme for modernisation and expansion, particularly when the extension is in new fields or lines. The subsidised rent during the initial period and other facilities including providing adequate raw materials, import quota, subsidised industrial services etc., are intended to assist new industries during the initial period when they will have teething troubles and problems. There is no point in wasting these facilities on old established industries which should have passed over these initial period of troubles. There will naturally be pressure from the existing industries to shift to the Estate for taking advantage of the facilities provided for new industries and this should be resisted, as the establishment of Estates is not merely a housing programme as envisaged by some. While providing factory space, care should be taken to ensure that new common-place industries of the type already functioning in the area are not allowed, as the occupants would have gained certain advantages over their unfortunate friends,

engaged in the same line, who had not been able to get space in the Estate on the ground that their factories are already functioning elsewhere.

In the Madras State, where the above principles are followed, only light engineering including electrical goods industries which manufacture, with the aid of modern machinery and power, essential consumer goods and other articles in good demand (1) which are at present imported from outside the country, (2) which are in short supply in the country as a whole or in the local area and therefore have to be transported from long distances, (3) which have a good export market, (4) articles for which new and larger demands are anticipated consequent on overall development and increasing incomes and (5) which manufacture ancillary parts needed to feed large industries or accessories needed to supplement the products of the larger industries—such important manufacturing industries which require special aid and encouragement for organisation and development—alone are allowed to be housed in the Industrial Estates. Industries which *do not involve* the use of any appreciable machinery or electrical power and such of the industries which can start and grow of their own accord without any special assistance or encouragement from Government and which are of the routine type, even if they are useful, are not provided space in the Industrial Estates. As regards other types of deserving industries such as chemical industries, leather, ceramics etc., where requirements will vary considerably from the standard building design and the common industrial services, it is proposed to set up separate Estates or allot developed sites with the required services and sanction loans for constructing their own sheds, subject to certain conditions to be stipulated by the authorities.

The question is often asked as to how much of additional employment is provided in these Estates started all over the country, presumably because Small Scale Industries are often confused with cottage and Village Industries. Small Scale Industries, no doubt, provide larger employment than medium or heavy industries in relation to the capital investment. But, on this basis, it should not be expected that the employment problem of the surplus agricultural population could be solved to a large extent by the establishment of Industrial Estates. Trained and skilled workers are scarce and a Small Scale Industrialist who is striving to introduce modern manufacturing methods will certainly see that resources are not wasted. The Industrial Estates are ideal for achieving greater national output and for attracting new capital which would otherwise not be invested in industry and this alone should be a guilding factor in deciding whether an Industrial Estate has been successful or not. In the most progressive Industrial Estate at Guindy where 97 units are functioning, the employment provided is only for about 3,000 persons.

Of late there has been a number of suggestions and approaches for the intensive development of Small Scale Industries in rural areas and for improving the conditions of the artisans. These suggestions include the starting of Industrial Estates in rural areas and spending bulk of the provision under Industrial Estates in rural areas. The country has just initiated a programme for the development of Small Scale Industries and the development of mechanised Small Scale Industries cannot be started or initiated from the Village end, where urban facilities are not available. The foundations needed for the truly productive growth of manufacturing industry include basic utility and industrial services, material resources, human resources, equipment and capital for investment in manufacturing, many of which are lacking in rural areas. Further, Small Industry has to sell its products in the region where it functions and merely exists by a regional demand. The cost of selling in long distanced markets are so high for Small Industry that the normal turn over of a small plant cannot bear them. If a small unit starts its production in rural parts, where there is no local demand, a living cantact with the clients becomes impossible, without which a Small Industry cannot thrive. Therefore, at this initial stage, entrepreneurs for Small Scale Industries will come forward to occupy factory sheds in the Industrial Estates, only if they are very close to the consuming and marketing centres and cities and big towns where technical know-how, raw materials ete. are also available. For the industrialisation of rural parts, it will be much better to start with inducing large scale industries to locate the production and sub-assembly departments in Villages as they have centralised selling organisations and hence decentralisation raises no marketing problems. For the supply of components for the large scale Industries located in rural areas, Small Industries could be encouraged by providing Industrial Estates etc. Under the existing conditions and initial stages of devlopment, it would be imprudent to set up Industrial Estates in rural areas on any appreciable or extensive scale, as only artisans are available in such areas and not entrepreneurs. Industrial Estate is only one of the several means of developing industries and the adoption of this means for developing rural industries is not likely to yield any striking results as the rural artisans will not need them and the entrepreneur or industrialist will not want them. At the present moment, in rural areas, good common service facility and training centres to cater to the needs of rural artisans and other assistance such as loans, raw materials etc. are needed and not Industrial Estates.

This article will not be complete without mention being made of functional and ancillary Estates where allied industries are grouped together and certain common service facilities provided. In Madras State, Schemes are being formulated for opening functional Estates for Footwear and Leather Goods, Ceramics and Precision instruments. The successful development of Ancillary Industrial Estates would depend entirely on the support from large scale industries and their willingness to purchase components from small units. Already one large scale industry has come forward to set up an Estate on a co-operative basis for organising production of components required for motor cycles. It is hoped that other large industries in Madras State would also implement similar schemes and provide necessary technical help for the small units housed in the Estates. Such grouping of industries would not only result in improvement in the efficiency of working but also facilitate testing, inspection, quality control etc.

ENAMELS for **TEXTILE BOBBINS**

PROCESS DEVELOPED AT

NATIONAL CHEMICAL LABORATORY, POONA.

Indian Patent No. 53636

Wooden bobbins used in textile industry are coated with waterproof enamels for increasing their utility. Black enamels based on cashewnut shell liquid or bhilawan shell liquid are already being produced and used for this purpose in India. However, for various practical considerations, bobbins in different bright colours are in demand. Coloured enamels which will withstand the rigorous use implied in bobbin coating are not known to be manufactured in India and requirements of such coloured enamels for bobbins are stated to be met from imports.

The present annual production of textile bobbins in the country is estimated at 3 to 4 lakh gross. on an average, one gallon of enamel is sufficient for coating about 3 gross bobbins. On this basis the requirements of enamels for coating bobbins may be placed at about I lakh gallons or 400 tons per annum.

A bobbin coating composition based on a mixture of modified urea resin and modified alkyd resin has been developed. The modified urea formaldehyde resin is prepared by reacting under suitable conditions, appropriate quantities of formalin, urea and fusel oil. This is mixed in required proportion with alkyd resin modified with fatty acids derived from drying and semi-drying oils. Accelerators and thinners are added in desired quantities. The composition is blended with pigments to obtain the desired colour on application.

Bobbins after conditioning are dipped in the unpigmented composition, air dried and baked. This is followed by two more coats, the second coat containing pigments while the final coat is without fillers.

The composition has been tested by some of the leading paint manufacturers and has been reported favourably. The manufacture of the composition can be taken up by firms engaged in the manufacture of paints or urea formaldehyde resins.

The equipment required for commercial manufacture consists of two reaction vessels, two mills and necessary tanks.

Parties desirous of taking up the commercial development of the process are invited to correspond with the Secretary National Research Development Corporation of India, Mandi House, Lytton Road, New Delhi—1.

MANUFACTURE OF ACTIVATED CHARCOAL FROM RICE HUSK

Capacity: 4 Tons per month of 25 working days.

Scope: Activated charcoal is in great demand for decolourising and deodorising purposes in the manufacture of 'Vanaspati' from vegetable oil and fats in the refining of sugar, glycerine and many other chemicals solvents etc. A rough estimate of yearly consumption of activated charcoal in India is about 1,000 tons at present which will increase to 5,000 in a few years due to the increase in production of sugar, vanaspati etc. At present the requirements are satisfied solely by imports from foreign countres and the price varies from Rs. 2,550 to Rs. 3,350. Indian made products can be sold definitely at a cheaper rate per ton.

Activated Charcoal can be Manufactured from Rice Husk

Location: A place centrally situated among the rice mills is an ideal place. Facilities such as steam, electric power, and other facilities are required.

Process of Manufacture: The technical preparation of the activated carbon is carried out essentially in two stages, e. g. heating at a low temperature to form the amorphous base carbon and removal of hydrocarbons absorbed by this carbon to increase the porosity of the material.

The next step to grind the carbon and purify by chemical agents. The material is finally dried and packed.

Financial Implication

A. *Blocked Capital:—*

		Rs.
1.	Land	5,000
2.	Shed including godown office etc.	5,000
3.	Machinaries and equipments	34,000
4.	Installation charges ...	2,000
	Total ...	46,000

B. *Working Capital for Three Months:—*

1.	Raw materials ...	5,000
2.	Coal	1,050
3.	Electric power ...	400
4.	Staff and labour ...	7,500
5.	Repairs contingencies ...	600
6.	Rent, Tax and insurance...	300
	Total ...	14,850

TOTAL CAPITAL	60,850
Manufacturing cost of 4·5 tons of charcoal activated including 5% interest on capital depreciation, tax, insurance etc. per month and inclusive of advertisement and sales expenses ...	6,215
Net Profit at 15%... ...	950
Total ...	7,165
Sale of 4·5 tons of activated charcoal at Rs. 1,600 per ton...	7,200


TECHNICAL INFORMATION SECTION
WITH
LIBRARY


TECHNICAL INFORMATION SECTION
WITH
LIBRARY

A Trade Delegation from Japan visited the Industrial Estate, Guindy.

What they say . . .

"GREAT SERVICE . . ."

We feel, great service is rendered to the development of Industries and every opportunity afforded to Small Entrepreneurs to participate in the development of Industries in the Country.

J. D. Chothi & Party,
Members of the 8th Session, Administrative Staff College of India, Hyderabad.

"GREATLY IMPRESSED . . ."

Greatly impressed by the fine start you have made in this new industrial centre.

George J. Bech,
Department of Commerce, Washington.

"MOST IMPRESSIVE . . ."

A most impressive industrial centre.

Dennis Kux,
American Consulate General, Madras.

"HERE IS THE HOPE . . ."

Team greatly impressed by the Industrial Estate. Here is the hope.

J. R. Jindal,
Material Handling Productivity Team.

"HOPE IN ACTION . . ."

This is hope in action.

C. G. Parekh & Friends.

"INVALUABLE EXPERIENCE . . ."

Invaluable experience to other countries needing industrialisation.

Sterling P. V. John,
I. C. A., Washington.

"IMPRESSIVE ACHIEVEMENT . . ."

A most impressive achievement.

Jagan Lall,
I. C. I. Calcutta.

"MOST IMPRESSED . . ."

I am most grateful to the management for taking the trouble of showing me round the Estate. I saw a good bit of it and was most impressed with what I saw. One can legitimately be proud of what has been achieved in such a short time.

B. N. Chakravarty,
High Commissioner (Designate) for India in Canada.

"VERY MUCH IMPRESSED . . ."

I was taken round the Estate this afternoon and was shown some of the factories that might provide materials needed by a precision factory like the proposed Teleprinter factory. I have been very much impressed by the variety of quality products turned out and with the magnitude and scope of the entire scheme.

B. S. Rau,
Officer on Special Duty, Teleprinter Factory Project, P. & T. Directorate, New Delhi.

"RARE OPPORTUNITY . . ."

I and the members were greatly amused to see some of the privately owned factories and service centres run by the Government. The facilities provided to the industrialists are really a great distinguished feature of the Estate. We found satisfaction amongst the factory owners and the out turn is encouraging. The provision of a Library for the industrialists is a rare opportunity for obtaining technical knowledge of various trades. The factory units are quite spacious while rents charged are not exorbitant. The Officials of the Department have extraordinary interest in developing the industries and make possibly maximum facilities available.

Harbhagwan Mondgil,
Chairman, Estimates Committee, Punjab & Members.

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Deputy High Commissioner for U. K. in Madras.

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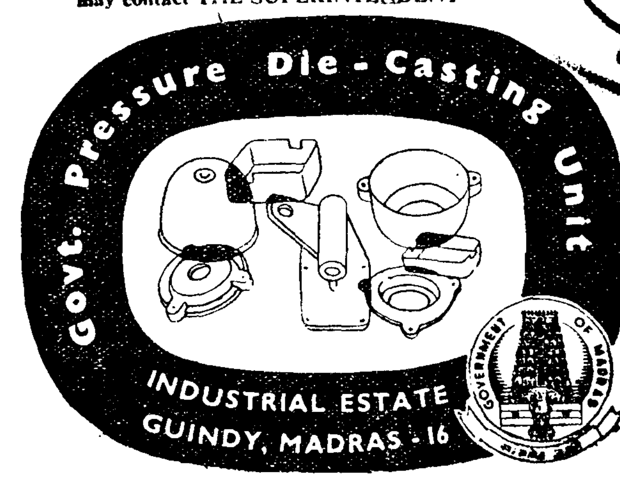

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(*ii*) There must be a sufficiently orderly and stable Government to render it highly probable that those who make this postponement will be able to reap their reward."

(Russell — The Prospects of Industrial Civilization.)

