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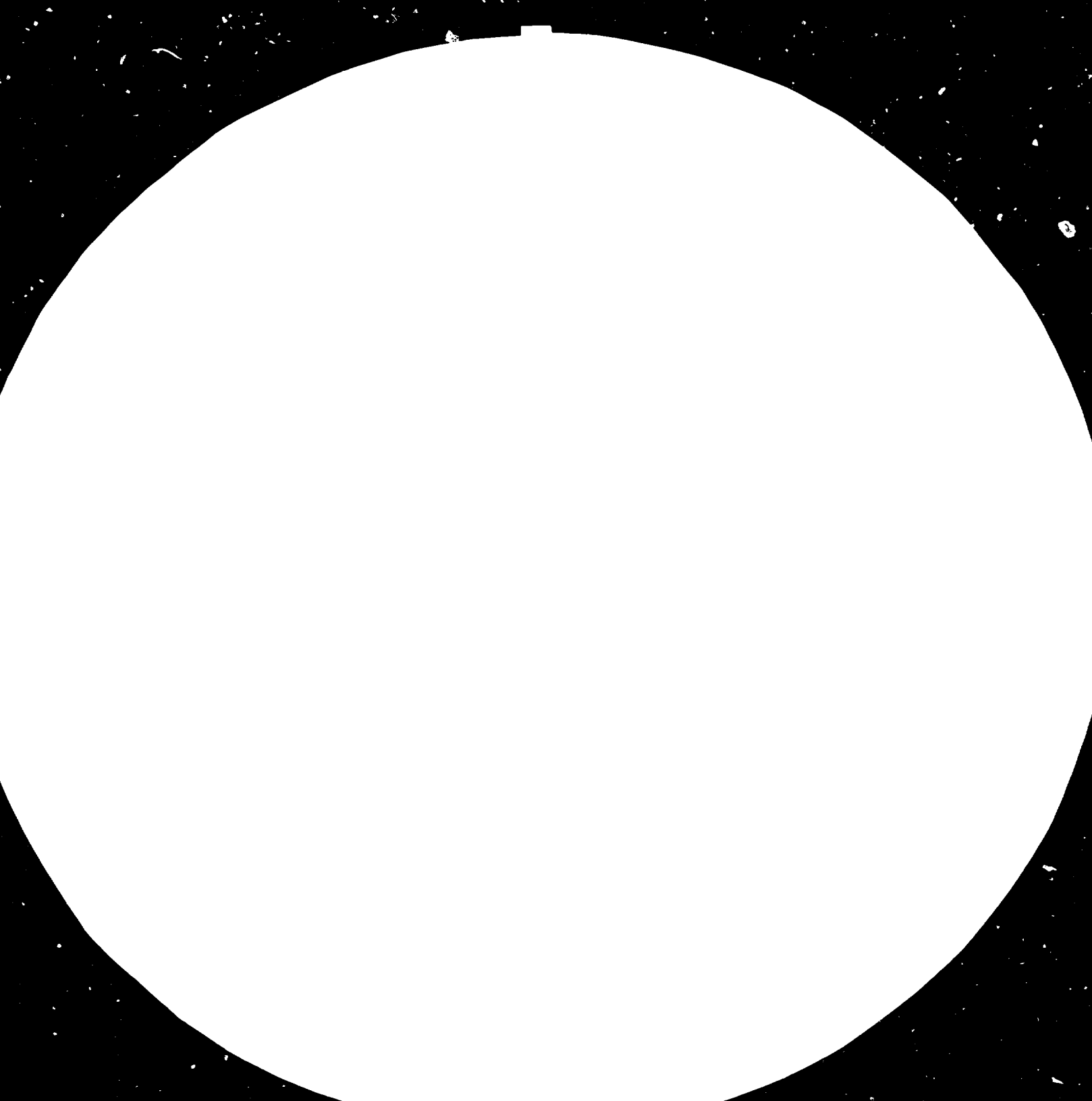
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THE FACILITIES AND TECHNICAL ASPECTS  
OF SHIPBUILDING AND SHIPREPAIR IN BANGLADESH \*

prepared by  
A.K.M. Wares Ali\*\*

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\*\* Naval Architect, Bangladesh

The facilities and technical aspects of  
Shipbuilding and shiprepair in Bangladesh.

1. Bangladesh being a riverine country water ways has all along been the cheapest means of transport and communications. A great portion of its domestic as well as the international trade is done in the sea and river routes which demands for a development of shipbuilding industry in the country. But for various unfavourable reasons, no significant development is made in this sector. The country has only three small scale shipyards in the public sector for the repair and construction of inland water transport vessels. One of them is Khulna Shipyard Ltd., Khulna which has an annual turnover of 5,000 tons of equivalent steel. The second one is Dockyard and Engineering Works Ltd., Narayanganj, Dhaka which has an annual turnover capacity of 3,000 tons of equivalent steel. The third one which is in Barisal has been mostly concentrating repair of BIWTA crafts.

