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REVISED LIST OF ITEMS RESERVED FOR PURCHASE FROM SMALL SCALE INDUSTRIES

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1. Animal driven vehicles (Civil requirements only).
2. Anklets web khaki.
3. All badges, cloth embroidered and metals.
4. Attach cases.
5. Bags ice head (Civil requirements only).
6. Bandage cloth.
7. Basket cane.
8. Belt leather.
9. Belt leather and stripe.
10. Blacksmith hearth.
11. Boxes made of metal (Civil requirements only).
12. Boxing boots.
13. Boots and Shoes of all types (Civil requirements only).
14. Brass dampers.
15. Brass padlocks.
16. Brief cases.
17. Brooms.
18. Brushes.
19. Button metal.
20. Cash bags.
21. Caps cotton.
22. Caps woollen.
23. Caps waterproof.
24. Ceiling roses upto 15 amps.
25. Centrifugal steel plate blowers.
26. Chappals and sandals.
27. Coir fibre and coir yarn.
28. Coir mattress and matting.
29. Cotton hosiery (Civil requirements only).
30. Crates wooden.
31. Cumblies.
32. Curtains mosquito (Civil requirements only).
33. Distribution boards upto 15 amps.
34. Dusters cotton all types except the items required in khadi.
35. Dust bins (Civil requirements only).
36. Dust shield leather.
37. Electric call bell.
38. Electric buzzers.
39. Expanded metal.
40. Football boots.
41. Garments (Civil requirements only).
42. Gauze cloth.
43. Ghamellas (Civil requirements only).
44. G. I. Padlocks.
45. G. I. Buckets.
46. Glass ampoules.
47. Gauge surgical all types (Civil requirements only).
48. Hand drawn carts of all types (Civil requirements only).
49. Handles wooden and bamboo.
50. Hair passam wool.
51. Hand gloves.
52. Hide and country leather of all types (Civil requirements only).
53. Hob nails.
54. Invalid wheel chairs.
55. Keys wooden.
56. Kit bags.
57. Kodali.
58. Kullahs.
59. Laces leather.

- | | |
|---|--|
| 60. Lanterns posts and bodies. | 87. Sole leather (Civil requirements only). |
| 61. Lathies. | 88. Soap washing or laundry soap (Civil requirements only). |
| 62. Lamp's signal. | 89. Sockets. |
| 63. Lamp holders. | 90. Spiked boots. |
| 64. Leather bags. | 91. Steel desks. |
| 65. Leather boxes (Not army types). | 92. Steel racks. |
| 66. Leather harness. | 93. Steel stools. |
| 67. Leather washers. | 94. Steel trunks (Civil requirements only). |
| 68. Metalclad switches. | 95. Stockinette (Civil requirements only). |
| 69. Mail Bags (Canvas and dossouti). | 96. Stone curry and stone curry roller. |
| 70. Manhole covers. | 97. Suitcases. |
| 71. Metal polish. | 98. Tape cotton (Civil requirements only). |
| 72. Metric weights. | 99. Tarpaulins (Civil requirements only). |
| 73. Nail tip heel rustless. | 100. Teak fabricated round blocks. |
| 74. Paper conversion products. | 101. Tentage jute. |
| 75. Patient coats and pyjamas. | 102. Tins trays. |
| 76. Postal lead seals. | 103. Umbrellas. |
| 77. Plugs. | 104. Utensils cooking (Except stainless steel utensils and vessel pressure cookers) (Civil requirements only). |
| 78. Postal weighing scales. | 105. Wooden plugs. |
| 79. Rags cotton (Civil requirements only). | 106. Wheel barrows. |
| 80. Railway platform drinking water trolleys (Civil requirements only). | 107. Wicks cotton (Civil requirements only). |
| 81. Rubber balloons. | 108. Wooden packing cases of all sizes (Civil requirements only). |
| 82. Scissors cutting ordinary scissors). | 109. Woollen hosiery (Civil requirements only). |
| 83. Shoe laces. | 110. Shellac. |
| 84. Sign boards painted. | |
| 85. Skin sheep all types (Civil requirements only). | |
| 86. Skiboots and shoes. | |

THE GOVERNMENT MECHANISED BRICK PLANT COMMISSIONED

Thiru V. R. Nedunchezian, Minister for Industries, Madras commissioned on the 31st March, 1968 the State-owned Rs. 70 lakh Mechanised Brick Plant set up at Thirumazhisai sixteen miles from the Madras City.



THIRU V. R. NEDUNCHE
Minister for Education and

This modern automatic plant has been supplied by the Yugoslav organisation 'INGRA'. Its production capacity is 66,000 bricks per day and wirecut process of manufacture is adopted. About 190 acres of land were acquired to locate the plant and for supply of clay for the plant.

Inaugurating the plant, the Minister for Industries said that the setting up of this plant augured well for the further industrial development of the State as brick was the basic requirement to any project. He did not envisage any shortage of bricks hereafter. He hoped that a major difficulty facing the building industry in Madras namely the procurement of quality bricks at reasonable price would be solved to a great extent. He stated that the public would welcome this unit in as much as it would, while cutting the construction cost, enhance the beauty and appeal of buildings put up using these perfect bricks.

Thiru R. Pasupathi, Director of Industries and Commerce, welcoming the Minister and others explained the features of the plant. He thanked the officers, contractors and members of the public for their co-operation

in the establishment and commissioning of the plant.

WORKING OF THE PLANT

Clay is collected by Multi bucket excavators and transported to the preparation shed by tipping trollies pulled by diesel locomotives. Box feeders at this stage enable proper proportioning of raw materials and steady feeding of slat conveyor. Two pairs of heavy high speed rollers ensure thorough mixing and grinding of clay. The clay so processed is fed into an extrusion press. A notable feature of the press is that it has facility to remove air from the clay mass as it enters the extrusion chamber. This deairing facilitates easy production of comparatively complicated items like partition blocks, hollow blocks, perforated bricks etc., The extruded bricks are cut by automatic cutters, loaded in finger cars and taken to artificial dryers. 64 numbers of artificial chamber dryers each with a capacity of about 3,603 bricks and working on the principle of humidity drying are designed to ensure removal of moisture from the bricks from about 22% to about 5%. Rapid drying of bricks especially in low humidity conditions cause uneven shrinkage resulting in warping,

cracking and other faults. Earlier stages of drying are therefore done in highly humid atmosphere. Waste heat from cooling zones boosted with additional fire mouth burners is used for drying the bricks. The artificial driers have been designed to dry bricks completely in about 72 hours.

The dried bricks are fired in latest type of Hoffmann Kiln with furnace oil using impulse burners which ensure efficient use of the fuel.

The Plant at Thirumazhisai has two production lines each designed to give an output of atleast 33,000 nos. of solid bricks of size 9"x4½"x3" in a shift of eight hours. Two lines make it possible for the unit to undertake manufacture of two different types of items simultaneously.

DEMAND FOR BRICKS

The requirements of bricks in Madras City are met by a large number of small units near Aminjikarai about 7 miles West of Madras City.

In the wake of increased tempo in the building construction during the second and third plan periods the price of bricks in Madras City as in other important cities was registering a steady upward trend. Price of table moulded bricks rose from Rs.40/- per 1000 nos. in 1955 to Rs. 65/- in 1961 and over Rs. 110/- by 1963. The quality of the bricks deteriorated rapidly. The building industry was threatened with a crisis. It was in such a situation that the Government of Madras took a decision to set up an uptodate, fully mechanised Brick Plant near Madras which would ensure to the consumer quality bricks at reasonable price.

BETTER IN EVERY RESPECT

When compared to ordinary stock bricks, machine-made bricks from the Thirumazhisai Plant have better finish and texture. They

are more accurate in size and shape. They have less absorption and far higher crushing strength. The Indian Standard Specification prescribes a minimum crushing strength of 35 kg per Sq. CM for common building bricks. The specifications also grade bricks of crushing strength, 70 Kg. per Sq. CM and 140 Kg. per Sq. CM as Grade A, and Grade AA respectively. The crushing strength of bricks manufactured at Thirumazhisai exceeds 193 Kg. per Sq. CM. Similarly as against 20%, 22% and 25% water absorption provided for Class I, Class II and Class III bricks, the Thirumazhisai bricks have 10.6% absorption only. Being accurate in size and shape and superior in finish, bricks from the unit need less mortar for laying. Buildings constructed with these bricks can afford to leave the outer surface without plastering.

PERFORATED BRICKS

In more advanced countries solid bricks have given place to perforated bricks. Perforated bricks ensure certain amount of heat insulation. It has been worked out that for tropical countries like India, 30 to 35 per cent perforation in bricks offer adequate thermal insulation property.

Perforated bricks find greater use in the construction of light weight walling and multi-storeyed buildings. Large size perforated bricks help to increase the masons' output. It is gratifying to note that the Mechanised Brick Plant at Thirumazhisai has in its production programme manufacture of large quantities of perforated bricks. Partition blocks, ceiling blocks, hollow blocks, facing bricks, glazed trillies etc. are other products the unit will be introducing in the market.

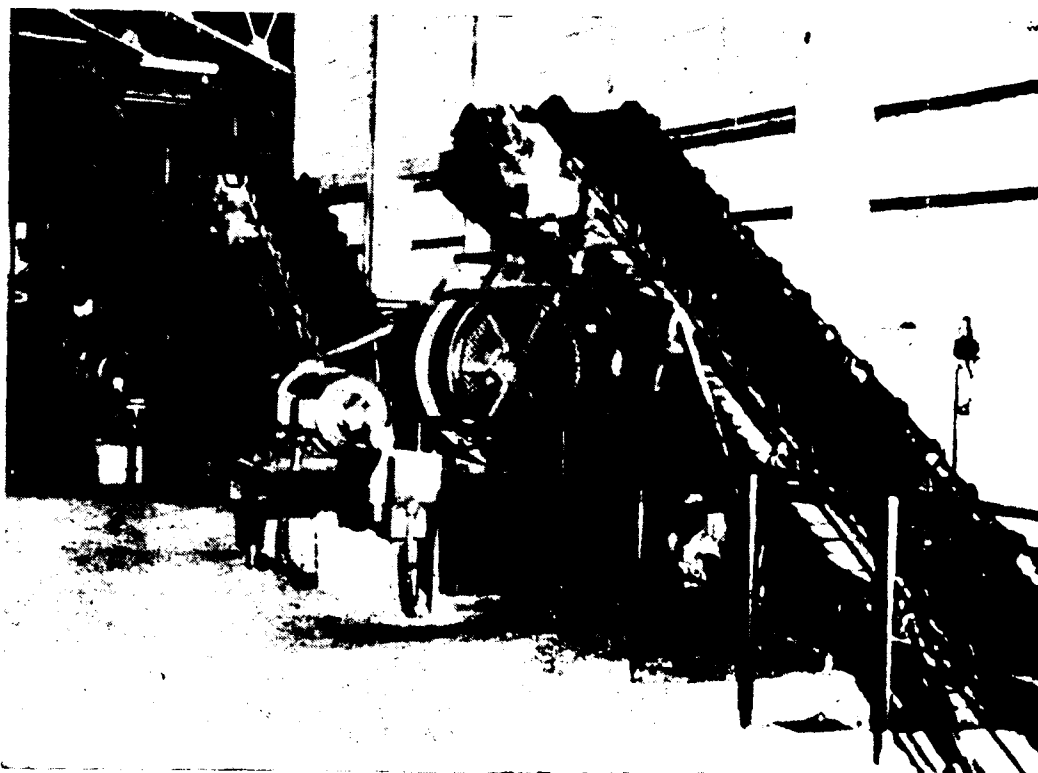
The present prices for 1000 bricks made here are Rs. 85/- for solid and Rs. 80/- for perforated bricks of size 9" x 4½" x 3".



The meeting of the State Export Promotion Advisory Board was held on 24-2-68 at Rajaji Hall under the presidentship of Thiru C. N. Annadurai, Chief Minister of Madras. Photo shows the Chief Minister with Thiru M. G. Balasubramanian, Secretary, Industries, Labour and Housing Department and Thiru R. Pasupathi, Director of Industries and Commerce, Madras



Thiru V. R. Nedunchezian, Minister for Education and Industries watching with keen interest a brick made in the Government Mechanised Brick Plant at Thirumazhisai



A view of the machinery installed in the Brick Plant at Thirumazhisai

IMPORT POLICY FOR 1968-69

SALIENT FEATURES OUTLINED

In the new Import Policy announced for 1968-69 incentives are proposed to be given to both priority and non-priority industries exporting ten per cent or more of their production in 1967-68. These incentives will take the form of freedom to import their requirements from their own chosen sources and permission to expand capacity.

