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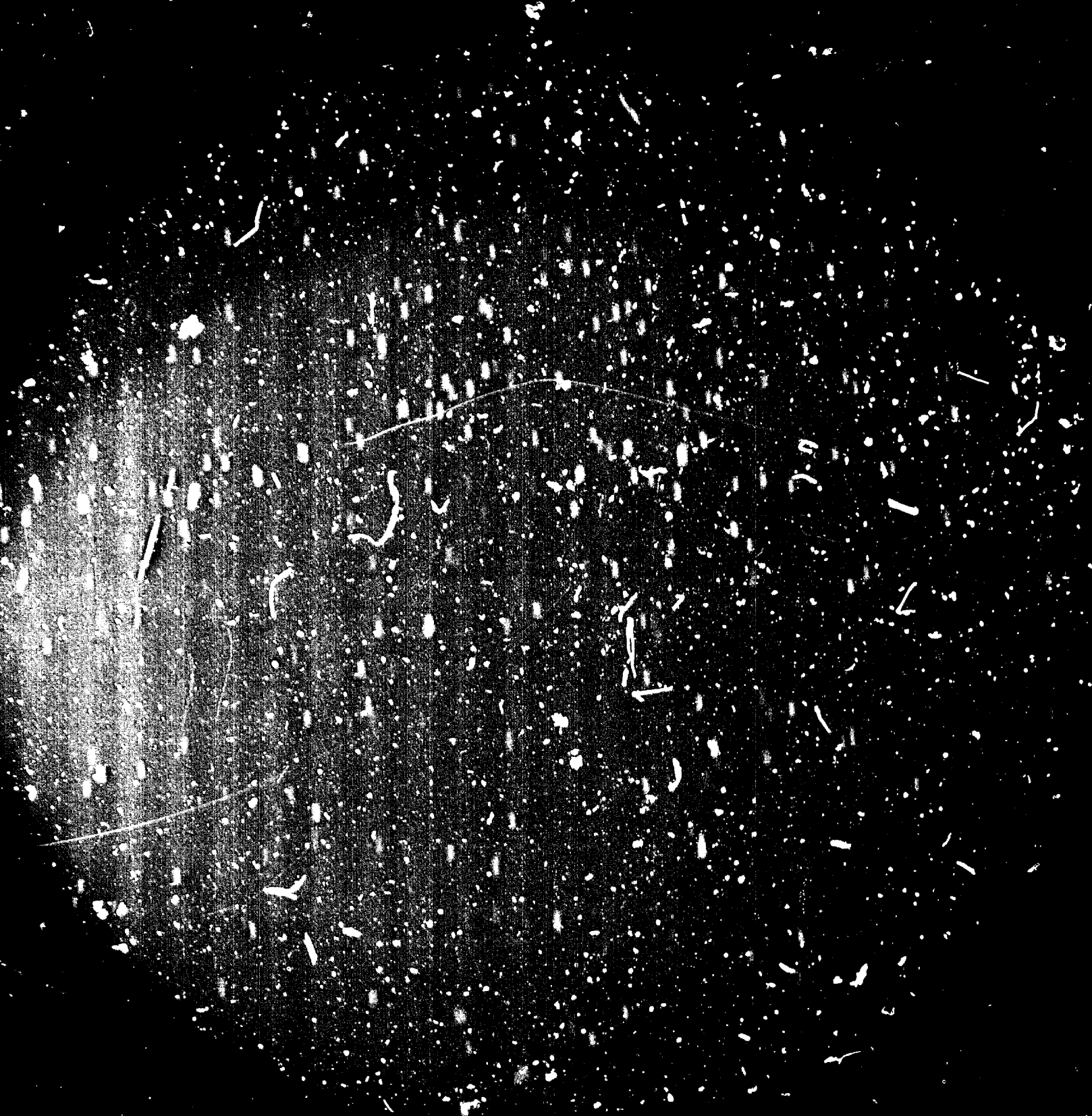
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SHIPYARD DEVELOPMENT PLANNING*

prepared by

James R. McCaul**

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** President, International Maritime Associates, Inc., USA.

While the approach used in a planning study would be tailored to the specific circumstances, we have generally followed a six step approach to development planning for shipyards.

I would like to briefly outline this six step approach :

Step 1. We segment the available market, study each segment to determine market and competitive trends, and examine options for promoting yard specialization.

As an example of market segmentation, in a recent planning exercise we identified seven market segments :

1. Domestic shipping fleet.
2. Public boats including Navy and marine police.
3. Offshore workboats.
4. Domestic registry, foreign trading ships.
5. Export market for shiprepair and construction.
6. Offshore engineered assemblies.
7. Onshore engineered assemblies.

For each segment we studied future potential market developments, competitive plans, and problems and issues relating to each market segment.

We then related these segments to the apparent capabilities of the existing domestic shipyards. Taking into account the facilities available in each yard, their production histories, location etc -- we developed options for how the yards could be encouraged to specialize in specific market segments.

Step 2. The existing shipyard industrial base is examined to determine the potential for getting greater utilization.

We have found in previous studies that such improvement opportunities frequently exist. Addition of an extra wet berth to complement existing dry dock capability is an example of the type of improvement possible. Often there is opportunity to pass surplus work to another yard in need of business.

Step 3. A central point of government coordination is identified and recommended for the shipyard sector. We have frequently found various agencies at the central government and state government level involved in planning and operations of shipyards. Plans are sometimes formulated out with consultation among the various agencies.

