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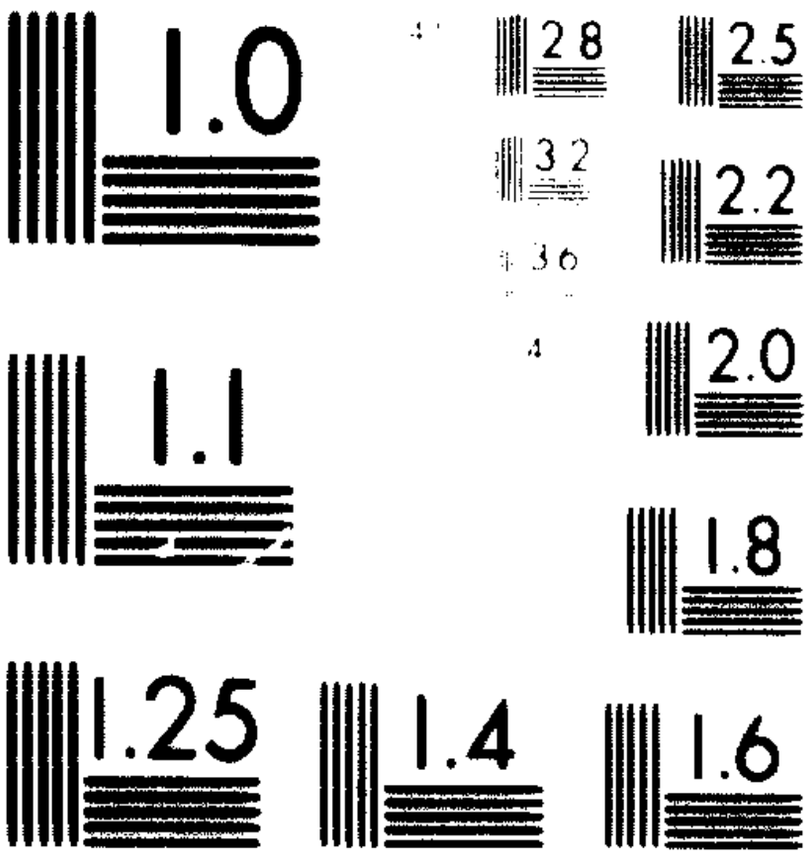

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THE SHIPBUILDING AND SHIPREPAIR INDUSTRY IN CYPRUS*

by

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1. Introduction

Although Cyprus is an island and its geographical position is most favourable for shiprepair and shipbuilding facilities, it is only during the last 2 years that such activities were established. Plans for the establishment of such facilities, however, were in existence much earlier than that, but the Turkish invasion of 1974 and the consequent occupation of 40% of the island, including the major port of Famagusta and all the existing shiprepair facilities available, set back these plans by a few years. The above are reflected in the following figures, extracted from official statistics:

Sector 3841: Shipbuilding and Repairing

	Employment	Gross Output	Value Added	Capital Formation
1973	42	C£ 41,000	C£ 26,000	
1975	14	49,000	10,000	
1976	13	32,000	16,000	
1977	117	1,434,000	343,000	494,000
1978	157	2,021,000	519,000	214,000

The lack of the availability of any substantial indegenous raw materials and other resources has led the Government of Cyprus to set as one of its targets for the 3rd Emergency Economic Action Plan, 1979-1981, the establishment of industries based on highly skilled and educated manpower, especially in the field of Engineering Industries. Shipbuilding and shiprepair yards are ideal candidates in meeting this target as their success depends largely on high technical skills. In addition to its high Value Added content and its direct gain in foreign exchange a shiprepair industry in Cyprus is expected to create a need for the faster expansion of various ancillary industries, thus contributing to the more general economic development of the island.

2. Market Potential

The most promising and immediate potential demand for shiprepair facilities in Cyprus is the vessels presently calling at its ports, particularly those calling regularly. Other potential customers might be vessels calling at other Eastern Mediterranean countries and to a certain extent vessels transitting the Suez Canal. Some minor additional work might also arise from related repair needs of the ports or other local enterprises.

Analyses of the ships calling in Cyprus* indicate that a substantial part of the traffic consists of repeat calls. The vessels calling at Cyprus are significantly smaller than the world fleet as a whole. It is estimated that vessels smaller than 7,000 GRT account for over 95% of the total traffic. The vessels calling at Cyprus ports appear also to be somewhat older than the world fleet as a whole, their average age being of the order of 18 years.