2. Chittagong Dry Dock is a yard having one graving dock intended for the purpose of repair of only ocean-going vessels. It is a project still under construction which is expected to be completed soon.

The Dock and Heavy Steel Structure Works, Chittagong is a project first of its kind in Bangladesh and intended for repair of ocean-going vessels specially to cater the drydocking repairs and other service requirements of national flag carriers.

Since inauguration of the drydock in May, 1981 Chittagong Dry Dock has drydocked and repaired 30 ocean-going vessel (both local and foreign). Of the said 30 vessels, 11 vessels belong to Bangladesh Shipping Corporation which includes 2 lightering tankers namely, M.T. BANGLAR KHEYA & M.T. BANGLAR ALO. Drydocking and all structural repairs work are being carried out as per the recommendation of concerned Classification Society. Unlike process type of industry, shipbuilding and repairing is a job type technology and the know how

and expertise required to handle these sort of industry is really versatile. Moreover, this particular type of industry and the infrastructure required to run this sort of industry successfully and efficiently has just started growing in our country.

Another important aspect is that for successful operation of this type of industry, lots of allied industries are required as back up facilities. It may be worthwhile to mention further that in the developed countries like Singapore, Korea etc. these industries are gradually booming under the continued assistance and technical collaboration from developed countries and also due to simultaneous creation of allied industrial facilities. Contrary to this fact, Bangladesh Dry Dock is just in the take off stage and as such it is apprehended that even on completion of the workshop complex of Dry Dock, it may not be possible to derive such a utility out of these machineries for feeding the repair requirements or to expend the present repair activities unless it is ensured to acquire the necessary technical know-how and to develop the skill of their floor level technicians. Bangladesh Dry Dock presently suffers a serious setback due to lack of skilled technicians. In this matter a proposal was earlier put forward by Bangladesh Drydock to arrange for bringing a Foremen level technicians for training up floor level technicians working shoulder to shoulder with them. It is a standard practice even in the shipyards of any developing or developed country that for the specialised items of repair such as that for turbo-charger, fuel pump, fuel oil governors simplex oil seals, Mogregor Hydraulic hatch cover handling equipments, electronic communication and navigational equipments, normally manufacturer's service Engineer are called for to attend them and instant service are also readily available because of the suitable infrastructures of industrial facilities of those countries. Contrary to this, Bangladesh Drydock would require to make a prior arrangement with the nearest available service base of these machinery manufacturers. As for the initial stage, it is seen that Bangladesh Dry Dock has started making correspondence with the Singapore based servicing agencies of M.A.N, B & W, Sulzer Brand Main Engine, Turbe Chargers, Mogrator hydraulic hatch cover handling equipment etc. seeking their terms and conditions in this regard. Further, it is felt that suitable Governmental regulations should also be formulated urgently so that these services could be made available from abroad by avoiding procedural difficulties and in the shortest possible notice.

From experience it is observed that there is frequent power failure from power Development Board which causes delay of work thereby loosing manhour resulting serious setback on the part of the owners. It will be expedient to emphasis on Power Development Board to arrange for uninterrupted supply to Drydock so that works can be carried out uninterrupted and thereby ensure optimum utility of Bangladesh Drydock. The Committee emphasises that if power failure continues then Bangladesh Drydock will have no other alternative but to incur huge capital expenditure to install a much bigger power plant to ensure adequate power supply which can be easily avoided if Power Development Board can ensure uninterrupted supply. It is thus essential that it has to be thrust upon Power Development Board to ensure adequate and uninterrupted supply to Bangladesh Dry Dock.

Bangladesh Drydock will have to ensure availability of minimum quantity of fast consumable shiprepair materials such as lignum vitae wood, Lloyd's tested steel plates of shipbuilding grade, white metal, chemicals etc. Such materials are not manufactured and produced locally and as such to be imported from abroad.

Non-release of fund towards working capital is another setback Bangladesh Drydock has been facing since commencement of repair work. Though about 30 ships have now been drydocked and repaired Bangladesh Drydock had to depend either on advance from owners or diverting funds from development works. It is a general practice all over the world to extend credit facilities upto 5 months time whereas it has been difficult on the part of Bangladesh Drydock to go ahead with usual repair works without advance from the owners. The matter of release of working capital for Bangladesh have to be vigorously pursued by Bangladesh Steel & Engineering Corporation to ease Bangladesh Dry Dock from the financial constraints. It may however be noted that provision of providing working capital of Bangladesh Dry Dock have already been made in the PEP.