For the first time, the Government is bringing indirect compulsion to bear on exporters. This will be done on an experimental basis in case of 10 industries, including bicycles, certain parts of bicycles, Diesel engines-stationary type, certain small tools, coated and bonded abrasives, storage and dry batteries, wire ropes, certain automobile ancillaries, drugs and pharmaceuticals, and paints, varnishes and enamels.

These industries will forfeit the facilities in the matter of sources of import and expansion of capacity and will also be liable to cuts in their import entitlement if their export performance does not come up to 5 per cent of their production. The Government thinks that they are now established well enough to export a substantial part of their production.

The penalty will apply if these units have been in production for more than five years, but units in the small-scale sector will be exempted from it. The small-scale sector will, however, get the facilities provided to the large-scale units.

Another highlight of the policy is to relate licensing closely to inventories and consumption of imported inputs. This procedural change in the conditions for eligibility for claiming successive licences has been made in order to have better control over the disbursement of limited foreign exchange resources.

As the prospects of foreign aid are, by no means, rosy, a tighter control over inventories is planned.

The 260 new items which have been banned include drugs, medicines, chemicals and machine tools. These are the items in which indigenous production has been established in the country.

The 12 items for which quotas of established importers have been reduced are drugs and medicines, raw films, motor vehicle parts, studio electric and projector bulbs, spare parts of power-driven road rollers, gas used for refrigeration and air-conditioning, potassium carbonate, parts of refrigeration and air-conditioning machinery other than domestic refrigerators and scientific and surgical instruments.

The 197 items which are to be allowed to actual users on a restricted basis cover a wide range of products. These include special and alloy steel castings weighing over 3 tons per piece, unmachined steel forgings, iron and copper products in various forms, marine diesel engines above 320 horse power, dyes intermediates, 32 items of drugs and medicines Cinnamon, unmanufactured tobacco, and many chemical products.

Three more items, namely sulphate of potash, sodium nitrate, raw films (35 mm excluding sound negative) have been added to the list of items whose import will be canalised through the STC.

The open general licence allowing import of certain essential raw materials required by export industries like cashewnut, hides and skins, dyeing and tanning substances, has been extended.

The grace period of validity of import licences has been extended from 15 to 90 days.

ITEMS TAKEN OFF PERMISSIBLE LIST

THE FOLLOWING IS THE LIST OF ITEMS TAKEN OFF THE PERMISSIBLE LIST

Ferro-selenium, silico-spiegel, aloe fibre, sisal yarn, asbestos yarn, packings, rope lagging and asbestos textile products all sorts; certain sizes of ball, roller and taper bearings; dial indicators; thread plug gauges and ring gauges; graphite crucibles of sizes up to 300; Silicon carbide crucibles or carbon-bonded graphite crucibles of sizes upto 100.

Rubber covered conveyor belting; commutators for DC motor up to 20 hp; segments of commutator for motors of all sizes; carbon brushes except special types (electrographitic grade and brushes of odd size) required as spares.

The following coal-mining machinery and parts thereof; coal cutters (shortwall, longwall, longwall/shortwall); haulages (direct, endless and reversible endless) upto 200 k.w., mine electric winder (drum and friction type) upto 2,000 k.w., safety detaching hooks upto 7½ tons; friction wedge type upto 1-½" dia; coal loader (capacity in coal upto five tons per minute; mine locomotive capacity upto 60 k.w.)

Mercury vapour lamps; graphite electrodes and anodes and carbon paste; power and distribution transformers of ratings upto 20,000 kva and 132 kv; conductor accessories, ground wire accessories, line hardware and insulator hardware materials used with transmission lines and insulators upto 220 kv and 40,000 lb. strength.

Mining cables and railway signalling cables; electrolytic copper wires; metal grade of carbon blocks, photo process carbons and

gonging electrodes; electric exploders; miners cap lamps; cation active finishing agents, synthetic resin finishing agents; textile preservatives (excluding phenol cresol but including their substituted products); sodium aliginate.

The following textile machinery and parts thereof: vacuum steaming plant; high temperature high low pressure piece dyeing machine package yarn dyeing machine; continuous bleaching plant (open width); embossing calender; rubber sleeves for shrinking ranges stenter clips; raising fillets; hank expander; single-spindle fully automatic pirm winding machine.

High speed sectional warping machine other than sectional warping machine Liba warp knitting machine for and Raschel Warp knitting machine; metallic traverse drums for high speed winding machine of various types and 5" and 6" bakelite traverse drums for various winding machines (single spindle four spindle type); warp winding machine (with or without automatic knitter).

Sizing machine; plain loom; fabric strength tester; yarn strength tester; direct yarn count balance round comb needles of any gauge; meter counters and other counters; spare parts for grinding rollers, dead or traverse.

Drugs and medicines; belt dona extracts; benzathine penicillin; bereberine and its salts; bruchin and its salts; hucelizin and its salts; carbarsone; cortisone; cyclizine and its salts; chlorcyclizine; diethyl carbam zinc and its salts;

ethinyl estrodiol, ferrous fumarate; ferrous gluconate, halogenated derivatives of hydroxy-quinoline, hyderocortisone, 17-1 hydroxy-progesterone and its esters, hydroxyzine hydrochloride, hexamine, insulin all types, lanolin (adepts lanae):

Magnesium trisilicate, meclozine and its salts, menthol, meprobamate, mercurio chrome, methyl testosterone, paracetamol, penicillin (sodium potassium procaine and phenoxymethyl penicillin), peptone, potassium bitartrate, progesterone, salicylic acid all grades, sodium formate, testosterone and its esters, vitamin A, vitamin K, zinc undecylenate.

Drange oil, fire bricks (refractories), refractory coating and cement, commutators and parts thereof, watch cases, cartridges 12 bore 2½" shots 2, 4, 6 and 7 and cartridges 2½" cartridges 12 bore shots sizes 1, 3, 5, 8 etc. LGSG and spherical ball.

Chemicals: Accelerators, antioxidants and retarders used in rubber chemicals, aluminium fluoroide, ammonium phosphate (mono and dil), barium chloride, barium nitrate, bisphenol, diethyl ether, diphenylamine, hydrofluoric acid, industrial gases—oxygen, dissolved, acetylene, carbondioxide, hydrogen, nitrogen and nitrous oxide, oleic acid, perchloroethylene, phenol, phosphorous ientoxide, sodium fluoride, sodium formate.

Raw materials for paints: phthalic anhydride, wood and timer namely mahogany, walnuts, cornel and compressed oakwood, hornbeam 35 mm and 35/70 mm project head complete with or without accessories, magnets except ceramic and sintered, components of moving coil meter such as magnets, jewels, laminations, castings, dials, needles and other pressed components, pressure gauge-indicating and recording, drought gauge-indicating and recording, thermocouples-base metal and rare metal, pyrometers-indicating, recording and controlling, resistance thermometers - indicating

recording and integrating, flow meters (manometric indicating, recording and integrating).

Flow meters electric transmitting, indicating recording and integrating flow meters-ring balance, indicating, recording and integrating, flow meters-open channel indicating recording and integrating, Co 2 analysers indicating and recording differential pressure transmitters-pneumatic, pneumatic controllers, indicating and recording, single point electric potentiometers, indicating, recording and controlling, level meters, indicating, recording and controlling, pressure recorders, temperature recorders.

Printing machinery and parts thereof as following: paging machines and other similar machines, ticketing machines, grading machine, for graining of offset plates (all sizes), vacuum printing frames for the offset plate-making all sizes, plate whirlers for the offset plate (all sizes), etching and retouching tables, mounting tables, registering tables, paper jogging machines, ink agitators, spray units, roller washing devices, self-adjusting proof presses (letter press) except precision letter press proofing presses, paper folding machines from 17" x 24" to 30" x 40".

All hand-fed letter press printing machines, all automatic letter press printing machines upto 20" x 30" other than those for high grade work for quality printers. Power operated and hand-operated paper cutting machines (other than automatic guillotine of 42" and above and heavy duty power-operated guillotine of 42") were stitchers paper perforating machinery hand or treadle type, paper varnishing and gumming machinery 24" x 37" and 32" x 44", parallel locking up of quions 4 x 12 cm to 4 x 148 cm, rule cutter size 9", table router 32" x 20" corrugating machinery single and double face combined conveyor, cutting scouring and slotting machines, rubber blankets

for cloth processing machines namely printing, sanforizing etc.

Silicon diodes up to 50 amps, flashes and time switches, electromedical equipments parts and accessories thereof, the following: X-ray equipments upto and inclusive of 500 m.a. capacity single channel portable cardiographs and cardioscopes ultra-violet ray lamps (excluding Kromdye for medical treatment), infra-red ray lamps for medical treatment high tension transformer generators.

X-ray controls, fluoroscopic stands, bucky tables-hand or motor driven, tube stands, ceiling mounted tube carriages, cones, localisers, collimeters, manula casset changers fluoroscopic stands, bucky tables hand or motor-driven tube stands ceiling mounted tube carriages cones, collimeters, manual casset changers, X-ray protection screens, barriers and devices, X-ray radio petrol or diesel engine-driven, electrical alternators, X-ray viewing equipment, fluoroscopic screens, intensifying screens, film filling cabinets, barium enema equipment and electric mixer film markers, angle boards, film clips hangers, film developing tanks, dark room thermometers, and floating thermometers, drying units and cabinets, wet film rack, tube lamps for illuminators. Meters of all types such as Kv ma and parts thereof, compensation transformers and parts thereof.

Switches and parts thereof, knobs, dial plates, catons, brackets, plugs, mains correction transformers, hand and foot switches, tape recorders, HT coils, filament transformers, transformers oil, boosting transformer, lamination for the transformers, tube head

covers, holders and supporters, hoses, thermometers, clamps, pulleys, pully wires, counter weights, tube colum rails, tibber stops and hinges, knobs and handles, head shoulder footrest, tramcars and component parts and accessories thereof, varnish shellac to approved specification No. bss x 18 thinner to approved aircraft specification and cellulose nitrate DPE to specification an TTD 514-3 and clear dope to specification No. DTD 751-3 aircraft solders grades A and B to BS specification No. 219/49 Dakota aircraft 12 volt 85 amphour battery type No. 6 A 12 RT HT-2 aircraft 24 volts 20 ah batteries PT No. 12 TA-9 B.

Water meters: Surgical operating tables working on hydraulic principles along with its spares and accessories, hypodermic needles, Magnets, except ceramic and sinterns, Glass syringes more than ml capacity and less than 50 ml capacity, Stethoscope, albastone, catone and moldano, dental, air compressor, lining cavity, probes, calsite investment mercury, chemically pure needed for dental purposes dispenser, mercury PVC composition including moulding powder, Bestos mantle yarn.

The following machine tools and parts thereof Twist drill grinders, roll grinders unit heads, special purpose machine including unit heads, special purpose machine including transfer machines, beanbenders, semi-automatic and automatic submerged arc type welders panto-graph engraving two dimensional machine, tapping machine 20 mm dia capacity, cable making machinery, broaching machine 50 ton capacity, induction heating equipment (main and medium frequency), valve seat grinder, clutches.