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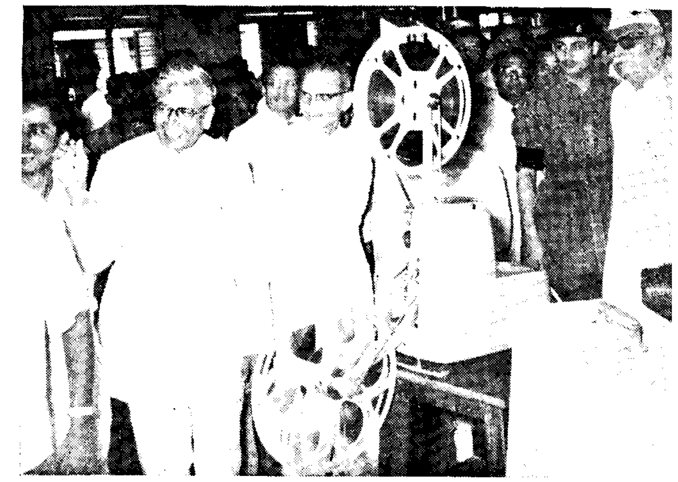
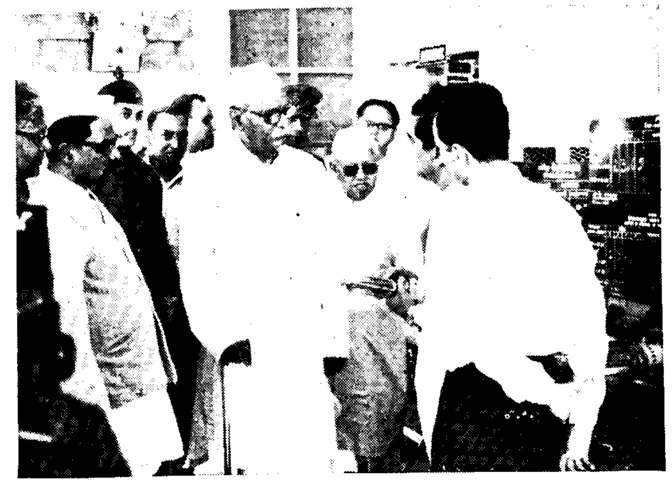
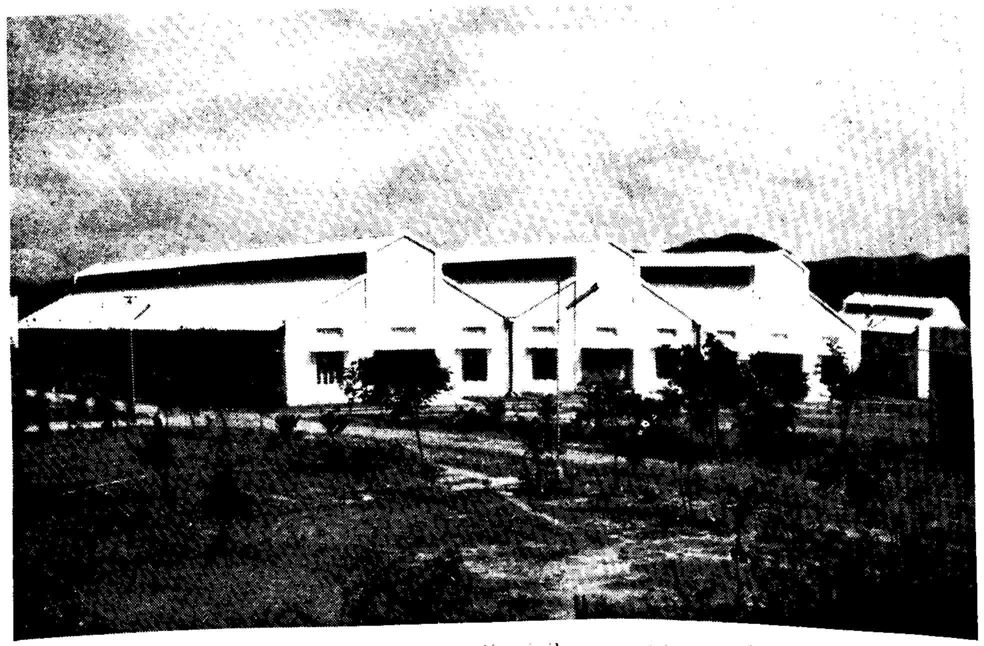




[illegible] above show Pr[illegible] Rajendra [illegible] Engineering [illegible] his recent visit to the [illegible] Estate, Guindy.

[illegible] Picture shows [illegible] Minister, [illegible] Madras, [illegible] and [illegible] are seen in the Picture.



[illegible] Wood Processing Centre, [illegible]

PROJECT REPORT

manufacture of TILES, STONEWARE and BRICKS

★ ★ ★

A project for developing any industry depends on four basic conditions. These are (1) a steady market for the product, (2) availability of suitable raw materials, (3) cheap power and (4) efficient labour. By applying the criteria, we can assess the possibilities for developing the above industries.

ROOFING TILE INDUSTRY:

Market Possibility

There is a fair to good demand for these goods in the Madras State. Demand varies from District to District. Demand for tiles is heaviest in Coimbatore, followed by Ramnad and Tinnavelly Districts while demand is little or negligible in South and North Arcot. Taking the State as a whole it can be assumed that sufficient demand exists for developing this industry.

Raw Material Position.

The chief raw material needed for this industry are clay and Fuel. Whereas suitable clays are found in some parts of the State, the position of Fuel presents some difficulty. The main source of Fuel is Coal which has to come from North India. Singareni coal though nearer is inferior in quality and is therefore uneconomical. The position, of course, would improve if and when the Neyveli scheme comes into successful operation. Suitable clays for tile manufacture are available in Madras, Pondicherry, Cuddalore, Manamadurai, etc. Obviously, the best place for industry would be in the Pondicherry, Cuddalore areas where lignite would become available at an economical price.

Power Supply.

With the Kundah scheme coming shortly into operation and the Thermal projects in Neyveli, the power requirements for the industry should be easily available.

Labour Position.

There is ample labour available throughout the State which in fact suffers from considerable unemployment. Roofing tile industry is essentially a labour intensive industry and its development would mitigate the unemployment problem.

Financial Implications:

In regard to the optimum size of a tile factory, the question has to be decided taking into consideration the availability of raw materials, labour and the local market. Since the tiles are a bulky commodity and transporting charges are comparatively high it may be advantageous to have larger number of factories in different areas rather than larger and fewer units. A minimum efficient unit would be for a production of 25 lakhs roofing tiles per annum. The maximum production for a bigger unit would be 50 lakhs of tiles per annum. Any production over 50 lakhs will not bring appreciable advantage in reducing cost. At the same time the unit producing 25 lakhs of tiles could reach a level of 90% efficiency compared to the larger unit. The cost of a 25 lakhs unit roughly will be at Rs. 7 or 8 lakhs and a unit for production of 50 lakhs between Rs. 14 and 15 lakhs. The entire machinery equipment for a modern roofing tile plant is available in India itself. The following break down figures of capital cost are given for the two units.

	25 lakhs scheme		*50 lakhs scheme*
	Rs.		Rs.
Land (8 acres)	20,000	(16 acres)	40,000
Buildings 20,000 sq. ft.	2,00,000	40,000 sq. ft.	4,00,000
Machinery Mixer, Fine Roller Pugmill and Revolver press	1,00,000		2,00,000
Electric motors, shaftings belts etc. ...	25,000		40,000
Continuous kiln	1,00,000		2,00,000
Racks and tile pallots (capacity 1 lakh) ...	1,00,000	(cap. 2 lakhs)	2,00,000
Office and quarters	1,00,000		2,00,000
Working capital	1,00,000		2,00,000
Total ...	7,45,000		14,85,000
Value of production	5,00,000		10,00,000
Estimated profit before adjustment of tax at 20%	1,00,000	22·5%	2,25,000

STONEWARE PIPES:

Market Condition

With the expansion of sanitation and drainage facilities in all important towns, there exists a very very keen demand for stoneware pipes throughout the State. The two factories now operating in Tiruvellore and Dalmiapuram are both expanding their production. There would still be scope for a few more stoneware pipe plants in the State.

Raw Materials

The Principle raw materials needed for this industry are suitable clays and fuel. In regard to fuel the same difficulty, as pointed out earlier in regard to the Roofing Tile Industry, exists. Suitable clays for stoneware pipes manufacture are available in and around Madras, Trivellore, Panrutti, Tindivanam, Trichinopoly and Namakkal. It would appear that in Neyveli itself suitable clays for the industry may become available. If this happens, the best location for this industry would be Neivelli where power and fuel would be available on the spot.

Power Supply and Labour Position

The remarks made earlier with reference to the Roofing Tile Industry will hold good for this industry as well.

Financial Implications:

In designing a stoneware pipe plant the minimum efficient unit should be designed for a production of 4000 tons per annum. The capital cost of this scheme would be roughly Rs. 15—16 lakhs. The main items of machinery needed for the manufacture of stoneware pipes would have to be imported from England or Continent and would cost roughly 3-4 lakhs of rupees. Details are given below of capital cost for a 4000 ton plant.

	Rs.
Land 10 acres	25,000
Buildings 20,000 sq. ft. ...	3,00,000
MACHINERY	
2 Heavy duty E. R. Mills ...	75,000
1 Impact Hammer Mill ...	30,000
2 Screening elevating & storing equipment ...	15,000
1 Double shafter mixer ...	15,000
1 Pug Mill	20,000
3 De-Airing pipe machines with automatic cutting equipment	2,50,000
CONVEYORS:	25,000
Elevator Motors, Shaftings and Pulleys	1,00,000
Trucks and Truck lines ...	25,000
1 Tunnel Dryer ...	75,000
1 Gass or oil fired continuous kiln	2,50,000
Laboratory, Office & Quarters.	1,50,000
Working capital	2,00,000
Total ...	15,55,000

Total value of production would be Rs. 12,00,000. Estimated profit at 15% before tax adjustment would be Rs. 1·8 lakhs.

BUILDING BRICK INDUSTRY.

This is a very common and familiar industry run on Cottage Industries Level, or on Small Scale Basis. Usually Brick manufacturers follow wherever large building programmes are started. This Industry can safely be left to take care of itself. The only help that need be rendered for the industry would be for arranging the necessary fuel which is usually dust coal. As regards clay for Brick manufacture, this is available practically everywhere throughout the State.

★ ★ ★

manufacture of SANITARYWARE

(By Mr. N. G. Bowen)

The project is on the basis of production of approximately 1,00,000 pieces of Sanitaryware per annum.

Raw Materials.

1. A ceramic body or in other words, a clay preparation from which ceramic articles are manufactured, may be described as consisting of a number of natural mineral products usually 4 or 5 in number, varying to suit the methods of manufacture to be used and the purpose for which the finished products are required.

2. Basically, all ceramic bodies usually consist of the following mineral ingredients.

(a) China clay.
(b) Ball clay.
(c) Quartz.
(d) Felspar.

and to these are added other constituents when special characteristics are required for the finished product.

3. Although not essential, it is desirable, when selecting a possible location to establish a new industry of this description, to select wherever possible, a locality conveniently situated to the source of supply of the major raw materials required.

China Clay.

4. This material should be fine grained, white burning and ordinarily with the following composition:

Si 02	44·26
Ti 02	0·45
Al 203	39·34
Fl 203	0·75
Magnesia	0·05
Ca 0	0·28
K 20	0·44
Na 20	0·07
Loss on ignition	14·42

Grain size 95% to be less than 2 microns.

5. Investigations so far carried out in connection with the Neyveli Lignite project have disclosed the presence of beds containing China Clay in the overburden covering the lignite seam. Research work indicates that beneficiation of the china clay bearing seams should yield a good quality china clay considered suitable for the manufacture of:

(a) Whitish earthernware.
(b) High grade stoneware.

6. It will, however, require blending with a proportion of white burning clay to produce a vitrified white ware. The reported reserves and availability of materials in the Lignite deposit over-burden, from which good quality china clay can be produced when the lignite scheme is fully developed, is such that it is expected 12/4400 tons daily of refined china clay will be produced, which is more than adequate for any pottery development in the foreseeable future.

Ball Clay.

7. This is a special variety of the kaolin group, highly elastic possessing a good deflecculent range, absence of speckiness when fired and vitrifying at about 1180°C. with a typical analysis as follows:

Si 02	51·28
Ti 02	1·00
Al 203	33·60
Fe 203	1·13
Mg 0	0·59
Ca 0	0·52
K 20 and Na 20	2·80
Loss on ignition.	9·19

8. This type of clay is on occasions found in association with lignite deposits or in close proximity thereto, and there is, therefore, a possibility that deposits of this material may by found at or near to Neyveli. As far as is known, a high quality Ball clay, which is essential for the manufacture of superior quality sanitaryware has not yet been discovered in the country, and supplies of imported material have to be relied upon.

Quartz:

9. Suitable material should have a minimum Si 02 content of 99·4% with a Fe 203 content as low as possible. Good quality material in adequate quantities is available in South India and within an economic distance of Neyveli.

Felspar:

10. This mineral should analyse generally as follows:

Si 02	63·36
Al 203	23·19
Fe 203	0·22
Ti 02	Nil
Mn 02	Nil
Ca 0	1·75
Mg 0	Traces
K 20	8·76
Na 20	3·27
Loss on ignition	0·45

and be free from quartz and mica contamination with which material it is usually associated. Supplies in adequate quantities are available in South India and within easy reach of Neyveli.

11. Although only one of the foregoing is known for certain to be available at Neyveli until the mineralogical picture has been completed further prediction would be valueless, but with the exception of a ball clay it is known the other three main constituents for ceramic production are available either at Neyveli or within an economic range of the locality.

12. Subsidiary materials required in the process are.

Plaster of paris.
Bentonite.
Zinc Oxide.
White Lead.
Tin Oxide.
Frit.
Calcite.
Cobalt.
Iron Oxide.

These are generally available through normal trade sources in the country.

Demand Survey

13. According to Development Wing's circular dated the 13th December 1956, the installed capacity at that time for sanitaryware production was 2640 tons against a demand for 3500 tons, which will increase progressively by 1960, the figure should stand at 6000 tons, for which an installed total, capacity of 8000 tons would be required. The demand for santitary ware exists throughout the whole of the country and is increasing with the mountng tempo of industrial development.

14. Foreign markets for Indian sanitaryware exist in Ceylon, the Persian Gulf territories and Malaya, Burma, Thailand and adjoining areas although competition is likely to be met from "iron curtain" countries where margins are ignored in order to obtain an outlet for the product of Government subsidised industries.

Availability of Fuels

15. (a) **Coal:** Good quality bituminous coal with a high percentage of valatile matter is required. This is not easily available as South Indian coals do not measure up satisfactorily to the standard required, and coal from the North Indian coal fields is preferrable, though the problem of transport is ever present, and makes supply on some occassions, difficult.

(b) **Liquid:** Oil with a low sulphur content is desirable, and this is normally available in adequate quantities from the major oil supply agencies.

(c) **Gas:** This is not available as yet, but with the development of the lignite deposit at Neyveli, the possibility of using lignite for producing "proper" gas should be explored. It is not known if the Neyveli lignite will be of a suitable quality for this purpose, but the matter is worthy of investigation and may result in the production of a comparatively cheap heating medium.

(d) **Water Resources**: Water should not present a problem and if the selection of a works site is confined to Neyveli area, the possibility of using the considerable quantities of water which will be pumped daily from the Lignite works, should be investigated and probably will provide an easy solution.

(e) **Power**: Installed generating capacity in the State is 256700 kw at present with the possibility of increasing it to 361700 kw on commissioning of Periyar Hydro-electric Scheme and a further 180000 kw. with the commissioning of the Kundah Project although it is believed almost all Kundah's outturn will be absorbed by the proposed new Aluminium Industry at Salem.

Meteorological Survey:

16. Meteorological data of interest in regard to coastal areas of Madras is as follows:

Max. temperature.	104°F
Min. temperature.	69°F
Relative humidity	74
Average rainfall	35″

Effluent:

17. Disposal of factory effluent should present no problem, as any discharge from the Pottery works will be innocuous and requires no special treatment other than possibly setting out should the local authority concerned insist on a limit to the percentage of solids in the effluent discharged.

Land:

18. Adequate and suitable sites are available within an economic distance of the Neyveli works, and no diffficulty should be encountered in obtaining requirements through Government sources at a reasonable rate of Rs. 1000 to Rs. 2000 per acre.

Transport:

19. Madras is reasonably served with transport services and the Neyveli area is well served by rail and road routes and Cuddalore port with adequate facilities for both imports and exports is only a matter of 20/25 miles distance.

