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THE DEVELOPMENT OF THE PLASTICS INDUSTRY
IN THE SOCIALIST REPUBLIC OF THE UNION OF BURMA

by

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With a population in the order of 30 million, distributed over a land area of 261,789 square miles, Burma is a country rich in natural resources which, mainly for geographical reasons, have not been exploited to the same degree as those of many other countries. At present substantially all of the plastic materials utilized are imported but proposals for the phased production of selected polymeric products, starting with those based or substantially based upon indigenous raw-materials have been initiated and their implementation facilitated by the establishment of a joint UNIDO-Government of Burma sponsored Applied Polymer Research Laboratory (APRL).

During the next five years, covering the formative stages of APRL the Laboratory is expected to service the following industries with particular emphasis upon such aspects as the development to the pilot scale stage of thermosetting resins and selected conversion products, promote diversification of the product ranges in existing industries, implement quality control procedures and establish specifications where necessary, and promote the use of raw-materials derived from indigenous sources.

Plywood and Furniture Industries.

Burma has long been renowned for its supplies of teak and other tropical hardwood. Its forests are estimated to contain about 70% of the world's supply of teak. Consequently it has well established plywood and furniture industries, which are at present using imported adhesives and assembly glues. With the establishment of two fertiliser complexes which, inter alia, produce urea, the development of U-P adhesives to maximise import substitution is regarded as top priority. The possibility of the indigenous production of other essential materials including formaldehyde, phenolics and furfural from indigenous sources including natural gas, waste wood and soft coal is under active consideration with possible assistance from UNIDO.

Plastics Industry

The plastics industry, while small in comparison with that of certain other countries of comparable size to Burma, has facilities for the conventional fabrication of both thermoplastics and thermosets. Its present capacity is in the order of 6,000 tons per annum, which is expected to increase to 16,000 tons per annum over the next decade.

Fabrication processes include:

- Injection Moulding - with capacities up to 32 oz. producing containers (domestic, industrial and medicinal) from various grades of polystyrene and the polyethylenes.
- Extrusion - garden hose, U-PVC pipe and conduit, cable insulation and lay-flat tubing for packaging.
- Blow Moulding - Containers including water bottles for the army.
- Calendering & Sheeting - Plasticised PVC unsupported film leathercloth and floor tiles.
- Compression Moulding - Phenolics and aminoplasts - mainly concerned with the production of small electrical items.

Surface Coatings Industry

For many centuries the superb qualities and artistry of Burmese lacquer-ware have enjoyed a world-wide reputation. It is perhaps the best known of Burma's craft industries. On the industrial scene the more conventional surface coating industries comprising paint, varnish and printing inks and finishes, which at present small are expected to increase by a factor of two over the next five years. Following a

conventional pattern their products are mainly based upon alkyds of long and medium oil length, polyvinylacetate emulsions and acrylic copolymers.

With increasing production of castor oil and tung oil over the next decade, coupled with the possibility of becoming more than self sufficient in mineral oil as a result of current off-shore explorations, the prospects of producing alkyds from completely indigenous raw-materials may be regarded as favourable in the medium to long term.

Apart from domestic and industrial surface coating media leather finishes are assuming increasing importance as since depletion of her livestock during the war years the production of finished hides has grown progressively.

Rubber Industry

As a producer of natural rubber, which has resumed its original importance since pronounced scarcities of the synthetic rubbers arose as a result of the oil crisis, Burma with the aid of various United Nations Agencies is anticipating the achievement of higher standards across the board from the plantation to the production of rubber goods.

At present there are eleven Government owned factories producing a range of articles including - sports shoes, bicycle tyres, retreading, foam cushions and washers. Considerable diversification is planned to achieve significant growth.

Textile Industry

Although producing a high proportion of her own cotton and silk and having a well established weaving industry Burma imports annually some 100 million square yards of textiles together with synthetic yarns and fibres. The production of cellulose-based synthetics is embodied in the work programme of the APRL, as a means of effecting a degree of import substitution.