It is estimated that by 1980 a gross potential market of 250 frequent callers, 1,300 occasional callers, 1,500 passing vessels and 13,400 vessels transitting the Suez canal will exist among vessels of under 14,000 dwt. From this gross potential market a very firm market exists for a repair centre to handle vessels of 6,000 dwt and less, with an expected market of 150 vessel dockings per year by 1980. Between 6,000 dwt and 14,000 dwt the market falls off, with an estimated market of 50 vessels per year between 6,000 and 14,000 dwt in 1980. Above 14,000 dwt only a small market exists.

3. Shiprepair and shipbuilding facilities available

Despite favourable conditions and sufficient demand the supply of drydocking and repair facilities in Cyprus is relatively undeveloped.

Shiprepair in Cyprus is mainly conducted by two specialised companies.

These firms are the Eastern Mediterranean Shipyards Ltd. and FAMALIFT Shipyard Co. Ltd., both situated in Limassol.

A. Eastern Mediterranean Shipyards Ltd.

The Eastern Mediterranean Shipyards (E.M.S.) has been established in June 1976 and in April 1977 began its operations. It has repaired and reconditioned the former Royal Air Force slipway in the old port of Limassol. Majority shareholders are the Harmstorf Group, operating large shipyards in Western Germany and having experience in shipyard establishing abroad. The activity of the company started on 14/1/1977

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* See for example J. Jansson, UNIDO consultant, "The Feasibility of Establishing a Shiprepairing and Shipbuilding Facility in Cyprus", Nicosia, March 1977.

with a staff of 10 employees. Since then progress has been made. Machinery, welding aggregate etc., gradually arrived from Germany and installed in the old R.A.F. partly reconditioned buildings. Welders have been sent to Germany for training and classification society licence test. The yard is now able to perform machinery and some hull repair by sending repair squads and equipment on board ships in Cyprus ports or waiting outside harbours.

The personnel of the yard at present is about 75 persons. A new plateshop however is not planned. The yard is nevertheless well equipped to perform a variety of machinery, electrical, electronic and hull repair work on board ship not requiring docking. Besides the standard repairs, the firm carries out as well as specialised repairs by importing specialised knowhow and supervision from Western Europe. EMS is an official service base for a wide range of well known Marine engine manufacturers and they have service contracts with Storke, Werkspoor, M.A.N., MTU, KMW, Burmainster and Wein Sultzer and others. The executed engine, steel work and other repairs are done according to the Standards of any International classification Society.

Their workshop equipment includes machine tools for machining, milling, grinding engine crankshafts, axles etc. as well as all types of welding machines such as AC/DC straight electrodes, T.I.G./M.I.G. gas welding etc.

EMS is also in a position to accept new building contracts for smaller craft such as patrol boats, customs and police launches, pilot vessels, sightseeing launches and smaller tugs, barges and pontoons.

For various reasons (narrow space, no wave and wind protection etc.) it is not possible at reasonable cost and effort to enlarge the shipyard at its present site in the old Limassol harbour.

Since April 1977 when the Company commenced its activities it has repaired more than 180 ships.

B. FAMALIFT Shipyards Ltd.

FAMALIFT Shipyard Ltd. was established in February 1974. It is the only shiprepair firm which owns a floating dock. The dock has a lifting capacity of 1400 tons (light ship).

Its internal dimensions are 64 metres length and 18.5 metres wide. The floating dock has been constructed by the firm themselves using drawings of an approved Naval Architect in Athens and it is in accord with the Hellenic Register of Shipping Rules and Regulations.

The firm commenced the construction of the dock in February, 1977 and completed the project in March, 1978. The construction of the dock cost only about C£ 200,000 (two hundred thousand Cyprus pounds). One Cyprus pound is equivalent to about 2.80 U.S. dollars. It should be noted that firm rejected a second-hand floating dock of same capacity including transportation charges for C£ 250,000.

The floating dock, consists of pontoons, each 15.0 m wide in the length direction of the dock and 22.5 m long, which is the maximum beam of the dock. The height of the pontoons subdivided by longitudinal watertight bulk heads in the length direction of the dock in five tanks is 2.20 m. The dock in the first stage consisted of 4 pontoons spaced 1 m from each other and in the final stage it will consist of 7 pontoons. Thus the total length in the first stage is 64.0 m and finally upon adding three pontoons it will become 111.0 m long. The pontoons are joined by two vertical side walls on top of them with 2.0 m thickness and 7.8 m height. This gives a total dock depth of 10.0 m and an inner distance of the walls of 18.5 m allowing docking of ships with a maximum beam of abou. 17 m. The lifting capacity of the dock in the first stage is about 1400 t and in the final stage will be more than 2500 t. These lifting capacities correspond reasonably well to the masses of about 75 m to 110 m long normal merchant ships in docking condition.

