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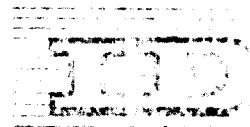
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TENTATIVE DATA ON PROJECT TO PRODUCE
300,000 METRIC TONS/YEAR OF SULPHURIC ACID 1/

presented by

the Project Promoters

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NOTE

This document consists only of a bare summary of information on the project; it is designed to provide for potential foreign investors to serve as a profile upon which to formulate a preliminary assessment of interest in principle. It does NOT pretend to be a complete description or to limit in any way productive discussion, investigation or negotiation between interested parties.

Once they have expressed positive interest, foreign partners usually prefer to be involved in the detailed investigation of the project. The Russian National Centre for Industrial Studies as well as UNIDO under its Industrial Investment Promotion Programme will also be pleased to assist both local sponsors and foreign contributors with further elaboration and additional studies as required.

I. IMPLEMENTATION OF THE PROJECT
TO PRODUCE 300,000 TONS/YEAR OF SULPHURIC ACID

According to the Third Development Plan (1969-1972), a chemical plant located at Maknassi will be producing 300,000 tons yearly of sulphuric acid (H_2SO_4). Following different studies and investment proposals, the plant's site could also be located either at Sfax or Gabes.

Production

The basic raw material is carbonic anhydride ($CaSO_4$). The sources of supply are the natural gypsum deposits at Maknassi and the stock of gypsum from SIAPE (Société Industrielle d'Acide Phosphorique et d'Engrais), a company which produces phosphoric acid.

Investment

The production costs are said to be very high because of the dehydration process and the elimination of impurities. Therefore, the cost of capital investment are comparatively high. The total cost of construction are estimated to total 10,430,000 Dinars (US \$ 20.860 million equivalent) of which 3,500,000 Dinars (US \$ 7 million) will be for civil works and buildings and 6,930,000 Dinars (US \$ 13.860 million) for machinery and equipment.

There is no indication of the total tonnage consumed or of the cost per ton to be paid for the main types of raw material. It is understood, however, that comparable estimates will be made by the technical experts of the interested parties.

Technical Characteristics

A final decision of the plant site has not yet been made. The Government is putting pressure on the submission, as soon as possible, of a study on the manufacture of sulphuric acid from Gypsum or imported pyrite,^{1/} as well as the comparative evaluation of individual possibilities of furnishing industry with sulphuric acid as for example by importation or from by-product gypsum from the manufacture of phosphoric acid.

Labour Force

About 100 workers and employees will be employed.

Sales and Estimated Profitability

The ex-factory price will amount to 17,742 Dinars (US \$ 35.48) per metric ton. The volume and trend of sales have not been mentioned. It appears to be advisable to study this question in some depth.

The profitability of the investment will depend on the possible development of an alternative production process in the future. The development programme for South Tunisia foresees the need to use an additional source of supply. In 1970/71, it is planned to install a cement factory to meet the local demand. For a total investment of 30,430,000 Dinars (US \$ 60.860 million), it is then expected to produce 300,000 tons of cement and 300,000 tons of sulphuric acid a year in a combined process. The price for H₂SO₄ is then expected to be about 12,280 Dinars (US \$ 24.56) only.

1/

Please refer to "PRELIMINARY DATA ON A PROJECT TO PRODUCE 300,000 TONS/ YEAR OF SULPHURIC ACID ON THE BASIS OF IMPORTED PYRITE" as circulated by UNIDO for the Tunisian Investment Promotion Meeting.

II. FACTUAL DATA

1. Requested external contribution

- (a) Financing: The foreign exchange component is estimated to amount to 60 per cent of the project and consists mainly of the cost of imported equipment, know-how, and working capital requirements.
- (b) Joint Venture or direct investment: This is a matter for negotiations with interested parties.
- (c) Know-how: Depends on the final decision about the technical process to be applied. The output will depend on the speed of the production process and the capacity installed.

2. Tunisian Contribution

The promoters of the investment are SIAPB (*Société Industrielle d'Acide Phosphorique et d'Engrais*), a state-owned enterprise. Their promoters have shown a permanent interest in the project and it has been indicated that the Tunisian contribution will be a matter of negotiations.

III. MARKET DATA

The chemical industry is called upon to play a major role in the economic development of Tunisia. This major effort of expansion can be explained as follows:

- (a) the natural resources of minerals exist in the country;
- (b) a domestic market exists, which at the moment is supplied almost entirely from abroad;
- (c) a foreign market exists, either in the form of final consumption or in the form of intermediate consumption of chemical materials.

1. Local Markets

With respect to markets the following problem has to be overcome. The fundamental issue is the size of the Tunisian market and its ability to compete with imports. Therefore, the enterprises will concentrate on obtaining low production costs and will possibly prefer to choose the alternative of combining the cement and the sulphuric acid production.

2. Export Market

The contribution of new investments to economic growth as emphasized in the Third Development Programme will positively affect Tunisia's export oriented mining and fertilizer industries. Exports can be expected to increase in the long run; however, the pressure on export prices will continue due to lower production costs, improved quality, and increase in capacity.

It should be kept in mind, however, that the import price for sulphur has been rising. An investment in sulphuric acid production is expected to be profitable but it will require continuing appraisal of the market possibilities.

IV. ADDITIONAL INFORMATION ON THE PROJECT

- (a) The National Centre of Industrial Studies, Tunis, has obtained agreement from UNIDO to recruit a consultant, who is an expert in the technical and economical aspects for the production of sulphuric acid.
- (b) Special attention should be given to the manufacture of sulphuric acid on the basis of imported pyrites. A comparative evaluation of all alternatives will have been undertaken by a qualified chemical engineer.





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