Labour:

20. Unskilled labour is readily available, but considerable training should be necessary before a degree of efficiency is reached which will enable production to reach a consistently high standard. Any plans for the establishment of an industry should provide for housing atleast 20% of the total personnel employed. Supervisory Technical staff may present a problem and it will be necessary to obtain the co-operation from the various Polytechnic Institutions in regard to the training and development of suitable supervisory personnel. The Ceramic industry generally should be in a position to provide top management personnel.

PROBABLE COST OF ESTABLISHING INDUSTRY AFTER SITE ACQUISITION

The probable capital outlay involved in the establishment of an industry for sanitaryware manufacture to the extent discussed in the foregoing paragraphs is considered to be:

(a)	Buildings and accommodation.	Rs. 10,00,000
(b)	Plant, machinery and equipment.	12,50,000
(c)	Working capital required.	8,00,000
		30,50,000

The return from waste and by-products would be negligible and no substantial income could be expected from this source.

The profit potential of an industry organised on the foregoing lines could be regarded as approximately 20% on capital equivalent to about Rs. 6,00,000 before adjustment for taxation.

Indigenous Availability of Plant and Machinery

All the following items of plant and machinery referred to in my Project Report can be obtained in this country.

Description

1. Jaw Crusher & Granulator.
2. Roller Crusher.
3. Disintegrator.
4. Edge Runner Mill.
5. Sieves in different sizes.
6. Ball Mill.
7. Blunger.
8. Magnetic separator.
9. Filter press.
10. De-airing Pug Mill.
11. Potters Throwing wheel.
12. Jigger & Jelley.
13. Potter's lathe.
14. Pot Mills.

For the remanining items, viz. driers and kilns, much of the refractory and construction material can be obtained in this country although it will probably be necessary to purchase designs from manufacturers elsewhere.

Conclusion

Generally speaking, with the availability of raw materials as prescribed hitherto, selection of a possible locality is almost automatic and confines itself practically to the coastal belt of South Arcot District with the Industrial estates on the outskirts of Madras city as an alternative.

A diagramatic flow line for sanitaryware production is shown in Appendix "A" attached.

APPENDIX "A"

GRINDING MILLS. —— BLUNGING —— ROUGH ARC ——PUMPS—— FINE ARC —— MAGNETTING —— FILTER PRESS

BLUNGING CASTING SLIP

SIFTING

STORAGE ARC

MAGNETTING

CASTING SHOP

GLAZING——DRYING——FINISHING

FIRING——CLASSIFICATION——STORAGE——PACKING & DESPATCH

APPENDIX "B"

List of Plant, Machinery and Equipment Required

1. Jaw crusher and granulator.
2. Edge roller mill.
3. Siaving and screening equipment.
4. Ball Mills.
5. Blungers.
6. Pneumatic separators.
7. Filter presses.
8. De airing pug mill.
9. Slip storage areas.
10. Casting system.
11. Glazing equipment.
12. Blocks and cases.
13. Pot Mills.
14. Ware and mould dryers.
15. Kilns.

manufacture of WALL TILES

★ ★ ★

BY P. S. MENON

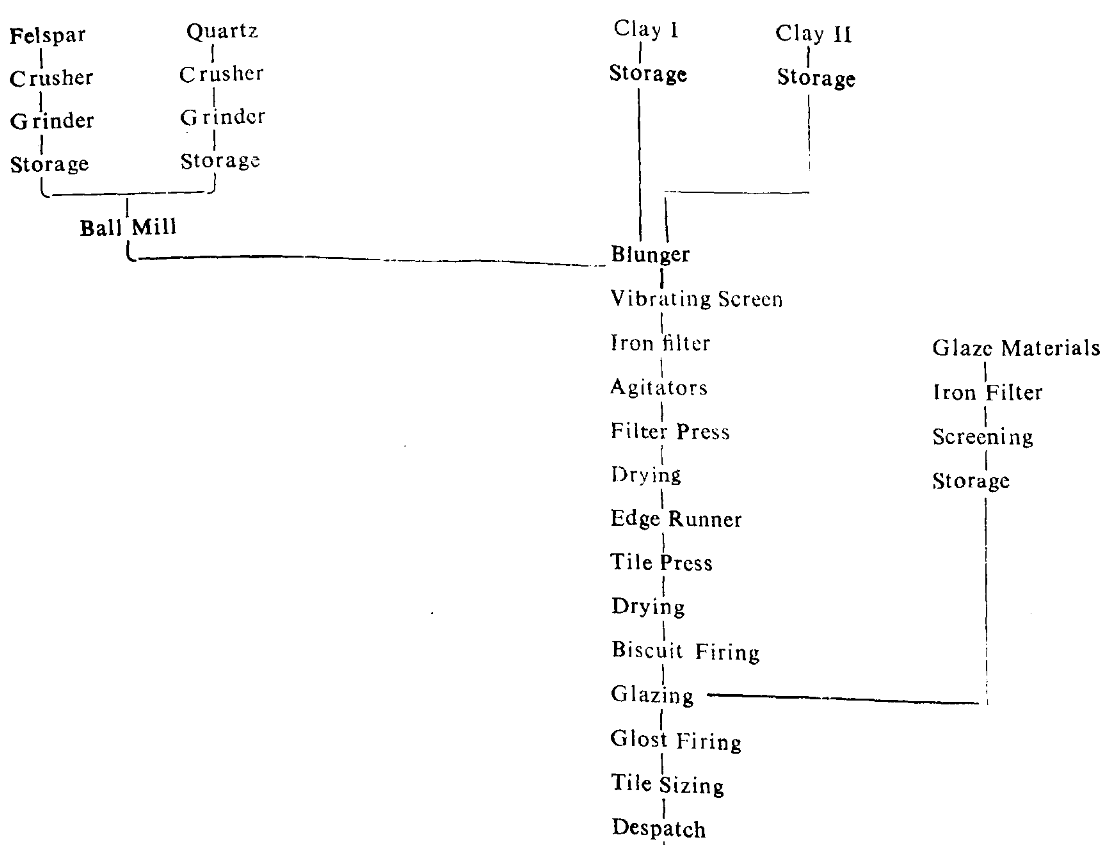
Ceramic raw materials occur in large quantities in different places in Madras State. Good quality quartz and Felspar are available in Trichy District. Large deposits of China clay, Fire clay, etc. Will be available when regular mining of lignite is undertaken as these form part of the over burden of the lignite deposits. Neyveli Lignite project will also make available cheap and economical electric power for industrial purposes. Gypsum is also available around Trichinopoly. A suitable site if selected in Trichinopoly will be ideal for the starting of a wall tiles manufacturing plant.

Trichinopoly has all the facilities of transport and is centrally situated. All the raw materials required for wall tile manufacture can be had from within a radious of about 100 miles. It is 88 miles from Neyveli, 211 miles from Madras, 96 miles from Madurai, 150 miles from Coimbatore, and is connected to all the above places by rail and road. Thus it can be seen that Trichinopoly is not only ideal from the point of view of availability of raw materials but it is also centrally situated to all the important markets in the State itself. Plentiful supply of water is assured and trained labour to some extent is also available. Finding out of housing facilities and land for housing constructions will not be a problem and can easily be encountered.

Glazed wall tiles are not being produced to a large extent in the country, and there are only 2 or 3 factories in India which are manufacturing them. The present annual output of tiles is about 100 tons, while the demand is expected to rise to about 8000 tons by 1960-61. Not only in this state but in the entire South India no factory has taken up manufacturing Glazed wall tiles uptill now. There is, therefore, much scope for developing this branch of ceramics. The market price of white Glazed wall tiles of the cheapest quality of indigenous manufacture is Rs. 10 per dozen where as the imported quality sell around Rs. 15 per dezen and the demand is even increasing while the supply is inadequate.

Putting up of a Modern plant in the south will greatly help to meet the growing demand for good quality glazed wall tiles. But it will be difficult to obtain the services of experienced technical personnel in this branch of ceramics and it may be necessary to send a few persons abroad for necessary training.

Quartz, Felspar etc. are crushed in Jaw Crusher. The crushed materials are fed into grinding cylinders or Ball Mills, for fine wet grinding. When grind to required fineness the cylinders are unloaded and the materials stored in slop form in tanks, the material passing through sieves and magnets on their way into storing tanks. Clays are also blunged and stored in tanks. All materials are pumped into a Mixer—the quantity of each being as per proportion required. Body slip so formed is pumped into fine arcs, the slip passing through sieves and elactro magnets. From the fine arcs the slip is pumped into filter presses for de-watering. Filter cakes are dried, to a moisture content of 5-6% and ground in edge runner pans. The dust can be sieved through some fairly coarse screen before they are sent for pressing. Tile pressing is done in semi automatic tile presses operated by fiction discs. Fully automatic presses are also used. Tiles are cleaned in Belt fetling machines; loaded in bungs on tunnel cars and sent to tile drier. Wares are dried to white hard and biscuited in oil fired tunnel kiln. Sorted biscuited tiles are glazed in a glazing machine of the water fall type, being used. Glost firing is done in an oil fired tunnel kiln. After glost sizing, the tiles are sent to packing and despatch section.



Flow sheet for the manufacture of wall tiles.

SCHEME FOR THE MANUFACTURE OF GLAZED WALL TILES

The scheme worked out below is for the production of glazed wall tiles at the rate of 18000 tiles of 6"×6"×¼" size per day (i.e.) 1,500 dozens or 4,500 sq. ft. per day.

The present market price of these tiles is Rs. 10 per dozen of indigenous manufacture while the imported quality is sold at Rs. 15 per dozen.

Production details and scheme of expenditure are as given below.

I. NON-RECURRING EXPENDITURE:

A. Site and site preparation.

		Rs.	Rs.
Land 6 acres, costing about Rs. 2,000 per acre	...	12,000	
Site preparation	...	4,000	
			16,000

B. Building:

		Rs.	Rs.
Building measuring 450'×100' 45,000 sq. ft. at Rs. 14 per sq. ft.		6,30,000	
Office Building 60'×30' 1800 sq. ft. at Rs. 16 per sq. ft.	...	28,800	6,58,800
Workers amenities like Rest houses, canteen etc.	...		55,500

C. Machinery and Equipments:

(i) Slip House:

		Rs.	Rs.
1. Ball Mills 6' dia × 5' face motorised unit with lining and porc balls ...	... 2	70,000	
2. Ball Mills 4½' dia × 4' face motorised Unit with lining and porc Balls ...	... 4	40,000	
3. Jaw crusher—Heavy duty capacity 15-2 tons. Hr. motorised unit ...	... 1	6,500	
4. Stirrers for groundstone material storage tanks of 5' dia × 4½' h. individually driven motorised unit ...	... 6	22,000	
5. Suspended type vibratory liquid screens motorised unit	2	6,000	
6. Screw Blungers, planetary type suitable, for 6' dia × 5' h. tanks motorised units	... 2	15,000	
7. Under-ground Arc agitators, wooden bladed for 5' dia × 4½' h. individually driven motorised units ...	... 6	24,000	
8. Slip pump for slip transfer. cap. 500 gls. Hr. with Motor and accessories ...	... 2	12,000	
9. Horizontal type vibrating screen 2 or 3 deck motorised unit	... 1	4,000	
10. Electro magnet with Rectifier of about 500 gls. Hr. flow capacity with auto-shutter and warning alaram ...	... 1	6,000	
11. Filter press 30" square × 72 plates centre feed with hydraulic closing and locking device with steel cylinder and hydraulic accessories, inclusive of suitable filter press pumps, filter clothes, electric motors etc. ...	... 2	65,000	
12. Weighing machine, 1 ton cap.	1	3,000	
13. Pipes and fittings	L.S.	5,000	
14. Miscellaneous like water melter lift trucks etc. etc.	L.S.	7,500	
			2,86,000

(ii) Body Preparation:

		Rs.	Rs.
1. Pallett car cake dryer with rails for conveying of cars, drying capacity 20,000 lbs. a day.	1 unit	30,000	
2. Edge runner with automatic lifting and rotating grinding track motorised unit, capacity 1,500 lbs./Hr. ...	... 1	10,000	
3. Wooden Boxes for stocking granulated body ...	...20	2,000	
4. Lift trucks for conveying	... 1	2,500	
			44,500

(iii) Tile Pressing and Dryer :

		Rs.	Rs.
1. Friction power presses with double impression device for pressing 6″×6″ tiles, die box adjustable for varying thickness of tiles, press manually operated with prematic ejection system of die box for release of pressed tiles capacity 6,000 tiles/8 hrs. motorised unit with drive belts electrically heated die sets and including air compressor with motor, pressure vessel, switches and all accessories ...	2	71,000	
2. Friction power press as above but with single die cap. 3,200/8 hrs.	1	20,000	
3. Fettling machines for the above 3 presses ...	3	26,000	
4. Chain belt tile Dryer, heated by wasteheat from kilns 60′×5′ size complete with variable speed motor etc. of normal capacity of 5,000 tiles/8 hrs. each dryer ...	2	22,000	
5. Spare set of dies for 6″×6″ tiles 6″×3″ tiles, 4″×4″ tiles 6″×1½″ angles etc. etc.	L.S.	9,500	
6. Toggle press for pressing "Corners" E. Legs. etc. ...	1	1,500	
7. Tile planks, Racks etc. for stocking 1 lakh tiles.	L.S.	16,000	
8. Refractory setters (Plain) for placing tiles at As 8 each. 20,000		10,000	
9. Miscellaneous like Exhaust Fans, lift trucks, tools and equipments ...	L.S.	4,500	
			1,80,500

(iv) Tile Glazing :

		Rs.	Rs.
1. Ball Mills 4½′ dia × 4′ face motorised unit with lining and porcelain Balls ...	1	10,000	
2. Ball Mills 3′ dia × 2½′ face as above for colours ...	2	14,000	
3. Suspended type vibratory screen motorised unit ...	1	3,000	
4. Glaze storage tank Agitators with motor, shafting etc. ...	2	7,200	
5. Portable propellor shaft Agitator with attached motor.	1	2,500	
6. Electro-magnet with Rectifier flow cap. 200 gls. hr. with auto shutter etc. ...	1	6,000	
7. Permanent Magnet, 500 gls. flow capacity, funnel, type. ...	1	1,000	
8. Spray equipment complete with compressor pressure vessel, Gun Spray booth, pressure regulator, etc. ...	1	6,700	
9. Tisque Tile sorting Machine, 500—1,000 tiles. hr. ...	3	1,500	
10. Glazing Machine, water flow type complete with motor, belts, pulleys etc. capacity 10,000 tiles. 8 hrs. ...	1	13,000	
11. Miscellaneous like Exhaust fans, pipes and fittings etc. etc.	L.S.	2,000	
			66,900

(v) Laboratory Equipments :

		Rs.	Rs.
1. Triple deck assembly pot Mill unit with porc. pots, Motor, etc.	1	4,200	
2. Auto clave apparatus for testing tiles at 60 lbs. / inch pressure complete with steam heating or oil burner heating.	1	2,000	
3. Petrol Gazifying plant ...	1	1,300	
4. Electrical drying oven 24″×24″×24′	1	2,500	
5. Physical Balance 56 lbs. cap.	1	350	
6. Rapid Moisture tester ...	1	800	
7. Laboratory type Jaw crusher and Pulverising Mill, combined unit, individually driven, motorised unit	1	6,900	
8. Clay plant consisting of Blunger, vat Filter Press, pump etc. 10 Gals. capacity with motor, filter clothes etc.	1	8,000	
9. Rack and furniture	L.S.	4,000	
10. Chemical and Physical Balances	2	2,000	
11. Miscellaneous like platignum crucible, glass apparatus etc.	L.S.	4,500	
12. Contingencies ...	L.S.	1,500	
			38,050

(vi) General Pipes and Fittings.

