Charting the Future of Malaysia's Maritime Industry

by Ms. Suvarna Ooi

Ir. Nordin believed that the country needed to develop more marine engineers and naval architects who specialise in offshore engineering

MALAYSIA, as a maritime nation, has always lagged behind leading shipbuilding nations such as China, South Korea and Japan. However, the industry will soon be rejuvenated when the newly launched guidelines on the sector come into play.

JURUTERA met up with Ir. Nordin bin Mat Yusoff, Vice President of Group Technical Services, MISC Bhd, to get his views on the guidelines and more. He is the Chairman of the Malaysia Shipowner's Association, a Fellow of the Institute of Marine Engineering, Science and Technology (IMarEST) and a member of the Royal Institution of Naval Architects (RINA).

The graduate of the University of Glasgow in naval architecture and ocean engineering explained that marine engineering is a specialisation of the engineering aspect of the different systems including the propulsion system, housed within a ship, while naval architecture is related to structural engineering specialising in design of ships and floating objects.

Historically, Malaysia has always been actively involved in shipbuilding and ship repair which is important for both its commercial and defence activities. However, the country's capacity is outmatched in many ways compared to the advanced state of the shipbuilding industry in several other maritime nations.

Ir. Nordin believes that one of major limitations lies in the shortage of locally trained marine engineers and naval architects who are needed to support the development and growth of the industry. The naval architects, for instance, are in demand not only for ships but also for floaters and production facilities especially in the oil and gas industry.

Floaters, which are generally categorised into fixed topsider production facilities and floating structures, are essential for oil and gas production facilities, an example of which are the Floating Storage Offloading (FSO), Floating Production Storage and Offloading (FDSO) and Floating LNG plant (FLNG). The latter is currently under development, and the first one will be launched in the next three to four years.

MARINE ENGINEERING AND NAVAL ARCHITECTURE EDUCATION

According to Ir. Nordin, before local universities added marine engineering and naval architecture courses to their syllabus, students were often sent to the United Kingdom to study as such courses were simply not available in the country. In fact, many of the engineers in the industry at that time were actually "converted" from other disciplines of engineering. However, all that began to change in early 2000.

He said, "At that time, Universiti Teknologi Malaysia (UTM) appointed me to its industry advisory board of its engineering department as they wanted to review the course on marine technology. However, I had to point out to them that such a course was not suitable in fulfilling the industry's need for marine engineers or naval architects."

What followed was a collaboration between MISC and UTM in 2005 where, with a sponsorship of RM5 million over five years, MISC invited visiting professors from credible learning institutions abroad to Malaysia. The first professor was the esteemed Ernst Frankel, Emeritus Professor from Massachusetts Institute of Technology.

This was followed by several other professors from universities in the USA, United Kingdom, Japan and Russia to review the syllabus offered by UTM. This collaboration eventually led to UTM offering an engineering degree which specialises in naval architecture and offshore engineering.

Although more local universities are beginning to offer similar courses, Ir. Nordin observed that there is little promotion of the marine engineering and naval architecture discipline among aspiring engineers, which is a surprise considering that 90% of Malaysia's export is by sea.

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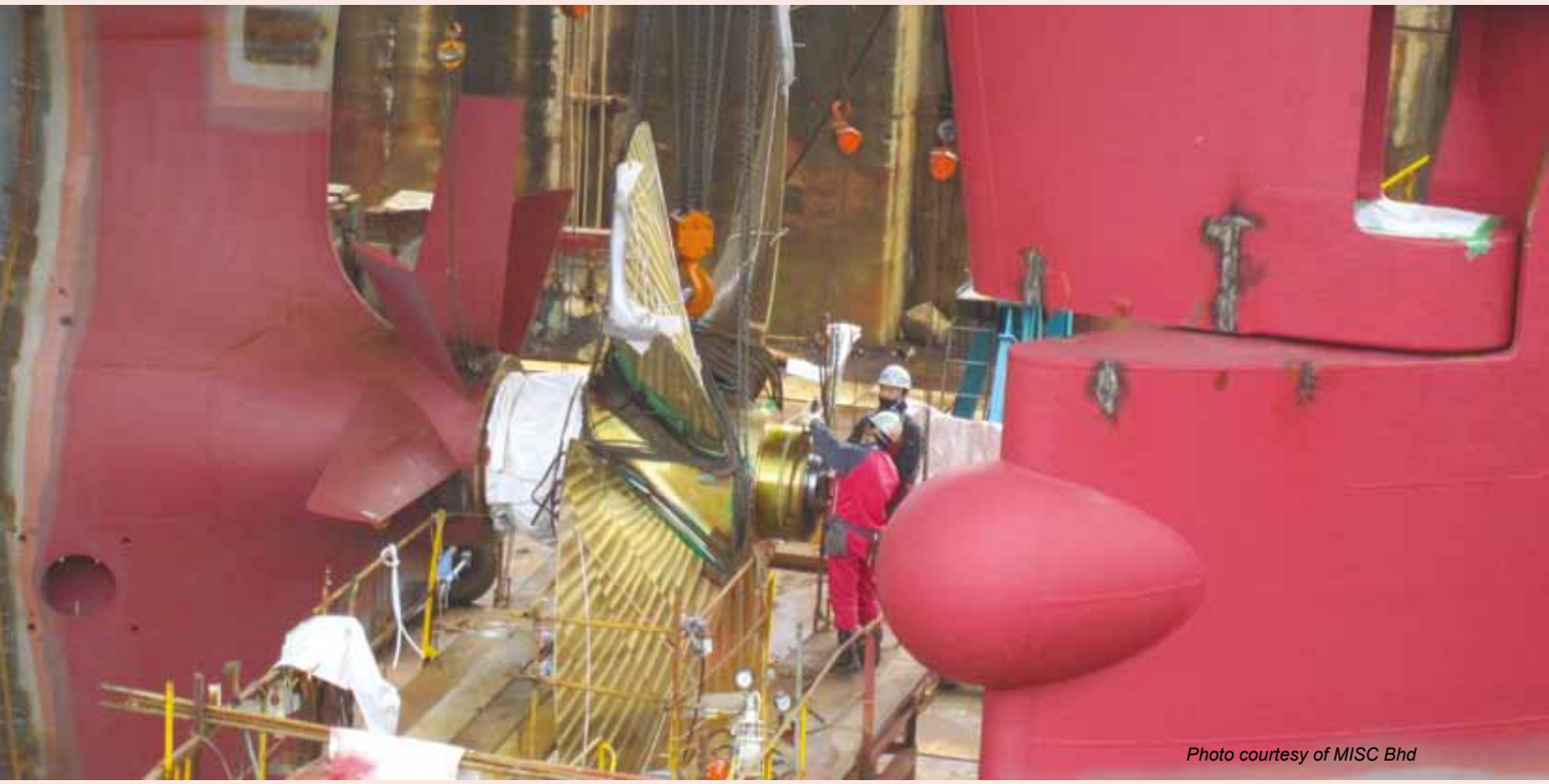