The dock is moored inside the so'thern breakwater of the Limassol new harbour at the second or third already existing "pier foot", which was enlarged to allow for motor vehicle manovring,handling of steel plates and sections, welding equipment etc.

On the beach the necessary shops for steel working and other metal works, storage etc.have been constructed. The dock pontoons (mainly of 10 mm certified steel material) were built on the beach. When they were launched in the harbour basin they were joined together there and the walls were constructed on top of them.

Finally the dock is equipped with pumps, piping electronic and optical levelling devices etc. For the first stage travelling lifting crane on top of only one of the walls is provided.

The mechanical equipment, machine shops, crane etc. cost about C£ 260,000.-

Since March 1978 when the floating dock was completed, i.e. during the last ten months, more than 60 ships have entered the dock for repairs and on the firm's waiting list there are more than 15 ships awaiting for hull repairs and maintenance.

Also the firm since its operation manufactured small crafts, pontoons etc.

The firm employs about 85 people. Its technical personnel is also fully trained and qualified to execute all sorts of repairs according to international Marine regulations and standards.

4. Potential for Development

The geographical location of Cyprus is considered to be favourable for the development of shiprepair and shipbuilding facilities. Since thousands of years Cyprus has been considered as the crossroads of the routes to three continents, i.e. Europe, Asia and Africa. Although Cyprus does not lie on the direct routes to Suez it is expected that the opening of the Canal enhanced further this factor. Moreover various surveys indicate a lack of generally acessible facilities in the Eastern Mediterranean for the smaller sizes of ships.

In addition to its location, Cyprus offers a number of other advantages as well:

The existence of a well-educated and very adaptable labour force is conducive to industrial development in Cyprus. Moreover the cost of living and hence wage rates are far below those prevailing in Western European countries. It is estimated that in this industry labour costs are some 30% - 50% lower than those in Western Europe, the productivity being at the same time relatively high.

In addition to the above the services industry is developed to European Standards, especially those of banking and telecommunications which are of primary importance in this industry. Cyprus has automatic

telephone connection with practically all countries of the world and all VHF marine bands to shipowners and repairers are available. A liberal import policy with respect to machinery and raw materials and a number of incentives designed to promote investments are also positive factors contributing to the more general industrial development of Cyprus.

It is well accepted that in the present stage of development of Cyprus, the establishment of a shipbuilding and shiprepair industry is not a very easy task, despite all the favourable factors described above. A number of constraints exist, the major one being the availability of labour trained in the particular skills required. Although a number of existing institutions, e.g. the Higher Technical Institute and the Cyprus Productivity Centre, have as their major task the training of workers and technicians, it is obvious that they will have to be strengthened and expanded if they are going to make a contribution to the shiprepair and shipbuilding industry. It may well be that, at least initially, a large part of the required training at all levels should be carried out abroad, for example in European shipyards.

With more than half of the Cyprus coastline being at present under Turkish occupation, the number of available locations for the establishment of a shipyard are limited. The absence of any naturally protected areas against waves and under-water currents and of adequate water depth presents the necessity that any shipyard to be established should be incorporated within a port.

The existing ports of Limassol and Larnaca are ideal for this purpose as far as their location is concerned, offering a number of other advantages as well, e.g. proximity to industrial centres, availability of necessary services etc. Unfortunately, however, they must be ruled out as potential locations for shipyards because of their size and their rapidly expanding requirements for space due to increasing traffic. Therefore, any shipyard to be established should be located on virgin land with consequent increase in investment costs or at the expense of other forms of development like tourist development. In view of the above, the idea of establishing a new port in Cyprus and incorporate in it a shipyard is gaining widespread support and as possible location those of Paphos and Vassiliko have been put forward.

The problems of training, accessibility to sophisticated technology, high investment costs (which have been estimated to be of the order of US $30 million for a shipyard being able to handle vessels of up to 7000 GRT covering 90% of the market potential) have led the Government of Cyprus to the conclusion that the best approach for the establishment of shipbuilding and shiprepair facilities would be through a joint venture with a foreign experienced partner. To this effect and following the recommendation of a UNIDO consultant who, in 1977, carried out a prefeasibility study on the establishment of such facilities in Cyprus, Government has recently asked for proposals for the establishment of a shipyard in Cyprus along the line indicated in the Consultant's study. A number of proposals have been received and are currently under consideration.

