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THE DEVELOPMENT OF THE PLASTICS INDUSTRY IN ALGERIA 1/

by

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1/ The views and opinions expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO.

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THE PLASTICS INDUSTRY IN ALGERIA

Present status

Until about 1970-1971, the activity of the plastics industry was limited to a few small-capacity factories in the private sector; fabricated thermoplastics were mostly second-priority products accessible to limited markets. Moreover, although the country has rich resources of hydrocarbons, the production of thermoplastic raw materials is not yet properly organized, so that the production potential of plastics fabrication is limited by the fact that the raw materials have to be imported. Indeed, the demand for plastics, both in the industrial sector and in the consumer goods sector, is met mainly by imports of semi-finished or finished products.

The country's total per capita consumption amounts, then, to some hundred grams - a ridiculously low consumption when compared with that of the developed countries or even of some countries with the same living standards as Algeria.

This lag in organizing a national plastics fabrication industry may be explained by the fact that the country had first to concentrate its efforts on the establishment of important complexes of a priority character: iron and steel works, fertilizer factories, and refineries.

Further, as consumption is still low, a potential market would have to be developed by:

- The establishment of an industrial sector with a heavy demand for plastics: piping, packaging, the electricity sector;

- The modernization of agriculture, which again calls for plastics in large quantities: drainage, packaging, hothouse cultivation;

- Raising the living standard of the population in order to develop the consumer goods sector;

Finally, it must not be forgotten that the fabrication of thermoplastics demands both considerable capital and a knowledge of advanced production techniques.

The development plan - Present and future achievements

Starting from the considerations enumerated above, the procedure adopted for the development of a plastics fabrication industry has the following basic objectives:

(1) Processing of the available hydrocarbons in order to produce the essential raw materials: monomers, compounds and polymers;

(2) Production, in the first stage, of semi-finished and finished products consumed on a large scale by industry and agriculture;

(3) Production, in the second stage, of more sophisticated products and substitutes to meet the needs of the building, electricity and furniture sectors;

(4) Side by side with the above activities, the drawing up of a training policy for engineers and technicians to run the factories that are to be established.

In this way all the projects set forth in the First Four-Year Plan, covering the period 1969-1973 have been or are being carried out. The first objective of the development process may be said to have been reached with the starting, at the end of 1973, of the construction of a vast petrochemical complex at Skikda, comprising:

- An ethane steam-cracking installation for the production of 120,000 tons of ethylene per annum, the ethane being extracted from the natural gas intended for liquefaction;

- A factory for the production of 40,000 tons of vinyl chloride monomers per annum;

- A polymerization factory for the production of 40,000 tons of polyethylene (PE) per annum;

- A polymerisation factory for the production of 40,000 tons of PVC per annum.

It is expected that this petrochemical complex will be operational in 1976 and thus allow the rapid development of the plastics fabrication industry through the availability of large quantities of raw materials.

Pending the final completion of these factories, and through the temporary import of raw materials, the first fabrication units were set on foot by 1971. Thus, at Setif the following are already operational:

- A rigid PVC pipe factory, with a capacity of 3,000 tons per annum. The expansion of capacity to 6,000 tons per annum has already commenced;

- A PVC calendering plant for the fabrication of floor coverings (floor tiles) with a capacity of 6,000 tons per annum;

- A polyethylene extrusion plant for the production of films.

Among the projects in process of being carried out may be mentioned:

- A rigid PVC pipe factory at Setif with a capacity of 6,000 tons per annum, including the compounding of PVC;

- A PVC and polyethylene bottle plant at Annaba for the production of 10,000,000 one-litre bottles and 10,000,000 five-litre bottles designed for the packaging of mineral oil. This factory will start working in 1975;

- A polyethylene bottle plant at Lakhdaria for the production of 30,000,000 bottles for chemical products, with a future increase in capacity of 100 per cent. This factory is scheduled to start working in 1976.

Future plans

After getting off to a slow start, the plastics fabrication industry is now making rapid strides, and is expected to grow still more rapdily in the years immediately ahead.

Because of the availability of polyethylene and PVC in 1976, and within the compass of the Second Four-Year Plan (1974-1977), a large number of projects have been planned for the building of thermoplastics fabrication factories making use of such major processes as compounding, extrusion, injection moulding, blow-moulding, and calendering.

Within the framework of the Second Plan the production of other raw materials is also envisaged, such as polystyrene, polyester, dioctyl phthalate and polybutylene styrene. The availability of these raw materials will make possible a larger range of finished manufactured products and consequently a real development of the plastics fabrication industry.

This development cannot take place unless thought is given to training the staff needed for running all these factories, and also to the creation of special laboratories for the inspection and development of the goods manufactured.

Hitherto, the training of technical staff has been undertaken by existing bodies such as the University and various Institutes. Basically, these bodies provide the qualified staff for running the petrochemical factories and not the specialized staff required for plastics fabrication.

