

Small industry

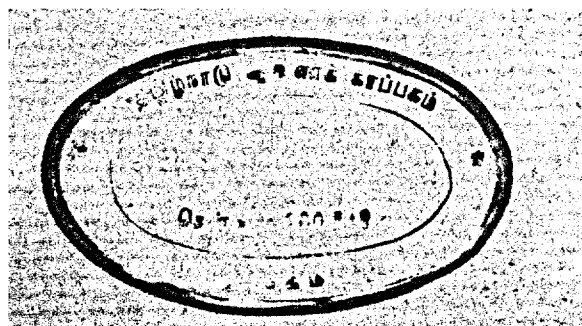
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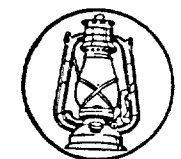
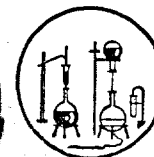
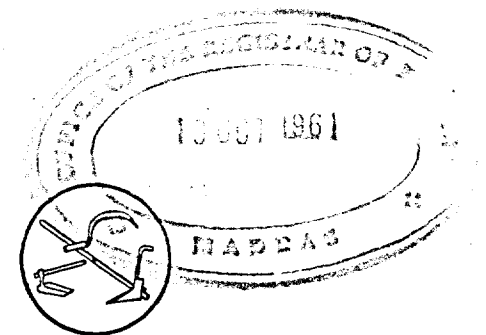
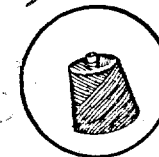
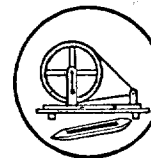
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Small Industry

EDITOR R. GANESAN

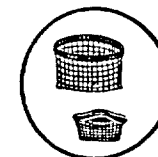
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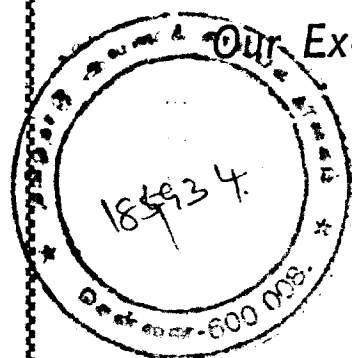
The Small Scale Industries Association
Madras

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Ancillary Industries

The Automobile Industry of United Kingdom and United States of America depend to a very large on ancillary industries to keep them supplied with parts which go into the Automobile as well, the spare parts which are essential for keeping the automobile on the road, it will be understood how important the role of ancillary industries is and how they are the invaluable potential source of industrial development and employment.

What is true of the automobile industry is true of other major industries like the railways, bicycle, motor cycle, scooter, sewing machine, electric motors, fans, radio, refrigeration and numerous other medium and large scale industries.

Before going further it is necessary to understand very clearly what is meant by ancillary industries. The dictionary meaning of ancillary is something which is subservient to or auxilliary to something larger and it is in this context we must discuss the position of ancillary industries.

Once an industry is established and its products are in demand it is not too difficult to expand that industry. All that is required is more capital, Labour, more raw materials more machinery, more and better organisation. What happens however that with the availability of all the items mentioned above, the cost of the product goes on increasing, because unless production increases in like proportion, the administration becomes top heavy and the overhead costs go on increasing with the result that the price of the final product goes up instead of down and the consumer gets the brunt of it.

It has been found in foreign countries who have made a special study of industrial costs with a view to reducing them the only way of reducing costs is to build around each large industry a series of ancillary industries and help them to develop on sound lines and buy their products and utilise them for assembly and pay the promoters of the ancillary industries across the counter.

Take a Machine Tool Industry as an instance. Our big manufacturers like Hindustan Machine Tools, Investa, Kirloskar, Cooper, Praga etc., make good machines but their prices are so very high that they are prohibitive to the small man. On the other hand in the Punjab, Batala, Ludhiana etc., they make cheap machines but of poor quality so they are not able to pass the Grade I test laid down by the Government of India.

Now what is required to be done is to organise this whole industry on the lines of Ancillary Industries and let each manufacturer make only about 4 to 6 items, but make them of a very high quality. However before this can be done it will be necessary to standardise the details and then manufacture them on a mass production basis to fixed tolerances so that all parts are interchangeable.

If this is done then the big manufacturers could purchase all these items from the small scale man and pay him across the counter, assemble and sell. In this way both quality and quantity could be improved and what is more prices would immediately come down, because unlike a large organisation the small scale ancillary industry would not have the same high overhead costs due to a high administration. The economic result of such an organisation would be that because the prices were low for a quality product more people would buy and the industry would grow very rapidly and provide employment of many more people in small industries. If expansion is required in ancillaries then more than one ancillary units could make the same item and yet have sufficient orders to keep them fully occupied. The lower cost would benefit the buyers of the lathe whose capital cost would go down and so the interest on capital and the depreciation costs and so ultimately reduce the cost of the article produced and benefit the consumers.

In order to further develop ancillaries on correct and scientific lines, the big industry should provide the small scale ancillaries with land, shed, electric power, water supply etc, and charge them an all in rental value per 100 Sq. Ft. of the accommodation utilised. The big industry could further obtain the raw materials for ancillaries on the bulk basis and let them draw use and pay for what they use without being burdened with heavy capital expenditure. The ancillaries could obtain the machines on a long term hire purchase basis and with a limited capital borrow more from the banks or industrial finance corporation and carry on their payment of labour. If formed on the company basis they could take certain amount of the profit and divide it among shareholders and keep a certain amount for building reserves for a rainy day and plough back the balance into the industry and so consolidate its position.

Bright Future In Kerala For Industries

By M. K. K. NAYAR, I.A.S.

(Managing Director, F.A.C.T., Alwaye)

Among Indian States, Kerala today is most congenial for entrepreneurs to establish industries in. Compared to other States, Kerala has little scope for expansion in the agricultural field, for every inch of land available has been used up for growing either food or cash crops.

Kerala has advantages conducive to industrial development. Its main wealth consists of unlimited deposits of rare earths (monazite, limenite, etc.) evergrowing forests, dependable deposits of clay, plentiful supply for water and cheap power.

Besides, industries already established in the State produce a variety of materials essential for other industries. Above all, there is an abundance supply of educated man-power.

Compared to other major ports cost of handling cargo at the centrally-situated port of Cochin is reported to be the lowest in India today. Communications in the State are satisfactory, facilitating reasonable transport to other parts of the country.

Rare Advantage

Besides these, Kerala has another rare advantage in its inland water transport system which, through an elaborate net-work of backwaters and canal, provide cheap and efficient water transport to well-inhabited areas of the State.

Kerala's water wealth is a great asset for the development of cheap hydro-electric power which so far has been exploited to about only a twentieth part of the availability.

In the third Five Year Plan some major schemes are being taken up. Cost of generation of power in the State being the cheapest when compared to the rest of India, industries, that require large chunks of power would find Kerala an attractive location.

Another important factor necessary for industrial development is industrial peace. A feeling has gained ground outside Kerala that there has always been industrial unrest in the State. It is true that there have been a number of disputes in the past but industrial relations in Kerala have never been as bad as they have been painted to be. The State Government has in its statement on industrial policy stressed that it would endeavour to ensure industrial peace.

Development

Another interesting feature of the Government's policy is that it is prepared to subscribe to a certain extent to the share capital of new ventures. This should give an additional assurance to industrialists that the State Government will stand by its declared policy of maintaining industrial peace.

Major industrial production of Kerala at present include sulphuric acid, caustic soda, ammonium chloride, sulphur dioxide, rare earth chloride, thorium hydroxide, titanium oxide, monazite, ilmenite, aluminium ingots and structurals, aluminium wire, hard boards, clay products, rubber products, hydrogen chloride, chlorine and so on. Industries requiring these as raw materials can be planned with advantage in the State.

Kerala offers special advantages for the development of nylon yarn paper, chemical, engineering, steel re-rolling and other allied industries.

Proposed Legislation: Salient Features

The principles suggested by the Small-Scale Industries Board and approved by the National Council for Training in Vocational Trades were examined by a Special Committee, consisting of representatives of the three recognised all-India employers' organisations and the Ministry of Labour and Employment, under chairmanship of the Minister of Industry, which made certain amendments to meet the point of view of the employers in general. The salient features of the proposed Legislation which have been accepted by Industry in general, will be as follows:

1. The Act should be a self-contained one. The apprentice will not be governed by the different labour and factory laws. Matters relating to his health, safety, welfare, payment of stipends, compensation for injury etc. will be provided for in the proposed Act itself.

2. Provision will be made in the Act or in the rules to be framed thereunder for the

Major Industry

With a coastline as long as the State itself, fishing is a major occupation of the people living in the coastal region. A large-scale industry, involving an investment of nearly Rs. 10 to 12 crores, for the exploitation of the fish reserves and their export can be established in Kerala.

With the decision to locate a second ship-yard at Cochin and a chemical industry at Neri Mangalam, the public sector has already made a start in this direction. The private sector has, however, yet to make a real beginning. In view of the facilities available—and considering the fact that there will not be a more propitious moment for starting new ventures in Kerala—it is time now for the private sector to fully exploit the present climate and start several industries in the State.

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execution and registration of apprenticeship agreements; medical examination of apprentices; minimum educational standards for admission; period of apprenticeship training; conditions under which apprenticeship could terminate; maintenance of records of progress of apprentices; payment of stipends; hours of work, etc.

3. Provision will be made for setting up Central and State Apprenticeship Councils consisting of representatives of employers in the public and private sectors, Government officials and experts to advise the Central and State Governments respectively on all administrative and technical matters relating to the training of apprentices in Industry. The National Council Training in Vocational Trades will co-ordinate all programmes for training in vocational trades in the country, conduct Trade Tests and issue National Certificates in craftsmanship including apprenticeship in "designated trades"

4. Provision has been made in the bill for extending the compulsory apprenticeship scheme by stages to different industries and areas according to need

5. Based on the available facilities in each "designated" trade in an establishment, the Union Government in consultation with the Central Apprenticeship Council will fix the maximum number of apprentices that could be taken in these trades. Where training has to be provided in the national interest to meet special shortage, the establishments where adequate facilities do not exist, will be provided with the required facilities and financial assistance by Government for creating additional facilities.

6. On completion of apprenticeship in the designated trade, the apprentice will not be bound to serve the employer training him; nor will the employer be bound to offer employment to the apprentice. During the period

SMALINDUSTRY

SMALL-SCALE INDUSTRIES

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WIDE DISPERSAL IN RURAL AREAS

Union Minister's Suggestion

The Home Minister, Mr. Lal Bahadur Shastri, urged the All-India Manufacturers' Organisation to give a lead in setting up small industries not only in big cities but also in towns as well as in rural areas.

of apprentice will be governed by the disciplinary procedure in force in the establishment. (The Employers have proposed that a provision be made in the Act to the effect that an apprentice will not participate in strikes and that he will not be allowed to be used for strike-breaking purposes. It is felt that such a provision is not necessary. Since, during the period of strike in an industry, there would be no arrangements for the training of apprentices, there is no point in enforcing the presence of the apprentice during the strike period. Again, the apprentices will be so small in number and their standard of skill so limited, that no employer will be able to use them effectively for strike-breaking purposes. In view of this, the provision suggested by the Employers seems to be superfluous and it may be necessary to incorporate this in the Legislation. It may be mentioned that it is proposed that the Industrial Disputes Act should not be applied to Apprentices under this scheme.)

7. While Government will undertake the responsibility for providing related instruction, industry, will be responsible for in-plant training.

8. Powers will be taken for making Rules under the Act, delegation to States of such powers as are considered necessary and for imposing penalties for the proper enforcement of the Act.

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SMALINDUSTRY

The Home Minister, who was inaugurating a convention on small scale industries organised by the Association, said: "The responsibility is cast upon us to develop backward areas through dispersal of industries. We can do this by expansion of small-scale industries."

Mr. Lal Bahadur referred to the growing population as revealed in the latest census and the need for finding jobs for them and said the cure for the problem of unemployment lay in the setting up of as many new industries as possible. In a vast country like India, he added, the combination of agriculture and small industries on a very big and extensive scale was the real solution for the economic development of the people.

The Home Minister said the main problem about the development of small industries was power and unfortunately almost every State was "feeling the pinch" of power shortage. The development of power was, however, receiving careful attention of the Government.

Mr. Lal Bahadur Shastri pointed out that even advanced countries in the world had provided employment to the people by increased production through the help of small-scale and ancillary industries. A large number of people in countries like U. S. A and U. K. and in Europe were employed in small and medium industries rather than in heavy industries.

Earlier, Mr. G. V. Puranik, Chairman of the All-India Manufacturers' Association, in his speech referred to the "rapid strides" made by small-scale industries since the inception of the first Five-Year Plan, but at the same time noted "a few shortcomings".

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Mr. Puranik said, the areas that were benefited were mainly urban areas which were already developed and were in a position to command requisite facilities like power, water, market, etc. Also, the entrepreneurs generally lacked financial resources and technical knowledge and required guidance in starting an industry, managing it and marketing the products. Difficulties were also experienced in getting requisite supplies of raw materials.

Mr. Puranik suggested that at least half the number of the proposed industrial estates should be set up in rural areas. His organisation also advocated that each State should set up a semi-autonomous corporation for the development of industrial estates.

The Chairman of AIMO also suggested that a detailed survey should be undertaken by the Director of Industries of each State of the various large industries in the State in the public and private sectors with a view to determining the items which could be produced during the next five years by the small-scale industries. The possibility of setting up an industrial estate for production of ancillary items by small-scale industries by the side of large-scale units to be set up or already in existence should be examined, he said.

Steel for Small Industries

The Central Small Industries Organisation, in the Ministry of Commerce and Industry, rendered increased assistance to small scale industries in procuring scarce raw materials like steel, non-ferrous metals, some types of chemicals, etc in 1960.

