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# U.S. TRADE AND DEVELOPMENT AGENCY

## EXECUTIVE SUMMARY

### **Tinplate Manufacturing Facility**

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**Project Sponsor: General Lithograph Egypt Company**

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**Region: Africa/Middle East**

**Country: Egypt**

**Sector: Manufacturing**

**TDA Activity Number: 1999-10058B**

**NTIS Number: PB2001-103802**

FEASIBILITY STUDY  
TINPLATE MANUFACTURING FACILITY

GENERAL LITHOGRAPH EGYPT COMPANY  
CAIRO, EGYPT

**EXECUTIVE SUMMARY**

The Egyptian steel industry produces about 3.4 million tons per year and the nation imports a net of about 850,000 tons per year making the consumption of steel about 4.25 million tons per year. Most of the steel produced in Egypt is in the form of rods and bars, while the imports are primarily flat rolled product, SQ bars and other value-added products such as cold rolled sheets and tinplate.

Tinplate is widely used in Egypt, and there are no manufacturers of tinplate in the nation or in the Middle East.

Mr. Hamdy Kobaisy of General Lithograph Egypt Company (GLE), having reviewed this situation many times, is of the opinion that a tinplate mill with a capacity of about 100,000 tpa, erected in Egypt, can be financially viable and an improvement to the nation's economy. He recommends that the mill be erected in the Cairo vicinity.

Mr. Kobaisy prepared a proposal for such a plan and submitted it to the Trade and Development Agency (TDA) of the United States. The proposal was reviewed and accepted. A grant was awarded to GLE to prepare a feasibility study of his proposal. GLE in turn awarded a contract to USX Engineers and Consultants, Inc. (UEC) for the study.

As stated above, Egypt is an importer of tinplate. Egyptian industry has imported an average of about 55,000 tons of tinplate per year over the last four (4) years. Other countries of Africa and the Middle East have also imported tinplate. Imports to the Middle East have averaged about 267,000 tons per year over the last four (4) years.

The rate of growth of this market in Egypt appears to be about 3%, somewhat greater than the population growth. The demand for tinplate in the Middle East is growing at a greater rate at about 18,000 tons per year. The market for tinplate in Egypt, North Africa and the Middle East is real, and it is being satisfied by imports.

Egypt is in an ideal location to produce tinplate for this market. It is centrally located and is a signator to a treaty of free trade with 22 countries of eastern and southern Africa. The relationship with the Middle East nations is good.

GLE has a plant in 6 October City (about 50 km west of Cairo) for producing lithoplate products. The operating plant and the auxiliary units, such as the electric sub-station, water treatment facilities, etc., utilize about one half of the property owned by GLE. GLE proposes that the electrolytic tinning line (ETL) and the shear and classifier facilities be erected on this site. After study of the space requirements for the operation and material storage, UEC is of the opinion that the facilities can be erected on this site. The "in process" inventory will be limited, but it is adequate for the 100,000 tpa operation. Off site storage for raw coils and for finished product is available at nearby warehouses.

To determine the type of process line to be installed, UEC examined the merits and the relative costs, both capital and operating, of the various tinplate processes. The review is outlined in detail in SECTION 4 of this report. On the basis of the findings, UEC recommends the use of the phenosulfonic acid process. An ETL using the methanesulfonic acid process can be an acceptable alternative; however, there are capital and operating cost disadvantages.

Based on the recommendations for the process, UEC developed an estimate of capital funds required for erection of the ETL and cut-to-length line on the site adjacent to the existing lithoplate plant. The area is adequate and the new installation can take advantage of the existing infrastructure.

The ETL and the shear line can be housed in a mill building approximately 120 meters long, 30 meters wide and 20 meters to the bottom chord of the roof truss. The lines will be serviced by one of two (2) 20 ton EOT cranes and mobile equipment. Utility facilities such as the electric power substation, water treating, etc. will be enlarged for the new plant. A single story building to the west of the main mill building will be constructed for repair services, anode casting, spare part storage, etc.

Certain financial impediments to foreign exchange with Egypt should be considered. Negative trends in the Balance of Payments have determined much of recent economic policy. Egypt's Balance of Payments turned negative in fiscal year 1997/98 and remained in a deficit position for fiscal years 1998/99 and 1999/2000. In early 1999, the Central Bank responded by resorting to foreign exchange rationing in order to control the outflow of foreign exchange, thereby delaying payment to foreign importers.