After due deliberation on the problems that are being faced and likely to be faced by Bangladesh Dry Dock the committee recommends the following:-

- a) Bangladesh Dry Dock must ensure completion of the construction of the workshop complex and installation and commissioning of the machineries in the workshop complex by end'83 as scheduled.

- b) Arrangement should be made by Bangladesh Dry Dock for bringing in experts from abroad for shop floor level training of local personnel as identified at Bangladesh Dry Dock should also ensure that sufficient number of technicians are available for receiving training from the experts.
- c) Arrangement should be made by Bangladesh Dry Dock to come into some bilateral agreement with different firms such as M.A.N., B & W, Sulzer engines manufacturers, Turbocharger, Mogregor hydraulic hatch cover etc. for providing servicing facilities in Bangladesh. In this respect B.S.E.C. should move the Government for relaxation of Government regulation so that these experts can be made available at Bangladesh at a shortest possible notice.
- d) Arrangement to be made for centralised fixed installation of compressed air.
- e) Arrangement to be made for the installation of water treatment plant for generating fresh water.
- f) Arrangement to be made by Bangladesh Dry Dock to train sufficient number of personnel for ensuring safety at work and combating fire. Adequate and required equipment must also be provided for the purpose.
- g) Arrangement to be made for adequate scaffolding facilities.
- h) Arrangement to be made for import of pneumatic tools and blowers of sufficient quantity.
- i) Power Development Board to be approached for uninterrupted and steady power supply to Bangladesh Dry Dock.
- j) Arrangement to be made for installation of converter with the standby power unit of Bangladesh Dry Dock for DC Supply to ships in case of power failure.
- k) Bangladesh Dry Dock to expedite procurement of ship repairing materials and expedite completion of storage facilities.
- l) Bangladesh Steel & Engineering Corporation to take up the issue with the Government for providing necessary working capital to Bangladesh Dry Dock without further delay.



3. Most of the technical staff and the management staff of the Chittagong Dry Dock have undertaken their training on shipbuilding and shiprepair engineering in Japan, England, Federal Republic of Germany, Italy, Yugoslavia, Holland, Bulgaria, etc.

Proposal for co-operation in the field of shipbuilding  
and shiprepair technology among developing countries

Proposal 1

In Japanese Industries every employee, irrespective of his professional expertise, tries to assist his fellow colleagues in each manner possible with the sole objective of higher production and services. This type of instantaneous assistance by fellow workers seems to be indeed a difficult method to be observed and introduced in a country like Bangladesh. Such an assistance would be very essential for the speedy development of industrial processes. This process of motivation and stimulation practised in Japanese industries results in a far more harmonious working relationship and feeling of belonging to the organization/industry where the individual worker is employed. In Bangladesh, however, this kind of sense of belonging to the organization is yet to be developed among the fellow workers in order to achieve better production in the industrial sector.

Proposal 2

In developing countries a simple change in the Government will definitely have a tremendous impact on the system of enterprise management whereas the Japanese industrial management will remain steady and unchanged regardless of any changes taking place at the Government's end. In developing countries adversities and rivalries among political parties are generally followed by similar iniquities in trade unions existing at different industries and factories. As a result, the productivity, tranquility and discipline in industrial enterprises are suffering a great deal. Since it is of vital importance that industries and factories should be kept aloof from all sorts of political rivalries, the Japanese example working discipline ought to be introduced and practised also in countries like Bangladesh with the aim of serving industry and mankind in the best way possible.

Proposal 3

Shipyards, dockyards and shipbuilding industries would not be able to enter competitive productions unless they modified their business approach and adopted a subcontracting system in their production process leading to an equal distribution of tasks in accordance with the individual fellow's field of specialization. The feature of getting the work done by subcontractors within a short period of time as it is practised in Japan is an excellent practice indeed. It is amazing to observe how many complicated jobs carried out by different subcontracting agencies could be tackled with high precision and efficiency if the above system of subcontracting services was applied.

Proposal 4

Lastly, it has been realized that engineers and workers in developing countries are in need of extensive practical training. In this case it would be desirable if more specialized experts from industrialized countries could be made available to developing countries in order to impart on-the-job training to engineers and workers in developing countries thereby implementing a quick and efficient method of transfer of technology. Regular exchange of manpower and training opportunities among least developing countries like Bangladesh, which has a huge potentiality of manpower, would definitely pave the way for a world-wide understanding in respect of transfer of technology. Being an industrial giant in Asia, it is clear that Japan could play an important role in this respect.