A review of the Organisation's activities for 1960 states that as against the annual steel allocation of 2,75,500 tons during 1959-60, 3,31,712 tons of steel were allocated in 1960-61. The allocation made for 1960-61 is sufficient to meet in full the requirements of the small-scale industries for all categories

(Contd. on page 41)

of steel, except sheets and wires of which shortage exists in the country.

In order to ease the supply position in respect of these categories the import of about 50,000 tons of steel in the form sheets, strips, coiled rolled rods, wire tin plates, etc; is being arranged from rupee-payment countries, through the State Trading Corporation. These will be distributed to the small scale industries through the Directors of Industries in the States. The supplies are expected to be received in India before the middle of 1961.

A total of 15,000 tons of billets has been placed at the disposal of various State Directorates of Industries for rerolling in the small scale sector and subsequent distribution to small industrialists.

Machinery Supply on Hire Purchase

N.S.I.C. Liberalises Terms

The National Small Industries Corporation has further liberalised its terms for the supply of machinery to small-scale industrial units on hire purchase basis.

The Corporation has now reduced the percentage of earnest money to be deposited by the parties who apply for machinery on hire purchase basis. Where the machinery is valued at less than Rs. 50,000, the applicants will be required to pay as earnest money only 10 per cent of the value; Until now, the Corporation had been insisting on 20 per cent earnest money.

For Machines valued above Rs. 50,000, the applicants will have to deposit earnest money at 20 per cent. In this case, however they will be given the choice to pay 5 per cent in cash and furnish bank guarantee for the remaining 15 per cent, encashable at the time of delivery of machines.

(Contd. on page 41)

SMALINDUSTRY

INDUSTRIAL RESEARCH

An Improved Spin-Cooker-Cooler (Pasteurizer) for Processing Canned Acid Foods

Designed at: Central Food Technological Institute, Mysore. Indian Patent No. 69697.

The colour, flavour, texture and vitamin contents of many canned foods are most effectively preserved by high temperature—short time cooking or pasteurization. Commercially this is accomplished through "flash-pasteurization" and "agitating processes". Flash-pasteurizers are, however, suitable only for liquid food products like fruit juices and have not been successful in the efficient processing of semi-fluid or viscous food products like fruit juice concentrates, pulps, pastes, purees, soups, etc., on account of their high viscosity and the presence of disperse particles which result in over-cooking and scorching of the product, with the accompanying undesirable changes in their colour and flavour. Besides, flash pasteurizers cannot be used for the processing of canned fruits.

The need for a suitable, convenient, efficient and yet comparatively inexpensive agitating cooker has been felt by the fruit preservation industry in India. As a result of investigations at the Central Food Technological Research Institute, a batch type agitating cooker (spin-pasteurizer) has been developed. In this cooker, hermetically sealed cans containing acid foods (fruits) rotate axially in steam at atmospheric pressure for an appropriate time, depending upon the nature of product, followed by their spin-cooling under sprays of water within the cooker.

Among others the design has the following salient features:

1. A variable speed drive gives a wider range of axial rotations of cans,

thereby providing facilities for the processing of a greater range of canned acid foods of different viscosities. The equipment is also suitable for the processing of greater range of sizes of cans.

2. The spin-processing times of various fruit products ranges from 1 to 3 minutes as compared to 20 to 30 minutes required in the conventional stationary processing adopted by the industry at present.
3. Heat sensitive fruit products could be sterilized in the larger cans without cooking or loss in flavour.
4. Heat resistant organisms could be destroyed without heat injury to the product.
5. Its cost is only about 25 per cent of that of similar imported equipment.

Up to 500 cans per day have been spin processed over the last two years in a prototype spin pasteurizer. Products which have been spin-processed in this unit include (i) canned fruits, such as, mango slices, pine-apple, orange segments, banana chunks, papaya chunks and tomatoes, (ii) fruit juices and fruit pulps like mangola, mandarin orange juice, pineapple juice, tomato juice and mango pulp, (iii) fruit juice concentrates of mandarin orange, mosambi orange and pineapple and (iv) tomato soup. All these have stood the storage tests for 6-12 months at 30°C.

Because of its versatile characteristics and adaptability to varied ranges of acid food products, the equipment is expected to have considerable scope in the fruit preservation industry. Manufacture of this cooker can be taken up by a workshop having facilities for lathing, welding, drilling, etc.

SMALINDUSTRY

Resin Emulsions from Cashew Nut Shell Liquid

Process developed at: Railway Testing and Research Sub-Centre Chittaranjan
Indian Patent No. 60612.

Resin emulsions are used as film forming materials which dry and set hard after application. Considerable work has been done on emulsions of various types from drying oils as well as natural and synthetic resins. The use of drying oils which form films by oxidation hinders quick drying and impairs their durability. The use of synthetic resin on the other hand calls for plasticizers to reduce the softening point of the polymer particles to a level at which sintering and fusion of particles can occur at atmospheric temperature.

The use of cashew nut shell liquid is free from either of these defects as it does not try by oxidation only.

In view of the advantages offered by cashew nut shell liquid resin emulsions, investigations were carried out by the Railway Testing and Research Subcentre, Chittaranjan. A process has been successfully worked out for making stable emulsions from cashew nut shell liquid-aldehyde condensed resins, their solutions and polymerised cashew nut shell liquid. These are emulsified either with bentonite in conjunction with tannin and formaldehyde under acidic conditions or by dispersion in an acidic aqueous phase containing a cationic surface active agent and an organic liquid binding agent slightly soluble in both phases. The resins can be incorporated with usual driers before emulsification to improve air drying properties. The presence of tannins helps in preventing of corrosion due to the moisture in the emulsion.

These emulsions are free from odour and fire hazards. They give rapid drying films which become water resistant within 24 hours. These are specially suitable for porous and wet surfaces like those of concrete on which

conventional oil paints which react with lime cannot be used. Many synthetic resins, if used as ordinary solvent type lacquers need large amounts of expensive solvent to give a workable consistency. In the case of emulsions, however, the quantity of solvents is limited to that required for obtaining a consistency of emulsification and that too only in the case of high molecular weight resins. The partially condensed cashew nut shell liquid resins do not require even this solvent. These emulsions form suitable media for sealing pastes that require to stand hot riveting as they do not flow under heat.

They can be mixed with pigments and fillers like slate powder, red mud, mica, exfoliated vermiculite, titanium dioxide, red oxide, zinc chromate, etc., depending upon the end use. When pigmented with titanium dioxide or red oxide and necessary tinting agents they can be used for coating cement and brick surfaces. Where extra flexibility is required, the resin can be admixed with bitumen emulsification. The coatings are resistant to alkali and scrubbing when applied on plaster and concrete. This can also be used as a cheap medium for core binding and shell moulding in foundries.

The process has been studied in the laboratory and 2 to 2½ gallon batches of the products have been successfully prepared in connection with small scale service trials. Service trials with emulsions were carried out in connection with water proofing of brick walls and reinforced concrete structures. Observations after 2 years on brick walls and 6 months on concrete structures have shown that their performance is satisfactory. Preliminary trials on wagons with the sealing pastes based on these emulsions have been conducted successfully, and arrangements are being made to carry out large-scale trials on 200 new wagons.

Cashew nut shell liquid which is the main raw material is available in the country. Other raw materials like bentonite and tannins

are also indigenously available. Hexamine, formalin and triethanolamine will have to be imported, but it is understood that factories are being set up to manufacture these in India.

Equipments required are a kettle for preparing resin and an edge runner. Their total cost is expected to be Rs. 25,000/-. Resin emulsions are used as film forming materials which dry and set hard after application. Because of their water resistant properties, these can also be used for waterproofing of brick walls and reinforced concrete structures. Exact demand for these emulsions is not known but railways are expected to consume appreciable quantities.

Dispersion Resins from Cashew Nut Shell Liquid

Process Developed at
Railway testing and research sub-centre,
Chittaranjan, Indian Patent No. 60613.

Dispersion resins differ from conventional type resins in that they are more or less completely reacted resin oil condensates dispersed in solvents. They are usually a combination of plasticisers, generally a drying oil and phenol aldehyde polymers, which have been condensed almost to B or isogel stage and then mechanically dispersed in solvents.

Cashew nut shell liquid possesses special advantages over the conventional types of phenols because of the chemically combined long unsaturated side chain which serves the purpose of both the plasticiser and drying oil in the conventional type phenolic dispersion. In spite of these advantages, no attempt has so far been made to obtain isogel stage dispersion resins from it.

A process has been developed according to which quick drying isogel stage dispersion resins could be easily obtained from cashew nut shell liquid and heat polymerised cashew nut shell liquid can be condensed with formalin or a mixture of hexamine and formalin,

under heat at low temperatures or heat polymerised cashew nut shell liquid can be condensed with formalin or a mixture of hexamine and formalin, under heat at low temperatures or heat polymerised cashew nut shell liquid can be condensed with aldehyde at room temperature under alkaline condition making the process simple and economical. Mixtures of formalin and hexamine react quicker than either formalin or hexamine alone. The process can be conveniently and easily carried out under atmospheric pressure without any complicated resin making plant.

These dispersion resins in the presence of usual driers dissolved in solvents give coatings which air dry within four hours and form suitable medium for quick drying primers, enamels and zinc rich paints. The dispersion resins obtained from polymerised cashew nut shell liquid when mixed with fillers like saw dust, mica, sand and the like can be moulded under heat and pressure. These are also compatible with drying oils with which they can be processed under heat to give suitable medium for making paints that possess improved resistance to water, chemicals and heat. The presence of a long side chain adds to the flexibility of the coatings.

The resins have been successfully made on a semi-pilot plant scale in batches of four gallons. In connection with service trials on coaches, wagons, bridges and locomotives, different types of paints based on dispersion resins have been made with equipment available at the research centre. Large quantities have also been manufactured by paint firms under supervision of the inventors.

Products based on dispersion resins have been tried on coaches, wagons, bridges, locos and track in corrosive sections. These were painted at different times during the past two years and have been found satisfactory so far. The zinc chromate red oxide primer and zinc chromate red-mud primer have been particularly found to be highly satisfactory,

Cashew nut shell liquid which is the main raw material is available in the country and the quality should conform to the Irvington Varnish Insulator Company Specification. During the polymerisation test, as per this specification, the oil may become more and more viscous and suddenly get or set to a stiff pasty rubbery mass at the polymerisation point depending on the type of oil. For the preparation of dispersion resin, the former type of oil should be used. Other raw materials, hexamine and formalin at present have to be imported; it is however, understood that plants are being installed in the country for manufacturing these which are expected to be commissioned in the near future. The equipment for preparing the resin comprises a resin cum varnish making kettle, trolley for carrying the kettle, furnace, laboratory equipment etc. The total cost is expected to be Rs. 16,000/-.

The dispersion resins in presence of solvents form film forming materials, which dry

very quickly and set hard after application. The final conversion of these to the infusible and insoluble stage is rapid since the reaction is well under way at the isogel stage. Their rapid drying and solvent resistance make them suitable for a great number of industrial uses, such as flat finishes, non-penetrating coatings and quick drying primers. They can be blended with other drying oils to give fast drying low cost enamel medium with improved resistance to heat, chemicals and water. The exact demand of paints based on these resins is not known, but Railways are expected to consume large amounts, the expected annual requirement of the primer alone being about a lac of gallons for wagons only.

Parties interested in taking up the commercial development of the above patents are invited to correspond with:

Secretary, National Research Development Corporation of India, Mandhi House, Lytton Road. New Delhi-1.

The Small Scale Industries Association

44, Mount Road, Guindy, Madras-15

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This is to intimate the members of the Association and our well-wishers that we are having our Technical Library and Reading Room at our premises and all are advised to make the best use of the same. The Library is equipped with a good number of useful books and magazines on technological subjects.

We are also glad to announce that Local Enquiry Offices of the Association are proposed to be opened at a few centres to serve the public and the correct addresses of the same will be communicated to members very soon.

V. V. NATHAN
Hony. General Secretary.

FOREIGN EXCHANGE PROBLEM

By S. B. TODI

Member, The A.I.M.O.

Our country is short of Foreign Exchange and it will be quite correct to say that the Foreign Exchange is the costliest and most scarce item in India to-day. Whatever you may require, whether capital goods, raw material, consumer goods or luxury items, even for fulfilling our 5 year plans, this is required.

Now-a-days whenever a new company is floated, the company's shares shoot up immediately and are quoted at a premium. This is because of this precious exchange, which has been allotted to them. To take an instance, a company is given a licence to manufacture Transister Radio sets, the landed cost of which is Rs 120/- while the market price is Rs. 500/- due to import restrictions. The company assembling these Radio sets gets Import Licence for parts and radio costs Rs. 120/- per set but they keep the sale price at Rs. 500/-.

We can take another example of Hack-saw Blades. Manufacturers get steel at imported price and sell the Blades at an inflated price. Cable manufacturers, tinned and bare copper wire manufacturers or for that purpose any other manufacturers whatever actual User's quota they may get, but for costing purposes, they all calculate the market selling price of that item and then fix selling price. Hence, the simple fact remains that the foreign exchange is an item by which one multiplies the capital, to the extent it is allotted. These are the reasons of the foreign exchange being scarce and more and more in demand.

Similar is the case with so called Established Importers. Though they are not allowed to sell the Import Licence but even the most honest businessman, imports the material, sells it market price and makes

money to the extent of 100 to 1000% depending on the nature of the item.

The so-called Rupee Currency area and Barter System in Import, Export, are also the means for minting money at the cost of the nation. The party who concludes or gets special import licence under these arrangements, also imports goods and sells at market price. Whosoever is able to convince the bosses of State Trading Corporation and is able to fulfil their conditions of sole agency, like similar requirements, become rich overnight.

Now, let us see wherefrom this mostly wanted foreign exchange comes from. Undoubtedly this is earned by the hard-working exporters themselves. The so-called Established Importers who take the cream out of Foreign Exchange, do not contribute a single percentage.