5. Conclusion

Various studies carried out recently have indicated that a large shipbuilding and shiprepair yard in Cyprus would be a viable proposition contributing among other things to the acceleration of the more general industrial development of the island. The problems associated with the establishment of a shipyard in Cyprus although not insurmountable cannot be underestimated. Their careful consideration may lead to a well balanced phased development of a shipyard in Cyprus along the lines indicated in this report. UNIDO can undoubtedly play a useful role in this respect with the provision of technical asisstance in the fields of training, acquisition of technology etc., thus enabling the orderly implementation of this project.

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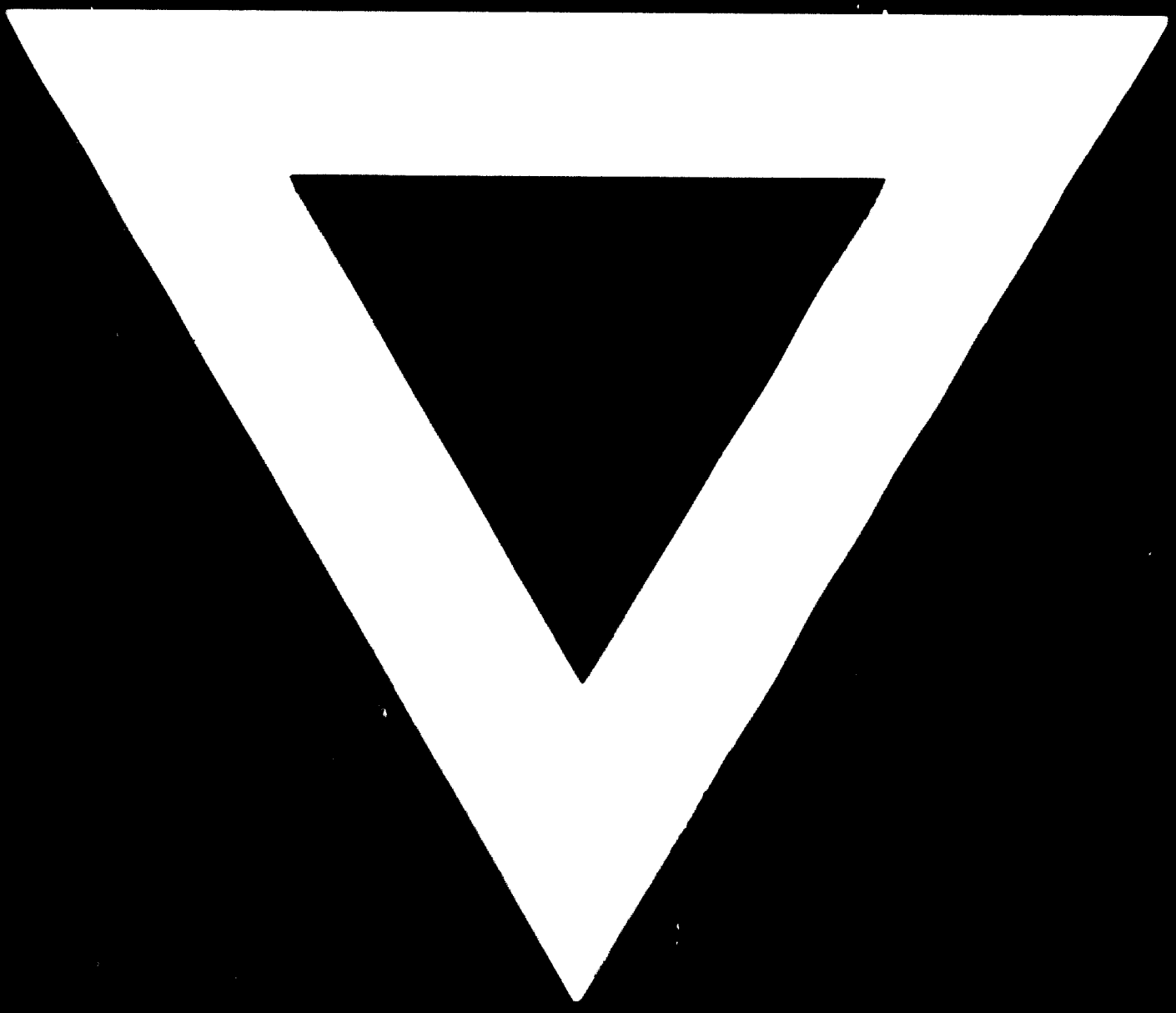

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