THE IMPORT POLICY FOR APRIL 1968 TO MARCH 1969. LIST OF ITEMS TO BE ALLOWED FOR IMPORT TO ACTUAL USERS ON RESTRICTED BASIS

The following is the list of 197 items to be allowed for import to actual users on a restricted basis under the new import policy:

Oil line pipes and tubes of A.P.I. specifications, pipes or tubes flexible for passing gas or fluid under pressure and telescopic flush pipes; iron and steel bolts, nuts, set screws, machine screws and machine studs but excluding bolts, nuts and screws adapted for use on cycles;

(a) Machine screws, set screws and machine studs; (b) others. Malleable iron castings, including malleable iron pipe fittings etc. iron and steel wire ropes or wire strand, (stranded wire) boot and shoe grindery; special and alloy steel castings, weighing above 3 tons per piece; unmachined steel forgings, including forged steel bar, copper wrought in the following forms, namely tape, foil, highly polished sheet specially prepared for making process blocks, lithographic sheet and copper perforated sheet (for printing industry). Copper flexible pipes or tubes, for passing gas or fluid under pressure; zinc granulations and dust; scrap of brass, bronze or similar alloys, nickel base alloys, nickel chrome alloys including manufacturers and scraps thereof. Phosphor bronze / metal rods / wires / strips; bronze flexible pipes and tubes for passing gas or fluid under pressure; monel metal unwrought;

Rolling rolls for steel works (whether of cast iron, cast steel or forged); packing engines and boilers all sorts, N.O S steam pneumatic and hydraulic packings for all machineries, readymade boiler packing machined steel balls above 9 1/16" dia; coated or uncoated arc welding electrodes, iron or steel coated and uncoated rods, wire files and stripe for gas welding and bronzing non-ferrous electrodes / wires etc. Nickel chrome; Iron base alloys other special alloys; including aluminium resistance alloys; ball bearings specified in Appendix 14(1) (B), 14(2) B, 14(3) (B), 14(4) (B). Slitting and slotting saws of thickness below 1/2" grinding wheels and segments emery fillets crocus paper emery polishing paper of standard micron gradings, water proof abrasive paper and cloth; V belts B.C.D. sections over 100" in circumference of sizes other than those detailed in Appendix 23; spare parts of road rollers marine diesel engines above 320 h.p.; parts of petrol gas and kerosene engines out-board motors up to and including 5 h.p. out-board motors above 5 h.p. Fractional horse power motors (including motors upto 1 h.p.) suitable for D.C. supply or single phase electric generators; generating sets; special pumps for fused caustic soda or acids, safety equipments required by collieries; thermocouples and pyrometer; lightning arrestors, high voltage fuses and protective relays, power and distribution transformers other

than of rating upto 20,000 kva and 132 k.v. on the H.T. side, air and oil circuit breakers up to 660 volts and cubicals and pannels incorporating these; electric control gear and electric transmission gear other permissible items; power cables above 33 k.v. disc insulators of above 18,000 lb E.M.S. (1) 2. transformers bushing and apparatus insulators below 66 k.v.; safety lamps.

Dyes Intermediates: (1) Acetoacetanilide; (2) Acetoacet-o-chloroanilide; (3) Acetoacet-p-chloroanilide; (4) Acetoacet-o-toluidide; (5) Anthraquinone; (6) O-anisidine; (7) P-anisidine; (8) Benzoyl-j-acid; (9) Chicago acid; (10) C-acid (2-chloro 5-toluitine) 4 sulphonic acid sodium salt; (11) 2-5 Dimethyl 4-chlorophenyl thioglycolic acid; (12) Di-J. acid; (13) G. salt; (14) Gamma acid; (15) H-acid; (16) J-acid; (17) J-acid urea; (18) Laurent's acid; (19) Naphthionic acid/sodium naphthionate; (20) 2-Naphthyl thioglycolic acid; (21) O-nitroanisole; (22) P-nitroanisole; (23) Peri acid; (24) Phenol; (25) Phthalic anhydride; (26) Rasoreinol; (27) Rhoduline acid; (28) Schaeffer's acid; (29) Robias acid; (30) O-toluidine; (31) P-toluidine; (32) P. Toluidine 5-sulphonic acid (acid/sodium salt).

Synthetic bleaching agents (other than bleaching powder or hypochlorides, hydrogen peroxide etc.) powdered milk containing not less than 18 per cent, cream intended for infant feeding; coral, unprepared ivory, unmanufac-

tured cinnamon, cloves all sorts, whether ground or unground nutmegs; cauliflower seeds; hops, palm oil.

DRUGS AND MEDICINES

Absorbable gelatine sponge; 2. acemarsol; 3. Aluminium glycinate; 4. Aluminium hydroxide gel. 5. Calcium De-saccharate; 6. Calcium gluconate, injectable grade only; 7. Calcium lactate; 8. Calamine; 9. Caffeine and its salts; 10. Chlorobutol; 11. Chloramphenicol palmitate; 12. Chloropropomide; 13. Glycorophosphoric acid and its salts; 14. Heprine; 15. Lignocaine; 16. Methyl-ester of para-hydroxy benzoic acid (methyl-paraben); 17. Morphozinamide hydrochloride; 18. Noscapine (narcotine); 19. Phenacetine; 20. Potassium hydrogen tartrate (cream of tartar); 21 Potassium Sodium tartrate (richelle salt); 22. Potassium iodide; 23. Procaine hydrochloride; 24. Saccharine; 25. Santonin; 26. Silver protein, mild and strong; 27. sodium cyclamate 28. Sodium iodide; 29 Sulphanilamide; 30. Sulphaguanidine; 31. Tetracyclines and their salts; 32. Vitamins D2 and D3.

Tobacco unmanufactured, china clay; albestor stone; Citronella oil; essential oils synthetic; glue N. O. S. excluding belt dressing; natural rubber; glassine paper, soft capillary tubing, parts of typewriters; starch and farina; essences containing spirit for the manufacture of beverages; liquid paraffin.

CHEMICALS

1. Acetic anhydride; 2. Acid salicyelic; 3. Activated carbon; 4. Ammonium nitrate of explosive grade; 5. Bromine; 6. Caustic potash or potassium hydroxide; 7. Case hardening compound; 8. Chlorinated paraffins; 9. Dichloro difluoro methane gas and its modified products used for refrigerators and air conditioning purposes; 10. Ethylene dichloride; 11. Gold cyanide, potassium-sodium gold cyanide, copper cyanide, zinc cyanide and silver cyanide; 12. Magnesium carbonate light and magnesium insulating materials; 13. Methanol; 14. Metol; 15. Mono chloro acetic acid and its sodium salts; 16. Butyl alcohol; 17. Ethylene oxide ethylene glycol including DI and poly; 18. Methyl isobutole ketone; 19. Naphthalene; 20. Phthalic anhydride; 21. Potassium carbonate; 22. Pyrotechnic aluminium powder; 23. Sexitol; 24. Sodium tripolyphosphate.

Tetrasodium pyrophosphate and other polyphosphate of sodium; 25. Strontium carbonate; 26. Submerged arc-welding fluxes; 27. Synthetic chemicals for the manufacture of dyestuffs; 28. Tri-sodium phosphate; 29. Phosphorus (yellow and white) 30. other organic chemicals; 31. any other chemical of a specialised nature or needed for a specific purpose.

Solvent naptha (light and heavy); explosives blasting gunpowder; blasting gelatine, blasting

dynamite, blasting roburite, blasting tonite and all other sorts including detonators and blasting fuse.

Giant motor, motor-cycle tyres, tubes and flaps including solid tyres, but excluding tractor and off-the road tyres and tubes; tractor and off-the road tyre and tubes and flaps, excluding other types of tyres and tubes and flaps specified elsewhere; rubber battery containers, willow clefts; ivory and fineboards for the manufacture of greeting and invitation cards; tanning machines, components of office machines and spare parts for the maintenance of improved machines; component parts of printing machinery, rubber hoses required for the oil industry, rubber spray hoses for industrial and agricultural purposes; rubber hose pipes and rubber and rubber hoses n.o.s. and rubber washers and boilers.

Industrial sewing machines and components thereof other than overlock, flat lock and chain lock machines needles, for all industrial sewing machines, polystyrene; polyvinylidene chloride, pyrotechnic aluminium phenolic urea, melamine, alkyds and malleic resins; synthetic iron exchange resins; polyvinyl acetate, polyvinyl alcohol, polyvinyl chloride; acrylate, and their copolymers in emulsion and or dispersion form; films made from transparent cellulose of viscacella, royasine, transparent cellulose wrapping and other transparent paper; vanadium pentoxide catalyst.

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A Division of the
Department of Industries
and Commerce, Madras

ESTABLISHED IMPORTERS

CUT IN QUOTAS

The following is the list of items in respect of which quotas for established importers have been reduced.

Spare parts of power driven road rollers (50%) 33-1/3 %.

Studio electric and projector bulbs (20%) 15%.

Drugs and medicines (23%) 18%.

Raw films (25%) 7-1/2% Motor vehicle parts (17%) 12-1/2%. Dichloro difluoromethane Gas and its modified products used for refrigeration and air-conditioning purposes, 40% (Nil)

Potassium carbonate (8%) Nil.

Parts of refrigeration and airconditioning machinery other than domestic refrigerators (10%) 7-1/2%.

Scientific and medical including surgical instruments, equipment and appliances and parts thereof made wholly/mainly of rubber and or made wholly/mainly of glass including laboratory glassware (17%) 12-1/2%.

Medical including surgical instruments, equipment and appliances and parts thereof not made mainly of rubber and not made mainly of glass (35%) 25%.

Scientific instruments equipment and appliances and parts thereof not made mainly of rubber and also not made mainly of glass (25%) 15%. Dental instruments equipment and appliances and parts thereof not otherwise specified (125%) 100.

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LIST OF TEN INDUSTRIES SELECTED TO BOOST EXPORT

The import policy for 1968-69 introduces an element of compulsion to boost exports in respect of 10 industries.

These 10 industries have been selected from the list of priority industries on the basis of their export potential. The units in these industries will be liable to cuts in import entitlement, if they fail to show export performance of even up to 5 per cent of their production.

In addition they will also lose the 'carrot', which the new policy seeks to give in the form

of facilities for importing from sources of their own choice and favourable consideration of expansion scheme to priority industries which exported during 1967-68 10 per cent or more of their production.

The 10 industries to which the 'stick' will be applied are bicycles, parts of bicycles, stationary type diesel engines, certain small tools, coated and bonded abrasives, storage and dry batteries, wire ropes, certain automobile ancillaries, drugs and pharmaceuticals and paints, varnishes and enamels.

Dr. A. R. MUDALIAR TO HEAD INVESTMENT CORPORATION

The Madras Government has nominated Dr. A. Ramaswami Mudaliar as the Chairman of the Madras Industrial Investment Corporation in the place of the late Mr. T. S. Narayanaswami.

Announcing this to newsmen, the Industries Minister Thiru V. R. Nedunchezian, said he was glad that the services of Dr. Ramaswami

Mudaliar had become available to the Corporation at a crucial stage of its development.

The Minister said there were definite signs that the climate for industrial expansion and investment in the State was improving. He hoped that under the able guidance of Dr. Mudaliar, the Corporation would play a prominent role in promoting industrial expansion of the State.

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TAMILNADU PAVILION IN THE INDIAN INTERNATIONAL TRADE AND INDUSTRIES FAIR, 1968

(CONTRIBUTED)

During 1965, the All India Manufacturers' Organisation, a premier organisation representing manufacturers in India, desired to organise a Fair with active support and assistance of the Governments of India and Madras with the main objective of promoting the country's export trade choosing a theme 'Prosperity through Partnership'. The aim of the fair was to highlight before the public, the industrial development of India and the rapid progress that had been achieved in every field of economic activity during the post-independent period and to stimulate, diversify and increase the country's foreign trade especially in non-traditional items.

The Tamil Nadu Government placed at the disposal of the Fair authorities 300 acres of land on the New Avadi Road about 2 miles from the heart of the city in the midst of an industrial complex well served by road and rail communications. The fair was divided into sections such as State Sector, Foreign Sector, Private Sector and Shopping Sector etc.

The State Government decided to take part in the fair in a befitting manner by bringing out the salient features of the development in the field of Industries, Agriculture, Animal Husbandry, Power, Irrigation and Rural Development and an area of one lakh sq. ft. was set apart by the fair authorities for the participation of the State Government.

The Fair was originally intended to be inaugurated during January '67 but this had to be postponed to January '68. The fair was inaugurated by the Vice-President of India on the 21st January, '68.

The pavilions of U.S.S.R., G.D.R., Poland, Bulgaria, Hungary, Romania and Yugoslavia were some of the more important of the Foreign participants. The States of Mysore, Andhra, Maharashtra, Assam, Delhi, Uttar Pradesh, Pondicherry and Gujarat also participated in a big way.

The Tamil Nadu Government was very well represented and the 'Madras Pavilion' as it was popularly known in the Fair, was situated right near the main entrance and comprised of the Agriculture, Industries, Animal Husbandry, Fisheries, Power, Irrigation and Information and Publicity Departments. Apart from participating in the Fair, the Government provided very active assistance to the Fair authorities in solving their day to day problems with the Government Departments by nominating the Special Officer of the Industries Department Pavilion as the Liaison Officer for the State Government for all the State Government Departments and also with the Fair authorities.

An imposing temple tower at the end of a long stretch of high wall with a dozen sculptural figures adorning it and a colourful temple

car facing the temple Gopuram gave a distinct look to the Madras Pavilion. It was also a fine blend of modern architecture with the traditional line. For, the temple motif on the northern side of the pavilion fitted in with the huge columns rising from a vast tranquil pool on the eastern side. The colonnade provided the visitors a glimpse even from a distance into the attractive stalls inside the pavilion.