This whole outlook in the system of Import and Export requires a complete change. In the present situation we have to think in terms of who can deliver the goods, rather than, our present working of that we should give foreign exchange to such people, who in the past had imported goods and due to only that reason, they are entitled for that much quota, without any other merits, whatsoever. Therefore, this is quite logical that exporters be given a certain percentage of their export earnings, for retention for their imports.

For the best advantage to the country as a whole, the entire allotment may be given to exporters for import of non-restricted items and these licences may be made transferable. They may be allowed a part of their Export Earnings and balance will automatically be a gain to the Government, thus removing the big gap of deficit.

Role of Foreign Private Investment & Fields For Development

The Government of India have been engaged in a review of the procedures relating to the applications that need to be made by parties interested in establishing industrial units in the country. Following the review, several of these procedures have been streamlined and simplified.

It has been felt that, in order to avoid delay resulting from separate and successive consideration by different authorities of various aspects of major Third Plan projects in the private sector, such as Industries' Act licensing, capital issues, terms of foreign

Actual Users and Established Importers or anybody else for that matter may be allowed to purchase these exchange vouchers and then Import whatever capital goods are required by them. The following advantages are likely to occur by introducing this scheme.

1. Foreign Exchange problem will be solved as the total licence granted will be a problem of Export Earnings.
2. Corruption in Government departments will be reduced as question of exports, will be the main factor for granting import licence.
3. Actual Users will get the raw material in quantity they want, subject to their capacity to sell.
4. Misuse of Import licence by public will be automatically stopped.
5. Export Earning will be more, as Exporters and manufacturers will be able to sell indigenous products, at subsidised prices, due to their having earned profits in Imports with no extra burden on the limited resources of Government.

This seems to be the only practical way of solving our Foreign Exchange crisis and exporting more and more.

collaboration, import licensing for capital goods, etc., it would be desirable to have a unified agency in position to undertake co-ordinated consideration of all aspects at the same time, in consultation with the authorities concerned. A senior officer has accordingly been placed on special duty in the Commerce and Industry Ministry for the purpose.

Some of the important Third Plan projects will involve foreign collaboration or foreign participation in capital. The need to give prospective foreign investors interested in participating in important Third Plan schemes prompt and reliable guidance is obvious. Such guidance will now be available from the officer on special duty and his staff, who will primarily be responsible for speedily processing important collaboration projects, involving large foreign investment or technical knowhow and skills of special significance.

An illustrative list of industries, in which foreign capital would ordinarily be welcome, has also been drawn up. This list takes into account the gaps in capacity, which exist presently in relation to Plan targets. The list, which is only illustrative, will be subject to revision from time to time.

The industries listed are : iron and steel structurals; iron and steel castings and forgings; iron and steel pipes; special steels; non-ferrous metals and alloys; boilers and steam generating plants; equipment for transmission and distribution of electricity; furnaces; marine diesel engines; industrial machinery, including major items of specialised equipment used in specific industries, and general items of machinery used in several industries such as equipment required for various unit processes; ball, roller and taper bearings; speed reduction units; machine tools; tractors, earth-moving and construction machinery; plastics; industrial and scientific instruments; fertilizers; organic chemicals; fine chemicals

and intermediates; industrial explosives; industrial gases; agricultural chemicals such as insecticides; dyestuffs and drugs, including the production of basic intermediates; newsprint and pulp.

This list, as has been emphasised, is more illustrative rather than exhaustive; collaboration schemes falling outside this list will also be considered on merits.

The fields in which foreign capital is ordinarily not needed have also been listed. This list includes banking, insurance, trading and commercial activities and plantations. Private capital, foreign or Indian, as a rule, is not being allowed in the industries listed in Schedule 'A' of the Industrial Policy Resolution of 1956. In special circumstances however, exceptions may be made where, after full consideration, this is found to be in the public interest.

Basically, the policy regarding foreign investments would be to attract private foreign capital in those fields, in which the country needs to develop in pursuance of the Plan targets. While Government have been generally encouraging the investment of private foreign capital in the country, it is to be recognised that this has necessarily to be on a selective basis.

If any project is approved for development in the private sector and, if imported plant and machinery are required, foreign capital investment would ordinarily be welcome as a form of financing the project.

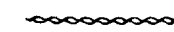
While Indian majority holding would be generally welcome, the ratio of foreign capital to Indian capital in joint venture enterprises,

the extent of foreign share holding that is to be permitted in any case etc. have necessarily to be judged on merits. This judgement is made after evaluating the technical skills offered and after weighing the requirements of foreign exchange for the purchase of equipment from abroad and the desire of Indian collaborators to play an effective part in the company's management.

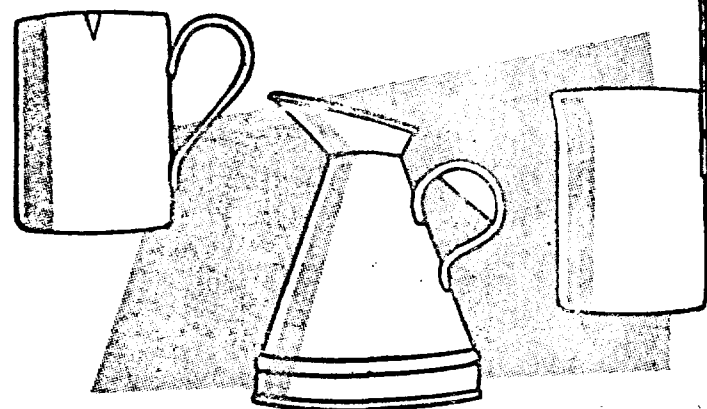
Importance is also attached to the arrangements proposed for the training of Indian technicians and executives in all aspects of production and management. Where a phased programme of manufacture is proposed, emphasis is placed on the rapid build-up of indigenous production. Long-term assembling and formulations and productions based on imported intermediate products have to be avoided.

Special encouragement is given to schemes which involve expansion of exports on an economic basis with or without the assistance of the foreign collaborators' overseas marketing organisations.

Foreign investors have found their collaboration arrangements of considerable economic value from the point of view of sound long-term investments. A happy corollary to the situation has been that, though existing regulations do not impose any restrictions on the repatriation of foreign capital investments in India, including accumulated profits and appreciated value of assets, subject to the payment of all taxes due, foreign investors have found it to their advantage to retain their investments in the country undisturbed and even pool back into their enterprises a substantial proportion of their remittable profits and dividends.



on to METRIC CAPACITY MEASURES



From APRIL 1, 1961, the use of Metric Capacity Measures is compulsory in the Union Territory of Delhi.

In selected areas in the rest of the country, Metric Capacity Measures have been introduced with option to use old measures for one year.

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Licensing of Industries

The Govt. of India has revised the lists of industries in respect of which applications for licences under the Industries (Development and Regulation) Act would ordinarily be approved or rejected without reference to the Licensing Committee. The revised lists will be in force upto September 30, 1961 and will be subject to revision every six months.

The list of industries, where applications will ordinarily be approved, will now consist of 23 engineering industries and 21 non-engineering industries. The engineering industries are:

Boilers and steam generating plant i.e. all items falling under serial No. 3 of the First Schedule to the Industries (Development and Regulation) Act; Conveyors chain, belt and screws; Constructions machinery. Electrical switch gear; Fabricated structurals (Heavy); Garage equipment and garage tools; Hosiery and knitting machinery; Industrial machinery i.e. all items falling under serial No. 8 (A to C) of the First Schedule to the Industries (Development and Regulation) Act, except air compressors; Instruments of all types such as meters, measuring instruments, drawing and surveying instruments, scientific and optical instruments Ice making machinery; Machine tools; Malleable Casting and C. I. Castings; Machinery for milk and dairy industry; Precision industrial instruments i.e. all items falling under item No. 13 & 16 of the First Schedule to the Industries (Development and Regulation) Act; Radio components (excluding valves and transistors); Small Tools such as cutters, cutting tools; Sluice gates; Steel forgings Structural Ropeways; Twist drills; Transmission towers; Tungsten Carbides brazing of tips; and Winches.

The non-engineering industries, in respect of which licences will normally be issued, are:

Abrasives grains; Bicycle tyres and tubes; Basic refractories; Camel Back (tyre retreading material); Crystal glass; Collieries in the public sector for production of coal; Finished Leathers; Glass Shells; Glass lined equipment; Hollow Building blocks; Laboratory Glassware; Plate Glass; Rubber/Canvas Footwear; Rubber Prophylactics; Sintered magnesite; Special firebricks for steel and glass industry; Solvent extraction from cottonseed and cake, provided the State Governments concerned certify the availability of oil seeds and cakes in the area; S. W. Pipes; Table and pressedware of heat resisting glass; Technical Gelatine, Edible Gelatine, Photographic Gelatine; and V and Fan Belts.

The Govt. have also revised the list of industries where applications for licences under the Industries (Development and Regulation) Act would ordinarily be rejected without reference to the Licensing Committee. These number in all 85 industries. The engineering industries which number 40 are:

A. C. S R. and all aluminium compressors, Automobile instruments; Aluminium foils; Bare copper conductors; Bearings—thin walled; Bifurcated rivets; Bicycle and bicycle parts and accessories other than rims, saddles B.B. fittings, forkhead fittings and free wheel. Circles, sheets, steel Conduit pipes; Copper wire for non-electrical purposes; Collapsible tubes and rigid containers; Domestic Refrigerators; Drums and Barrels and tin containers excepting those where the manufacture is for making the applicant's own requirements; Expanded metal; Earth moving machines; Flash light and torch containers; Ferro-manganese. General Lighting Lamps, Hurricane Lanterns (except on a small-scale, Ordinary type wood screws as indicated in para 1/54 (b) of I.T.C. Schedule; Paper cones and tubing bobbins; Piston Assemblies; Radio Receivers except components; Room Air-conditioners,

SMALINDUSTRY

Road Rollers except expansions; Railway wagons; Steel doors and windows (unless made from indigenous steel); Stranded wire (unless drawn from wire manufactured by applicant); Wire nails (unless from wire manufactured by applicant; Zinc Strips; and Radiators.

The non-engineering industries, for which no licences will be issued will be:

Asbestos Cement sheets and ordinary pipes, i.e. non-pressure pipes; Activated bleaching; Acetic acid except for captive consumption; Antibiotics viz. Penicillin, Streptomycin; Tetracyclines; Bismuth salts; Chloral hydrate; Calcium carbide; Calcium carbonate (precipitated); Cigarettes; Cotton mesh fabrics; Dyestuffs based on imported intermediates, Derivatives of 8-Hydroxyguanine viz. 8-7-Di-Iodo and 5-Chloro, 7-Iodo; East India Tanned (Semi-tanned) kips and skins; Fireworks and paper caps, Glass and mineral wool; Hollow-ware, including table and pressed-ware made on semi-automatic machines; Hydrogen peroxide; Liquid glucose; Match industry; Myrobalan extract; Oxalic, citraic and formic acids; Photographic raw film and paper; Potassium chlorate; Phenol formaldehyde moulding powder; Soaps; Superphosphate; Sulpha drugs,

Synthetic hormones, Surgeon's requisites; viz. catgut sutures, adhesive tapes, plaster of Paris bandages, Salicylic acid, Sodium aluminate, Sheet glass including wire and figured glass Textiles made of artificial silk, Urea formaldehyde resins; Urea formaldehyde moulding powder; Vegetable Oils (other than cottonseed oils); Vitamin 'A'; Vitamin 'C'; Vacuum brake hoses; Vanaspati; Waterproof fabrics and Zinc oxide.

Applications for diversion of existing cotton spindles and looms to work on art silk will be ordinarily rejected without reference to the Licensing Committee. Similarly, applications for licences to carry on the business of existing undertakings for the manufacture of copper; and brass, sheets, circles and rods from units which were not in existence on October 1, 1953, or which had not taken effective steps to set up their undertakings on or before that date, will not be considered. In the case of copper and brass utensils, applications for licences for taking over the business of existing undertakings from units which had not been in existence on March 1, 1957, or which had not taken effective steps to set up their undertakings before that date, will also ordinarily be rejected without reference to the Licensing Committee,

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SMALINDUSTRY

RURAL INDUSTRIES IN BRITAIN

By Luscombe Whyte

It seems odd to think of the highly technical and comparatively new science of "work study" being applied to a small country workshop employing only a dozen skilled craftsmen of the old school. For "work study"—with its trained observers noting and analysing every detail of production, the stages of every process, every movement of a worker's hands—appear to be more suited to the large factory in a city.

But, during 1960, dozens of small rural workshops in Britain have benefited by the visits of work study experts and by their subsequent advice. Modern production methods have been taken to the villages to help traditional "hand made" country workmanship to sell successfully in a competitive market. Indeed, by eliminating wasteful working, it is giving more scope and time for the art and skill in a traditional craftsman to express themselves.

This service to Britain's 14,000 or more small country enterprises—turning out every thing from fine wrought ironwork, furniture and saddlery, leatherwork and handwoven fabrics to engineering products of every kind—is the latest enterprise of the Rural Industries Bureau.

Many Technical Experts

For years the Bureau—its London offices have a rural setting as they look out over Wimbledon Common—has aided without charge Britain's rural output, whether from one-man workshops or "factories" employing up to 20 skilled journeymen. Its many technical, advisory and training experts pay thousands of visits every year, its experimental workshop tests machines, tools and methods, and devises new ones. Financed by the

United Kingdom Government, its annual expenditure is about £150,000 (Rs. 20,00,000).

How does rural work study function? The first step is a preliminary survey visit by an Officer to the "factory" concerned, at which the rough prospects of improvement are assessed and a date is fixed for the actual study. This may occupy one or several officers and the visit may last from a day to week, depending on the complexity of the job. Minutely detailed notes are made of every single process of manufacture. The position of every machine and appliance is measured and mapped; supply methods for raw material and its storage are noted, and the flow of finished goods and their packing and dispatch.

The distance walked by each worker during each phase of manufacture is measured and the number of trips counted. The exact movement of his hands and body during any one job are recorded in writing, sketches or even film. A great mass of relevant details is compiled, together with a general survey of methods used. Workers' comments on conditions and their criticisms and suggestions receive particular attention.