		Rs.
This includes slip house pipe, fittings, water pipe connection etc	L. S.	5,000
vii. Water storage tanks 10,000 gls. Cap. Pump, motor etc. ...	L. S.	15,000
viii. General Engg. workshop requisites	L. S.	6,000
ix. Contingencies and unforeseen expenses	L. S.	8,000

SUMMARY OF MACHINERY AND EQUIPMENT

		Rs.
i. Slip House ...	...	2,86,000
ii. Body Preparation ...	...	44,500
iii. Tile Pressing and Tile Dryer	...	1,80,500
iv. Tile Glazing ...	...	66,900
v. Laboratory Equipments	..	38,050
vi. Pipes and Fittings ...	...	5,000
vii. Water Storage Tank	...	15,000
viii. Engineering Equipments	...	6,000
ix. Contingencies and Unforeseen expenses	...	8,000
Total	...	6,49,950

D. KILNS & KILN FURNITURE

			Rs.
1. Oil fired Muffle tunnel Kiln 175 ft. long, for Bisque firing of tiles, firing schedule 3 hrs. per car of about 2,750 tiles cap. each, cost inclusive of waste heat collection system..	1		4,25,000
2. Oil fired car type Muffle Kiln 175 ft. long for "glost" firing of tiles firing schedule 60 mts. per car of about 800 tiles, loading cap. each, cost inclusive of waste heat collection system	1		4,50,000
3. 500 lbs. capacity frit klin oil fired ...	1		5,700
4. Fuel oil storage tank 20,000 gls. storing cap. inclusive of piping valves etc... ...	1		33,000
5. Tile setters, Refractory for glost tile placing at As 10 each		50,000	31,250
Total ...			9,44,950

		Rs.
E. Office furniture and equipment	L. S.	10,000
F. Electrical fittings, Erection of machinery, freight and Insurance at 12½% cost of machinery and equipment i.e. C. 649950×⅛		81,300

ABSTRACT OF NON-RECURRING EXPENDITURE OF FIXED CAPITAL

		Rs.
A. Site and site preparation ...	...	16,000
B. Building including workers amenities...		7,14,300
C. Machinery and Equipments	...	6,49,950
D. Kilns and Kiln furniture ...	...	9,44,950
E. Office equipments and furniture	...	10,000
F. Erection, freight, electrical fittings etc.		81,300
Total	...	24,16,500

II. RECURRING EXPENSES (per month)

A. Tile Body Raw Materials.

For the manufacture of double fired wall tiles of Standard composition, the consumption of raw materials per month will be approximately as follows:

Items	*Quantity per month*		*Rate per ton*	*Cost*
	Tons		Rs.	Rs.
China Clay	68	at	180	12,240
Ball Clay	56	,,	240	13,440
Quartz	58	,,	30	1,740
Falspar	20	,,	40	800
Talcum	20	,,	140	2,800
Dolamite	5	,,	40	200
			Total ...	31,220

B. Glaze Materials

1 lb. of fitted tiles glaze will usually be required for glazing 20 biscuit tiles.

Therefore daily requirements of Glazewill be: $\frac{18,000 \text{ lbs.}}{20} = 900$ lbs.

Assuming that a lb. of material for glaze costs Re. 1, daily expenses for glaze materials will be Rs. 900 or Rs. 27,000 per month.

The following items of glaze materials will be required for consumption per month.

Items	*Quantity*
1. White Lead	1½ Tons
2. Borax	2¼ ,,
3. Quartz ...	3½ ,,
4. Felspar	3½ ,,
5. Whiting	1½ ,,
6. Zinc Oxide	1 ,,
7. China Clay	1 ,,
8. Red Lead ...	¾ ,,
9. Colouring oxides of metals like copper oxide, cobalt chromimum etc.	¼ ,,

C. Fuel

Each kiln will be consuming about 800 gls. of furnace oil per day. Therefore for two kilns, daily consumption of oil works out to 1,600 glns.

Furnace oil at As. 12 per gl. cost of oil per day or fuel cost for 2 tunnel kilns per month. Rs. 1,200
1,200 x 30
Rs. 36,000

Add Fuel cost for fit furnace and Quartz calcination ... ... Rs. 4,000

Fuel cost per month ... ... Rs. 40,000

D. Labour

Labour requirements for the projected plant will approximately be as follows:

Slip house	20
Cake drying	6
Body preparations	4
Tile press	16
Tile dryer	12
Tile sorting & glazing	16
Kilns	32
Tile sorting & packing	12
General	7
Total:	125

Showing the average cost of a labour at Rs. 90 p.m., monthly labour cost. Rs. 11,250

E. Staff

	Rs.
1 General Manager—Rs. 800 p.m.	800
1 Works Manager—Rs. 600 p.m.	600
1 Ceramic Chemist—Rs. 350 p.m.	350
3 Ceramic Assistants—Rs. 200 p.m. each	600
1 Mechanic cum Electrical Engineer Rs. 500 p.m.	500
6 Engineering Assistants—Rs. 250 p.m. each	1,500
2 Electricians I grade—Rs. 150 p.m. each	300
2 Fitters I grade—Rs. 150 p.m. each	300
1 Accountant cum cashier—Rs. 350 p.m.	350
2 Clerks I grade—Rs. 200 p.m. each	400
2 Clerks cum typists II grade—Rs. 120 p.m. each ...	240
1 Store keeper I grade—Rs. 200 p.m.	200
1 Time keeper—Rs. 120 p.m. ...	120
1 Stenographer—Rs. 175 p.m. ...	175
4 Peons—Rs. 50 p.m. each ...	200
6 Worksmen—Rs. 45 p.m. each ...	270
Total cost of staff per month ...	6,905
or say ...	7,000

F. Setter Replacements:

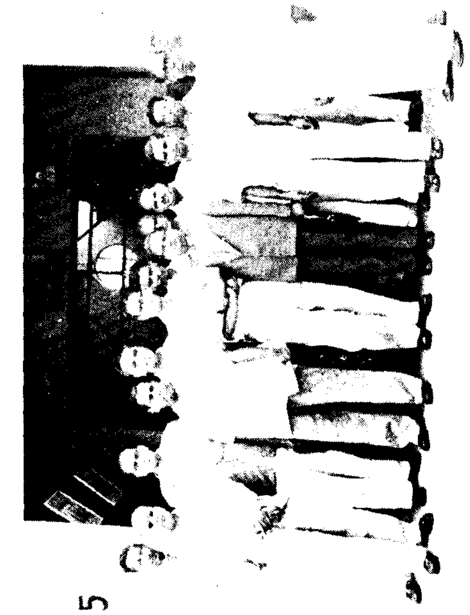
Replacements of Setters both for biscuit kiln and glost kiln will on an average be about 8000 nos. p.m.

	Rs.
Taking the cost of each setter at As. 10 setter replacement costs per mensem will be	5,000
G. Water and Power consumption (350 H.P.)	2,000
H. Office contingencies, oils and lubricants and miscellaneous for labourer cost etc.	5,000

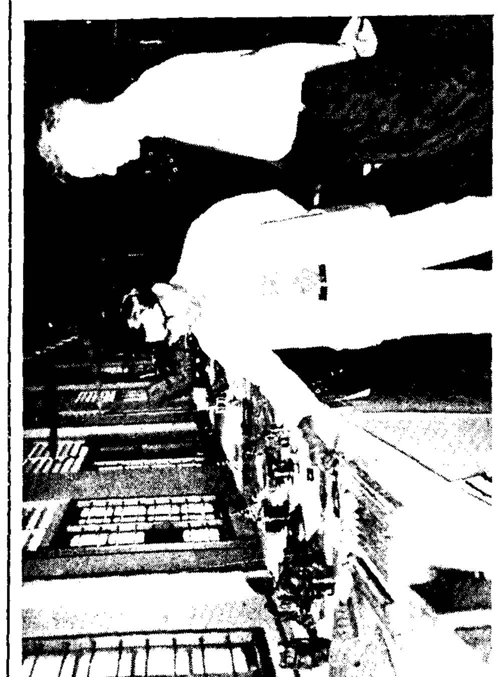
Abstract of Recurring Expenditure per Month

(a) Body materials ...	31,220
(b) Glaze materials ...	27,000
(c) Fuel	40,000
(d) Labour	11,250
(e) Staff	7,000
(f) Setter Replacements ...	5,000
(g) Water and power consumption	2,000
(h) Contingencies and Miscellaneous	5,000
	1,28,470

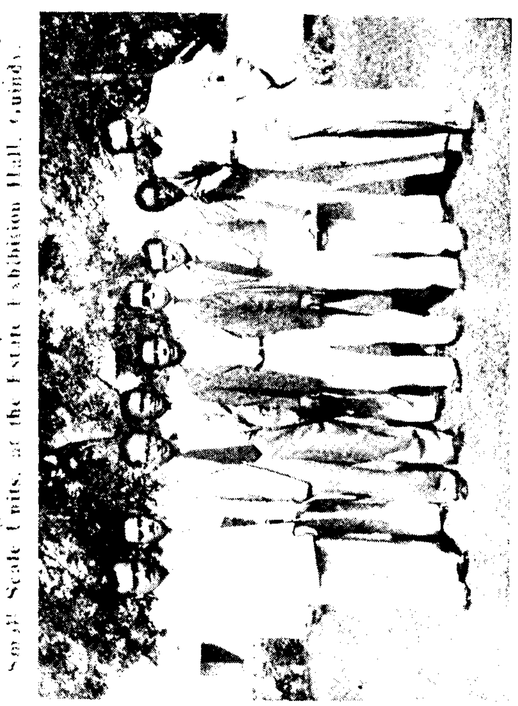
The Members of the Estimates Committee from [illegible] at the Industrial Estate, Guindy.



The Members of the National Productivity Council [illegible] Handling, Visit to the Industrial Estate, Guindy.



Mr. John L. Eales, Assistant Director, I. C. M. New Delhi, evincing interest in the products manufactured by the Small Scale Units, at the Estate Exhibition Hall, Guindy.

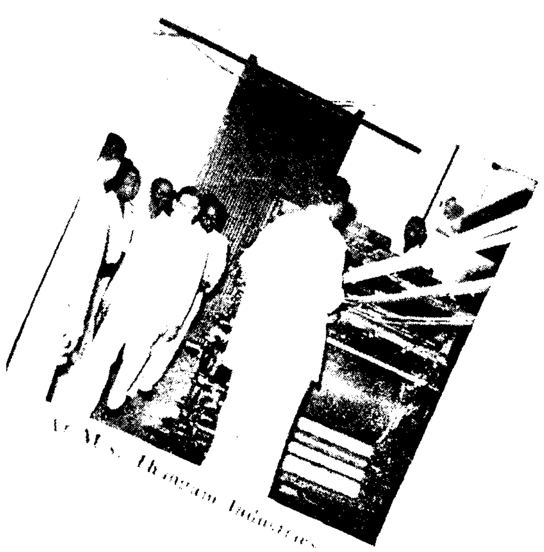


The Members of the Staff of the Administrative Staff [illegible] at the Industrial Estate, Guindy.

Addressing the Industrialists

At M/s. Lingam & Co.

Visit to M/s. Muthiah & Bros.



At M/s. [illegible] Industries

Signing the Visitors' Book

RE-ROLLING MILLS IN MADRAS STATE

Due to the shortage of steel, the progress of industrial development in Madras State is not as rapid as one would wish it to be. In the industrial use of steel, Madras lags far behind other States. For example, parts of bicycles and sewing machines, iron and steel castings, buckets, bolts and nuts are imported from distant places. A sustained and adequate supply of steel is a **sine qua non** for the satisfactory development of Small Scale Industries. A survey of the position regarding production and supply of steel in other States shows that each State in India gets steel from the main producers like Tata Iron and Steel Company and Indian Iron and Steel Works, the new steel plants in the public sector and also from re-rolling mills. There are over 150 re-rolling mills in India out of which 65 are registered re-rolling units and 85 are unregistered. Out of the 150 re-rolling mills, only 3 are located in Madras, producing a small quantity of 8,200 tons. To meet the urgent and essential needs of the small industries in the State, it is essential to establish more re-rolling mills here. Recently, a notification was issued by the Government of India in the Ministry of Steel, Mines and Fuel, announcing that no licence or permission was necessary for anyone to establish a steel re-rolling mill employing less than 50 workers for the manufacture of bars and rods. In August 1960, a meeting of industrialists who were interested in setting up re-rolling mills in Madras State was convened by the Government of Madras. Some of the Industrialists present indicated their willingness to establish re-rolling mills in Madras, provided the State Government helped them to get licences and an adequate supply of billets. On behalf of the State Government, it was pointed out that it would not be possible to guarantee supply of billets even at the outset but that entrepreneurs should start unregistered re-rolling mills using scrap initially and then try and make out a case for the supply of billets. The Government of Madras would be glad to give all possible assistance to industrialists to set up un-registered re-rolling mills.

SUPPLY OF SODA ASH TO SMALL INDUSTRIES

The Development Commissioner for Small Scale Industries, Government of India, has made arrangements for the supply of soda ash to small industrial units from indigenous sources. According to this arrangement, Small Scale Units requiring the same should submit their requirements to their respective Directors of Industries who would recommend their cases to the Development Commissioner. The Development Commissioner would ask the manufacturers to supply soda ash to small units recommended by the Directors of Industries.

STEEL GOODS MANUFACTURE: NO PRIOR APPROVAL NECESSARY

The Government of India in the Ministry of Steel, Mines and Fuel have decided that Small Scale Industries employing less than 50 persons each will no longer require the prior approval or permission of the Iron and Steel Controller for installing plants and equipments for manufacturing steel-casting, dog spikes, chair spikes, scraw spikes, bolts and nuts, rivets, wire, barbed wire, wire nails, pipes, tubes, pipe fittings, wire ropes, bars etc.,

HOT-DIP ALUMINISING OF STEEL WIRE

A method for aluminising steel wire has been worked out at the National Metallurgical Laboratory, Jamshedpur, and is being piloted to a semi-commercial stage.