The Government Architect designed the layout for the pavilion and the shells of the pavilions of different Departments were constructed by Public Works Department in a very simple and effective manner. The internal decoration, lighting, etc. were all done by the respective Departments. Inexpensive building materials like casuarina poles, wooden boards, galvanised iron pipes and sheets were used. This temporary nature of the construction was an advantage because of the fact, that most of the articles could be retrieved at

the end of the show and a good portion of their value realised. The various sections of the pavilion merged into a harmony while depicting the State's progress in an architectural set up which was in keeping with the ancient heritage.

The Agricultural Department was the first to catch the eye of the visitor. One could see the progress made in the State in the Agricultural field. The various quick-yielding crop development programme and the latest techniques in the agricultural engineering field were depicted.

Next to Agriculture was the Industries pavilion, which displayed a cross-section of the traditional handicrafts goods and portrayed the modern industrial progress both in the private and public sectors. The goods exhibited ranged from serene-looking icons made of solid bronze as well as deceptive papier mache, to carpets

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The Chief Minister of Madras, Thiru C. N. Annadurai is seen in the picture addressing the Tamizhagam Day Celebrations at the World Fair on 23-2-68



The Governor of Madras Sardar Ujjal Singh and Sardarini Ujjal Singh are inspecting ceramic pieces at the Madras Industries Pavilion at the World Fair

and mats providing a rich feast to the eyes of the visitors. The stall had a separate sales section. The development of Trade and Industries in the State from the early days of 1635 A.D., when Chennappa Naicker founded the Madras City, was very well brought out in a series of Pictorial visual panels and eye-catching Murals. Goods produced by some of the private enterprises who could not set up pavilions of their own, were also put on show, besides the bewildering variety of the products of the various units of the State-owned Small Industries Corporation. The Handlooms Department put up a very impressive show in this pavilion.

Then there was the Animal Husbandry pavilion, which depicted the latest techniques in cattle and poultry protection and also the need for increasing the cattle and poultry wealth. The pictorial representation of these was made in a very effective and educative manner.

The next one was Fisheries pavilion which gave the visitor an idea of the State's marine wealth and the means used to exploit it. The counters selling all types of Marine products from Preserved Prawns to Pearl jewellery attracted a large and appreciative crowd who

had all a good word to say about the Government's endeavour towards Marine-based industries.

The power pavilion, which came next, showed the working models and charts of all the power schemes in the State.

The Irrigation pavilion depicted the various projects in their natural settings.

The last one was Information and Publicity pavilion, where the ancient culture of Tamilnad was brought out by antiques, collections and pictorials.

It was described by every one who visited the Fair that the Madras Industries pavilion was easily one of the best in the Fair. It had been a 'Must' for the visitors and it was almost the first in the itinerary for any V. I. P. visiting the Fair. The large number of visitors included Central and State Ministers, Diplomats from abroad, industrialists, Entrepreneurs, Traders and Students.

To persons from Tamilnad, the Madras pavilion was a Pride; to persons from outside Tamilnad it was a Model to emulate; and to a Foreign visitor it was a Proof of the Country's progress.

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THE NOTIFICATION No. S. O. 574/IDRA/29B/68 DATED 7-2-1968 PUBLISHED IN
THE GAZETTE OF INDIA, PART II SECTION 3 SUB-SECTION (II) DATED 7-2-1968
AS REPUBLISHED IN THE FORT ST. GEORGE GAZETTE IS REPRODUCED BELOW :

NOTIFICATION

MINISTRY OF INDUSTRIAL DEVELOPMENT AND COMPANY AFFAIRS

(Department of Industrial Development)

NEW DELHI, 7-2-1968.

S. O. 574/IDRA/29B/68-In exercise of the powers conferred by sub-section (i) of section 29-B of the Industries (Development and Regulation) Act, 1951 (65 of 1951) the Central Government hereby exempts from the operation of sections 10, 11, 11A and 13 of the said Act and the rules made thereunder, all industrial undertakings pertaining to such of the Industries specified in the First Schedule to the said Act as are mentioned below, namely :

Any industry engaged in the manufacture or production of :

Wheeled agricultural tractors and power tillers falling under entry (i) Tractors, harvestors and the like under the heading "10 Agricultural machinery".

(No. 6 (1)/Lic. Pel/68)

Sd. R. V. Subramanian,
Joint Secretary.

THE MADRAS STATE INDUSTRIAL CO-OPERATIVE BANK LTD.

NOMINATION OF BOARD OF DIRECTORS AND MEMBERS OF EXECUTIVE COMMITTEE

Under Bylaw 25(a) of the Bylaws of the Madras State Industrial Co-operative Bank Ltd., No. IND. 594 the Director of Industries and Commerce and Registrar of Industrial Co-operatives, Madras, is pleased to nominate the following gentlemen as Directors of the said society for a period of one year from 19-1-1968.

1. Dr. P. V. Rajamannar, D. Litt., L.L.D., Chief Justice of Madras (Retd.)
2. Dr. P. Natesan, M. B., B. S., President, The Perambur Arunthathiyar Leather Workers' Industrial Co-operative Society Ltd., and the Tamilnad Co-operative Union, Madras.
3. Thiru V. M. Chatikachalam, J.P., D. Com., F. Int., A.C., F. A. I. A. (Lond.), President, The Madras State Handicrafts Co-operative Marketing Society Ltd., Madras.
4. Thiru R. Ganesan, President, Small Scale Industries Association, Madras.
5. Thiru A. Mahalingam Chettiar, I. A. S., (Retd.) President, The Kumbakonam Co-operative Metal Works Ltd., Kumbakonam.
6. Thiru G. P. Mahadevappa, President, Talavadi Sericultural Workers' Industrial Co-operative Society Ltd., Talavadi.
7. Thiru P. Brahmayya, President, Andhra Chamber of Commerce, Madras.
8. Thiru S. P. V. Swaminathan, President, The Sattur Small Match Producers' Service Industrial Co-operative Society Ltd., Sattur.
9. Thiru K. Natarajan, Managing Partner, M/s. Pilco Mirror Industries, Industrial Estate, Guindy.
10. Thiru S. Bellie Cowder, Vice-President, Kundha Industrial Co-operative Tea Factory, Yedakkadu P. O., The Nilgiris.
11. Thiru G. P. Somasundaram, M. P., Belukurichi (via) Rasipuram, Salem District. President, Co-operative Sugar Mills, Mohanur.
12. Thiru M. Shanmugam, M.L.A., Shanmuga-perumal Street, Kilperumbakkam, Villupuram, South Arcot Dt.
13. Deputy Secretary to Government (Planning), Finance Department, Madras-9.

14. Joint Director of Industries and Commerce (Industrial Co-operatives and Handicrafts), Madras-5.

1. Dr. P. V. Rajamannar

15. Joint Director of Industries and Commerce (Planning and Development) Madras-5.

2. Dr. P. Natesan

2. Under the same By-law Dr. P. V. Rajamannar and Dr. P. Natesan are nominated as the President and the Vice-President respectively of the Bank for the said period.

3. Thiru S. Bellie Cowder

4. Thiru M. Shanmugam, M. L. A.,

5. Thiru R. Ganesan

3. Under Bylaw No. 27(9) of the Bylaws of the Madras State Industrial Cooperative Bank Ltd., No. IND. 594, the Director of Industries and Commerce and Registrar of Industrial Co-operatives, Madras is also pleased to nominate the following gentlemen as members

6. Deputy Secretary to Government (Planning), Finance Department, Madras-9

7. Joint Director of Industries and Commerce (Industrial Co-operatives and Handicrafts)

CO-OPERATIVE MOVEMENT IN MADRAS STATE-REVIEW AND REORGANISATION-COMMITTEE SET UP

The Government have constituted a Committee to study the working of the Co-operative movement in Madras State and formulate proposals for its reform and re-organisation on proper lines under the Chairmanship of Thiru K. Santhanam.

The other Members of the Committee are:
Dr. B. Natarajan, Deputy Director-General,

National Council of Applied Economic Research; Dr. P. Natesan; Thiru A. Palaniappa Mudaliar, Retired Registrar of Co-operative Societies; Thiru V. Alagappan; Thiru Vardhamanan and Registrar of Co-operative Societies. Thiru D. A. Swayamprakasam, Joint Registrar of Co-operative Societies will be Secretary to the Committee.

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OPEN AND CLOSED SYSTEMS OF INDUSTRIALISED BUILDING

By Thiru ROBERT McCALLION

The range of industrialised building systems available in Britain is extremely diverse, and this characteristic is tending to increase both with regard to architectural variety and the range of applications. Systems are reaching out beyond the main building fields of housing, schools, factories, offices and hospitals into such categories as churches, multi-storey car parks, military barracks, university halls of residence and other specialised functions.

Open systems, consisting of a building structure with cladding materials and other components drawn from products available on the open market, offer the greatest degree of design freedom. Closed systems, in which the system sponsor manufactures all the building elements, offer at present the greatest degree of industrialisation. This is particularly noticeable in the housing field which involves the largest volume of production.

HIGH-RISE HOUSING

Experience in housing has shown that systems based on the use of precast concrete elements for high-rise housing have attained the highest degree of industrialisation: they have the lowest labour content, and the elements are pre-finished before arrival on site. The most advanced systems also have the highest production capability.

The system adopted by one London firm, for example, produces a finished dwelling

structure in less than 500 man-hours, which is only a quarter of the labour content required by traditional building methods. Their permanent casting factories have a production capacity of 12,000 dwellings per annum. Another firm in London also uses a concrete-based system which provides more than 20 percent, of the high-rise flats in Britain's housing programme.

On high-rise construction industrialised methods are proving consistently cheaper than traditional ones. In addition to loadbearing large panel construction, framed systems in concrete and steel work are making their appearance.

LOW-RISE HOUSING

On low-rise housing loadbearing crosswall construction still predominates, but framed systems are coming into the market in increasing numbers. Steel framework for two-storey housing has been in use for some years, but timber framework based on platform-frame principles is proving to be a strong competitor. The chief reasons for this are that a timber framework can be erected easily in one day and roofed the next, so that protected working conditions are provided quickly, and all the frame elements can be erected without complex and expensive handling plant. Traditional or factory-made claddings are equally applicable.

More advanced timber systems are available such as that offered by a firm in County Durham. Each house consists of four pre-finished box units, two at ground level and two at first floor, which arrive on site with services fittings installed and internal and external finishes applied.

More recently, another firm have marketed a plywood stressed skin system, also comprising completely prefinished box units. Their prototype pair of dwellings was erected on prepared foundations and completed in 50 site man-hours.

OTHER SYSTEMS

One of the most interesting of recent developments is the system manufactured on a kit-of-parts principle by another London firm. Walling consists of narrow width concrete elements with exposed aggregate finish. Floors and roofs are of joists and plywood panels for spans up to 20 ft. (6 m.) Each dwelling has three prefabricated service cores. The component range includes walls, floors, roofs, partitions, services, staircases, windows, doors and concrete ground beams, from which selections can be made for application to other open systems. This kind of interchangeability has important implications.

The system employed by a firm in Scotland is making a contribution in the search for non-traditional cladding solutions. Loadbearing timber framed panels are clad with stove-

enamelled aluminium sheets and the company are laying down a completely automated production line to produce these components.

Plastics are also in evidence with another system in which wall panels of glass fibre reinforced polyester resin with asbestos backing are built around a light frame of slotted steel angle. The panels have bolt connections.

Still another London firm are also producing sand-wich panels of glass fibre which are being used on a steel-framed multi-storey flats development for the Greater London Council.

ENGINEERING SERVICES

Mention must be made of the impact of engineering services on building technology. The growing complexity of engineering services has reached a stage, particularly in laboratories, factories and hospitals, where they form a major portion of the contract cost. Not only has the building fabric to be designed at the outset to accommodate these services, but it must be sufficiently flexible to allow constant access and replanning and re-arrangement as a necessary concomitant. The system developed by Oxford Regional Hospital Board is a fine example of the degree of integration that can be achieved between structure, fabric, and services, with all possible future variations built-in.

Even a brief sampling of industrial building tendencies such as this is sufficient to indicate

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a definite movement towards open systems and a range of building components for cladding the structure. There is already an impressive list of component manufacturers offering standard products on batch or even flow-line production basis for such items as trussed rafters, roof floor, wall, and partition units, staircases, packaged plumbing units, prefabricated bathrooms, electric harnesses, etc. The range of cladding components has accelerated with the spread of structural framework in concrete, steel and timber, to all categories of building.