Tests with Models

This searching "dossier" is returned to the Bureau's headquarters, where an intensive study—possibly with the aid of scale models—is carried out. The existing lay-outs and methods and movements are analysed; faults resulting in time-wasting, unnecessary movement, worker-fatigue and general inefficiency are pieced together to give an exact picture of waste or delay.

The next step is to build up a scheme of detailed suggestions for improvement in

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INDUSTRIAL MACHINES ON INSTALMENT PAYMENT BASIS

We have the pleasure to announce two new schemes for supply of machines on Hire Purchase basis introduced specially to utilise the Credit of \$10 million from the Development Loan Fund of the United States of America recently made available to the Corporation for the import of machines.

The important features of these schemes are:—

	<i>Bank Guarantee Scheme.</i>	<i>Special Hire Purchase Scheme.</i>
Earnest Money	20% (For the balance the applicant will give Bank Gurantee)	40% (In two instalments.)
Period of Repayment for balance	4 equal annual instalments.	5 equal annual instalments.

These schemes are in addition to the one already in operation. According to the normal Hire Purchase Scheme, earnest money is only 10% is required to be paid for machinery valued up to Rs. 50,000/- and 20% for machinery above this limit. The value is required is to be repaid in 13 half-yearly instalments.

The machines are supplied to small industries viz., those with the capital investment in land equipment not exceeding Rs. 5 lakhs.

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every smallest aspect of the job, and this is finally put into what may be a long three-part report. This study task is so through that one survey may occupy the headquarters' planners for two to three weeks. The report next goes to the workshop concerned and, if accepted, expert help is later given in carrying out any necessary alterations or in training for new techniques.

Encouraging Results

Already encouraging results are reported, with small firms increasing efficiency— with lower costs and higher output—by up to 50 per cent. One striking case concerned a business forced to move into new premises one-third the area of its previous one. After a long analysis, the section produced ideas for drastic replanning of storage facilities, the flow of work, siting of machines and movements of workers. As a result, output was increased by cutting down needless walking and other effort by the operatives.

The work study section co-operates closely with others in the Bureau, which often suggests suitable "subjects". They include the business management service, which advises on and trains in modern methods of costing, accounting recording and generally economic production. Since their tasks tie up so closely, the service's six advisory Accountants, together with work study officers, recently took a thorough "recitation course" on the subject in a work study training establishment.—

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Windmills for Madras

The Wind Power Wing of the Council of Scientific and Industrial Research, Government of India, have decided to install 200 windmills in the country during the next two years, for lifting water for small-scale irrigation purposes and domestic water supply in rural areas in Saurashtra, Madras and Gujerat.

Prof. M. S. Thacker, Secretary, Union Ministry of Scientific Research and Chairman

of the Council of Scientific and Industrial Research, said that the wind power project staff of the Council had during the past two years been engaged in the development of two types of low-cost windmills suitable for lifting water for small scale irrigation purposes and domestic water supply. The designing and construction of a number of proto-types had been completed and as a result of experiments carried out during the last two years, these proto-types, specially designed for moderate and low wind velocities had been found to work very satisfactorily. These windmills were made of indigenous materials which were easily available and simple to build and operate. The cost was a third of imported windmills of equivalent power. The mass production of these windmills, Prof. Thacker said, could confer great benefits to rural areas. Their principal use would be for pumping water, but by special adaptation they could also be used for corn grinding and for generating electricity on a small scale.

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Design, Production Course Veledictory Function

Under the auspices of the Andhra Pradesh Productivity Council, a training programme in tool design and production engineering was conducted in the Institution of Engineers (India) building at Hyderabad for a period of 12 weeks. Fifteen technical personnel from various industries and Government undertakings participated in the course. Mr. Robert Andrews Jackson, TCM specialist, attached to National Productivity Council, conducted the course.

On the completion of the course a pleasant function was arranged in the premises of the Institution to award certificates to the participants. The minister for Small Scale Industries, Mr. Konda Laxman Bapuji, presided.

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FOREIGN EXCHANGE EARNERS

Growing Importance of Engineering Goods

Products of India's growing engineering industries—from metalware and household utility articles to complicated electrical goods, machinery items and transport equipment—are steadily pushing themselves up in the order of the important foreign exchange earners.

What is more, the efforts made so far give confidence that there is substantial scope for placing India's engineering products on the world markets in large numbers.

In 1960, engineering exports are estimated to have earned over Rs. 9 crores, an increase of Rs. 3 crores, over the previous year. Until a few years ago, these exports confined to a steady, limited range of goods sent to traditional markets, earned between Rs. 3 to 4 crores annually.

Fresh Fields

Now only newer items have been added to the list but fresh markets have been developed. Indian sewing machines, for many years the favourite of the house-wife in the neighbouring south and west Asian countries, have in the last few years been exported to the United States and the United Kingdom and other European countries.

Amid a large range of more than 100 different items of export, those which predominate are metal artware (exports worth Rs. 1.9 crores in 1960), electric fans (nearly Rs. 90 lakhs), sewing machines (Rs. 55 lakhs), aluminium utensils (Rs. 37 lakhs), steel trunks (Rs. 28 lakhs), diesel engines (Rs. 22 lakhs, apart from nearly Re. 1 crore worth of unmanufactured steel products).

South East and West Asia together, with an offtake of nearly Rs. 4.3 crores worth of products, come first in a region-wise breakdown of the buyers of our engineering goods.

European countries, which brought engineering goods worth Rs. 17 crores, come next followed by North and Central America (Rs. 1.4 crores) and Africa (Rs. 1.3 crores).

The United States is the largest single buyer, exports of engineering goods to that country being worth Rs. 1.3 crores in 1960. Next with Rs. 70 lakhs worth of purchases followed by Ceylon (Rs. 65 lakhs), the United Arab Republic (Rs. 48 lakhs), and Kuwait and Burma nearly Rs. 45 lakhs each.

Kenya, Malaya, Pakistan, Singapore, Aden, Saudi Arabia, the Netherlands and Ireland are the other large scale buyers of engineering goods from India.

The increase in exports in 1960 was shared in small or large measure by all the geographical regions but there was a spectacular rise in the exports to Europe—from Rs. 32 lakhs to about Rs. 1.7 crores.

Market Studies

The possibilities of increasing exports of engineering goods to European countries is to be explored on the spot by a delegation of exporters, sponsored by the Engineering Export Promotion Council, one of the 11 set up by the Government of India in co-operation with the trade and industry, to study market trends abroad, keep exporters and producers in India informed of these trends, create greater export awareness among the industrialists at home and generally to help smoothen out the difficulties and obstacles in the way of higher export earnings.

Delegations to several other parts of the world have been sent by this Council in previous years and information collected and contacts built up have proved of considerable value.

The information of Export Promotion Councils is only one of the several measures

adopted in the recent years. It has been increasingly stressed during those years that from a short-term as well as a long-term point of view export earnings have to be stepped up steadily and rapidly enough so that at no distant date the import requirements are fully paid for by export earnings.

Need to explore new markets

For that purpose exports have to be diversified, new markets have to be explored and greater surpluses have to be found for export. The exporters of engineering goods have been provided a number of incentives, including rebate of excise duties, special quotas of scarce raw materials and railway freight concessions.

The increasing availability of iron and steel and the expansion of machine making industries combined with the experience gained exporters and the promotional agencies in the past few years, give ground for confidence that engineering goods will be able to make a still greater contribution to our foreign exchange earnings.

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Industries in Britain

Great Demand for Skilled Workers

The accent on youth in Britain's industry is now strong. The emphasis comes from the ambition, not yet fully attained, to provide the country with all the skill it needs.

Though the number of youngsters in training is growing, industry's demand for the services of skilled workers has been outpacing the supply. In the motor-car industry, for instance, there are still vacancies for the highly skilled. And the prospect in industry generally for as far ahead as the expert forecasters look, is that the demand for skill will go on mounting.

So Government departments, unions, employers and educationalists are making renewed efforts to bridge the supply-and-demand gap. The activities have been a

stimulus by the crusading Zeal of the Duke of Edinburgh, who brought back from Australia the idea of a technical training campaign week and has given it a Commonwealth-wide angle. The end of May and the beginning of June 1961 had been chosen for this "week"—organised in Britain by a committee on which the unions are represented.

New Technical Courses

But this is not the beginning of this year's plans and programmes for training the young. The Ministry of Education came out in January with a White Paper setting out proposals for a major reconstruction of the technical college courses for technicians, craftsmen and the grade of workers known as operatives, who, though skilled, do not normally need a fullscale apprenticeship.

Many of the proposals are in line with what trade unionists have been advocating—and the Trades Union Congress was one of the bodies consulted before the outline plan was issued. One of its most attractive features is that it will seek to eliminate the present awkward break of about a year between the ending of ordinary school life and the beginning of technical college training. In that year—and sometimes it stretches to two years—the young worker is often reliant mainly on evening schools for his technical education.

Even in later years, the trainee and apprentice frequently have to put in a good deal of evening study after their day's work in the factory. The intention is to scale this down by extending day-time training in working time, the first aim being to ensure that nobody is relying entirely on evening study.

Four main objects underlie the proposed changes. They are intended to broaden education and make the last years at school and the first years at work one continuous period of education; to bring the system more closely into line with the needs of industry; to offer a bigger variety of courses to suit the aptitudes and careers of students; and to reduce the wastage due to students failing to complete their courses.

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Indian Standards Specifications on Electroplating

The Indian Standards Institution has published the following Indian Standards Specifications regarding electroplating :

(i) IS: 1067-1958 — Commercial Silver-plating.

(ii) IS: 1063-1958 — Copper, Nickel and Chromium, Electroplated Coatings.

The above standard specifications will be very much beneficial to the small scale electroplating industry. Their implementation in the production schedule of small scale electroplaters will help in improving the quality of their electroplating and also the consumer acceptance of the Standardised product would be more rapid. All small scale electroplaters who are interested in standardising their electroplating according to the IS standards mentioned above, should contact the Director, Small Industries Service Institute, in their respective regions for technical advice.

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Training of Technician Compulsion To Be Resorted To

The training of technicians and other skilled personnel by industrial units will be made compulsory in India. A Bill with this objective will be introduced in Parliament in a month.

The Union Minister for Industry, Mr. Manubhai Shah, disclosing this in Bombay, said that the aim of the legislation was to make India self-sufficient in Technical know-how. Industry should take an interest in this matter and contribute to the success of the training programme, he added.

Mr. Shah pressed into service the first Indian-produced let drying and stentering machine at Sayaji Mills No. 2 at Lower Patel.

The machine was manufactured by Famater India Private Limited.

The Bill envisaged the training of a certain number of men in various specialised technical jobs by industrial establishments, Indians, he said, had proved themselves as good as any other in the technological field and it was imperative that side by side with the growth of industry and in conditions of a self-generating economy, a higher degree of self-sufficiency in skilled technical personnel was attained.

Tempo of Production

Mr. Shah emphasised the need for increasing the tempo of production of machinery in the country and of making use of as many indigenously made components as possible. In this context, he gave the country a new slogan: "Build machinery to build India." This slogan, he said, should be widely popularised.

He said that the cotton textile industry, the second largest in the world, had taken great strides since independence. There were a number of mills with obsolete machinery which ought to be replaced. In the programme of modernisation, expansion and rehabilitation of the textile industry, the "massive co-operation" of Industry, labour and the Government was necessary.

Production of Machine Tools

Indian Machine Tool Manufacturers' Association report that the total approximate production of various machine tools by their 19 leading member-firms during the month of February, 1961:

Description	Quantity Nos.	Value (In thousand Rs.)
Lathes	211	29.05
Milling machine	40	20.00
Radial drilling		

machines	25	10,00
Drilling machines	125	2,95
Eccentric Presses	3	52
Slotting machines	3	46
Press brake	1	45
Hacksaw machines	11	36
Shapping machines	5	30
Plate bending machines	2	31
Wire drawing machines	2	27
Plate bending roll with		
motor	1	10
Circular saw benches	5	2
Abrasive wheel cutting-		
off M/c.	1	2
Grinding machine	1	1
Regulators	1,216	1,90
Blowpipes	622	1,46
Lathe Chucks	565	1,48
Drill Chucks	267	12
	3,106	69,84

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Small Industries Assn. Bombay

Shri Mohan H. Sahani was elected President of the Association of Small Industrialists, at its first annual general meeting held in March.

Shri Mohammed Ally Aziz was elected General Secretary and Shri H.T. Khorakiwalla treasurer. Eight other members were elected to the executive committee of the Association.

The aim of the Association is to promote and assist the development of small industries and its industrialists.

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Financial aid to Small Industries Opposition Attacks Alleged Malpractice

Mr. Jyoti Basu, the Opposition Leader, vigorously attacked the West Bengal Government in the State Assembly on Tuesday for alleged malpractice in giving financial assistance to small-scale industries. He substantiated his statements by quoting from the audit report of 1960.

Mr. Basu got the opportunity for his attack during the discussion on the Bengal State Aid to industries (Amendment) Bill,

which was passed. According to the audit report, he said, loans had been given to five firms which had never been in existence and three others which had lacked the capacity to repay them. He was doubtful about the basis on which firms were selected for granting loans. He suggested reconstitution of the Board of Industries with representatives from the Opposition in the Assembly.

Dr. Roy, who piloted the Bill, strongly deprecated the "suspicious" attitude of Mr. Basu. The Industries Board could not function if its members had suspicious minds. The Government had only one representative and four nominated members on the board. The Opposition members forgot that beyond the party groupings there was a vast majority of people who had nothing to do with the Congress and the Communist Party. "We need not be so self-conscious of the fact that we are the only custodians who can stop corruption." The board was fairly constituted. He gave a list of names to argue that most of those who had received loans were neither Congress members nor supporters of the party. During the last five years, 9,879 persons had received loans amounting to over Rs. 52 lakhs. The terms for granting loans had also been liberalized. It was no longer necessary to consult even the Finance Department about granting loans up to Rs. 50,000. He assured Mr. Basu that he would give a written reply to his allegations as quoted from the audit report.