Hot-Dip aluminising of steel wire provides excellent resistance to atmosphere and high temperature corrosion.

The process uses a molton salt flux for aluminising Posts and Telegraphs wires, an aqueous flux for continuous aluminising or an organic flux for both purposes. After picking in an alkali-lined tank for 12 seconds and washing, the steel wire enters the fluxing bath, which comprises a tank containing boiled linseed oil heated by an immersion heater. The oiled wire enters the molten aluminium bath. The length of traverse of wire through the bath is such that the wire remains in contact with metal for about 15 seconds. This period is optimum for the oil to vaporise and the metal casting to form. The surface of the aluminium bath is cleaned from time to time mechanically. The wire emerges from the bath vertically and travels in air a long way to allow the excess metal to flow down and the wire to cool.

ROAD TAR

A process for the preparation of good quality road tar from tar produced by the low-temperature carbonisation of coal has been developed by the Regional Research Laboratory, Hyderabad.

It essentially consists in preparing the base pitch by blowing air through the tar at about 300° C. in the presence of catalysts and blending the pitch with suitable tar oils to obtain tar of the required grade. The products have been found to be satisfactory as road binders.

Large amounts of low temperature tar will be available as by product when commercial low temperature carbonisation plants for the manufacture of smokeless domestic coke come into operation. About 5 million tons of the tar is likely to become available as a result of carbonisation of 70 million tons of coal annually by 1970.

UTILISATION OF SLACK COAL

Investigations in progress at the Central Fuel Research Institute, Jealgora, for finding a better use of slack coal have resulted in the development of a continuous process for low temperature fluidised carbonisation whereby char, tar and gas could be obtained.

Non-coking slack coal (size, 1 in.) is mainly used in power generation, brick and cement industries, and for steamraising.

In the process, pre-heated air is used as fluidising medium and the heat of carbonisation is mainly obtained by combustion of a part of the coal with air inside a tubular carboniser, provided with a suitable condensing system to recover the by products.

INDIGENOUS ENAMEL COMPOSITIONS

An imported material, tin oxide, has been in use as a stablisier in many enamel stains and ceramic colours. Uncertain supplies and high and widely fluctuating prices make its use disadvantageous. Investigations carried out at the Central Glass and Ceramic Research Institute, Calcutta, for replacing tin oxide by cheaper materials in lead-antimony yellow stains, have shown that it is possible to substitute it by alumina added in the form of alum. Enamel stains and overglaze ceramic colours made by using this substitute have proved to be satisfactory.

Porcelain enamel compositions have also been developed at the Regional Research Laboratory, Hyderabad, using titanium oxide as opacifying agent instead of imported tin oxide. The compositions possess satisfactory adherence, glossiness, reflectance, acid and thermal shock resistance. These enamels are more suitable for application in thinner coatings than conventional tin oxide bearing enamels; the quantity of enamel required for coating sheet irons is comparatively less.

ASBESTOS CEMENT SHEETS

Studies carried out at the Central Building Research Institute, Roorkee, for utilisation of low-strength sheets have shown that if two sheets are doubled up with a layer of bitumen sandwiched between them, the strength of the combination becomes more than the minimum requirement of a single sheet.

The double sheet can easily replace the single sheet for all purposes including roofing material. Bitumen gives rigidity to the pair, absorbs shocks and provides waterproof layer.

THICKNESS OF ELECTROPLATES

A novel technique, based on the impedance change of the stripping cell, has been developed for determining the thickness of electroplates at the Electro-Chemical Research Institute, Karaikudi (Madras).

The technique consists in dissolving out a small well defined area of the electroplate (chromium plating on copper or cadmium plating on mild steel) by passing constant current in the electrolysing system containing suitable stripping solution and super-imposing with electrolysing current a small constant alternating current. The resulting D.C. voltage actuates a relay that stops a timer (Dekatron Scaler) which is started at the time when constant current is switched on and counts the pulses of the A.C. ripple. Knowing the exact time required for dissolving the electroplates, its thickness is calculated by applying Faraday's Laws.

FREQUENCY STANDARD

A portable frequency standard with stability of 1 part in million has been developed at the National physical Laboratory, New Delhi. The instrument comprises a GT cut quartz crystal operated in a modified 'pierce' type transistorised oscillatory circuit and a six-volt dry cell power unit.

The crystal is enclosed in a thermostatically controlled oven. The output signal is a pure 100 Kc/s sinosidal wave having an amplitude of 1·5 volts across 3,000 ohms load impedance. A variable tuning condenser has been provided in the instrument to adjust the crystal frequency. The instrument is light, compact and is well suited for **in situ** calibration of signal generators and signal measuring equipments.

TRAINING OF HANDICRAFT TEACHERS

The All India Handicrafts Board is assisting three Regional Training Institutes to train Handicraft Teachers and others engaged in the line. The three Institutes are: (1) Handicrafts Teachers' Training College, Bombay; (2) Regional Handicrafts, Training Institute for Women, Barkatpura, Hyderabad; and (3) Vocational School of Arts and Crafts, Dharwar. A fourth Training Institute is likely to come up at Calcutta. These Institutes are financed by the All India Handicrafts Board and are run by private social welfare organisations. The Institute at Hyderabad and the one, under establishement, at Calcutta are intended exclusively for women whereas the Bombay unit and the Dharwar unit train both men and women.

Admissions are made to these Institutes from the applications received from the Central Social Welfare Board, Private Social Welfare Organisations, State Social Welfare Organisations, and Community Block Development agencies. The applicants should be generally persons engaged in teaching and developing handicrafts, in one of the above organisations. Generally, no outside application, not supported by one of the above organisations, is entertained. All the trainees are paid stipend ranging from Rs. 40 to Rs. 80 per mensem. The Institute at Hyderabad has a hostel attached, run by the same Social Welfare Organisation which is conducting the Training Institute also, and thus it is very helpful to the women candidates who come from the southern region. This Institute is intended exclusively to cater to Madras, Kerala, Mysore, Coorg and Andhra. The Calcutta Institute, which is under establishment, will also similarly cover the States of Bengal, Assam, Tripura and Manipur, Bihar and Orissa. In all these Institutes, the courses start in the month of June or early July.

Departmental Activities

INDUSTRIAL ESTATE, VIRUDHUNAGAR

Of the 15 units completed, 12 units have been allotted and occupied. For the remaining 3 units, a number of applications have been received and in view of the growing demand for factory space at Virudhunagar, the question of constructing additional units is under consideration.

Among the units occupied, four have gone into production and the remaining units are expected to go into production shortly.

Twenty Labour Tenements have been constructed and allotted to the Industrial Workers employed in the Private Industries housed in the Estate. They are charged a subsidised rent of Rs. 11/- per month per tenement.

One of the additional features in this Estate, is the provision of shops which are being leased out to small traders. The object is that the Estate should become self-contained in the long run for all purposes. These shops have been leased out at a very nominal rent of Rs. 5-50 per shop, per month.

The types of industries housed in this Estate include Tin printing and processing, Plastic sheet, Metal works, fabrication etc. etc.

INDUSTRIAL COLONY, MADURAI

Of the 12 units originally constructed and allotted, seven units have started functioning. The remaining five units are expected to start production shortly. Besides these, one "B" double and two "C" double units have also been completed, and allotment has been made to five of them. Construction work in respect of Four 'A' Super units and Four 'B' Super units is in progress.

It is proposed to have one Technical nformation Section with small Library attached to this Industrial Colony, on the lines of Guindy. Details are being worked out.

The more important types of industries functioning in this Colony include fractional horse power motors, water taps, metric weights, motors and pump sets, small tools, bakelite electrical accessories, industrial accessories, industrial belts and steel tubular furniture.

INDUSTRIAL COLONY, PETTAI

Of the 8 units allotted, 3 have gone into production and the remaining units are expected to go into production shortly. Four 'B' Super units are also coming up and are expected to be ready for occupation shortly.

Here also 20 labour tenements have been constructed and allotted to the Industrial Workers of the Private Industries housed in the Colony. Shops have also been constructed like Virudhunagar and a few of them have also been leased out.

The important Industries located in this Colony are polythene bags, wire nails, panel pins, rice huller spare parts, foundry and metal works, tin printing, collapsible gates and doors, bolts and nuts and automoble spare parts.

INDUSTRIAL COLONY, MARTHANDAM

The industries located in this Colony include furniture, shafts, foundry etc.

All the 4 "D" type units and the special type unit have been allotted and occupied. But two of them have not yet started production.

INDUSTRIAL COLONY, TIRUCHIRAPALLI

All the 14 units originally constructed have been allotted and occupied. Of the above only 3 units have started production. Others are expected to start production very shortly on receipt of raw materials. In addition to the above, 2 "A" double and 2 "B" double units have been completed very recently and allotment is being made to the pending applicants.

Here also 20 Labour tenements have been constructed and allotted to the Industrial workers of the Private Industries housed in the Colony.

The industries located in this colony include the manufacture of bullock shoe nails, conduit pipes, assembly of radios, tin containers etc.

All these Colonies have been provided with a canteen and a rest shed for the convenience of workers. A First Aid Post has also been provided in all these Colonies and arrangements are being made to have the services of a visiting surgeon for the benefit of the workers.

TEXTILE MILL PARTS UNIT, INDUSTRIAL COLONY, MADURAI

The main idea of establishing the Service Centre is to help the Textile Mill Parts Manufacturers in and around Madurai by supplying the component parts required by them and for helping the Industrialists by carrying out the jobs which could not be carried out by themselves for want of modern machineries and other facilities. This unit is having a foundry and undertaking all orders for casting etc., All kinds of Engineering works are undertaken by this unit, as it has got modern machineries and equipments to do the jobs.

The particulars of production during the quarter ending 30-6-1960 are furnished below :—

Month	*Value of Production.*
	Rs.
April, 1960	9,131·52
May, 1960	7,667·60
June, 1960	11,467·20

THE MODEL FOUNDRY, ERODE

The Model Foundry, Erode, has started production from April 1959 and had a turnover of about Rs. 40,000 during 1959-60. During the last quarter ended 30-6-1960 works to the tune of about Rs. 21,000 were completed.

During the quarter under report a production of Rs. 23,969-42 was recorded with a complete sale of the products produced. Of the production, the manufacture of pipes and specials for the Western Public Health Division and Southern Railway alone have amounted for about Rs. 16,000. During this quarter, an order for one 15" dia. Duckfoot bend, weighing 896 lbs. and costing about Rs. 900 was carried out for Western Public Health Division, Coimbatore. Still there are huge orders for pipes and specials.

A production target of Rs. 1,00,000 has been fixed for this unit which has been allocated at Rs. 20,000 each for first two quarters and Rs. 30,000 each for the first two quarters of this year i. e. 1960-61. The fixed targat has been achieved during this quarter ended 30-6-1960. This would have been much more higher but for the non availablity of certain important raw materials.

Anvils, all sorts of vices, (carpentry, lench vices leg-vices etc.,) cast iron pipes and specials such as C. I. collars to suit different dia pipes, S/S C. I tapers etc., castings of sugarcane crushers, centrifugal machines etc. and all sorts of rough castings. Anvils alone have accounted for about Rs. 15,700. There are orders for about 50 anvils to the value of Rs. 5,000 during this quarter which has not been able to complete due to lack of Steel Spiring scraps which makes for the good quality of the anvils.

GENERAL PURPOSE ENGINEERING WORKSHOP, RAJAPALAYAM

The services rendered by this unit include manufacture of hospital equipments, agricultural implements both for public and private sectors in Ramnad, Tirunelveli and Madurai Districts.

Besides, this unit imparts training to the candidates from the Industrial Training Institutes at Virudhunagar and Madurai.

MODEL COMBINED CARPENTRY AND BLACKSMITHY UNIT, PETTAI

(Tirunelveli District)

The main object of the unit is to familarise the village artisans in the use of modern machineries in improving quality and quantity of production. This unit is undertaking training, demonstration-cum-production on improved lines.

The Buildings for the Wood Seasoning Plant is under construction and the same will be completed soon and the Wood Seasoning Plant will commence functioning shortly.

All the power-operated machinery required for the Small Scale Industries are erected in the workshop, and they are very much useful for the Small Scale Industrial Units surrounding the unit and they are availing the service facilities offered.

The unit is undertaking the manufacture of all household and office furniture, kisan charkas, ambar charka parts, small wood working machinery, structural works, agricultural implements etc., and wood working machines are supplied now to the Block Development Officer, Industrial Co-operative Society etc.,

The scheme provides trainig to 35 artisans for one year on payment of a stipend of Rs. 30/- per mensem.

The Carpentry and Blacksmithy vans of this unit are sent to rural areas of the nearby districts. The local artisans are benefited by the Demonstration in modern power-operated machines and tools.

The production and sales of the unit is also increasing and the figures for the quarter ending 30-6-1960 are furnished below. Servicing facilities are also offered in this unit. The local artisans and Small Scale Industrial units are availing of the facilities.

The following servicing facilities are offered: Welding, turning, machine repairs, punching, dies and jigs, drilling, shafting, brazing, painting and planing.

Production Figures of the Unit

Month	*Value of Production*	*Sales*
	Rs.	Rs.
April	26,607·72	21,828·86
May	32,612·75	31,767·44
June	31,293·93	31,308·18

THE MODEL COMBINED CARPENTRY AND BLACKSMITHY WORKSHOP, CUDDALORE

This unit was started in April, 1957. Hospital furnitures, agricultural and gur implements etc., are manufactured here. Welding and forging works are also undertaken.

The Mobile Carpentry and Blacksmithy workshop attached to this unit had conducted demonstration in villages. There are 31 candidates undergoing training in the workshop.

THE MODEL COMBINED CARPENTRY AND BLACKSMITHY WORKSHOP, MANNARGUDI

The average value of production in this unit has been Rs. 25,000 and a maximum production of Rs. 60,000 per month had been reached during the year 1959—60.

Training is also imparted both in blacksmithy and carpentry for about 35 students and the duration of training is one year.

Two mobile vans fitted with modern machines are regularly sent to villages for demonstration purposes.

VILLAGE MODEL TANNERY, PALLADAM

The Government of Madras have set up five Model Tannery Centres, one each in Coimbatore, Tanjore, Salem, South Arcot and Tiruchirapalli Districts. The tannery sanctioned for Coimbatore District is located at Palladam. The new Techniques employed in chemical processing is demonstrated to the tanners in and around the town who were hitherto adopting the crude old method of tanning. It may be pointed out here, that the avarage profit for a leather tanned in the Model Tennery is always higher than the leather tanned in the old way. Besides, the quality of leather, tanned in these model tanneries, is always superior.

HANDLOOM PARTS FACTORY, SALEM

The Government Handloom Parts Factory, Salem, has been established with a view to cater to the requirements of handloom, powerloom and pedalloom parts in the three Southern States of Madras, Kerala and Mysore. Most of the machines have already been received and installed and a few more are shortly expected. Production of spare parts will commence as soon as power is made available to the unit.