An area of particular insulation seems to be between defense ministry planning for naval shipbuilding and maintenance facilities, and equivalent planning for the commercial sector by the ministry in charge of promoting industry.

Naval ships and commercial ships often share the same maintenance facilities. The demand in both sectors should be coordinated.

Step 4. The priority of the shipyard industry should be studied and established at an overall industry planning level. Shipbuilding and repair should not be considered an industry operating in a vacuum. It is part of the country's industrial structure. Investment in this sector uses funds which could be used for other purposes.

In examining how the shipyard sector fits into the overall macro plan for industrialization several key considerations should be addressed. :

- One - To what extent is it necessary to have a local base to support domestic fleet requirements ?

This is not as clear-cut as it sounds. It may be vital to have a domestic shipping fleet. But it may not be necessary to have a base i.e. a domestic base to repair and build these ships.

The obvious question is whether facilities are available in nearby locations to build and or repair. The less obvious question is whether the cost would be lower if the work is performed domestically.

Generally speaking, availability of local capability to repair vessels is more necessary than the capability to build ships.

This requirement should be carefully assessed.

- Two - Does the shipbuilding and repair industry have a catalytic effect in the form of improving the country's engineering industry base, improving skills ? Shipyards tend to be a good point of entry into advanced engineering, and do tend to be a breeding ground for upgrading worker skills.

It is perhaps worth noting that the shipbuilding industry was among the vanguard industries in the industrialization drive in Japan, Korea and Taiwan.

- Three - Does a local shipyard save foreign exchange, and is this important to the country? This is not a clear cut as it may appear. A local shipyard uses lots of imported services and material. Because of transport costs and low volume purchasing, the materials may be more costly than would be if the work was performed in a major shipyard center. In fact, local construction could actually result in negative foreign exchange effects.

Four - To what extent does a shipbuilding and repair industry contribute to the country's national security ?

This is an intangible factor, but one which seems to have driven many investment decisions in this industry.

In general these and other considerations must be systematically evaluated. This evaluation must be done in the context of overall macro planning.

Step 5. Government should identify and study actions which may be taken to improve and/or promote the industry. These actions can include :

1. Initiate a program to replace obsolete inefficient coastal and inter-island ships with ships build in local shipyards.
2. Set rules which require national shipowners to build and repair ships locally.
3. Restrict importation of second hand ships.
4. Empl leverage on foreign companies using country resources - to pressure these firms to give work to local yards.
5. Set up an export financing scheme to promote ship exports and expand market opportunities.

However it should be realized this can be an extremely costly exercise. Trying to compete with the financing schemes now available in Korea, Japan and Europe will require massive government involvement.

6. Provide financing to yards to improved technology and upgrade training, reducing costs and improving quality.
7. Eliminate duties, import restrictions and other government rules which hinder shipyard performance.

Step 6 Evaluate which of these actions, if any, are justified on a cost effectiveness base. It should be realized that any attempt to promote shipyard development has an associated cost.

This cost can be direct or indirect. The direct costs are subsidy outlays and soft loan financing. Indirect costs are found in higher shipping cost which results from rules to build and repair locally

I believe it to be very important to carefully study and weigh any measure to be taken to promote the shipyard sector. The expense will be substantial. It should be justified on bases of how it contributes to the country's industrialization efforts.

I would also like to point out several pitfalls which are worth avoiding.

ONE Shipyards purchase all types of services and material. Sometimes it is thought that supporting industries can be, and should be developed. Problem is that too quick attempt to promote use of local supporting industry can kill off the shipyard. The yard is forced to use more expensive possibly lower quality sub suppliers. It will raise ship prices and reduce the yards' competitiveness.

TWO It probably would be best to design maximum flexibility into shipyard. This of course involves a trade off with efficiency and cost. A specialized yard can operate with more efficiency than a yard designed with many objectives in mind. But this requires enough specialized Through put. There are numerous shipyards which have been put up with specific target markets in mind that have found their target market have not materialized.

THREE Watch out for under estimated project cost. I have found few shipyard development and expansion projects which have come in under the original cost estimate.

Finally, a few words about financing sources. First there are numerous financing programs promoted by various public or semi-public organization in Europe, Canada, the US and Japan. They offer free feasibility studies, low interest financing, grace periods. They also tend to tie procurement of equipment to sources within their country.

I can think of more than one shipyard which now has little business where the company supplying most of the project engineering and equipment has walked away with profits in pocket.

Second, the World Bank and ADB have programs which could be used in this sector. ADB is already involved in a shipyard project in Fiji. The World Bank has been involved in the Philippines and Indonesia. Generally speaking, these development banks would be more likely to finance projects designed to improve the domestic shipping fleet. That is they would finance transport infrastructure improvement projects.

A development bank project for shipping improvement and expansion can have linkage to shipyard improvement. A requirement in the loan could be the ships to be built or modernized have to be built locally. This provides demand for the local industry.

Third, UNIDO of course is a good source of feasibility study financing.

Fourth and last, the International Finance Corp (IFC), a subsidiary agency of the World Bank could be a direct participant in shipyard facility improvement financing. An example of IFC involvement is the new graving dock at Cebu Shipyard in the Philippines.

By involving IFC the project quality improves in the eyes of the other financing participants. This effects financing terms.