However, what was incipient and instinctive as a tendency has been acknowledged recently and made official national policy. Parallel with the change from the British to metric dimensions and quantities (programmed for 1972), the opportunity is being taken to co-

ordinate all dimensions in the building industry. Future building components, designed and manufactured on a dimensionally co-ordinated basis will therefore be interchangeable. This factor alone will provide a far greater range of applicability for a given component, enabling industrial quantity production methods to be used to a considerable extent. These components, used in conjunction with framework and other prefabricated structures, will enable the present semi-craft and craft-based industry to evolve into an assembly industry.

It is realised that a universal system of interchangeable components rest in practice on a thorough understanding of the theory of joints. Government agencies are at present working on joints and tolerances in step with the agreed programme for changing to metric.

(SOURCE: BRITISH TECHNIQUES)

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LOANS FOR SINKING NEW WELLS AND PURCHASE OF PUMP SETS

The Government have hitherto been extending loans with subsidy to ryots for sinking of new open wells under the New Well Subsidy Scheme. Loans (Without subsidy) were being given for the hire-purchase of oil engines and motorpump sets. The Reserve Bank of India, the Life Insurance Corporation and Commercial Banks are now coming forward to support agricultural production programme in a big way. Assistance from these sources will however be available only to the Co-operative sector. With a view to getting the assistance available from institutional sources of finance, the Government have, as a matter of policy, decided that new loans for these two purposes should be given wholly by the Land Mortgage Banks. This decision was announced by the Chief Minister in his speech presenting the budget. Thus, with effect from 1-4-68 the issue of new loans directly by Government under the New Well Subsidy Scheme and for the hire-purchase of oil engine and motor pumpsets will stop and all loans for sinking of new open wells and for the installation of oil engine and motor pumpsets will be made available to ryots only through Land Mortgage Banks. The Agro-

Industries Corporation is also expected to supplement the efforts of the Land Mortgage Bank, as far as pumpsets are concerned.

2. Until further orders, the staff in Blocks and the Revenue Department will continue to receive applications for loans for these two purposes as before, enquire into them and forward the processed applications to the Land Mortgage Banks and the Land Mortgage Banks will sanction loans to ryots direct. The loans given by Land Mortgage Banks for sinking of new wells will be eligible for the usual subsidy of 25 per cent of the value of the work done subject to a maximum of Rs. 500/- (Rupees five hundred only).

3. The allotment of funds made in the Budget under the New Wells Subsidy Scheme for 1968-69 will be utilised only for sanction of second and further instalments of loans in respect of wells for which first instalment had already been sanctioned prior to 31-3-1968. Thus, those who have already been given the first instalment will, if they are eligible, be able to get the second and further instalments as hitherto. ★

RESEARCH CENTRE TO TEST CHEMICAL PESTICIDES

An Agro-chemical Research Centre for testing new pesticidal chemicals has been established near Madras by a private-sector chemical concern. A 120 acre plot in Guduvancheri about 20 miles from Madras

City, was acquired for housing the Centre by the firm.

The site chosen lies in an area where rice is grown all round the year. At any time of the year the crop will be available in different

stages of its development for experiments with the chemicals.

This Centre, organised by Messrs. CIBA of India Limited will try out new pesticidal combination on various crops such as rice, jowar, maize, groundnut, cotton, vegetables and fruits. The extensive field area will also be utilised to lay out demonstrations on mechanised farming and on the correct

methods of employing pesticides particularly for paddy.

Finished pesticidal products are tested in many centres in the country but facilities for testing pure chemicals are said to be lacking. It is claimed that this research unit is the first of the kind to deal with active ingredients of pesticides. ★

LUBRICANT BLENDING PLANT FOR MADRAS

A blending plant for the production of lubricants will be put up in Madras to coincide with the commissioning of the Madras Refineries at the end of this year said Thiru N. K. Kashyap, Chairman, Indian Oil Corporation at a press conference here at Madras

recently.

The plant will produce two lakh tonnes of lubricants per year and besides meeting the needs of this region, it will serve the up-country needs also, he said. ★

RESTRICTION AND CONTROL OF ELECTRICITY SUPPLY

The Madras Electricity Supply Peak-load hour and staggering of Holidays and Recess Hours order, 1968 has come into force at 00:00 hours on the 1st March, 1968.

This order imposes some restrictions on the supply of Electrical energy, in the areas served by the Madras Electricity Grid including those served by the licensees receiving bulk supply from the Madras Grid, namely:—

A ban on the supply of power to L. T. power leads including all agricultural loads during the evening peak load period between 18 and 22

hours in the Hydro Electric areas and between 17:30 and 21:30 hours in the Madras Thermal area;

Staggering of weekly holidays of textile mills and other H. T. industrial establishments not engaged on continuous processes; and

Staggering of recess hours for an hour and a half between 6 p.m. and 9 p.m. (to be specified by the licensee depending upon the local conditions) of textile Mills and other H. T. industrial establishments not engaged on continuous processes. ★

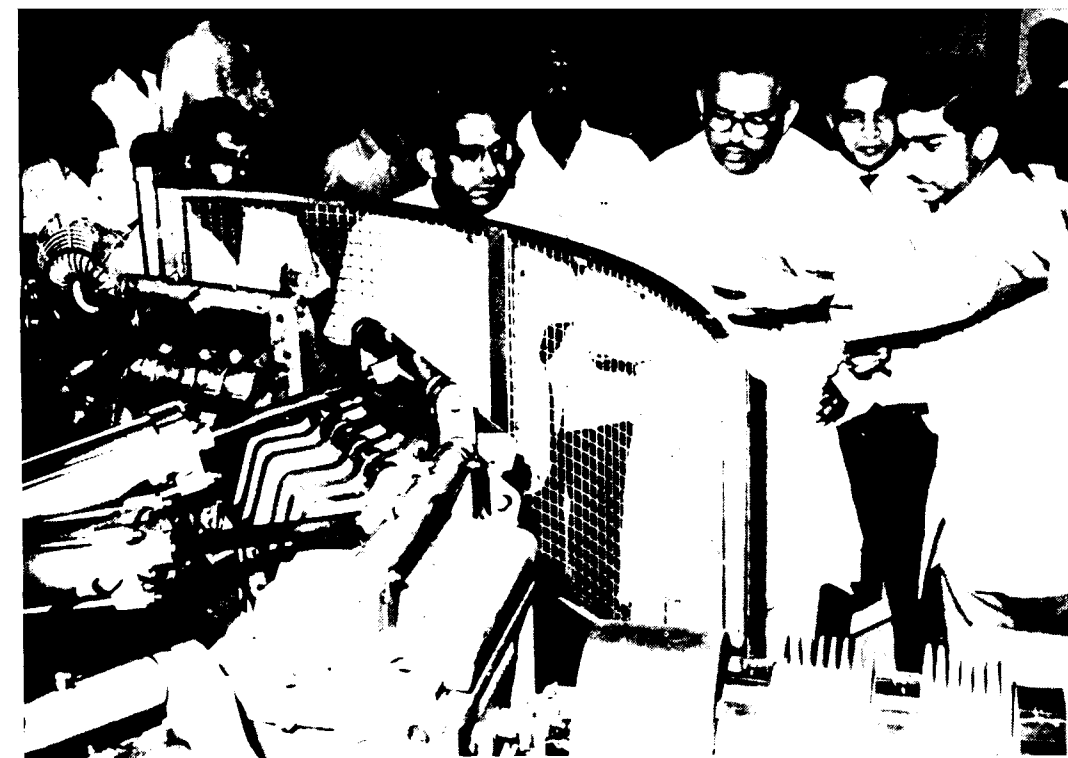
THE ALL INDIA SKILLS COMPETITION AWARD TO MADRAS

The Madras State has been adjudged as the best State in India in the Fourth All India Skills Competition held in August, 1966, and retains the President's shield for the second year. The shield was awarded to Madras by the Union Minister for Labour, Thiru Jaisuklal Hathi at a function held on the 9th March 1968.

A Machinist trainee and an Electrician Trainee from Madras State have secured

first places in their respective trades in the All India Competition.

The All India Skills competition is organised by Government of India after each trade test in the trades of Fitter, Turner, Machinist, Moulder and Electrician, with a view to fostering a spirit of healthy competition among the various States, training institutes and trainees and with a view to improve the standard of training and skills of Craftsmen on an All India basis. ★



The Minister for Education and Industries, Thiru V. R. Nedunchezian is seen inspecting a P.V.C. Shoe Making Plant at the World Fair



The Minister watches with keen interest the operation of an Automatic P. V. C. Shoe Plant at the Fair



A finished P. V. C. footwear is shown to the Minister



The techniques of a P. V. C. sole to a leather upper is being explained to the Minister at the Fair

INDUSTRIAL DESIGN IN JAPAN

HIGH STANDARDS FOR EXPORT PROMOTION

In the belief that for the sound development of exports, the level of industrial design must first be vastly improved, the Japanese Government implemented a series of design promotion measures.

1. Enactment of an Export Design Law.

First, a law concerning the design of export goods was enacted. Although not a positive design promotion measure in itself, the law was to form the foundation for Japan's design policy and the various design promotion measures that were to follow. With a view to effectively preventing mutual imitation of design among manufacturers of export commodities and contributing to the sound growth of the export trade, the Government in 1959 promulgated and put into force the Export Goods Design Law.

This law, which applies to items specified by Government ordinances, provides that no commodity shall be exported unless its design has been certified by a Government appointed public body as not being an imitation. At present, 14 items of sundry goods and 7 items of light machinery are covered by this law. Appointed as certifying agencies for these two commodity groups are the Export General Merchandise Centre of Japan and Japan Machinery Design Center, respectively.

Besides these, similar design approval systems have been established for textile products and pottery for export under agreements enforced voluntarily among manufacturers and dealers pursuant to the Export and Import Trading Law.

2. Selection of Commodities of Good Design.

Familiarly known as the "G-mark system" the good design selection system enforced by the Ministry of International Trade and Industry (MITI) allows manufacturers to put a "G" mark label on their products if they pass the official examinations held annually for commodities submitted by their makers. In this way, the system aims at enlightening manufacturers on better design and encouraging research and development on design, while, at the same time, stimulating an interest in good design among the general consumer public. The system, since its inauguration in 1957, has been gradually extended and, according to the most recent statistics 1,362 items have been awarded the "G-mark" including the 374 items picked in 1967. The system is thus having far-reaching effects on marks and consumers alike. Some leading department stores even have a special section devoted to the display of G-mark goods.

3. Export Design Show.

The export design show brings together for display commodities of excellent design and demonstrates design management and design processes to show how an idea for design is born and takes form in a product, thereby enlightening both manufacturing enterprises and the consumer public on the importance of design. For this purpose, the show has been held annually since 1963 under Government sponsorship in Tokyo, Osaka and other major cities of Japan.

4. Research and Tests for Design Improvement

Three state-operated institutions, the Industrial Arts Institute, the Nagoya Industrial Research Institute and the Tohoku Industrial Research Institute, are devoted to basic scientific studies in the improvement and development of design. More specifically, their work includes studies in market research, statistical analysis and human engineering as well as guidance in introducing newly developed techniques. The three Institutes place special emphasis on improving design for export commodities. At present, the Industrial Arts Institute is concentrating its research efforts on metal tableware; the Nagoya Institute on china dinner sets; and the Tohoku Institute on cast iron goods and moulded furniture of wooden texture.

5. Activities of the Design Centres.

There are four Government-delegated agencies for screening export goods for good design—the Export General Merchandise Center of Japan, the Japan Machinery Design Center, the Japan Textile Color Design Center, and the Japan Pottery Design Center.

These agencies not only examine and approve designs but also engage in various activities for design promotion, under Government subsidies. Some of the activities are: holding of short courses to guide industrial circles in better design; sponsoring of design contests to encourage development of new

products and to discover talent; and collecting of data on design for use by those interested.

6. Activities of JETRO

The Japan External Trade Organisation (JETRO), a corporation wholly financed by the Government under Japanese law, has as its objective the undertaking of business related to export promotion, in a comprehensive and efficient manner. From this viewpoint, JETRO engages in various activities concerning industrial design.