QUARTZ CRUSHING PLANT, SALEM

A Factory to crush quartz and lime stone for supplying pure form of sand to the glass factories in the State is being established in Jagirammapalayam about 5 miles from Salem Town. Some of the machines have been installed and some more are expected. The factory will commence production immediately after all the machines are installed.

GOVERNMENT MODEL BOLTS AND NUTS UNIT, ERODE

The scheme for the establishment of a Model Bolts and Nuts Unit at Erode in Lower Bhavani Pilot Project Area was formulated with the idea of encouraging the private sector to start similar Units and satisfying the needs of Small Units by supplying bolts and nuts to them. Creation of incentive to the private sector, is an important aim of this scheme. It was proposed to run this Unit departmentally and to convert it into an Industrial Co-operative later.

The total production untill 31-3-1960 was Rs. 33, 208-77 and sales to the value of Rs. 25,161-62 have been effected leaving a stock worth of Rs. 8,047-15.

Building: Since the present building is found to have been very small to accommodate machineries as well as stores, it is proposed to acquire the present Model Foundry Building. The present Model Foundry will be shifted to the new building which is now under construction.

Machineries: During the quarter under report one Electric Pressure Blower and one Pedestal Grinder have been purchased. One Bolt Threading Machine was transferred from the Common Lease Shop, Industrial Estate, Guindy and it was found that the machine is not useful for this Unit's work since the machine is provided for threading of below 1/2" dia. bolts only, whereas the unit is manufacturing bolts and nuts of 1/2" and above. Orders have been placed for one Chaser Grinding Machine, and the supply is awaited.

Production & Sales: The total production for the quarter under report is for Rs. 34,636-46 and sales to the value of Rs. 35,391-06 has been effected. It is a notable feature that the unit has recovered the overhead fixed during this quarter.

General: It may seen from the reports that the production and sales are steadily increasing month by month. This progress can be kept up only if the raw materials required for the unit are supplied regularly, untill the supply of 300 tons of tested rounds for which a quota certificate has been registered with the Iron and Steel Controller, Culcutta, is effected. It is requested that 15 tons of tested rounds per month are made available to the unit regularly. It is also found from experience that the bolt threading machine now functioning in the unit is not sufficient for the unit's work and the necessity for one more bolt threading machine is keenly felt in view of the huge pending orders.

TANNING AND FINISHING OF LEATHER UNIT, VINNAMANGALAM, AMBUR

Finished products of the unit (leathers) to the value of Rs. 5,633/—were sold to the private merchants, local shoe makers and sales emporia of the Department.

INDUSTRIAL TRAINING INSTITUTE, VIRUDHUNAGAR

A sum of Rs. 2-5 Lakhs has been sanctioned for the construction of a Hostal with 80 seats for the trainees of this Institute. The work has already been started and the hostal buidings are likely to be ready by 31—3—1961. The trainees are given free hostal accommodation, free medical aid and free work-shop clothing.

Shri Manubhai Shah, Union Minister for Industries, visited this Institute on 18-9-1960 and was much impressed with the working of the Institute.

HILL REARING STATION, COONOOR

This station began functioning as Zonal Station to the Central Silkworm Seed Station at Srinagar run under the aegis of the Central Silk Board from the year 1960-61.

This Station is considered to be one of the best Stations for the rearing of foreign races of silkworms and all modern facilities have been provided.

On the recommendations of the All India Central Silk Board, the following races of silkworms only are being maintained in this Station from 1-4-1960.

(1) H.S. 6; (2) C. Nichi; (3) C. 108; (4) C. 110; (5) J. 112 & (6) I. 122.

Production and distribution of silkworm seeds during the quarter under review are as follows:—

Production.	*Distribution.*
12,163 disease-free silkworm seeds.	13,000 disease-free silkworm seeds mainly to the Southern States.

Indents from States like Madhya Pradesh, Himachal Pradesh, Bihar, etc., are also complied with.

During the quarter under review, preliminary steps to establish the additional mulberry garden in 6·25 acres were taken and actual plantation work was expected to be completed in October 1960.

The following are some of the modern equipments provided in the Station:—

(i) Three refrigerators for hibernation of silkworm eggs and for conducting experiments on the suggestions of foreign Sericultural Experts;

(ii) Provision of Gumma type rearing cellar for better conditions inside the rearing rooms.

(iii) Provision of blower type heaters for better conditions inside the rearing rooms.

EXTENSION OF SERICULTURAL ACTIVITIES IN MASINAGUDI AREA IN NILGIRI DISTRICT.

To improve the economic conditions of the rural population in Masinagudi, steps have been taken to introduce Sericulture in Masinagudi area of the Nilgiri District. Requisite technical staff to carry on propaganda and also to render technical assistance to new enterprisers, have been posted. Besides, the new sericulturists are supplied with mulberry cuttings and standard rearing appliances free of cost. Arrangements for the timely supply of disease-free silkworm seeds and assistance in the proper disposal of the cocoons produced by the ryots are also made. The area under mulberry cultivation in the new areas of the District stood at 46 acres as on 30—9—1960. The area brought under mulberry plantations duriag the quarter under review is 11 acres. The seasonal conditions prevailing in the area during the quarter were not fovourabla and hence appreciable area could not be newly brought under mulberry.

During the quarter under review, 300 disease-free silkworm seeds were reared and harvested to yield 165 lbs of reeling cocoons. These cocoons were sold to private reelings in the adjoing Mysore State at rates ranging from Rs. 1-87 to 2-12 per lb., as there is no silk reeling in the area at present.

ESTABLISHMENT OF A DEMONSTRATION SILK FARM AT MASINAGUDI

In order to provide better rearing fecilities in the initial stages and also to provide marketing facilities, Government were pleased to sanction the establishement of a Demonstration Silk Farm at Masinagudi (in G. O. Ms. No. 1091, I. L. C. (spl) dated 15—7—1960). The following are the salient features of the Farm :—

(i) To serve as a Demonstration Silk Farm to teach ryots rational mehods in Sericulture.

(ii) To rear silkworms in the younger stages and supply them as such to the ryots, so that they could have the benefit of better yield and qulity

(iii) To buy all the reeling cocoons produced in the area and convert them into raw silk by the establishment of a small Reeling Unit as an adjunct to the Farm.

(iv) Grant of mulberry loans to new enterprisers at Rs 50/—per acre newly brought under mulberry.

Steps have been taken to acquire the requisite land for mulbeey cultivation and also for purchasing necesary rearing reeling appliances etc., during the quarter under review.

GOVERNMENT GUT SECTION, COONOOR

The seasonal conditions were favourable for silkworm rearing and mulberry plantation.

A quantity of 412 disease free layings were reared during the quarter ending 30-6-1960. 927 lbs. of mulberry leaf picked from the gardens attached to the section were used for the rearings. 72,000 silkworm guts in various grades and 1,297 foreign race cocoons are produced. Periodical cultural operations, such as digging, weeding etc., and manuring were taken up in the gardens.

A quantity of 72,225 silkworm guts in various grades was supplied to different medical institutions in the state.

SERVICE CENTRE FOR THE MANUFACTURE OF FARM IMPLEMENTS & AGRICULTURAL MACHINERY, TIRUCHY

During the quarter ending 30—6—1960, production has been made to a tune of Rs. 49,288-27. Sales were effected for Rs. 15,868-09. A sum of Rs. 21,856-06 has been recovered as overhead charges as against Rs. 15,000 and thereby increased the target. During the quarter serviceing work has been done for 14 private parties and one co-operative society. Besides this, servicing work has been done to Agricultural, Medical and Electricity Boards.

Implements in the design have been given effect from this year and the rates have been completely revised to compare with the market rates. A 5/16" thick M. S. washer has been substituted in the place of 18 G plate and punched washer in the rotors of Japanese Intercultivator to give an easy movement. The Buremse Suttern are provided with pipe rotors instead of wooden and so on. The prices of ICM 14 plough and Burmese Suttern No. 1 have been reduced from Rs. 33-50 and Rs. 77-50 to Rs. 27 and Rs. 70. The bund former rates have been reduced from Rs. 42-50 to Rs. 40.

During the period M/s. Industrial Chemicals Limited, Sankar Nagar, Thalaiyuthu, has been supplied with electrodes made in 18 G worth to Rs. 5,000/. This work involved preparation of dies, for blanking, punching, notching and bending has been completed to their satisfaction. Special casting works like C. I. Pipe bends, bell mouth are being undertaken in the peried.

BRASSWARE UNIT, KUMBAKONAM

During the quarter the Centre has produced articles to the value of Rs. 23,703-40 and sold goods to the value of Rs. 29,110-21 including servicing rendered. Though servicing is the main object of the scheme, regular production work has also been taken up simultaneously with the aim of running the Unit profitably.

GENERAL PURPOSE ENGINEERING WORKSHOP AND BICYCLE ASSEMBLY UNIT, VELLORE

During the quarter ending 30—6—1960, the General Purpose Engineering Workshop, Vellore, continued to manufacture and supply hospital equipments to various hospitals in the State. Besides, the above, this Workshop has also undertaken the servicing work from a few Government Departments like Highways, Agriculture and Jail Departments and from the private local Industrialists. The Production and sales of this Workshop from April, 1960 to June, 1960 are furnished below :—

Month	*Production*	*Sales*
	Rs. Np.	Rs. Np.
April, 1960.	15,368—51	15,450—45
May, 1960.	13,099—64	11,542—69
June, 1960.	7,953—37	9,811—42

CO-OPERATION

SCHEME FOR THE ESTABLISHMENT OF AN INDUSTRIAL CO-OPERATIVE BANK IN THE MADRAS STATE

As a result of the impetus and encouragement shown for the development of Small Scale, Handicrafts, Village and Cottage Industries in the II Five Year Plan a large number of Industrial Co-operatives have been established with the liberal assistance given by the various All India Boards in the shape of loans and grants etc. As on 31-3-'60 there were 2,012 Industrial Co-operatives in the State including the societies for the development of Palm Gur Industry. Some of the Industrial Co-operative Societies were directly provided with the funds to meet their working capital etc. from out of the funds allotted under the State Aid to Industries Act. These Co-operatives were given loans to the extent of Rs. 79·45 lakhs repayable at periods ranging from 3 to 10 years. There is a pressing demand for the formation of more Industrial Co-operatives for all types of Industries, but it is not possible to meet the demands fully owing to the limitations in the availability of funds to finance a larger number of Industrial Co-operatives. The Co-operative Banks in the State have done precious little in the matter of providing funds to the Industrial Co-operatives, as by convention and tradition they are loath to lend to Co-operatives consisting of artisans or industrial workers or small entrepreneurs either due to fear of the greater risk involved in such transactions or for lack of appreciation of the aspirations of these classes of men and of the national and promotional interests involved. In fact Co-operative Banks are more conservative than even private banks in regard to advancing loans to Industrial Co-operatives and have nothing but the money lenders outlook. Further the Co-operative Central Banks have assumed larger responsibilities in providing funds to agricultural sector and are finding it difficult to meet their obligations in respect of agricultural finance. They will not be able to take up the responsibility of dispensing the commercial credit side by side with agricultural credit. The capital required for the industrial Co-operatives are provided by Government from the II Five Year Plan provisions earmarked for the various All India Boards. In fact the main source of finance for Industrial Co-operatives has been the Government. Though, Government and its machinery have been undertaking the financing of these Industrial Co-operatives satisfactorily, yet it could not be continued as a permanent measure. It need hardly be emphasised that sooner or later the Government finance should be substituted by institutional finance. It is expected that during the III Five Year Plan period a very large number of Industrial Co-operatives will have to be established and adequate funds provided to meet their credit requirements.

The artisan who for any reason is not in a position to join Industrial Co-operatives and Small Entrepreneurs or Small Scale industrialists have to be provided with the required credit facilities by liberalising the standards of security, the period of repayment etc. Suitable arrangements, have therefore, to be made to provide them credit through a Banking institution which will cater to their needs.

2. It is, therefore, proposed to establish an Industrial Co-operative Bank at Madras on the following lines:

I. MEMBERSHIP

(1) The Madras State Industrial Co-operative Bank will be registered under the Madras Co-operative Societies Act VI of 1932 on a limited liability basis with its area of operations extending throughout the State.

(2) The Bank will finance all Industrial Co-operatives under the administrative control of the Director of Industries and Commerce as also artisans, entrepreneurs and private industrialists who are eligible for help under the State Aid to Industries Act.

(3) The Bank will be located at Madras and when its business develops, it will open two branch offices at Madurai and Coimbatore.

(4) All Industrial Co-operatives, artisans, entrepreneurs and Small Scale Industrialists shall be eligible to become members of the Bank.

(5) Individual persons having experience in administration, industrial concerns or banking institutions may also be admitted into the Bank as members provided the number of persons shall not exceed 25.

(6) As the Government of India have accepted the principle of State partnership in the Industrial Co-operative Bank and of State guarantee to financing agency it is suggested that Government might subscribe 51% of the authorised share capital of the Bank.

II. SHARE CAPITAL

(1) The authorised share capital of the Bank shall be Rs. 30 lakhs made up of 30,000 shares of Rs. 100 each. Fifty one percent of the subscribed capital viz. Rs. 15·30 lakhs will be allotted to Madras Government. The total subscribed capital of Rs. 30 lakhs is proposed to be raised within a period of 3 years from the starting of the Bank as shown below:

Madras Government	Rs. 15·30	lakhs
Industrial Co-operatives	Rs. 10·00	,,
Industrialists	Rs. 4·00	,,
Individual persons	Rs. 0·70	,,
Total	Rs. 30·00	,,

(2) The maximum shares which an industrialist or an individual person may hold in the Bank shall be limited to Rs. 5,000. Section 6 (b) of the Madras Co-operative Societies Act will be relaxed by State Government in virtue of powers conferred on them under Section 59 of the Madras Co-operative Societies Act.

(3) A provision of Rs. 52 lakhs has been made for the Industrial Co-operative Bank in the III Five Year Plan. As the Bank has to be established immediately during the current year 1960-61, Government may subscribe to the shares of the Bank to the

extent of Rs. 15 lakhs during the current year by making provisions in the budget estimates for 1960-61. A sum of Rs. 5 lakhs will be raised from Industrial Co-operatives and other members. Thus, a total sum of Rs. 20 lakhs will be raised to start with.

III. GENERAL BANKING BUSINESS

The Bank may also carry on general business of banking not repugnant to the provisions of the Co-operative Societies Act and the rules framed thereunder and subject to instructions of the Registrar of Industrial Co-operatives from time to time.

IV. FUNDS OF THE BANK

The Bank shall obtain funds from the following sources:—

1. Share capital
2. Deposits from members and non-members.
3. Borrowings from the State Government.
4. Borrowings from the Reserve Bank of India, direct or through the Madras State Co-operative Bank.
5. Other bodies or institutions approved by the Registrar of Industrial Co-operatives from time to time.
6. Entrance fees and miscellaneous receipts.
7. Grants and donations from Government and others.