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New Laboratory In Poona Industrial Research

A new industrial research laboratory set up by the State Government under the Directorate of Industries to help solve the production problems of various types of industries in the region was declared open by the Vice Chancellor of Poona University, Prof D. G. Karve.

Speaking on the occasion, Prof. Karve recalled the Maharashtra Government's efforts to narrow, if not altogether eliminate class

differences between the educated and the uneducated developed and undeveloped regions, agricultural and industrial societies, and between cities and villages, by building up what he called an agro industrial society in the State.

Earlier, the Deputy Minister for Planning Mr. G. D. Patil, said that the Government would always be willing to help and encourage research to assist industries and their growth.

Small Industries Corp. For Gujarat

The Government of Gujarat will shortly set up a small industries corporation to provide facilities and incentives to small industries.

The corporation's field of activity would include procurement of machinery, guidance for financial assistance and ensuring adequate and timely supplies of raw materials. Gujarat would be the second State—the first being Uttar Pradesh—to set up such a corporation to assist the growth of small industries.

Small Industries Close For Lack Of Steel

Madras State has been given a special allotment of 3,000 tons of steel and 1,000 tons of pig iron, said the Industries Minister, Mr. R. Venkataraman, in the Council.

He told Mr. Mohamed Raza Khan, that iron and steel allotments were made to the State by the Centre for each half-year, April to September and October-March and not for particular months.

Under the non-agricultural quota, 711 tons of standard steel had been received in Madras during November last and another 711 tons of it in December. Surplus allotments were 224 tons in November and 204 tons in December and scrap received 163 tons in November and 503 tons in December.

On being told that certain small industries had stopped production in Madras on account of non-receipt of steel, the Minister conceded that the receipts in Madras were

small in relation to the needs. But the question was one not of allotment but of actual receipts. There had been considerable delay in getting these allotments from Calcutta. Madras had taken up the matter strongly with the Steel Controller and a special allotment of 3,000 tons of steel and of 1,000 tons of pig iron had been made to the State.

Refrigeration Industry Minister Assures Aid

The Madras Government will be sympathetic and helpful to you for any industry you start"—this assurance was given by Mr. R. Venkataraman, Industries Minister, to the Refrigeration and Air-conditioning Trade Association.

Mr. Venkataraman reiterated his appeal to the businessmen of Madras to start co-operative cold storage godowns in important towns like Madurai, Coimbatore, etc, so that a good amount of wastage in food products could be avoided. He assured help, including financial aid, to those who came forward to start cold storage manufacturing plants.

He sympathised with them in view of the recent increase in the excise duty on refrigeration and air-conditioning plants but advised them to educate the people with regard to the importance of this industry and thus make their voices heard.

The Madras Government, he said proposed to air condition all hospitals in the State and the installation of plant in the general hospital had already started.

He called upon industrialists to conduct research in refrigeration and air-conditioning to suit the conditions of our country which, he said, could go a long way to cut down cost.

Machine Tool Plant In Howrah Indo-Jap Venture

The Government of Japan has granted Rs. 50 lakhs and the Government of India, Rs. 70 lakhs, towards the Indo-Jap Prototype

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Rail Equipment Price Preference For Small Industry

The thirteenth periodical meeting of the Regional Railway Equipment Advisory Committee was held in Bombay, under the chairmanship of Mr. D. R. Khanna, General Manager of the Central Railway.

Representatives of engineering associations, National Small Industries Corporation, Directors of Small Industries Service Institutes and Director of industries of various State Governments and Central and Western Railway officials were present.

The Committee reviewed the progress made by the administration in the matter of developing indigenous capacity for gauge glasses, asbestos tape, etc. which are at present imported.

The Chairman said that registered small-scale industries, recognised by the National Small Industries Corporation, would be granted a price preference up to a maximum of 15

per cent. in the matter of supply of railway equipment and stores.

Supplying Plant For Basic Industries British Firm Registers Branch In India

Sir John Wrightson, Chairman of Head Wrightson and Co, Ltd., who toured India, told that a new Company, Head Writson India Limited had been registered to act as a contracting Company for the supply as far as possible from Indian sources, of various types of plant to the designs of the Parent Company.

He stated that the fullest use would be made by the new Company of the rapidly growing manufacturing facilities in India, for the class of work concerned, both in the public and private sector.

Sir John said that the Company's intention was to develop the Indian industries with

(Machine Tool) project, started in Howrah, Dr. B. C. Roy West Bengal's Chief Minister told the State Legislative Council

Dr. Roy, who was replying to a brief debate on supplementary estimates for the year 1960-61, referred to an earlier demand of a statement about the Chief Minister's visit sometime ago to Japan and Switzerland and efforts made by the Government for developing a link between big and cottage industries.

Dr. Roy said that the State Government had given land and other facilities for the purpose of locating the project.

He expressed the view that the cottage industries should be developed properly along with the big ones.

Dr. Roy said there were about 70 different schemes under Cottage Industry Development

Plan. Their committed expenditure, for the year, amounted to Rs. 50,46,000.

Industrial Estate In Every Taluk H.Q.

Mr. R. Venkataraman, Madras Minister for Industries and Labour, has said that the Government planned to provide an industrial estate in every taluk headquarters in the State during the Third Plan period.

The Government had allotted Rs. 15 crores for development of small-scale industries, mainly through the establishment of such estates, he added.

The Minister was speaking after commissioning a pin and wire nail factory in Akkur.

The factory, set up in the private sector as a small industries unit, has a production capacity of one ton per day.

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the collaboration of Hindustan Steel Ltd. Head Wrightson, said he, had maintained a close link with India for many years, and had been responsible for supplying much of the specialist equipment used today in India's basic industries. He said that the Company was at present playing a major part in the Durgapur Steel Works project and were supplying all the iron making plant together with much ancillary equipment.

He also said that though at present the firm would import the designs from their Parent Company but their ultimate object was to Indianise the designs and train up Indian Engineers in U.K. so that they could do it for themselves.

With the establishment of this new branch, he stated that the bond of friendship between Indian and British people would be strengthened.

2 More Machine Tool Factories During 3rd Plan

Two more machine tool factories in the public sector will be established in India during the Third Plan period.

This was stated by Mr. M. K. Mathulla, Managing Director of the State-owned Hindustan Machine Tools Factory at Bangalore, prior to his departure for East Germany, as leader of a three-man delegation, to finalise arrangements for technical collaboration with East Germany for these factories.

The two new factories, Mr. Mathulla said, were estimated to cost Rs. 5 crores. They were likely to be completed and start production in two years.

Technical collaboration for doubling the output of the Bangalore factory will also be discussed by the delegation with East German officials. He said that preliminary discussions with regard to technical collaboration were held in India in March with the delegation of the German Democratic Republic during their visit to this country.

Mr. Mathulla said that plans for setting up a watch factory in Bangalore had reached an advanced stage. The lay-out of the factory had been completed and it was expected to go into production by the end of 1963.

During his four-week stay in Europe, Mr. Mathulla will finalise, and, probably sign, an agreement with East German Government-owned concerns for the manufacture of a wide range of advanced machine tools either in the new factory now under erection near the existing factory, or in factories proposed to be set up elsewhere in the country.

He will go to France to finalise an agreement with the Renault Auto-mobile concern for taking up manufacture of mass production machines in HMT.

The new factory, financed, completely by the HMT, is expected to be completed in two to three months. Installation of machinery and training of personnel to man the factory are now in progress.

Production of machine tools in HMT, which stood at 135 in 1956-57 when it was started, has touched the thousand mark during the current financial year.

Since its inception, the factory has produced 2,660 machines of five different types up to the end of February, out of which nearly 2,460 had been sold. Another 100 machines are being dispatched.

Appeal For Small Industries

Mr. Shukla, commissioner of the Gorakhpur division, presided over the industrial campaign launched in the district.

About 500, gram pradhans, sarpanchs, block development officers and village-level workers attended the seminar.

In his address, Mr. Shukla said that to eliminate poverty small scale industries had to be developed to provide employment to the poor.

Mr. Kalika Singh, M.P., addressing the seminar said: "The average per capita income in UP is Rs. 250 per annum and Rs. 184 in rural areas. An average of Rs. 386 per head is being spent on the jail population, which in a way becomes an attraction to the poor people for committing crimes rather than fearing humiliation of conviction."

Development of Industries

American Firms Offer Services

The United States Department of Commerce in Washington has prepared a list of American firms which are prepared to offer their services to Indian firms in establishing manufacturing plants.

The industries in which the American firms have offered their services are the following, according to information available: organisation and construction of fishing fleets and complete shore facilities for processing and preserving catch; metal fabricating, casting and rolling mills, highway public works and general construction; chemical, petroleum and food processing industries; ore-processing; metallurgical plants; glass and steel industry; natural gas plants, beverage plants; complete saw mills; thermal electric plants; plywood plants; brick and ceramic plants; hydro and steam generating plants and vegetable oil processing plants.

The services offered by American firms include preliminary investigation, engineering design, construction, supervision of construction, final inspection, start-up of the plant as well as training of the personnel and operation of the plant for the first year or two.

Japanese aid to Industry

Delegation's Talks In Madras

Mr. Rokuro Ishikawa, a member of the Japanese South-East Asia Economic Co-operation

Mission, expressed the view that Indian economic climate was quite congenial for attracting investment from Japan.

Mr. Ishikawa, who was speaking at a reception given to the members of the delegation said that India possessed highly skilled technicians. The mission, he added, during its stay in India had first-hand knowledge of the economic conditions and had exchanged views generally with the Government officials and businessmen on mutual problems relating to the development of industries and the technical tie-ups pertaining to the respective countries. The mission was sponsored by Keizai Doyukai (Japan Management Association, one of the big four economic organisations in that country). Japan, he said, wanted to have close collaboration with foreign countries, especially those in Asia. The members of the team felt that Japanese industries could extend co-operation with India in many kinds of industries. Now that the world was fast shrinking in its size, no nation could grow without co-operation from other countries. "Your trouble is our trouble and your prosperity is our prosperity", he said.

During the general discussions the mission had with the members, it was stated that the Government of India were eager to welcome financial and technical aid from Japan in starting new ventures here. In Japan, an organisation called the Foreign Economic Co-operation Fund had been founded to help collaborators to invest money overseas. A company had started the manufacture of chemicals from out of sea water bitterns. The regulations in respect of the investment of foreign capital in India might require slight modifications or liberalisation.

RADIO INDUSTRY IS FACED WITH A CRISIS

The radio industry has virtually been at a standstill since the imposition of the new excise duty on radio sets from March 1.

A survey of the industry reveals that the setback is due as much to the introduction of new excise procedures as to the enhanced duty.

According to the new excise procedure, the total production of each manufacturer is to be evaluated and categorized by the excise staff. On the basis of this categorization the new excise will be charged at 10 percent on sets priced from Rs. 150 to Rs. 300 and 20 percent on those priced above Rs. 300. The stocks will be released by the excise staff only after the excise has been deposited by the manufacturer.

Later, when assessed and released by the excise staff, the stock must be removed forthwith from the factory and stored in a separate showroom or godown.

The excise staff, inadequate as it is, must attend to radio manufacturer. This means that a manufacturer has to stop production after putting out a certain quantity to get it cleared by the Excise Department and dispose of the stock before going into production again.

The fabricators claim that most of them do not have spare capital to continue production without at the same time disposing of their products. There are many small manufacturers who produce only about five sets a day and have to sell these to buy mate-

rial for further production. They are thus faced with going out of business or resorting to cheap production of dubious quality. The majority of them are using only one place for both production and sale and will not be able to hire larger of separate premises for the two operations.

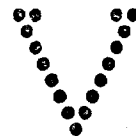
Harassment Alleged

A number of manufacturers said that apart from the leadership caused by the new excise, they were being unnecessarily harassed by the excise staff. They could not change over to the new procedure overnight. It needed re-orientation of their office staff. The industry needs time to adjust itself to the new situation.

Another chaotic situation has been created by the insistence of the excise staff for proof that a set has been manufactured before midnight of Feb. 28.

Only a few manufacturers have been able to get their stock cleared. As a result hardly any transaction can be completed even though the dealers are being deluged with inquiries from their agents outside wanting their orders filled.

The manufacturers say that the excise should be of a more rational character. Besides, they should not be required to maintain multiple records and premises. The minimum level should be raised from Rs. 150 to Rs. 200. The quantum of tax should also be halved.



SMALINDUSTRY

New Products

Small Ironing Table

Rudolf Loh GmbH (of Haiger, Dillkreis, West Germany) has designed a portable ironing table (the "Hailo") which folds to a package only 1½ inches high. It has its own plastic bag and easily fits into a suitcase. The all-metal frame is fitted with a felt-and-cellulose pad and sonforized slip-on cover.

* * *

Midget Phonograph

Aviwa Co. Ltd., of No. 4 Motoskuma-cho, Kanda, Chiyodaku, Tokyo, is marketing its "Compact-play," Model PM-87, a miniature transistorized phonograph that requires no turntable for discs and operates on four standard 1.5 volt batteries.

No change-over switch for speed is used, the phonograph playing by setting the disc at either EP (45 r.p.m) or LP (33½).

Specifications are as follows: circuit-4 transistor amplifier; output 300 mW; pickup-crystal; speaker, 3 inch dynamic; battery, UM-2 (Eveready 935 Berez U11) 1.5 V 4 pcs; size 4x3x2 inches, and a weight of 1½ pounds.

* * *

Answering Service

Komatsu Electronic Inc., of Kozato Kaikan, 2 Chome, No. 12, Shiba - Tamura-cho, Minato-ku, Tokyo, has developed the "Tel-messenger," Model KH-85, an answering and recording device, and Model KH-90, a similar unit employing a remote control system.

When a bell rings, the handset is lifted up by the arms and a prerecorded message is transmitted to the caller through the internal speaker for about 10-15 seconds. Next, the

caller's message is recorded for as long as he speaks. Recording capacity is roughly 15 minutes.