(a) Dispatch of Design Researchers

Starting in 1955 JETRO annually sent abroad researchers for one-year studies in industrial design, but in 1967 this programme was replaced by one in which experienced industrial designers and design managers are to be dispatched overseas for shorter periods (three months) to quickly survey overseas trends in the hope of obtaining more effective results in improving design for Japanese export goods. So far a total of 90 persons (an average of 6 every year) have been sent to foreign countries under these programmes. The returnees are asked to lecture at short courses and offer guidance in design improvement at local public organisations and in the smaller enterprises to which they belong.

(b) Collecting of Foreign Samples

Under this programme foreign commodities of excellent design are collected and displayed in mobile exhibition throughout the country,

By showing actual samples of well-designed foreign commodities, the programme aims at providing an incentive for improving Japanese industrial design. Every year around 1,000 foreign products are collected from a broad range of fields, including textile goods, sundries and light machinery.

(c) Operation of Japan Design House

The Japan Design House has a 400 square meter showroom located in JETRO'S main office in the heart of Tokyo. Well-designed commodities selected by a specialists' committee are arranged under various themes and displayed for Japanese and foreign traders, as well as those concerned with industrial design.

The Japan Design House also functions as a design information center, being equipped with a complete set of index cards available to visitors who wish to look up well-designed commodities, design organisations, and other related information.

7. Export Promotion for Well-Designed Japanese Commodities

Under this programme, which consists of a series of steps, small and medium enterprises that are eager to export their products are given guidance in producing items of good design which will meet export standards, and the best of their products are then purchased for display in specialized trade fairs abroad

with a view to developing overseas markets for these well-designed products.

For the present, pottery and other sundry goods are covered by this programme, which is being operated jointly by the Ministry of International Trade and Industry (MITI) (including the Smaller Enterprise Agency, the Industrial Arts Institute, and the Nagoya and Tohoku Institutes,) JETRO pottery and sundries design centers, exporters' associations, and local Government agencies concerned.

In charge of guidance in design improvement are the industrial research institutes and design centers, while purchases of well-designed products and their display overseas are made by JETRO. Every year, more than 200 small and medium enterprises receive guidance in better design and more than 1,000 of their products are purchased for overseas display. Pottery products are entered in the China and Glass Show at Atlantic City in the United States and other sundries in the Frankfurt Messe in Germany.

8. Council to Prevent Foreign Imitation of Japanese Design and Trademarks

In recent years, imitations of Japanese designs and trademarks have been reported at an increasing rate in some foreign countries, notably in the developing nations. While there were only four cases of such imitation in 1960, the number increased to 93 in 1965 and exceeded 100 in 1966.

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In view of the situation, a special council was established in July, 1966 within the Ministry of International Trade and Industry for the purpose of studying measures to prevent such imitation. Composed of approximately 20 members representing Government and private circles concerned, the Council annually sends fact-finding teams to countries where such incidents are reported most frequently to investigate the situation of design plagiarism and to conduct negotiations with the responsible persons in these countries.

Activities of the council are of great significance in preventing loss of interest in improving design on the part of Japanese industry, as well as in helping to promote the sound expansion of exports.

COCONUT PITH HAS HIGH THERMAL INSULATION VALUE

Coconut pith is a by-product of the coir industry and is a durable light weight material having a very high thermal insulation value.

A large quantity of pith is available in the country. However, this has no industrial use at present and is going as waste. To utilise this material, investigations were undertaken at the Central Building Research Institute, Roorkee and a thermal insulating material based on coconut pith and cement has been

Present Status of Industrial Design in Japan and its Evaluation

Against the background of the enormous growth of industrial production, and aided by the various promotional measures described above, as well as by design-consciousness and efforts on the part of private enterprises and designers, industrial design in Japan has undergone an amazing development in the space of 10 years or so.

Some companies, which 10 years ago had a designing staff of only a few members, today have 100 or 200 designers in their employ. Some industrial products of Japan today are being accepted on the international market as first-rate goods in design and in quality. For example there is the chair picked for display at New York's Museum of Modern Art and the automobile that has been honoured by an international design prize. ★

developed successfully. The process is simple requiring only the intermixing of materials.

The novelty of the new product lies in that compared to the conventional insulating material, 'lime concrete', the cement coconut pith concrete is much lighter, easier to apply and give better thermal insulation for equal cost. Compared to modern materials such as expanded polystyrene, for equal thermal insu-

lation value, the cost of pith concrete is only one-half to two-third depending on the transport cost of pith from Kerala where it is available in large quantities. Retted coconut

pith and portland cement are the main raw materials required in the process. No special plant and machinery except a tilting type concrete mixer is required. JL ★

TAIRO COTTON CLEANING MACHINE 18M 211 K66 1168-231

The Textile and Allied Industries Research Organisation, Baroda has developed a "Tairo Cotton Cleaning Machine" for ginneries. The machine is intended to clean cotton at the gin stage i.e. after ginning and before pressing into bales.

The width of the machine is 42" with 6" skeleton type beaters of 19-1/4" diameter upto beater bar tips. It has 6 rows of round beating bars and in each row there are 9 and

10 beating bars alternatively. Three such beaters are placed on a rising gradient and other three on falling gradient. The beaters are run at 600 rpm from 5 H.P. 1400 r.p.m. motor mounted on two channels on top of the machine. The drive from the motor is provided first to 2 central beaters on each side of the machine by 4 V. Belt. The drive to other beaters i.e. 1st and 3rd on the rising and falling side is given from the central beaters by V. Belt (tension bulley eliminated here). ★

PATENTS DEVELOPED AT JORHAT RESEARCH LABORATORY

The Regional Research Laboratory, Jorhat, one of the national research laboratories under the Council of Scientific and Industrial Research, which has just completed three years of its existence, has to its credit over ten patents.

It has designed, fabricated and installed a 30 ton-a-day capacity vertical shaft kiln for the manufacture of cement. It has also worked out the design for 100 and 200 tons per day capacity cement plants and a licence is now being issued to an international firm of cement machinery manufacturers, who will undertake turn-key job for the installation of plants in different parts of the country. The Government of India has already issued ten licences for the vertical shaft kiln.

PELLETISATION

An important research work under way is the process for pelletisation of iron-ore as well as production of self-fluxing sinters. It is in a position to design pelletisers of any capacity

which could be used in the steel industry. The vertical shaft kiln developed primarily for the production of cement is now being tested for the production of self fluxing sinters and iron pellets from iron-ore.

Utilisation of shaft-kiln for the production of pelletised iron-ore or self fluxing sinters can bring about an increase of over 40 per cent, in the through-put of the existing blast furnaces at much less cost, it is stated.

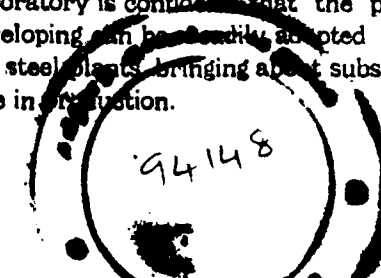
The laboratory is also working on a simple process of reducing alumina as well as silica in the blast furnace feeds which will result in recovery of 99.9 per cent, purity alumina as a by-product for use in the aluminium industry. The unusually high percentage of silica and alumina in the raw materials used by the steel industry is one of the problems at present. The laboratory is confident that the process it is developing can be readily adopted in the existing steel plants, bringing about substantial increase in production.

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A research project recently completed the designing of 50 kg. per day and one-tonne-per-day capacity plants for the production of edible protein from petroleum hydrocarbons. It has located various micro-organisms from the oil well soil samples and has worked out the optimum conditions for their growth. It has also worked out the bio-engineering problems involved in the design of un-conventional fermenter.

The laboratory has recently entered into a collaboration agreement with the French Institute of Petroleum, France, and the Indian Institute of Petroleum, Dehra Dun, for accelerating the work on the project so that in the course of the next two or three years production of protein from petroleum hydrocarbons might become a commercially viable proposition.

It has developed a process to substitute imported asbestos with pulp for making asbestos cement boards. The process has been licensed to a party who is installing a ten-tonne/day capacity plant. The country at present is importing a substantial quantity of asbestos.

ANOTHER AREA

Another area where the research work done in the laboratory will result in substantial

foreign exchange saving is the development of a process for the manufacture of caffeine from tea waste. The country is at present importing 100 tonnes of caffeine a year. A number of units are to be set up in the country for the production of caffeine from tea waste by utilising the new process. The cost of production of caffeine has been worked out at Rs. 20 per kg. against the imported price of Rs. 50. The investment required for a 40 tonne per annum capacity is envisaged to be of the order of Rs. 4 lakhs.

The laboratory has developed a binderless process for making hard boards from saw dust and paddy husk and these boards being water-proof can be used as roofing material of flash doors or flooring tiles. A firm in Malaysia is negotiating for the process.

It has also developed processes for obtaining cinnamon oil and citronella oil, used in substantial amount by the soap and perfumery industry and at present imported, from indigenously available raw materials. Two plants are being set up in Assam for manufacturing essential oils.

MODERNISATION OF RICE MILLS

Thiru Jagjivan Ram, Union Minister for Food, envisaged a rapid programme of modernisation of the milling industry in the country in the near future.

In his inaugural address at a three day seminar on 'progress evaluation of modernisation of rice milling', he said the results achieved by pilot projects so far had been "encouraging". The Food Corporation "has taken up a programme for the establishment of 24 modern rice mills. The equipments for five complete mills and components for 19 others are being imported from Japan" he said.

In his absence, the Minister's address was read out at the seminar by Thiru R. Balasubramaniam, Joint Secretary of the Union Food Ministry.

Thiru Jagjivan Ram said that as part of the Government's procurement, buffer stock and distribution policy, certain special facilities had to be extended to co-operative and public sector units, but "this is not likely to affect the private sector to any great extent as over 20 million tonnes of additional paddy is expected to be produced over the production of level of the Third Plan," he added.

Thiru Jagjivan Ram said the production programmes in new areas would require new rice mills providing ample scope for modernisation of the industry in the private sector.

For, there were about 49,800 rice mills in the country of which 43,400 were hullers, 2,600 shellers and 3,700 sheller-cum-hullers.

Modernisation of the existing units itself was a major task which could be taken advantage of by the private industry, he added.

MECHANICAL DRIER

He said that the mechanical drier, introduced for the first time in the modern rice mills project had been profitably adopted for field drying of paddy in Tanjore where there was problem of drying during monsoon. This has enabled the State Government to adopt a new cropping pattern - two short crops yielding larger production of paddy from the same area. The approach was likely to be extended to other areas where there was scope and problem of drying, he added.

Referring to the utilisation of by-products, the Minister said the modern rice mills already produced bran of superior quality, which yielded highly valuable oil to the extent of 20 per cent. The Government was encouraging the establishment of solvent extraction units for rice bran and the Food Ministry had already taken a lead in the recovery and effective utilisation of this oil by promulgating the solvent extraction order.

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SURVEY FINDS GOOD EXPORT DEMAND FOR READY-MADE CLOTHES

A market survey conducted on behalf of the Union Government has revealed great scope for increasing the export of ready-made garments to the U.S.

Japan, Hongkong, Taiwan and South Korea are already firmly established in this market for ready-made garments and if determined efforts are made, it will be possible for India to obtain a fair share of this market.

In 1965 the value of ready-made garments exported to the U. S. exceeded three million Dollars. The survey says that in the U.S. there

is an increasing demand for a variety of garments such as shirts, suits, blouses, knitwear, nightwear, particularly double-knit sweaters.

The survey, however, has drawn attention to some of the difficulties experienced by importers in the U.S. like inadequate supplies within a limited range, insistence on letter of credit by the Indian exporters, lack of uniformity in furnishing supplies to specifications, frustration with inordinate delays in shipments against firm orders, multiplicity of price offers and uncompetitive offers by Indian suppliers.

SCOPE FOR ENGINEERING GOODS EXPORTS TO SAUDI ARABIA

The scope for Indian engineering goods is very good in Saudi Arabia, according to export circles in Calcutta.

In general, there appears to be a very large market for electrical wiring accessories for domestic and industrial purposes, automobile lead acid batteries, automobile spare parts and materials for building industry such as reinforcements roundbars, cement, plumbing hardware and sanitary ware.

It is, however, observed that the Government of Saudi Arabia does not purchase any of its requirements directly from overseas manufacturers. All purchases are done through local agents or firms, who are Saudi nationals.

Saudi Arabia has a free economy. There are no restrictions on imports into the country. If Indian engineering goods have to enter this market, India's exporters will have to meet international price competition and their products will have to be at par, as far as quality is concerned, with those of advanced countries. Besides the quality of packaging of Indian products will have to be considerably improved.