V. GOVERNMENT GUARANTEE FOR REPAYMENT OF PRINCIPAL AND INTEREST OF DEPOSITS

In order to attract the public to invest their funds in fixed Deposits in the Bank, Government may declare that the principal and interest in respect of Fixed Deposits received by the Madras State Industrial Co-operative Bank Limited be fully and unconditionally guaranteed by Government as has been done in the case of Fixed Deposits received by the Madras Industrial Investment Corporation vide G. O. No 2316. Industries, Labour and Co-operation, dated 11—7—57.

VI. BUSINESS

The Bank will finance not only Industrial Co-operatives under the administrative control of the Director of Industries and Commerce but also provide funds to Industrial workers, artisans and private industrialists (Joint Stock Companies, partnership or sole-proprietory concerns) who are eligible for help, under the State Aid to Industries Act. It will also extend short term credit facilities viz. cash credit to its borrowers. The loan shall be granted to members only for such purposes as may be notified by the Registrar of Industrial Co-operatives from time to time. The loans granted to a member should at no time exceed 20 times the paid up share capital to his credit in the Bank and Rs. 2 lakhs in the case of an Industrial Co-operative and Rs. 50,000 in the case of an Industrialist or industrial concern. The Bank shall ordinarily entertain loan applictions for Rs. 2,000 and above. The nature and mode of security of the loans, the fees for scrutiny of applications etc. shall be determined by the Bank in consultation with th Registrar of Industrial Co-operatives. The period of the loan shall not normally exceed 10 years. The rate of interest on loans to members shall be so regulated as not to exceed by more than 2% the rate at which the Bank has raised funds. The Government staff in the Industries Department will assist the Bank in the matter of scrutiny of applications and sanction or recovery of loans etc. untill such time as the Bank is in a position to employ its own special staff for the purpose.

(b) Water and drainage fund

(c) Depreciation reserve and sinking funds pertaining to electric supply undertakings of local bodies.

(d) Unspent loan funds not required immediately. Government may order that these deposits may also be invested in this Bank. As it is proposed to back up the deposits in the State Industrial Co-operative Bank with Government guarantee it is expected that the Local Boards and Municipalities might invest the funds in this Bank.

XVIII. Bylaws of the Bank.

The draft bylaws of the Bank embodying its constitution and other main features indicated in paragraph 2 above are enclosed. (Annexure I). They also provide for all other matters connected with the working of the Bank with reference to Madras Co-operative Societies Act VI of 1932 and the rules framed thereunder.

LIST OF INDUSTRIAL CO-OPERATIVE SOCIETIES REGISTERED DURING THE PERIOD FROM 1-4-1960 TO 31-7-1960.

Sl. No.	Regn. No.	Name of the Society.	Name of the Taluk & District.	Date of Regn.	Name of the Industry.
(1)	(2)	(3)	(4)	(5)	(6)
1.	Ind. 504	The Thengalpatti Pottery Workers Co-operative Cottage Industrial Society Ltd.	Thirumangalam Taluk, Madurai Dt.	14-4-'60	Village Industry.
2.	Ind. 505	The Alathambadi Village Industries Co-operative Society Ltd.	Thiruthuraipoondi Tlk., Thanjavur Dt.	14-4-'60	Village Industry.
3.	Ind. 506	The Tamilnad Industrial Co-operative Society Ltd.	Chintadripet, Madras Dt.	17-4-'60	Small Scale Industry.
4.	Ind. 507	The Kattakamanpatty Brick Workers Co-operative Cottage Industrial Society.	Nilakottai Taluk, Madurai Dt.	24-4-'60	Village Industry.
5.	Ind. 508	The Arumbavoor Carpenters & Blacksmithy Workers Co-operative Cottage Industrial Society.	Perambalur Taluk, Trichy Dt.	24-4-'60	Small Scale Industry.
6.	Ind. 509	The Pacode Brick Workers Co-operative Cottage Industrial Society.	Vilevancode Taluk, Kanyakumari.	27-4-'60	Village Industry.
7.	Ind. 510	The Manamadurai National Potters Co-operative Cottage Industrial Society.	Sivagangai Taluk, Ramnad Dt.	27-4-'60	do.
8.	Ind. 511	The Mannargudi Oil Producers Co-operative Cottage Industrial Society.	Mannargudi Taluk, Thanjavoor Dt.	27-4-'60	do.
9.	Ind. 512	The Jamnamarudur Bee Keepers Co-operative Cottage Industrial Society.	Thirupattur Taluk, North Arcot Dt.	6-5-'60	do.
10.	Ind. 513	The Kottaipattinam Women Palm Leaves Articles Producers Co-operative Industrial Society.	Aranthangi Taluk, Thanjavur Dt.	6-5-'60	Handicraft Industry.
11.	Ind. 514	The Pandavanadai Basket Makers Co-operative Cottage Industrial Society.	Papanasam Taluk, Thanjavur Dt.	6-5-'60	do.
12.	Ind. 515	The Kivalur Oil Producers Co-operative Cottage Industrial Society.	Nagapattinam Taluk, Thanjavur Dt.	6-5-'60	Village Industry.
13.	Ind. 516	The Thazhakudy Pottery Workers Co-operative Cottage Industrial Society.	Kanyakumari Dt.	23-5-'60	do.
14.	Ind. 517	The Thuraiyur Carpentry Workers Co-operative Cottage Industrial Society.	Musiri Taluk, Trichy Dt.	25-5-'60	Small Scale Industry.

VII. CHANNELLISING FUNDS UNDER THE STATE AID TO INDUSTRIES ACT THROUGH THE BANK

Since the Industrial Co-operative Bank will give loans to private industrialists upto Rs. 50,000, such portion of the yearly allotment for State Aid as the Bank could utilise for the purpose may be lent to the Bank on terms and conditions agreed to by the Director of Industries and Commerce with the concurrence of Government and the Board of Directors of the Bank.

VIII. UNDERTAKING THE LOANING AND RECOVERY OF FUNDS SANCTIONED BY ALL INDIA BOARDS ON SPECIFIC SCHEMES FOR DEVELOPMENT OF INDUSTRIES

At present the all India Boards give financial assistance by way of loans and grants to Industrial Co-operatives on specific schemes. Such funds should also be channelised through this Bank which will pass on the said funds on such terms and conditions as the respective Boards may stipulate. The Bank will be responsible to recover the loans and arrange for the repayment of the loans to Government. The State Government will, however, pay a grant equal to $1\frac{1}{2}\%$ of the loan outstanding, every year, to meet the incidental charges of the Bank connected with this transaction. The loss arising in respect of these loans will be shared by the Bank and the Government at 10% and 90% respectively and the share of the loss between Central and State Governments will be on the basis of their share of the loan viz. 75% and 25% respectively. In other words, the loss will be shared by the 3 agencies as shown below.

Government of India	...	$67\frac{1}{2}\%$
Government of Madras	...	$22\frac{1}{2}\%$
Industrial Co-operative Bank	...	10 %

IX. MAXIMUM BORROWING POWER

The borrowing power of the bank will be limited to 20 times its paid up share capital plus Reserve Fund. In special cases this limit may be increased to 30 times with the sanction of Government, for such period as may be considered necessary.

X. GENERAL BODY

The General Body of the Bank shall consist of the following members;

(i) Delegates representing the Industrial Co-operatives.

(ii) Artisans, entreprenaurs and private Industrialists who are members of the Bank.

(iii) Individual members.

(iv) Nominated directors.

XI. MANAGEMENT BY A BOARD

The Executive Management of the affairs of the Bank shall vest in a Board of Directors consisting of not more than 15 members as follows.

(i) 5 nominees of the Government of Madras, of whom one shall be the Joint Director of Industries and Commerce (Industrial Co-operatives.)

(ii) 6 representatives of Industrial Co-operatives to be elected at the General Body Meeting, of whom at least one shall be elected from among persons representing the Industrial Co-operatives having state-wide jurisdiction.

(iii) 3 representatives of industrialists to be elected at the General Body Meeting.

(iv) One representative of individual share holders to be elected at the General Body Meeting.

The President or in his absence the Vice-President shall preside at such meeting and conduct such election. The time and place for the election shall be fixed by the President.

XII. EXECUTIVE COMMITTEE

To facilitate quick despatch of business the Board may elect among themselves an Executive Committee consisting of 7 members including the President and Vice-President and at least two nominees of the Government.

XIII. BOARD OF DIRECTORS AND EXECUTIVE COMMITTEE TO BE NOMINATED

The first set of Board of Directors including the President and Vice-President as also the Executive Committee shall be nominated by the Registrar of Industrial Co-operatives for a period of 3 years and may be extended for such periods as the Registrar may deem fit, provided that the total period of nomination does not exceed 12 years.

XIV. DISTRIBUTION OF PROFITS

40% of the net profit as declared by the Registrar shall be carried over to the Reserve Fund. Out of the remainder, dividend on shares subject to a maximum of 5% per annum shall be paid. Balance, if any, may be set apart for other items as provided in the by-laws.

XV. EXECUTIVE OFFICERS OF THE BANK

The Bank shall employ an Agent who shall be a nominee of the Registrar of Industrial Co-operatives. The Board of Directors may employ a full time Accountant and also an Industrial Consultant either on full time or Part time basis in consultation with the Registrar. The cost of the Supervisory staff to be employed in the Bank may be met by Government for the first 3 years. 50% of the expenditure may be claimed from the Goverment of India. Some grant to meet the expenses connected with the office equipment etc. may also be given.

XVI. RESERVE BANK OF INDIA TO FINANCE

In terms of sub-section 17 (2) (bb) of the Reserve Bank of India Act, which relates to the financing of Cottage and Small Scale Industries, the Reserve Bank of India can make advances for periods not exceeding 12 months for financing the production and marketing activities of approved Cottage and Small Scale Industries against the security of (i) two good signatures, one of which shall be that of a State Co-operative Bank or State Financial Corporation and (ii) guarantee by the State Government in full, of the repayment of the principal and payment of interest. The Reserve Bank of India make funds available to the State Co-operative Banks at $1\frac{1}{2}\%$ below the Bank rate i.e. at $2\frac{1}{2}\%$. The Co-operative Banks (State and Central) together keep a margin of 3% and lend to Weavers Co-operatives at $5\frac{1}{2}\%$. To ensure that primaries receive the funds at 3%, the Government of India have agreed to subsidise the Co-operative Bank to the extent of $2\frac{1}{2}\%$. The Industrial Co-operative Bank can avail itself of this facility by affiliating itself with the Madras State Co-operative Bank. If however, the conditions in sub-section 17 (2) (bb) of the Reserve Bank of India is relaxed so as to enable the Industrial Co-operative Bank (which is a State Bank) to receive funds direct the subsidy of $2\frac{1}{2}\%$ which Government of India have to bear can reduced to 1% as a margin of $1\frac{1}{2}\%$ need not be paid to the intermediary bank viz. the State Co-operative Bank. Government may be pleased to explore this possibility.

XVII. At present Local Boards and Municipalities are permitted to invest the following earmarked funds in the Madras State Co-operative Bank and the Central Co-operative Banks in the Districts in Fixed Deposit:

(a) Railway cess fund,

(b) Water and drainage fund

(c) Depreciation reserve and sinking funds pertaining to electric supply undertakings of local bodies.

(d) Unspent loan funds not required immediately. Government may order that these deposits may also be invested in this Bank. As it is proposed to back up the deposits in the State Industrial Co-operative Bank with Government guarantee it is expected that the Local Boards and Municipalities might invest the funds in this Bank.

XVIII. Bylaws of the Bank.

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3.	Ind. 506	The Tamilnad Industrial Co-operative Society Ltd.	Chintadripet, Madras Dt.	17-4-'60	Small Scale Industry.
4.	Ind. 507	The Kattakamanpatty Brick Workers Co-operative Cottage Industrial Society.	Nilakottai Taluk, Madurai Dt.	24-4-'60	Village Industry.
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10.	Ind. 513	The Kottaipattinam Women Palm Leaves Articles Producers Co-operative Industrial Society.	Aranthangi Taluk, Thanjavur Dt.	6-5-'60	Handi-craft Industry.
11.	Ind. 514	The Pandavanadai Basket Makers Co-operative Cottage Industrial Society.	Papanasam Taluk, Thanjavur Dt.	6-5-'60	do.
12.	Ind. 515	The Kivalur Oil Producers Co-operative Cottage Industrial Society.	Nagapattinam Taluk, Thanjavur Dt.	6-5-'60	Village Industry.
13.	Ind. 516	The Thazhakudy Pottery Workers Co-operative Cottage Industrial Society.	Kanyakumari Dt.	23-5-'60	do.
14.	Ind. 517	The Thuraiyur Carpentry Workers Co-operative Cottage Industrial Society.	Musiri Taluk, Trichy Dt.	25-5-'60	Small Scale Industry.