The all transistorized system uses AC 100 V 50-60 c/s house line. The unit is able to operated by one centrally located knob.

IF Module

Toko Radio Coil Laboratorie, Ltd., of No. 59, Yukigaya-cho, Ohta-ku, Tokyo, has developed the IF module, a self-contained shielded unit comprising a transistor and/or diode, IF transformer and the associated components completely wired. Three styles are available: converter, interstage and final stage, with or without a neutralizing capacitor.

Use of these modules in miniature transistor radios will result in a saving of space on the printed board and also eliminate the insertion and wiring operations of the various components. The size is 0.41x0.71x0.51 inches above chassis.

The high potential portions are fully enclosed in the shield and only the input and output terminals which are at low impedance and low voltages are exposed. The static coupling between the circuits is practically eliminated and higher stability and amplification is achieved as compared with the usual layout. It is possible to minimize further the magnetic coupling by providing an external shielding with ferrite materials.

* * *

Jig-Borer

Schneider & Kern Fabrik fuer Messzeuge (of Niedernhall/Wuerttemberg, West Germany) has designed a co-ordinate jig borer, called the "Helios." It consists of two graduated scales placed at angle of 90 degrees to each other.

SMALINDUSTRY

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Help to solve your Industrial Problem

In full appreciation of the significance and scope of Small Scale Industry development in India and with the intention of disseminating and introducing in this country her rich experience in the field, the Japan Chamber of Commerce and Industry has recently established Industrial and Technical Co-operation Office (ITCO) in New Delhi.

It is stated that the ITCO owes for its establishment and co-operation to the fullest support of the Government of Japan and is assigned by the parent organisation to contribute its best in rendering technical assistance towards the healthy development of small and medium industries in India through the undermentioned service:

1. General consultation on technical or techno-managerial matters on behalf of the small—medium industrialists in India;

2. Introduction and recommendation of the most suitable and efficient expert-technicians to the Indian Small—medium industrialists.

They slide on a joint beam which has a boring bush set exactly at zero. The scales are independently movable, and readings are made from verniers on the beam to an accuracy of .000787".

Take-Out-Car Radio

Blaupunkt - Werke GmbH (of Hildesheim, Germany) has marketed the "Westerland" auto radio which can be removed from its case in the instrument panel and used as a portable radio. It has its own built-in aerial and battery. Described as a high quality full transistor superhet, it has an output of about four watts, great receptive power and an impact-proof construction.

lists who are desirous of adapting Japanese technique into their production—process or processes;

3. Any other technological consultant services relating to small—medium industries and;

4. Arrangements, desired, for Indo-Japanese joint ventures in the small—medium industrial sector.

The following extract from their pamphlet entitled "How to find out Japanese technicians or enterprisers" is given below for the information of the interested public.

The Industrial and Technical Co-operation Office is prepared to act as your consultant or adviser in acquiring the services of Japanese technicians, particularly for the Small and Medium Scale Industrialists, whether they are already well established or just starting. It can also arrange for the training of Indian workmen under highly qualified Japanese technicians.

In the matter of established industries that suffer from long teething troubles and experience unaccountable loss in production, factories where difficulties are encountered in improving the quality of products, new factories that are unable to bring out quality products and high efficiency as planned and those that are not satisfied with their present production and are seeking for higher efficiency and with regard to new enterprises where the machines are equipped with highly automatic devices, where products pass through a number of process that require high standards of manual techniques; where a large number of different types of raw material are involved and processed under highly complicated conditions and where the major part of the labour cannot be filled with

Tentative Programme of Indian Participation in Fairs/Exhibitions during 1961-62

S.No.	Name of the Exhibition/Fair	Country and place	Period
1.	VIII Damascus International Fair	Damascus (UAR) Syrian Region.	25th Aug. to 28th Sept. 1961
2.	Kabul International Exhibition (on the occasion of the Afghan Jaspas Celebration, Kabul.)	Kabul (Afghanistan)	23rd Aug. to 31st Aug. 1961
3.	Izmir International Fair	Izmir (Turkey)	Aug. Sep. 1961.
4.	International Trade Fair or Wholly Indian Exhibition 1961**	Addis Ababa (Ethiopia)	Date to be fixed
5.	International Trade Fair or Wholly Indian Exhibition 1961.	Mogadiscio (Somalia)	Date to be fixed
6.	Sydney Trade Fair	Sydney (Australia)	1st to 12th Aug. 1961.
7.	Zagreb International Fair	Zagreb (Yugoslavia)	9th to 24th Sept. 1961.
8.	Frankfurt Autumn International Trade Fair	Frankfurt (West Germany)	Aug-Sept. 1961
9.	Hyspa Sports Goods Fair (To be organised by the Sports Goods Export Promotion Council)	Berne (Switzerland)	18th May to 17th July 1961
10.	Chicago International Trade Fair ^o	Chicago (U.S.A.)	25th July to 10th Aug. 1961
11.	Wholly Indian Exhibition, 1961.	Kingswon (Jamaica)	Date to be fixed.

Note: Intending participants may consult the Model terms and conditions (subject to which the participation of manufacturers or exporters in normally accepted in any Trade Fair Exhibition in which the Ministry of Commerce and Industry, Government of India officially participate or in any display organised by the Government of India abroad) published in the Indian Trade Journal, dated November 26, 1960 (pages 724-27) and amendments there to be published in the issue dated January, 14, 1961.

** Same goods/exhibits as offered for display at the Exhibition at Addis Ababa will be forwarded to the Exhibition at Mogadiscio or vice-versa provided it is possible for the Ministry of Commerce and Industry to arrange for the dates of the two Exhibitions to coincide.

^o Same goods/exhibits as offered for display at the U.S. World Trade Fair New York, will be forwarded to Chicago International Trade Fair.

skilled workers, this Co-operation Office is ready to come forward with their suggestions and advice for better results in a shorter period. Interested Small and Medium Scale Industrialists in the country can, without hesitation, utilise its consultant services on all relevant issues by contacting its representa-

tive Mr. T. Kishimoto (International M.T.M. Practitioner, Industrial Consultant, registered by Govt. of Japan), Technical Co-operative Office, Japan Chamber of Commerce and Industry, 28, Barakhamba Road, New Delhi-Residential address: C/o Hotel Ambassador, New Delhi-3.

Consideration of Costing Schemes & Productivity

It is true to say that, at the present time, there is an ever-increasing interest being displayed in Cost Accounting, side by side with the increase of productivity consciousness, in the manifold fields of the Indian industrial activity. The reason for this is not far to seek: modern management must use the scientific methods at its command if it is to succeed in this competitive world; and cost Accounting ranks high in the list of methods of management control employable in the combating of competition and inefficient production.

We are constantly reminded of the admonitory message that India's productivity must be increased if she is to raise the standard of living of her people and to turn out the goods at competitive prices. It is urged upon us that increased production means lowered costs, and increased wages (the latter however being dependent to a large extent on wage incentive schemes) of the foregoing message the remark that will bear constant reiteration is that greater productivity means lowered costs. But there is a concealed danger in accepting this statement urbanely, and without a deeper examination of hidden factors bearing upon production cost. We should not rely merely upon greater productivity to reduce our costs, but upon planned manufacturing operations; proper layout of our factories; the setting of cost standards; the budgeting of expenditures; and the securing of maximum efforts from our employees by means of incentive schemes or remunerations coupled with the highest standards of working conditions.

All of the foregoing remarks are extremely apt in connection with the industry, big or small, in our country. It requires and deserves, adequate cost information; but it is an undeniable fact that so far cost accounting has by no means been fully or effectively applied in our country.

The industry employs and maintains expensive machinery and plant. It secures and retains skilled operatives. Labour costs are going up in comparison to the rate of production. Competition is becoming keener. Prices must therefore, be carefully computed, and to ensure that this is done correct product costs have to be available. The primary function of cost accounting is to provide and maintain an internal check and control on every form of expenditure in an undertaking. This is done by ascertaining costs of products, processes, and the various operations of the undertakings, and by provision of information for the guidance of Management, particularly for the purpose of Cost Control. Because of various economic factors, selling prices cannot be based on cost, but it is obvious that over a period they must be higher than their corresponding costs if the business is to continue. Costing throws light on those activities of an organisation that are profitable, and those that are not.

It is not suggested, however, that cost accounting supplants managements. To say that, would be to do management a great disservice for Management must always take the final decisions. But Cost Accounting, properly practised, provides the data on which effective management can be based. Possessed of such data management can consider the likely outcomes of alternative policies knowing in advance the effects on cost and profits. It can plan on a sound basis of accurate fact—a procedure vastly different from that of working on 'hunches'. It will be profitable, at this stage, to emphasise the importance of modern cost accounting to the industry at large by drawing attention to the inadequacy of management information afforded by the financial accounts. The latter, dependent on the up-to-dateness in outlook of the accountant and his management, may be prepared at yearly, half yearly, quarterly, or monthly in-

tervals. It is true that the annual accounts show the profit earned; and that the profit and loss accounts for shorter periods—such as one month—provides a reasonably accurate estimate of the trading results. But the whole emphasis is laid upon trading outcome whereas the cost of manufacturing, as represented, by omnibus charges shown in the profit and loss account, is nebulous to a degree that makes the figures useless for control purposes. The information which is not provided by such financial accounts is decisive data such as:

1. The achievable target cost, and variations therefrom.
2. The explanation of such variations;
3. The efficiency of the labour force;
4. The extent of the plant utilisation;
5. The cost of materials lost in production;
6. The cost of idle plant.
7. The efficiency—or otherwise—of the plant maintenance staff, as expressed by the comparative immunity from breakdown of the machinery and plant;
8. The amount of capital tied up in stock of process materials, revealing in the redundant and/or slow moving items;
9. Product costs; and data as to which product contributes the greatest sum to profit.

This list could be further, extended, but is curtailed here deliberately.

Is it possible to obtain the desired information speedily, with clear cut precision in the portrayal of efficiencies and inefficiencies of factory operation, and at a reasonable cost? The answer is a qualified affirmative. If the industry proceeds to employ the advanced scientific methods of cost accounting including standard Costs and Budgetary Control—which let me add, have been applied in USA., U.K., and other well developed countries of the world for decades past—required cost data will ema-

nate smoothly; will stimulate managerial action; and draw prompt attention to inefficiencies. If the procedure known as 'actual' cost is resorted to, then the results will have a lesser value. These historical costs will entail numerous—and needless dissections of expenditure to various product classifications; they naturally tend to be history, and nothing but history, because they are produced usually too late provide effective control mechanisms. They do not normally reveal the all important cost of volume variance (which is resultant on the effect played by volume of production on standing charges) And these so-called 'actual' costs have an alarming tendency (and one which is largely caused by the undisclosed volume variance) to show wide diversity of costs for a specific product over successive months of a year. How can an 'Actual' Cost be a true guide for the basing of management action if it is shown and purports to be Rs. 10/- per dozen this month, Rs. 11.50 next month and Rs. 8/- month after that! In such circumstances managements are justified in asking what really is the cost of the article in question, which entails laborious analyses by the accountant of the constituent charges for the months under review, and an attempted but ineffective synthesis of the figures thus elicited.

Actual costing was an early rung in the ladder of cost accounting; but considerable thought during the past 40 years by leading cost and management consultants in America and England have evolved the modern costing techniques which have a scientific basis of fact.

There is a wide diversity in the size of individual enterprises. The very small concern, at the bottom of the scale, does not need the whole range of cost data necessary in the case of the mammoth plants. Even the small processing concern, however, cannot fail to find utility in such ancillary data as the monthly analysis of production losses, showing input quantities, realised output,

loss entailed, and the relevant percentage relationship between loss and input. From these simple schedules a loss standard can be set up against which weekly (or daily) production results can be measured. Stock control can be instituted in the small firm, and save money by emphasising the necessity for the careful handling of the finished products, and exerting a deterrent influences on defalcation. Moreover, an effective analysis-weekly or monthly-will provide a basis for production planning, and act as an indice of consumers' preferences. These data, it must be reiterated, are usually ancillary to the full scale costing accounting methods employed in the industry. They are offered here, however, as simple yet effective control tools for the small and cottage scale industry which does not wish to employ or which is not fully appreciative of a modern costing system.

In the large scale industry or undertaking every modern device for the ascertainment and control of costs should be employed. It follows as a natural corollary that the installation of the modern methods of cost accounting or standard costs should be a carefully thought out procedure. Cost installation work can be performed by either the company's chief accountant or, alternatively, by a professional Cost Consultant. But it can be stated quite decisively that if the company's own accountant is entrusted with the job of installing cost accounting and cost control systems, he should be equipped with the requisite knowledge and viewpoints to ensure the success of the procedure. By this is meant that he should have a thorough knowledge of the processes involved in the factory as a whole; he must be able to decide which are the 'cost-centres' (i.e. successive production-centres around which the operating standards are formulated); he must be in full possession of the facts regarding the production-cycles for each specific product; he will require to have a clear conception of those charges which can be controlled by executive action; he must be able to fully appreciate

the application of modern productivity increasing techniques in the industry; and in budgeting for expenditures, he must carefully see that proper provision is made for the budgets appropriate to varying levels of production-in other words-for flexible budgetary control.

To ensure that the forgoing matters are embraced in, the costing scheme, therefore, requires an intimate knowledge of the production operations, which can be gained only by the process of actual studies made on the factory floor. It is only by the consecutive questioning of workers, foremen, managers, and directors (for all these come within the ambit of standard Costs and Budgets), and by personal inspection of every factory process that the *modus operandi* of the whole undertaking becomes firmly fixed in the mind of the person installing the costing methods. To plan an effective scheme requires all of the foregoing synthesised knowledge, and it cannot be gained from the remotenesses of the accountant's private office.

On the other hand, if a professional Cost Consultant is employed to device and launch the costing scheme he will bring to bear upon the problems involved a wide knowledge of the costing structures of many and diversified industries. He will be impartial; able to concentrate solely on producing a scheme that will give the management the vital information required for control purposes. His experience will result in his restricting paper work to that which is essential, and no more; and he will readily perceive the operating centres which are to be cost-controlled.