AFTER SALES SERVICE

As far as marketing of engineering goods are concerned, a point to be noted is that because of shortage of skilled, semi-skilled and unskilled labour, Saudi Arabian firms offer only a minimum after-sales service. It is because of this that the Government of Saudi Arabia is insistent that any imported engineering equipment must necessarily be accompanied by at least 10 to 20 per cent of its value as spares.

One of major bottlenecks is the pacts of increasing exports to Saudi Arabia is prompt deliveries within the stipulated letter of credit period as specified by the exporters themselves.

Another major bottleneck is the inadequate shipping facilities. Apart from the fact that shipping services from Indian ports to Jeddah are few and far between, the freight rates from Bombay to Jeddah are comparatively high.

A leading manufacturer of batteries has made arrangements for the sale of batteries to Jeddah through local Saudi Arabia agents. The company will export 2400 batteries, valued at approximately £ 5,000 every year.

LIGHT ENGINEERING PRODUCTS

Saudi Arabia also offers an attractive market for light engineering products of Indian origin. But there is little scope for export of transmission line towers in the near future.

For export of general electrical materials etc. the Government of Saudi Arabia insists on appointment of local agents, through whom the purchases are to be effected.

Various oil companies also offer scope for radiographic inspection of oil pipelines, which are at present being done by American technicians.

Since, there is a big boom in the construction industry, certain construction firms in Jeddah have expressed their desire to be put in contact with labour contracting firms in this country which would be able to supply, on a contract basis, masons, carpenters, welders, fitters, plumbers etc.

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SCOPE FOR 'AGRI-INVESTMENT IN DEVELOPING NATIONS'

There is now a general awakening, in practically all the developing nations of the world, about the problems and needs of agricultural development as a vital base for economic growth.

The traditional agriculture requires the introduction of the business methods and practices which have accompanied industrial expansion.

Agri-business can facilitate the task of developing nations by helping to promote the production of needed inputs. Two characteristics of developing nations are: foreign exchange shortage and need for industrialisation. In both, developing nations could be helped if agri-business resources are drawn upon.

Leaving out of consideration the immense use of chemical fertilisers in countries like United States and Japan, we see that as against 31.6 metric tonnes per hectare of chemical fertilisers used in Spain, 49.0 in Poland, 38.0 in Greece and 9.4 in Mexico in 1960, the corresponding input in 1960 was only 2.3 in India, 2.3 in Thailand and 3.2 in Pakistan. Despite a slight improvement since 1960, enrichment of soil by chemical fertilisers and protection of crops by pesticides remain still the number one priority.

In respect to agricultural implements one finds that as against a use, in 1966, of nearly 4 million tractors in Western Europe, 5 million in North America, just over 2 million in East Europe and about over 2.2 million (inclusive of garden tractors) in Japan, the whole of East Asia including India and Pakistan - used no more than 88,000.

The augmentation of rain-fed and surface-fed irrigation through tubewells, etc. is yet another field where production facilities must be enhanced. The evolution of better seed strains, which has been one of the major factors in the agricultural break-through in Mexico and in other agriculturally successful countries is yet another field where government action can be usefully supported by agri-business investment.

Losses in storage account at least for 5% to 10% of the product in the developing areas. Similarly the development of processing facilities for meat, dairy products, vegetables, fruits or others, could stimulate agricultural development by saving on current waste, by developing export potential and by broadening international markets. These to mention a few, are examples of vast possibilities for agri-business.

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RECLAIM RUBBER INDUSTRY

Reclaim rubber is an important raw material for the manufacture of rubber goods such as tyres, automobile rubber parts, storage battery containers, hose-pipes and tubings, adhesives, footwear, electrical cables etc.

First quality reclaim used by the tyre industry was imported till 1968 when indigenous manufacture of this quality product was started. Reclaim rubber is now manufactured in India in sufficient quantity and there may be also surplus capacity for export. With the growth of the rubber industry the consumption of reclaim rubber has also gone up.

The Indian rubber industry normally consumes about 10 to 20% of reclaim rubber of its total rubber consumption and hence the demand of reclaim rubber is expected to be about 15,000 tonnes in the year 1968 and above 20,000 tonnes by 1970-71.

The Government has already licensed a capacity of 17,720 tonnes. The three factories, Indian Rubber Regenerating Co. Ltd., Bombay, Organo Chemical Industries Delhi and L. G. Balakrishna and Bros., Coimbatore went out in production for years back and the quality of their product has been found quite satisfactory by the rubber industry in the country. Other units are also expected to go into production to the full capacity in the coming year and the production will be adequate to

meet the country's requirement of reclaim rubber, without licensing further capacity.

The main raw material for manufacture of reclaim rubber is waste rubber of almost every type. Since tyres form the largest production-about 70 to 75% in the total rubber goods produced in the country, scrap tyres naturally form a large part of waste rubber available for reclaiming.

The cost of scrap tyres in India is about 400 per cent higher than the rate at which they are available to the reclaimers in foreign countries. This is because of the high bidding by the retreaders. In spite of this high price of the raw material, reclaim industry in India has been able to make the product available to the rubber industry at reasonable price.

Reclaim rubber industry in the country plays a very vital role by supplying the raw material for the manufacture of rubber goods and at the same time recovering waste material and converting it into an usable form. It is also saving crores of Rupees worth foreign exchange for the country. In the course of next ten years it will produce in the country, raw material worth Rs. 5 to 6 crores per annum. It should also be possible to export reclaim rubber to the neighbouring countries in large quantities with the availability of cheaper scrap.

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GOOD SCOPE TO STEP UP NON-TRADITIONAL ITEMS' EXPORT TO ITALY

There is enormous scope for increasing exports of non-traditional items such as machine tools, small tools, handloom products, spare parts and components of automobiles and scooters and pig-iron and other steel products and tropical fruits and fruit juices to Italy.

A delegation, which visited Italy recently, in its report to the Government pointed out that the quality of these products was generally acceptable to Italians.

The delegation has stated that to wipe out the adverse balance of payments and to develop sizeable trade in various traditional and non-traditional items, it will be necessary to be constantly in touch with foreign buyers.

The delegation was informed by the Italian Ministry of Foreign Trade that India should pay more attention to Italian market. Export executives from other countries were visiting Italy in large numbers and this was the secret of their success.

The delegation was able to study at first hand, the Italian market conditions and consumer tastes and preferences and individual members of the delegation were able to establish personal and direct contacts with their counterparts in Italy. In the traditional sectors, like cotton textiles, jute goods, sea foods and spices the opportunity was utilised to consolidate the existing contacts, establish new contacts and find new avenues for expanding trade. It was discovered that the specialities of jute like carpet backing cloth and Polyethene lined jute bags had a future in Italy. In cotton textiles Indian prices were higher than the prevailing prices in Italy. It was felt that steps will have to be taken at

home to make cotton textiles more competitive.

COMFORTABLE POSITION

In the field of spices India is already in a comfortable position with almost an 80 per cent share of the total imports of black pepper which is the main spice consumed in Italy. It was felt that for the introduction of other exotic varieties of spices more concentrated efforts would be necessary in order to develop a taste for them in Italy. With regard to food it was discovered that great possibilities existed for expanding the existing trade. There is not only a growing demand for frozen and canned shrimps and prawns but also for canned sardines. It was felt that with a little effort on India's part it should be possible to expand this trade 3-4 fold within the next couple of years.

India has been having a continuous adverse balance of trade with Italy, even since the beginning of the First Plan. During the First Plan the trade gap was of the order of nearly Rs. 10 crores against India's average exports of Rs. 8 crores per year. During the Second Plan the trade gap rose to Rs. 20 crores per year against the average annual export of nearly Rs. 7 crores. During the Third Plan this gap stood at Rs. 11 crores on an average per year against an export of Rs. 10.5 crores. This continuous deficit in trade exchanges with Italy has been a matter of serious concern for India.

The 16 member delegation was led by Thiru G. L. Bansal, Secretary-General of the Federation of Indian Chambers of Commerce and Industry while Thiru Y. Sinha, Under Secretary in the Union Ministry of Commerce was its member secretary.

GOOD MARKET FOR LADIES' BICYCLES IN WEST GERMANY

Ladies' bicycles have a big market in the Federal Republic of Germany, as 80 per cent of bicycle sales in Europe are in ladies' bicycles, according to a seminar held in Dusseldorf recently.

The seminar was sponsored by the Indian Embassy in Bonn and attended, among others, by 70 per cent of the German businessmen interested in trade with India.

The seminar stressed that Indian businessmen should travel abroad more often. "Although export promotion is done for handi-crafts, little is done for machine-made articles".

The seminar wanted market organisations to be set up at German commercial centres on a commission basis. In this connection, it stressed the necessity of quality control.

Other points which needed attention were careful testing before shipment, seaworthy packing, sufficient labels and direction for use and other printed literature in German along with each product.

Lack of attractive samples was cited as another instance. "Permanent Exhibitions for technical products are necessary and impulses collected at the exhibitions must be followed up and passed on".

Finally, facilities for export financing should be publicised in Germany since this would protect the Indian exporter.

To promote tourism, German advisers should be made available for selecting the right type of accommodation, food and to train cooks accordingly.

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ENGINEERING INDUSTRY MAKES HEADWAY IN IMPORT SUBSTITUTION

A significant breakthrough has been achieved in the import substitution of raw materials, components and spare parts needed for the engineering industry.

According to a survey by the Union Industries Ministry, a big leeway has been made in the manufacture of cement machinery, sugar machinery, boilers, as also in other items produced by Heavy Electricals and other public sector units.

The core wire required for the manufacture of welding electrodes is no longer being imported as its manufacture has now been established at the Bhilai steel plant. The foreign exchange saving on these items alone would be of the order of Rs. 220 lakhs, representing the foreign exchange cost of 30,000 tonnes of core wire heretofore imported.

The survey continues that import substitution of tin plate in the manufacture of certain types of containers by material available locally is being pursued through the Iron and Steel Controller and is expected to save Rs. 90 lakhs, now spent on importing tin.

It is stated that substitution under this category has been followed vigorously even when it involved re-engineering of the product design.

Trials made

In the Ministry of Defence, the imported Komatsu engine for the D-80 tractor is being

replaced by the indigenously manufactured Cummins engine. Trials are simultaneously carried out to replace the imported engine OND-122 tractor. Investigation has also been undertaken to indigenously manufacture diesel engines for air compressors which are to be manufactured with Japanese collaboration in the Garden Reach Workshop at Calcutta.

Such re-engineering of various equipment with a view to achieving the maximum standardisation of assemblies and sub-assemblies and consequent import substitution offers considerable scope in the field of components the import of which has been estimated at Rs. 700 crores during the Fourth Plan period. The survey points out that the Union Ministry of Irrigation and Power has set up a committee for standardisation of equipment for large thermal power stations especially the balancing equipment for turbo generators that are to be manufactured in the country during the Fourth Plan with a view to getting them locally made.

On the basis of the capacity of indigenous manufacturing units it is intended to ultimately choose the equipment ratings which could be manufactured indigenously, even though the best possible design may not be achieved.

As a result of the special measures taken, steam turbo alternator units of capacity

aggregating 2390 mw and hydro-turbine alternators of capacity aggregating 584 mw are expected to become available from Bharat Heavy Electricals in the Fourth Plan period.

Synthetic Rubber

In the chemical field, the survey points out that increased production of synthetic rubber and insistence on its consumption in the tyre and other rubber goods industries has resulted in bridging 50 per cent of the gap between the supply of and demand for rubber, calculated to be of the order of 18,000 tonnes, resulting in a saving of about Rs. 1.8 crores of foreign exchange. Development of manufacture of rubber chemicals since 1963 has also saved nearly Rs. 601 lakhs foreign exchange, it is stated.

Fifty per cent of the carbon black is now being met by the production of 12,000 tonnes per annum by Phillips Carbon with the coming on stream of United Carbons. The saving in foreign exchange is estimated at Rs. 2.8 crores. Likewise, production of rayon cord in the country at a level of 10,000 tonnes represents a saving of Rs. 5.5 crores per annum.

Other examples under this head, are nylon continuous filament yarn, resin for plywood, drugs like vitamins, insulin, hormone preparations, antibiotics, optical glass, high tension insulation for power transmission, industrial explosives, borax, synthetic fibres, tyre-cord brake linings etc.