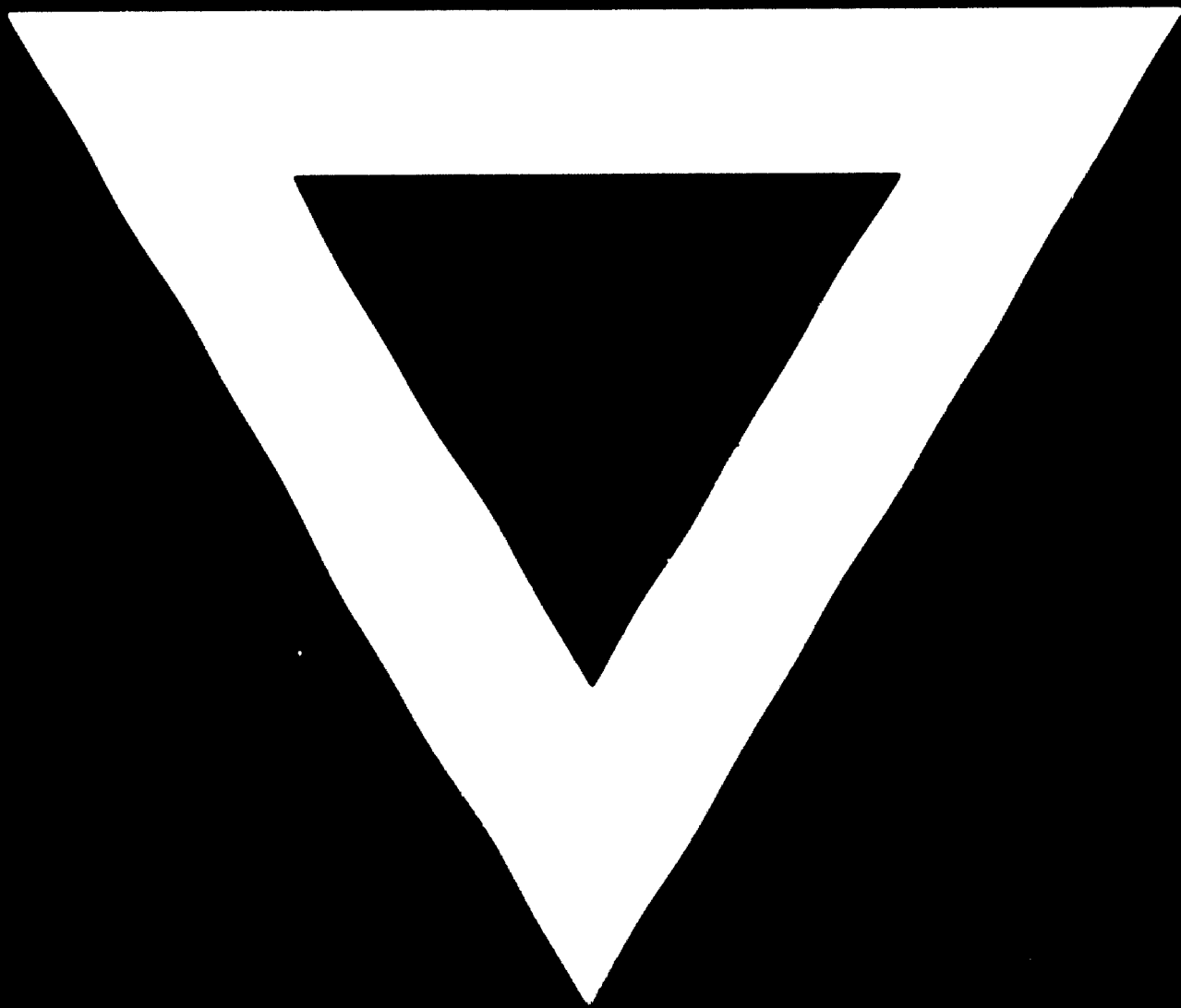
The provision of ancilliary items for textile machinery, including cones, pirns and bobbins is envisaged as a distinct possibility for diversification in the plastics sector. It is also envisaged that formulations for synthetic resin based sizes and dressings will be developed.

Pulp and Paper Industries

With technical assistance from the Central Research Organization to which APRL is attached, progressive growth of the pulp and paper industry has been planned. A recent proposal from the Central Industrial Technique Section of UNIDO formulates an integrated strategy for the development of the pulp, paper and packaging industries.

With her wealth of timber species, including extensive bamboo resources the possibility of their utilization in the production of dissolving pulps is foreseen. The development of a wide range of cellulose based synthetics to embrace such materials as: Viscose and acetate fibres and films, carboxymethyl cellulose and methyl cellulose is planned in the work programme of APRL. The development of such products as beater addition wet-strengthening resins, resin/paper conversion products, etc. will contribute to substantial diversification within the industry.

The main problems, which have inhibited Burma's industrial development in the past have stemmed from a lack of foreign exchange, particularly with regard to capital investment. Her resources are abundant and with the possibility of the discovery of further sources of oil and natural gas as a result of off-shore exploration, which has recently been started on a contract basis, prospects for the future are most promising. Undoubtedly the future growth of the plastics industry will provide a measure of the success of current plans.



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