The installation of advanced costing and budgeting methods is not a simple matter. It calls for a knowledge of specialised techniques and for an ability to seize on the essential requisite for production and marketing economy in a given situation. But it does not follow from this that the system once installed is complicated to handle. The

reverse is usually the case, and a standard Costs System reveals operating tendencies with a flexibility that has no counterpart in the 'actual' costing systems, which are now being rapidly outmoded in many industries.

The present article closes with the writer's hope that the readers who do not obtain effective cost control will be stimulated to obtain it; that those who are in receipt of cost information will review the effectiveness of the data now secured; and that all will be permeated by the thought that the planning of industrial production to eliminate inefficiencies and to obtain a budgeted volume at a desired manufacturing cost involves foresight—a quality without which no industrial concern can work with true effectiveness, and one that if cultivated consistently can reveal achievable potentialities hitherto submerged in the day-to-day limbo of events.

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Start Small-Scale Industries Appeal to Engineers

Mr. T. Subramanya, Minister for Local Self-Government and Development, Mysore, recently appealed to the engineers to become entrepreneurs by starting small-scale industries. The Government would render all possible assistance in their endeavour, he said.

Presiding over the valedictory function of the National Institute of Engineering Association he said a time would come when the services of all engineers could not be utilised by the Government. They had, therefore to, seek other avenues of service.

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Applications from Small-Scale Units for raw materials

In order to expedite the grant of import licences for raw materials and allotment of non-ferrous metals and steel to small-scale industrial units, it has been decided that applicants should be asked to quote the registration number allotted to them by the Directors of Industries in the States. Where the registration number has not yet been allotted to any small-scale unit, this fact may be stated in the application.

Under the new procedure, import licensing authorities, Controller of Non-Ferrous Metals and the Iron and Steel Controller will check up the registration number in each case, before granting the licence or allotting non-ferrous metals or steel. For the present this requirement will be relaxed in cases where the registration number has not yet been allotted; but the relaxation will not be allowed to any small-scale unit beyond September 30, 1961.

A scheme for the registration of small-scale industrial units all over the country has been in operation for some time past. The Directors of Industries in the States are handling this work, which is expected to be completed by the end of March, 1961. The registration number will also be quoted by the State Directors of Industries in the Essentially Certificate issued to small-scale industrial units.

Import of Polystyrene and Polyethylene

Actual user licences for import of polystyrene and polyethylene (low density) will be granted to the units in the small-scale sector on an *ad hoc* basis. This has been announced in an Import Trade Control Public Notice.

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Training Men For New Industries

Nehru Opens Indo-German Enterprise

Inaugurating the prototype production-cum-training centre at the Okhla Industrial Estate, Prime Minister Nehru said the real capital of a country was its trained manpower.

An Indo-German venture, the centre will manufacture prototypes of machines and machine tools and impart training to nearly 500 skilled workers every year. The prototypes will be sold to small-scale industries.

Quoting Mr. Benjamin Franklin Mr. Nehru said "a human being is a tool-making animal" and the progress of civilization might be described in terms of man's capacity to make tools. The economic development of a country was measured by its capacity to make "effective tools", big or small, Mr. Nehru added.

The Prime Minister described the centre as a symbol of Indo-German co-operation and said cultural association between India and Germany was not only old, but had its roots deep down in India's spiritualism.

Referring to developmental activity in the country, Mr Nehru said a fairly rapid change had come in the minds of 400 million people in this country. It was not due to the work of a few officials. A great mass of people was at work. The work would go ahead and nobody could stop it, he added.

New Outlook

What counted in any developmental scheme, Mr Nehru said, was the attitude of the individual. If he tried to become an efficient skilled worker, not only would he himself make progress but the country would also prosper.

Later speaking in Hindi the Prime Minister reminded young workers present on the occasion that the world was passing through tremendous technological change. He advised

them to understand the effort of crores of people engaged in science and technology.

Earlier, Mr Lal Bahadur Shastri, Union Minister for Commerce and Industry, announced that during the third Plan period the Government proposed to open 500 to 600 industrial estates in villages and small townships. The Government would establish at least one prototype production-cum-training centre in each State, he added.

Dr Hans Wilhelmi, W. German Minister of Treasury, said the Federal Government would extend the service contracts of West German instructors up to March, 1964.

Public Sector Industries

Awards Scheme Instituted

The Government of India has decided to introduce annual awards by the President to encourage the Central Government industrial enterprises to exceed their production targets and achieve outstanding allround performance. The awards have been instituted at the instance of the Prime Minister.

A shield in copper and silver will be awarded to the public sector enterprise adjudged best for its all-round performance during every year.

Certificates of Merit will be awarded to five under-takings for outstanding performance, taking into consideration their financial working, cordial labour relations in the factory and any special contribution made to the country's economy through research, discovery of new process, design of machinery and equipment, etc.

Certificates of Honour will be presented to the undertakings whose performance is adjudged to be satisfactory.

(Contd. from page 8)

It has also been decided that, wherever the period of delivery of the machines is long, the earnest money should be split up in two equal instalments.

The Corporation has also decided to supply machines on hire purchase basis up to a ceiling of Rs. 10 lakhs for units which would manufacture ancillaries and components for certain selected industries. Special concessional rate of earnest money has been fixed for the supply of machinery on hire purchase for this ancillary industries. Ancillary units to industries in the private sector, wanting machinery, valued above Rs. 50,000 will be required to deposit as earnest money only two-third of the normal amount. In the case of ancillary units to industries in the public sector, the earnest money will be limited to Rs. 5,000, if the value of the machinery is between Rs. 50,000 and Rs. 1 lakh and 5 per cent for machines valued above Rs. lakh.

Entrepreneurs Must Be Encouraged

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MPs' Body On Building Of Ancillary

Industries

The Estimates Committee of the Lok Sabha has recommended that concessions or inducements like reduction in the duties on imported raw materials, provision of land, power and building materials should be given to ancillary industries.

This, the Committee hoped, would encourage development of ancillary industries and influence decentralisation of production, especially machine tools.

The Committee's report on Commerce and Industry Ministry (development wing) was presented to the Lok Sabha by its Chairman, Shri H. C. Dasappa.

The report expressed the doubt whether the Five-Year Plans would be able to carry

the country "very far and quick enough" to progress. But it was admitted that the Five Year Plans would play a useful role in correlating achievements with resources and fixing the concerned targets.

The committee suggested the setting up of a Public Relations Unit in the development wing for guiding entrepreneurs.

Intermediaries

It has recommended investigation into the causes of delay in the disposal of application for industrial licences so that effective steps could be taken for early issue of licences.

The Committee has noted that agents or intermediaries are now processing the applications for licences on behalf of their clients. It has suggested that the Intelligence Department should watch over the unhealthy activities of such intermediaries.

The Committee suggests it would be better to enable the applicants themselves get into direct contact with the officers concerned. The public Relations Unit would be helpful in such things.

The Committee feels that the Ministry should scrutinise the transfer of licences to see that they are bona fide. The Committee suggested the prohibition of all transfers of licences without the prior approval of the authorities.

The committee has urged the development wing of the Union Commerce and Industry Ministry to exercise greater control on the growth of industrial empires.

It adversely commented on some sugar licences being given to people "high up in the Industrial world, probably on the ground that co-operatives were not ready for the purpose."

Industrial Estate For N. Arcot In Third Plan

North Arcot will have an industrial estate, common tool workshop and an industrial training institute before the end of the first year of the Third Plan.

The Industrial estate would be established in the aerodrome area in Arkonam town at an estimated cost of Rs. 9 lakhs.

The common tool workshop, similar to that at Erode, would form an adjunct to the Industrial Colony at Katpadi Co-operative Township. This colony will have ten 'B' and two 'C' class units and two factories.

The Industrial Training Institute will also be located near Vellore. Two sides at Kilmanavoor and Senguttai have been inspected by the Director of Industries and Commerce, Mr. Sabhanayagam.

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Motor Ancillary Industry

A nine-man team representing the automobile ancillary industry will be leaving India this month for overseas countries to study the latest developments in the industry. During its two-month stay abroad, it will visit Japan, West Germany and the U.S.A.

It will be the team's main purpose to know the modern technique of production and distribution of automobile components. The ancillary industry in India, consisting of about 90 licenced units, produces about 75 per cent. of the components required for automobiles. There are plans to increase the percentage to 90 by the end of next year. It may be stated that within the last two years, the Government has issued licences to cover the entire range of components.

In particular the team will study the relation between vehicle manufacturers and ancillary producers in respect of the supply of original equipment and the distribution of the products in the replacement market. It will also study ways of improving the quality of the industry's products.

Role of Small Industries

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Plea For Quality Goods

The Madras Small Scale industries and Handicrafts Board which held its first meeting at Coimbatore Mr. P.L. Kumar, Chairman, presiding decided to recommend to the Government, among other things, measures to make raw materials available and the starting of tool rooms to aid the development of this sector.

The Board considered steps to promote small industries and handicrafts for which a total sum of about Rs. 12 crores has been earmarked for Madras State during the Third Plan period and develop them on sound lines.

The next meeting of the Board will be held in Madurai in July.

Members visited the Praga industries, the P.S.G. establishments, U.M.S. Radio manufacturing centre and some units of G. D. Naidu concerns.

In the evening a reception was held on behalf of the P.S.G. & Sons charities at the premises of the College of Technology, Peelamedu, when Mr. P. L. Kumar, pointed out that small scale industries would eventually become the backbone of the economic development of India. Mr. B. R. Krishnamurthi, Principal, P.S.G. Arts College, welcomed the members.

Mr. Kumar referred to the pattern of development of ancillary industries in advanced nations to help large industries and said that conditions in India were different, but the trends were likely to change here as time advanced. He asked small industrialists to produce goods of standard quality at competitive prices and suggested the location of small industries in the rural areas. He instanced the rapid advances made by the Indian cycle and sewing machine manufacturing industries and hoped they would be in a position to export automobiles too in the Third Plan. He also explained the incentives provided by the Government and State Bank.

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New Tool To Cut Metals Devised

A new industrial tool has been developed by the U. K. Company which manufactures the filing-type "Surform" hand tools and power tool accessories.

Still based on the file type of tool the purpose of the new product is to cut, smooth, shape and trim materials like mild steel, aluminium, copper and brass. It can be used in normal machine-shop practice. Its working surface consists of a perforated "blue blade" of hardened end tempered Sheffield tool steel set with numerous scientifically-angled teeth.

Features of the tool are its balance, its efficiency when used with only a light pressure, and its ability to trim corners of hard materials without chattering or damage to the blade. It is a very fast cutting tool, and the perforations in the blade effectively prevent clogging. Tests on the Herbert file testing machine indicate that it will stand up to long periods of continuous use without impairing its efficiency.

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Development Of Auto Ancillary Industries

The Union Commerce and Industry Ministry has underlined the scope for the development of automobile ancillary industries in the country.

The Ministry has asked the state Directors of industries and Directors of small industries service institutes to encourage the setting up of more small units for the manufacture of automobile components.

The centre is also proposing to undertake an all-India survey to assess the prospects of development automobile ancillary industries.

The Ministry has given an elaborate list of parts and components regarding which there is scope for development. The list includes gaskets, connecting rods and bolts for engines, valves, axles, head and side lamps, body panel and sheet metal parts tools and accessories.

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Indian Standards Convention 1961:

This year the 6th Indian Standards Convention is being held at Kanpur. The subjects of topical interest of the convention are productivity in building designs and constructions, certification marking, packaging, company standardization, metric system in engineering industries, universal count system in textiles, housing and preservation of documents, safe use of electricity in homes, and non-destructive testing of metals. Standards conventions which have become an annual feature of I.S.I. activities are held in different industrial centres of the country. Previous conventions were held in Calcutta, Bombay, Madras, Delhi and Hyderabad.

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Factory Manned By Women Opened

A small factory built at a cost of Rs. 55,300 and manned by women, was opened at Behala the southern fringe of Calcutta, by Mrs. Durgabai Deshmukh, president of the Central Social Welfare Board.

The factory which employs thirty-nine women from poorer sections, will produce "fan guards" to serve as an ancillary unit to Messrs. Jay Engineering Works. The factory is the first of its kind in West Bengal and fifth in the country as an ancillary to bigger industries opened up by the Family Welfare Co-operative Society of West Bengal.

The factory will presently produce three fan guards per day per worker and will go through sixty different operations. Women workers are employed on 'piece rate' basis.

The plan of the work has been provided by the National Small Industries Corporation in Delhi after consultation with Messrs. Jay Engineering Works. The Union Ministry of Commerce and Industry, after sanctioning the plan, had allotted the financial help which would come half as aid and half as a loan.

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Industrial Estate Of Agra Faces Closure

Mr. Shyam Lal Jain, General Secretary of the Agra Manufacturers' Association, said that unless the Union Government or the U.P. Government solved the problems confronting the Agra industrial estate, there was every likelihood that the estate would be forced to close down soon.

The estate, situated at Nunhai, about four miles from here, faces shortage of raw material, water and electricity, transport facilities, labour and Government financial aid.

The estate was expected to start functioning by 1960, but only nine out of the 14 factories have started manufacturing.

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Beggars As Labour In Small Industry

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S. Sambasivan's Suggestion

Inaugurating a Khadi Gramodyog Bhavan Mr. S. Sambasivan, General Manager of Rourkela Steel Project, said, "As far as I know there are about 10 million beggars in our country. Out of them about eight million are able-bodied. If these parasites are made to work in Khadi and Village Industries, no doubt, to a very great extent our society would be benefited. Mahatma Gandhi had stressed on such constructive programme for development of village economy."

Mr. R. S. Roy, Marketing Officer, Orissa Khadi and Village Industries Board, Bhubaneswar, while welcoming Mr. Sambasivan, the Chief Guest, on the occasion said that popularity of Khadi in India resulted in closure of a number of Textile mills in Manchester. Due to National love towards cottage industries, their products had come to a position to compete with that of mills, he added.