Sl. No.	Regn. No.	Name of the Society.	Name of the Taluk & District.	Date of Regn.	Name of the Industry.
(1)	(2)	(3)	(4)	(5)	(6)
15.	Ind. 518	The Ammayapuram Jaggery Manufacturers Co-operative Society.	Tenkasi Taluk, Tirunelveli Dt.	31-5-'60	Village Industry.
16.	Ind. 519	The Sri Muthumariamman Village Industries Co-operative Society, Royavaram.	Thirumayam Taluk, Tiruchy Dt.	5-6-'60	do.
17.	Ind. 520	The Singampunneri Pottery Workers Co-operative Cottage Industrial Society.	Tirupattur Taluk, Ramnad Dt.	12-6-'60	do.
18.	Ind. 521	The Paruthyoor Oil Producers Cottage Industrial Co-operative Society.	Nannilam Taluk, Thanjavur Dt.	16-6-'60	do.
19.	Ind. 522	The Dharmapuri Gur & Kandasari Sugar Demonstration & Production Society	Dharmapuri Taluk, Salem Dt.	24-6-'60	do.
20.	Ind. 523	The Manrampalayam Umbrella Workers Industrial Co-operative Society.	Pollachi Taluk, Coimbatore Dt.	25-6-'60	Small Scale Industry.
21.	Ind. 524	The Vedakku Karukurichi Harijan Brick Workers Co-operative Cottage Industrial Society.	Ambasamudram Tlk., Tirunelveli Dt.	25-6-'60	Village Industry.
22.	Ind. 525	The Cowl Bazaar Pottery Workers Co-operative Cottage Industrial Society.	Saidapet Taluk, Chingleput Dt.	25-6-'60	do.
23.	Ind. 526	Muthendal Brick Workers Co-operative Cot'age Industrial Society.	Sivagangai Taluk, Ramnad Dt.	1-7-'60	do.
24.	Ind. 527	The Sirkali Nattu Chekku Oil Producers Co-operative Cottage Industrial Society.	Sirkali Taluk Thanjavur Dt.	1-7-'60	do.
25.	Ind. 528	The Mettur Chemical Workers Industrial Co-operitive Society.	Omalur Taluk, Salem Dt.	5-7-'60	Small Scale Industry.
26.	Ind. 529	The Avadi Glass Ampules Manufacturing Workers Co-operative Cottage Industrial Society.	Sriperumbadur Taluk, Chingulpet Dt	5-7-'60	do.
27.	Ind. 530	The Papanasam Nattuchekku Oil Producers Co-operative Cottage Industrial Society.	Papanasam Taluk, Thanjavur Dt.	14-7-'60	Village Industry.
28.	Ind. 531	The Chengam Carpentry & Blacksmithy Workers Co-operative Cottage Industrial Society.	Chengam Taluk, North Arcot Dt.	14-7-'60	Small Scale Industry.
29.	Ind. 532	The Sayalkudy Paddy Handpounding Rice Workers Co-operative Cottage Industrial Society.	Mudukalathur Taluk Ramnad Dt.	16-7-'60	Village Industry.
30.	Ind. 533	The Narippayur Potters Co-operative Cottage Industrial Society.	Mudukalathur Taluk Ramnad Dt.	21-7-'60	do.
31.	Ind. 534	The Lurthapuram Mat Weavers Co-operative Production & Sales Society.	Avanashi Taluk, Coimbatore Dt.	21-7-'60	Handi-crafts Industry.
32.	Ind. 535	The Eruvancheri Harijan Mat Workers Co-operative Cottage Industrial Society.	Nagapattinam Thanjavur Dt.	21-7-'60	do

THE KANCHEEPURAM METAL WORKERS INDUSTRIAL CO-OPERATIVE SOCIETY

Kancheepuram the seat of the Pallavas and a pilgrim centre in Chingleput District is known for its copper and brass-wares. The artisans of this place have specialised the manufacture of house-hold utensils. They are very poor and do not, therefore, have independant means of earning their bread. They are mostly under the mercy of merchants who employ them on inadequate wages. The bulk of the profits in the industry goes to the traders. In order that the artisans could organise themselves into an Industrial Co-operative Society, a scheme was formulated under the Second Five Year Plan. The Small Scale Industries Board approved the scheme and sanctioned the funds.

(2) In G.O. Ms. No. 643, Industries, Labour and Co-operation (Special) dated 2-4-'59 the scheme, for the establishment of an Industrial Co-operative Society for the metal workers at Kancheepuram, was sanctioned at a total cost of Rs. 51,000. A loan of Rs. 46,000 bearing an interest of 2½% per annum repayable in 10 equal annual instalments was sanctioned to the society for the purchase of machinery, working capital etc. A subsidy of Rs. 5,000 was also sanctioned to the society towards the cost of the staff employed by it during the first year.

(3) The Kancheepuram Metal Workers Industrial Co-operative Society Ltd. (No. IND. 397) was registered under the Madras Co-operative Societies Act VI of 1932 on 2-7-'59 and started on its work on 26-7-'59. The first Board of Directors were nominated and they manage the affairs of the society. The authorised share capital of the society shall be Rs. 25,000 made up of 250 shares of 100 each. In the first instance the society will provide employment to 30 artisans. The number of members and the paid up share capital of the Society were 27 and Rs. 12,725 respectively, as on 31-3-'60. Its production and sales amounted to about Rs. 10,072.

The Society worked at a profit of Rs. 563. The Society is progressing well and provides adequate employment to the workers admitted as members. Arrangements have been made with the Madras State Small Scale Industrial Co-operative Society for the supply of raw materials. i.e. metal sheets to the society.

(4) The World Bank Team visited the society on 13-4-'60 and reviewed its working. The team appreciated the progress made by the society in the manufacture of various types of utensils.

EXPORT PROMOTION

EXPORT MARKET SURVEY

SEWING MACHINES

MALAYA, in view of its being centrally situated in South East Asia and enjoying entrepot status to re-export the imported goods to the neighbouring countries like Sumatra, Java, Sarawak, Thailand and North Borneo, offers boundless opportunities for Indian Exporters of sewing machines,

'Usha' and 'Orient' sewing machines are already being marketed in Malaya and new Indian brands could also be introduced as the demand for home consumption seems to be on the increase day by day. But it should be noted that the market is already glutted with cheap chinese and Japanese machines. Facilities such as easy availability of spare parts, introduction of conveninent hire-purchase system, efficient servicing arrangements, competitive prices, vigorous publicity campaign and public relations technique can promote the Indian Trade in this line in Malaya.

The present trend there appears to be more for industrial sewing machines with all the complete gadgets for making embroidery and other articles rather than household sewing machines.

It may be mentioned here that the 1958 average monthly import of household machines was 7,256 and 77·6 per cent was retained for her own consumption, while the remaining 22·4 per cent re-exported to neighbouring countries.

All goods in Malaya are imported under open general licence and there are no import restrictions or quata for sewing machines in Singapore, Federation of Malaya, Sarawak and North Borneo.

ELECTRIC FANS

The average montly import of electric fans into SINGAPORE AND FEDERATION OF MALAYA is 6,420, out of which only 550 are Indian makes. Though Indian ceiling fans are selling fairly well, her table fans are not doing well. This is because in quality, appearance and price, Indian table fans are not able to compete with those from Japan.

With intensified publicity and high pressure sales technique, India should, it is felt, be able to wrest from other countries a part of their exports and thus increase her fan exports to Malaya by about 50 per cent. Efforts have to be made to sponsor a co-operative publicity organisation, the members of which should include among others, Indian manufacturers and exporters in order to take care of group advertising of Indian products.

The agents' commission on sale of Indian fans is believed to be small compared with other makes. It seems, therefore, necessary that if India were to sell here goods, she should not only have to see that her selling prices are competitive but also that the commission paid to retailers is better. Retailers are the only medium through whom one has to reach consumers and hence their goodwill is very essential.

MARKET FOR INDIAN COMMODITIES IN BURMA

Information has been received from the First Secretary (Commercial), Embassy of India in Burma, Rangoon, that subsequent to the declaration of the policy of the Government of the Union of Burma regarding Burmanization of Agency Trade which took effect from the 1st June 1960, a number of firms in Burma expressed their willingness to contact those exporters in India who may be interested in appointing agents in that country. The particulars of commodities in which the Burmese firms are interested are detailed below :—

Textiles, household goods, hardware and building materials, machinery, motor parts and accessories, electrical goods, radio parts, air conditioners, refrigerators and parts, bicycles and parts, tyres and tubes, watches and clocks, glass and earthenware, paper—all sorts, stationery, fountain pens, printing ink, surgical goods, pharmaceutical products, sports goods, fishing materials, foodstuff, provisions, toilet requisites, boots and shoes, and miscellaneous items.

Manufacturers and exporters in India of the above mentioned articles interested in appointing agents in Burma are advised to contact the Director-General of Commercial Intelligence and Statistics, 1, Council House Street, Calcutta, for names and addresses of the concerned firms in Burma who are interested in doing agency business for the articles in question, furnishing their Bank and other trade references.

ADEN

The following extracts are from the Report on Economic and Commercial Conditions in Aden during may 1960, received from the Commissioner for the Govenment of India, Aden :—

SILK AND RAYON TEXTILES

A seven-man Trade Delegation sponsored by the Silk and Rayon Textiles Export Promotion Council, who were on a tour to countries in West Asia, North and East Africa, arrived in Aden from Addis Ababa on 20th May and left for Bombay on 25th, May 1960.

The visit of the Delegation has, no doubt, been useful, since Aden is a fairly large importer of rayons much of which (66 per cent) comes from Japan. During 1959, out of total imports valued at £2,251,000, Japan's share was £1,502,000, while India's contribution amounted to only £372,000. As for silks, the demand in Aden market is small and it is rapidly dwindling year by year. In 1959, the total import of silk was valued at £7,968 (India : £963) compared to £28,217 in 1958 (India; £2,962) and £229,298 in 1957 (India : £480) With a large influx of military personnel and their families in the Colony in recent years, it is felt that with some effort demand for Indian raw silk material for curtains, upholstering, etc., can be created.

The main reason why Japan has been able to virtually capture the market for rayons is because the prices of the Japanese products, particularly the spun varieties which form the bulk of imports of rayon textiles in this market, are cheaper than those from other countries. It is understood that at present India is not producing spun rayon in sufficient quantities as to enter the export market on competitive basis with Japan. The importers are also satisfied with the packing of the imported consignments from Japan and also with the business behaviour of the Japanese exporters, especially with regard to insurance claims. On the other hand the local importers have expressed general dissatisfaction on these two grounds with regard to imports of Indian rayons and other manufactures.

WATER PUMPS

The Federation of the Arab Amirates of the South in the Western Aden Protectorate have shown interest in the import of Indian water pumps. The Federation was set up in February 1959 and its capital city (Al Ittihad) is now in the stage of construction. Development plans for the capital and for the Federation as a whole are being framed and executed. It is, therefore, felt that ample scope exists for Indian water pumps in the Federation where physical conditions approximately those existing in Rajasthan and the Punjab, provided Indian exporters are able to compete their counterparts in the U.K. and Germany, both in quality and price, and can arrange in some manner after-sale service facilities.

GLASS AND GLASSWARE

Aden imports fairly large quantities of glass and glassware, and such imports are increasing year by year in view of the swelling population and as there is a building boom in progress. Total imports of glass and glassware were valued at £ 177,000 in 1956, £ 167,000 in 1957 and £ 230,000 in 1958. Glassware would account for 80 per cent of these import figures. India's share was £ 18,000 in 1956, £ 19,000 in 1957 and £ 21,000 in 1958. In glass (sheet and plain glass) Czechoslovakia and Japan are the principal suppliers, while Japan dominates the local glassware market.

WHITE AND KHAKI SHORTS

An important category of goods imported into Aden for use in the colony proper as well as in the interior (Aden Protectorate, Yemen, etc.) is Khaki and white drill shorts. The monthly demand is estimated at 3,000 dozen.

The supply of drill shorts at present is largely met from Hong Kong, especially by a firm whose products have the brand name "Rival". There has, of late, been a drop in the import of "Rival" shorts, and hence importers are looking elsewhere for filling up this gap. This situation offers an opportunity to introduce Indian products, provided Indian firms act quickly and offer their products at competitive prices.

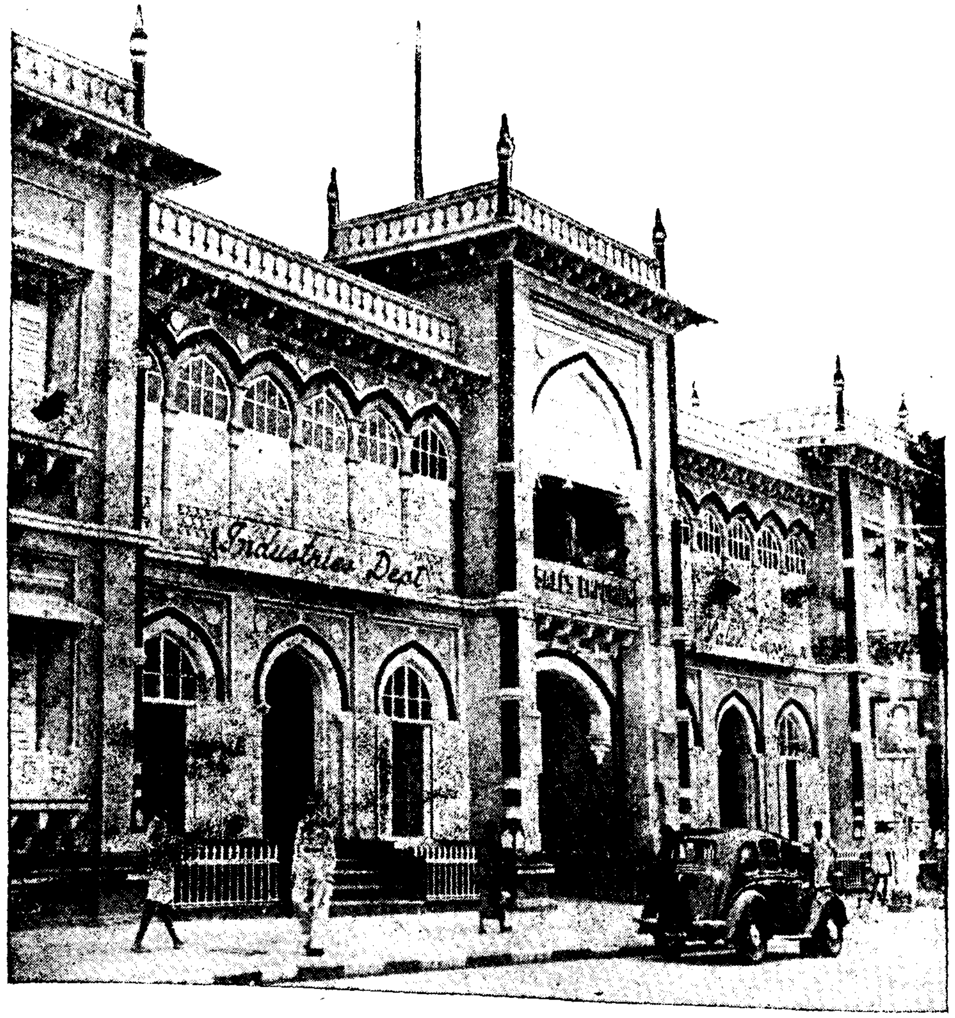
SWITZERLAND

Sports Goods

Direct contacts established with Swiss importers of sports goods have revealed the following facts which might be of interest to Indian exporters.

1. Due to moderate quality of goods supplied in the previous years, Indian exports to Switzerland decreased considerably. Swiss dealers in sports goods want goods of only first class quality. Due to the high standard of living the price factor plays a secondary role,

2. Swiss retail traders prefer to import sports goods through the intermediary of wholesale importers (various syndicates and similar organizations have been established



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in this field. They supply the retail trade and numerous sporting clubs, which are the main consumers). This is so, because wholesale importers are in a better position to maintain larger stocks, and also, every retail dealer does not have to bother about customs formalities, etc. It is, therefore, desirable to approach the wholesale importers, instead of sending quotations to retail trade.

3. To prove that the quality of Indian goods has improved, the Indian exporters should be prepared to send free samples to the Swiss importers.

4. There is market, for footballs, tennis rackets and hockey sticks, but it is necessarily limited on account of the size and Population of this country. It is necessary here to mention the recent changes introduced by foreign industries (in respect of baldders for footballs). The old type of bladders used for footballs (with a rubber pipe) is no longer in use here. The German industry is now manufacturing bladders with a special closing, without a pipe. The new bladder gives a perfectly round shape to the football, which the old bladder did not. It may also be mentioned that the handles of tennis racket should invariably be covered with material with fast colour.

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