The survey points out that strenuous efforts have been made by the fertiliser factories to cut down import of spare parts

to the minimum. The amount saved by FCI alone on this account upto 1966 was Rs. 116 lakhs. Currently Bharat Heavy Plates and Vessels is scheduled to manufacture fertiliser and chemical plant equipment.

The survey continues that the Department of Defence Supplies has been able to locate available capacity to undertake manufacture of defence stores and has succeeded in locating capacities for the production of items like gear-boxes, carburettors, fuel pumps etc.

In the auto industry, some of the principal items which have been indigenised recently for certain models are carburettors, gears, steering wheels, axle shafts etc.

The Bhilai steel plant is in a position to supply high carbon billets required for the wire industry and the same are re-rolled to wire rods by the indigenous re-roller to meet actual requirements of this industry. As a result, there will be annual saving of Rs. 3 crores in foreign exchange. Indigenous development in the crane industry now save about Rs. 15 lakhs annually in foreign exchange.

Malleable and alloys cast iron pipes, scientific instruments, electric motors, transformers, cables, winding wires, electric lamps, refrigerators, house services meters, radio receivers, industrial explosives, switchgears etc. are other items where import substitution has made a major breakthrough, saving for the country many crores of rupees in foreign exchange.

During 1966-67, a total sum of Rs. 30.92 crores was saved through import substitution.

NEW SCHEME BY BANK OF BARODA TO HELP SMALL UNITS

The Bank of Baroda is introducing a new scheme to assist technologists to set up small-scale industrial units.

Normally the total amount of advances to a single unit under the scheme will not exceed Rs. two lakhs.

The effective rate of interest on the advances will be eight and a quarter per cent per year and eight per cent for medium term loans under the refinancing scheme of the Industrial Development Bank of India. The Bank would cover these advances under the Credit Guarantee scheme of the Reserve Bank.

Under the scheme credit facilities by way of medium-term loans (for three to five years) for acquiring plant and machinery and short-term working capital will be provided by the

Bank. The Bank will grant such advances to the technologists even without the marginal security of plant and machinery, purchased by them.

Similarly, no margin for cash credit facilities for meeting the working capital requirements for purchase of raw materials will normally be insisted upon in the initial stages, if the Bank is satisfied with the project. The technologists will be required to assign their Life Insurance policies to the Bank upto a reasonable amount.

The Bank says that projects should be viable with reasonable future prospects and should be located in places where all essential facilities are available. The units should be registered with the concerned department of the Government

INFORMATION CENTRE FOR CHEMICAL INDUSTRY

Technical Information Centre for Chemical Industry (TICCI) jointly sponsored by the Indian Chemical Manufacturers' Association and the Council of Scientific and Industrial Research is the first of its kind in India and had started functioning from August 1965.

The Centre keeps compiled information on important aspects of the industries like import and export data, foreign collaboration, research work and maintains technical information on latest development. During the year, the centre processed 951 technical and survey

enquiries for a wide range of chemicals manufacturers. The centre has been able to publish several statistical bulletins and news letters and intends to publish an up-to-date Directory for chemicals and chemical products. Other activities include arranging liaison meetings between technical personnel in the industry and scientists of National Laboratories.

Interested entrepreneurs are requested to contact Scientist-in-charge, Technical information Centre for Chemical Industry, 7, Bruce Street, 2nd Floor, Fort, Bombay-1. (B.R.)

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INDUSTRIAL LICENCES

LIST OF LICENCES ISSUED UNDER THE INDUSTRIES (DEVELOPMENT AND REGULATION) ACT, 1951 DURING THE MONTHS OF SEPTEMBER, OCTOBER AND NOVEMBER, 1967 IN THE STATES OF MADRAS, ANDHRA PRADESH, KERALA, MYSORE AND PONDICHERRY

Name and full address of the undertaking (and location)	Articles of manufacture and capacity (type of licence i.e. NU/SE/NA/COB/shifting)	Licence No. and Date
Schd. Ind. No. 27 (4)—Flour.		
Thiru M. L. Gupta, M/s. Cochin Roller Flour Mills, National Highway, (Kalamassery, Ernakulam)	Wheat products ... Tonnes p.a. (on three shift basis) ... 30,000	L/27(4) 11/67—LI (I) 31-8-'67
Schd. Ind. No. 5 (1)—Equipment for Generation, Transmission and Distribution of Electricity including Transformers.		
M/s. Aluminium Industries Ltd., No. 1, Ceramic Factory Road, Kundara (Kerala)	Capacity annual (on maximum utilisation of plant) Nos. ...	L/5(1)—139/EEI/67 23-8-'67
1. Circuit breakers—11 k.v. ...	300	
2. Circuit breakers 22 k.v./33 k.v. ...	75	
3. Isolating switches upto and including 33 k.v. (Motor operated type) ...	100	
4. Current transformers 11 k.v. ...	900	
5. Current transformers 22 k.v./33 k.v. ...	225	
6. Potential transformers 11 k.v. ...	300	
7. Potential transformers 22 k.v., 33 k.v. (N. A.) ...	75	
(1) Circuit breakers above 33 k.v. and upto 66 k.v. ...	75	
(2) Instrument transformers		
(a) Current transformers for 66 k.v. range ...	225	
(b) Potential transformers for 66 k.v. range ...	75	
(3) Isolating switches above 33 k.v. and upto 66 k.v. (Motor operated type) (N. A.) ...	75	

(Continued)

Name and full address of the undertaking (and location)	Articles of manufacture and capacity (type of licence i.e. NU/SE/NA/COB/shifting)	Licence No. and Date
Schd. Ind. No. 1A (5)—Iron & Steel Pipes.		
M/s. Tube Products of India, "TIAM" House, Post Box No. 1357, 11/12, North Beach Road, Madras-1. (Madras, Madras State)	E. R. W. Tubes (S. E.) ... Tonnes p.a. ... 30,000	L/1A(5)/21/67—EI (M) 6-10-'67
Schd. Ind. No. 5 (5)—Electrical Furnaces.		
M/s. Binny's Engineering Works Ltd., Post Box No. 1111, Meenambakkam, Madras-61 (Madras, Madras State)	Electric smelting furnaces N. A. ... Nos. p.a. (on maximum utilisation of plant) ... 2	L/5(5)/1/EEI/67 5-10-'67
Schd. Ind. No. 7 (5)—Automobiles (Motor Cars, Buses, Trucks, Motor cycles, Scooters and the like)		
M/s. Standard Motor Products of India Ltd., 29, Mount Road, Madras-2 (Madras, Madras State)	Standard 1 ton truck (S. E.) ... Nos. p.a. after expansion ... 3,000	L/7(5)/6/67—AE Ind. (I) 28-9-'67
Schd. Ind. No. 5 (1)—Equipment for generation, transmission, and distribution of electricity including transformers.		
M/s. Kirloskar—Asca Ltd., Post Box No. 1, Habbel, Agricultural Farm Post, Bangalore-24 (Bangalore, Mysore State)	Outdoor isolators upto 245 k.v. and 1,250 amps. ... Nos. p.a. ... 320	No. L/5(1)—142/EEI/67 15-11-'67
Schd. Ind. No. 5 (7)—X-Ray Equipment.		
M/s. Bharat Electronics Ltd., Jalahalli P.O. Bangalore-13 (Bangalore-Mysore State)	X-Ray tubes and accessories (N. A.) ... p.a. (Maximum capacity) ... 1,800	No. L/5(7)/1/67—LEI (A) 4-12-'67
	(N. A.) ... p.a. on two shift basis ... 3,600	
Schd. Ind. No. 19 (11)—Insecticides, Fungicides, Weedicides and the like.		
M/s. Vorion Industries & Chemicals Ltd., No. 4, Second Street, Dr. Thirumoorthy Nagar, Madras-34 (Saidapet, Dist. Chingleput, Madras State)	Malathion Technical (N. U.) ... Tonnes p.a. ... 600	No. L/19(11)/58/67—A & I. 27-11-'67

(Continued)

Name and full address of the undertaking (and location)	Articles of manufacture and capacity (type of licence i.e. NU/SE/NA/COB/shifting)	Licence No. and Date
Schd. Ind. No. 10—Agricultural Machinery.		
M/s. Industrial & Agricultural Engineering Co. (Mysore) (P) Ltd., 54-55, Silver Jubilee Park Road, Bangalore-2 (Hassan, Mysore)	(i) Sprinkler Heads ... 50,000 Nos. (ii) Support stands for sprinkler head ... 50,000 Nos. (iii) Thin walled G. I. special pipes ... 1,50,000 Units (iv) Accessories and attachments (N. U.) ... 25,000 Nos.	No. LEI (B) - 8 (13)/66 6-9-'67
Schd. Ind. No. 30 -Rubber Goods.		
M/s. Madras Rubber Factory Ltd., 175/1, Mount Road, Madras (Madras, Madras State)	Brake Chamber diaphragms (N. A.) ... 3,00,000 Nos. p.a.	No. 30(22)/66 4-9-'67 L-Ind-II
Schd. Ind. No. 5—Electrical Equipment.		
M/s. Best & Co. Pvt. Ltd., 13/15, North Beach Road, P.B. No. 63, Madras-1 (Madras State)	Cinema arc carbons ... 1-8 (3 million pairs per annum after expansion) (S. E.)	5(5)/67—LEEI 10-11-'67
Schd. Ind. No. 18—Fertilizers.		
M/s. Coromandel Fertilizers Ltd., 126, Sarojini Devi Road, Secunderabad, (Vizagapatnam, Andhra Pradesh)	(i) Urea and N. P & N. P. K. ... 20,000 (Capacity p.a.) (ii) Complex ... 20,000 (nitrogen) Fertilizers ... 30,000 (P ₂ O ₅) (S. E.) (K ₂ O)	No. Ferts. 1/6 (7)/67 7-11-'67
Schd. Ind. No. 10 -Agricultural Machinery.		
M/s. Mysore Implements Factory, (Government of Mysore) Post Box No. 4, P.O. Hassan, Mysore (Hassan, Mysore State)	(1) Muntios ... 500 (2) Pick axes & beaters ... 79,900 (3) Crowbars ... 200 (4) Shovels ... 900	No. LEI (B) S (6)/67 4-12-'67
Schd. Ind. No. 28—Vegetable Oils and Vannaaspathi.		
M/s. D. N. Jhunjhunwala, C/o. P.B. No. 2279, Tiruvottiyur, Madras-19 (Ambattur—Madras State)	Cotton seed oil (N. U.) ... 20,000 Tonnes p.a.	No. 11(11)/66—L1 (I) 2-12-'67

**STATEMENT SHOWING CHANGES EFFECTED IN THE NAMES OF OWNERS/
UNDERTAKINGS DURING THE MONTHS OF SEPTEMBER, OCTOBER AND
NOVEMBER, 1967**

NIL

**STATEMENT SHOWING THE LICENCES REVOKED/SURRENDERED DURING
THE MONTHS OF SEPTEMBER, OCTOBER AND NOVEMBER, 1967**

Licence No. and Date	Name of the Party	Articles of Manufacture
L/12(2)/56/62 2-3-'62 (N. U.) (Andhra Pradesh)	Licensee: M/s. Raghunath metal Industries, Chittoor, (Andhra Pradesh)	Screw, Taps, Adjustable Tap, Wrenches, Dies and Die Holders.
L/23(1)/779/64—Tex (B) 21-4-'64 (S. E.) (Andhra Pradesh)	M/s. National Spinning and Weaving Mills Ltd., Nirmal District Adilabad, (Andhra Pradesh)	Cotton Yarn.
L/30/4) (B)/L.E.I. (B)/62 30-6-'62	M/s. Hindustan Beltings Company, Bangalore	Transmission Belts, Conveyor Belts and P.V.C. Heavy Duty Belts etc.
L/23(1)/697/64—Tex 3 21-2-'64 (S. E.) (Surrendered) (Kerala)	M/s. Kerala Spinners Ltd., Alleppey	Cotton Yarn.
L/23(1)/905/64—Tex 3 16-11-'64 (S. E.) (Madras State) (Surrendered)	M/s. Gitanjali Mills Ltd., Rajapalayam	Cotton Yarn.
L/30(1)/(2)/62—Ch. W 17-8-'62 (N. U.) (Madras State)	M/s. Southern Tyre Manufacturers (P) Ltd., Madras	Automobile Tyres and Tubes.
L/23(1)/1096/66—Tex (H) 29-10-'66 (N. U.) (Surrendered) (Andhra Pradesh)	Thiru M.K.V. Reddy, Director, M/s. Venkatalakshmi Mills Ltd., Hyderabad	Cotton Yarn.

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