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Small-Scale Industrialists' Difficulties

There are many slips between the cup and the lip. This saying is not only true in the case of individuals but also with industries.

Such has been the experience of a small industrialist in the Naini Industrial Estate.

Crossing many hurdles of machine import, power supply, non-availability of raw material and training of skilled labour, when the industrialist managed to go into production, he found to his utter surprise that all his goods were piling up into the limited space of his godown. His produce—the tin containers have now occupied so much space in the godown and the railways refuse to help him that the industrialist is facing a serious crisis which might develop into his factory closing down for some time. It is not known why the products of small scale industrialists do not get a sympathetic treatment from the railways.

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Setting Up Small & Medium Industries Asian Aid Body To Be Set Up

An Asian productivity organisation to help the Asian countries in setting up small and medium sized industries will come into being shortly.

This was disclosed by Mr. Inchiyo Oshikawa of Japan who is in Pakistan to discuss with the Governments issues connected with formations of the organization.

The decision to set up organization was taken at a meeting in Manila in September last which was attended by the representatives of Government of Japan, Philippines and Thailand. Mr. Oshikawa was the Secretary General of the Conference.

Mr. Oshikawa told newsmen that while sponsoring nations had already agreed to become members of the organization, India, Indonesia, Ceylon, Nepal and some other Asian countries were expected to announce their decision to accept membership shortly.

Mr. Oshikawa said that the organization would provide exchange of technical information training for boosting industrial and agricultural production. He expected financial and technical assistance to the organization from agencies like International Labour Organisation International Co-operation Administration.

He said that the first meeting of the governing body would be held in Tokyo which would be the temporary headquarters of the organization.

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New Products

(Contd. from page 34)

Multi-purpose Porous Plastic

A multi-purpose porous plastic has been developed by Porous Plastics Ltd., England. Known as Vyon, its chief characteristic is its permeability—air, liquid, smoke or gas will pass freely through its surface. It also has the merit of being light in weight, flexible and tough, having considerable tensile strength. If used for filtering acids it will not corrode. It can also be welded. And it is hygienic—suitable for use with food handling equipment—and is expensive. It is made from high density polyethylene and the degree of permeability can be adjusted to the users' requirements. It has already been used for many industrial, scientific and medical purposes, but its potential range of uses is unlimited. Extensive tests for its use in orthopaedics were made at the Royal National Orthopaedic Hospital in Middlesex, England. One of the merits for Vyon in this field is that it permits the passage of water vapour and thus allows the evaporation of sweat—in other words, a plastic that breathes! It is also used most successfully in the manufacture of flail arms for poliomyelitis patients. Like many other British industrial inventions the plastic resulted from efforts to solve quite a different problem. It was produced as a result of a search for a new material for separators for batteries. This problem being solved, it was realised after further developments that the new material would have a wide range of other uses and the firm responsible for its origination has set up a separate company to deal with the product.

Delivery Vans that Climb Stairs

A lightweight truck which "walks" up and down stairs has been developed by a U.K. firm. It has been specially built to ease delivery, up steps and staircases, of such loads as safes, refrigerators, stoves and filing cabinets. For loads of up to 2 cwt. it cuts the normal

handling team from two to one. And above that weight, to its limit of 10 cwt., its use greatly reduces the element of fatigue to delivery men and consequently increases their turnaround. It has been found that in the British market, where it has immediately proved popular, it pays for itself within a short time. The truck is a development of the conventional sack truck design with the addition of flexible tracks which operate in conjunction with the wheels when steps or stairs are being negotiated. The principle is that the truck lays its own track and then rolls over it. It has been built to combine maximum strength with minimum weight and is manufactured from strong aluminium alloys and steel. Special care has been taken in the design to guard against damage to carpeted stairs.

Terylene Bags for Plant Breeding

A novel use for Terylene has been found by the Genetics Section of the Forestry Commission Research Branch in Edinburgh. Since April 1960, the Commission has been experimenting with non-woven Terylene bags for isolating female flowers when control-pollinating pine and larch trees. Previously paper bags had been used for this purpose. The bags are placed over branch tips bearing female buds from a fortnight to a day before the female flowers become receptive and before pollination takes place. This prevents outside contamination from stray pollen. When the bud breaks into flower, the bag is pierced by a hypodermic syringe containing pollen from specially selected trees and pollen is blown on to the flowers. After pollination the bag is sealed again for a further ten days, after which it is removed. This method ensures that the parentage of the resulting seed is known. By planting the resulting seedlings on different forest sites and by assessing their vigour and form, the best parents can be selected. These

parents will provide the seed for future forest planting stock.

Welding Torch

A new welding torch for use in powder welding, which uses argon to convey the powder on the section being welded, has been developed in the U.K. Both the flow of the gases, and the powder can be controlled. It is claimed, independently. The operation of the system is such that it will, it is claimed, enable standard pistol-type welding units to be readily adapted. It is expected to be especially useful for welding many different types of engineering components, which have previously been prepared for treatment. It is expected to find widespread applications in the chemical engineering industry as well as in other specialised fields such as atomic energy.

Shoes by the Thousand

There are normally about 300 operations in making a shoe by factory methods, but plastic foot-wear is being made now by machinery in one operation. After the shoe has been made, it has to be trimmed and the buckle attached by hand, but the main process is automatic. These economically priced plastic shoes are selling well in many countries. Polyvinyl chloride (commonly called P.V.C.), coloured in the shades required, is poured in at one end of a machine and shoes come out at the other. One of the firms making these shoes, Eatoughs Ltd., High Street, Burton-on-Trent, Staffordshire, England, used nine operators per eight-hour shift, working on seven machines. To these, of course, must be added those engaged on trimming and packing, and the whole team can turn out 70,000 pairs a week. There is little, if any, waste, since faulty shoes can be put into the machine again.

Moisture-Proof Linings For Bagging Urea

Search for moisture-proof packagings of hygroscopic fertilizers at Sindri has indicated

that polythylene liner stitched to jute bag gives maximum protection against humidity. For protection of urea against caking, the thickness of the liner should be at least 0.002 inch.

Among the different linings, tested at the Sindri's Technological Department for moisture impermeability and ability to withstand rough handling were: polythene liners, crepe paper pasted with bitumen to jute, two plies bagging paper laminated and pasted with bitumen to jute and paper laminated and pasted with polyvinylidene chloride-coated jute bags.

The results showed that polythylene chloride-coated or paper-lined jute bags, are superior polyvinylidene chloride coated or paper-lined jute bags. Polythene liners stitched to the jute bag are better than loosely inserted ones. The liner, larger in dimension, and the jute should be folded and doubly stitched so that there is less likelihood of moisture penetration.

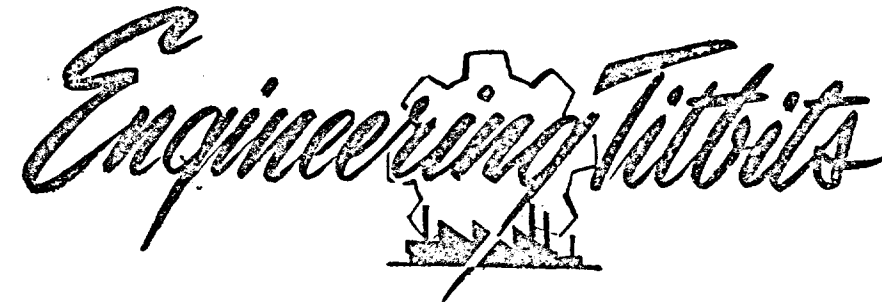
Emulsions & Resins From Cashewnut Shell Liquid

A new process has been worked out for making stable emulsions from cashewnuts shell liquid aldehyde condensate resins, their solution and polymerized cashewnut shell liquid.

The emulsions obtained are rapid-drying and free from odour and fire hazard. They can be applied on wet as well as porous surfaces and the films obtained can withstand washing. These emulsions are suitable media for primers and possess tolerance to addition of corrosion inhibitors. Sealing pastes based on these emulsions can stand hot riveting.

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Design Centre for Optical Instruments

The U.P. Government have decided to open a research-cum-design centre at the Government Precision Instruments Factory, Lucknow, at a cost of Rs. 11,00,000.

The centre will carry out research on mechanical and optical instruments and prepare proto-types and test them. It will manufacture and design new dies; jigs and fixture for mass production and will also advise public and private institutions on industrial research.

The aim of the centre would be to introduce new and advance techniques of design and production methods in the instrument making industry. A building at a cost of Rs. 4,01,000 will be constructed during this financial year to house the centre.

Development Body for Machine Making Industry

Mr. Manubhai Shah, Union Minister for industry is understood to have told a meeting of the Standing Committee of Central Advisory Council for industries that it was proposed to set up a development council exclusively to look after machinery manufacturing industries.

The Minister expressed satisfaction over the progress made by the industry and said that machinery manufacture during 1960 was estimated at about Rs. 160 crores.

Referring to the need for setting up suitable designs organization, he said that

SMALINDUSTRY

the Government were putting up a Central Designs Institute at Ranchi. He appealed to the business community to take more and more interest in setting up consultancy services and designs bureau.

Representatives of Industry are believed to have spotlighted at the meeting the acute difficulties in respect of raw materials and transport.

Industrial Estate Die and Tool Design Section

The Madras Government have approved of a scheme for the establishment of a die and tool designing section in the Industrial Estate, Guindy.

Sanction has been accorded by the Government to a non-recurring expenditure of Rs. 1,77,600 towards building and equipment while another sum of Rs. 32,400 has also been sanctioned for minor tools and other requisites.

While approving the scheme, the Government have stated that, with the development of small-scale industries adopting modern methods of production and with the start of supply of component parts to large-scale industrial establishments, the need of designing has been keenly felt. During the Second Five-Year Plan, sanction was accorded for the establishment of five tool room shops and five other tool room sections had been provided in the service facility workshops. In the Third Five-Year Plan, the order

"Training of Manpower the Greatest Need of Developing Countries"

The consensus of opinion among a large number of experts who discussed problems of assistance to the developing countries at a conference in Berlin recently was that the greatest attention should be paid to the training of skilled workers in the developing countries.

The meeting was held under the auspices of the German Foundation for Developing Countries with the assistances of the Ford Foundation. Dr. P. S. Lokanathan, Director-General of the National Council of Applied Economic Research from New Delhi, and a large number of other experts from Asia, Europe and America were present. The delegates included the Director-General of the United Nation Fund for Special Projects, Mr. Paul Hoffman, and the Director-General of the United Nations Food and Agriculture organisation (FAO), Mr. Binay Ranjan Sen.

The object of the Foundation is to foster cultural and economic relations between the Federal Republic of Germany and the developing countries through seminars, discussions among experts, etc.

says, provision had been made for opening more tool rooms and for expanding the existing ones and also for the establishment of a training centre for tool and die makers at Dindigul. For the implementation of these schemes and for enabling the private small-scale units to take full advantage of the facilities, a Central Die and Tool Designing Section considered to most essential.

Pocket Oiler

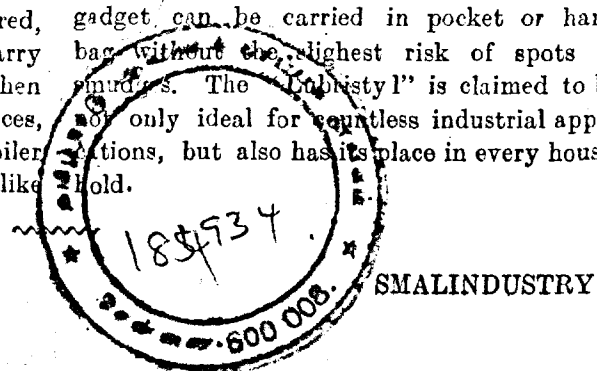
Traditionally oil-cans generally leak, do not allow for dosage of the oil required, and are so bulky and disagreeable to carry that one rarely has them on hand when needed. To remedy these inconveniences, a Swiss company has developed an oiler called the "Lubristyl" which is shaped like

The subject discussed at the conference were the problems and possibilities associated with the granting of technical aid to the developing countries. Such aid, German experts emphasise, could only be successful if the rich experience of economic, cultural and sociological conditions in these countries—such as the delegates to the Berlin conference possess in full measure—is fully utilised.

Besides courses in public administration, the German Foundation for the Developing Countries has, since its inauguration last year, held seminars for specialist personnel from developing countries on such subjects as "Population Development and Public Health", "Agricultural Co-operatives", and the "German Education System".

The conference passed a resolution emphasising that the "training of skilled workers in the developing countries is the most important aspect of the aid to these countries, and consequently, such training is of greater importance than the investment of capital goods".

a fountain pen. Its use is simple and clean: the point is placed on the spot to be oiled and moderate pressure applied. The hollow needle retracts to open the oil container valve, thus letting exactly the required amount of oil flow out. Any excess oil can be sucked back through the needle by releasing the pressure abruptly. The oiler can be filled simply by removing the head of the oil container. When not in use, a cap protects the point and this handy little gadget can be carried in pocket or hand bag without the slightest risk of spots or smudges. The "Lubristyl" is claimed to be not only ideal for countless industrial applications, but also has its place in every household.



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Phone : 87181

ANNOUNCEMENT

The Federation of Associations of Small Industries of India, will be holding their Second ordinary General Conference at Madras on 6 & 7th July 1961. Member Bodies, Associate and individual Members of the Federation and all the Members of our Association, are requested to participate in large number and make the Conference a great success

The Conference will be held at
ST. MARRY'S PUBLIC HALL
3, Armenian Street, Madras-1.

Sri R. VENKATARAMAN
Minister for Industries Madras State.

will inaugurate the conference.

Suggestions and resolutions may be sent well in advance to:

The Hon. General Secretary,
SMALL SCALE INDUSTRIES ASSOCIATION,
44, Mount Road, Madras-15.

Phone: 87181