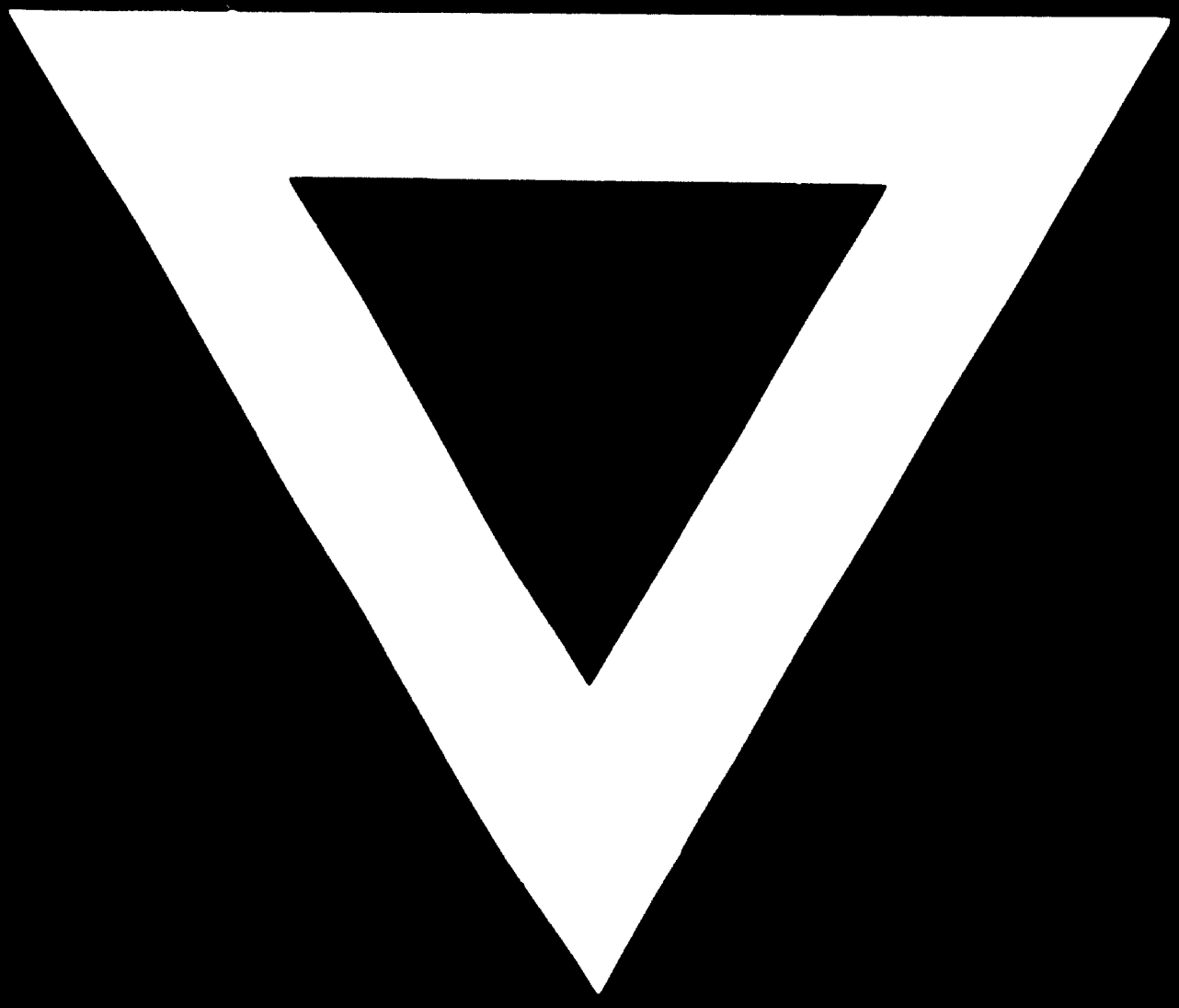
In order to meet ever more urgent needs, quite a number of technicians have been and are being trained by manufacturers and suppliers. Moreover, a special plastics fabrication department, with highly equipped laboratories, has been created at the Algerian Petroleum Institute (Institut Algérien du Pétrole), to be responsible both for training engineers and technicians and for promoting, developing and inspecting the goods manufactured. Thus, from this year, training of a first cadre of engineers and technicians has started in Algeria.

As a representative of the Algerian Petroleum Institute I am not in a position to indicate the sort of technical assistance that UNIDO might offer in connexion with the various projects of the plastics industry.

UNIDO could, however, assist the Algerian Petroleum Institute:

- By sending experts to organize conferences and seminars designed both for students in training and for engineers and technicians already working on the job;

- By granting fellowships for study abroad in order to train Algerian staff to teach and carry out research in institutes and laboratories.



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