Installation of the propeller

He said, "Not many people are aware of what the course is about and what are its prospects. The fact is, Malaysian graduates in this sector are highly sought after in Singapore and the Middle East."

He pointed out that the country needed to develop more marine engineers and naval architects who specialise in offshore engineering to maintain the rapid growth of its oil and gas industry. According to him, whereas in the past many foreign talents were brought in to work on the numerous production platforms in Malaysia, local engineers have now taken over most of the senior positions.

If a comparison were to be made, local marine engineers within the oil and gas industry are on par with their peers from other countries. Ir. Nordin said, "However, we need more engineers who can think creatively and be innovative. Most of these engineers are well equipped with the knowhow, but they are not articulate and have issues with communication."

He added, "We also need to inject leadership qualities into the young graduates. In general, Malaysian engineers seem to lack that. We want engineers to be leaders and take any challenges to greater heights, and be positive and proactive."

SHIPBUILDING/SHIP REPAIR INDUSTRY STRATEGIC PLAN 2020 (SBSR 2020)

Launched by Prime Minister Datuk Seri Najib Razak, the SBSR 2020 aims to generate RM6.35 billion in gross national income and create 55,500 jobs in Malaysia by 2020. The plan also targets to capture 80% of the local new build market and 2% of the global new build market.

Although he supports the plan wholeheartedly, Ir. Nordin questioned if the target is realistic and achievable. He asked, "What is the appetite of the industry? Can we afford to invest in technology automation? Do we have the necessary supporting industry to be a shipbuilding nation?"

He added, "We need to determine the things that we are good at and how we can go further from there. We must have a target of where we want to be and be specific. For example, by 2020, we must set a target so that we will be able to build or repair ships rank top 3 in the world of a certain size and capacity."

Ir. Nordin stated that the SBSR 2020 is merely a guideline, and that the most important part of the plan is for the government to play its role and assist the industry in ensuring that the numerous players, with the help of fiscal incentives, implement and execute the plan. He pointed out that in the United States, with the Jones Act, not only do ships which operate within US waters need to be built and registered locally, but also are required to have a local crew.

He stressed that the industry is capital intensive, and that tax exemptions should not only be offered on the company revenue, but also be extended to its supporting industries as well as on materials, most of which have to be imported. Additional funds should also be provided for the industry to grow, albeit at attractive interest rates.

Construction of bow

On the other hand, Ir. Nordin believed that the industry itself also has to be positive and proactive in supporting the government's aspiration. He said, "One of the biggest obstacles the industry is facing is that some players become short-sighted and try to monopolise the industry through unethical business practices. Instead of working hand in hand with the industry, they try to take advantage of it."

He explained, "When I handle international contractors, I have tried promoting local suppliers who are known for their competitive prices. However, usually after the first deal, international contractors complain of suppliers hiking up their prices for subsequent projects. This has occurred many times and they do not realise they are tarnishing the country's reputation."

Although the petroleum chemical sector is currently affected by the global economy and commercial shipping is facing an overcapacity of supply, the local oil and gas sector is still going strong good and demand for offshore supply vessels continues to grow. However, he pointed out that it was important not only for the local demand, but also regionally.

Ir. Nordin shared that when Singapore decided to become a maritime nation perhaps about 40 years ago, it came out with a masterplan which led to the development of its marine technology park.The island nation was able to achieve its ambition to be a leader in ship repair, oil and gas fabrications as well as a thriving international port as it had a comprehensive support chain; from the agency to drive its success, to the government support and the industry's proactive stance.

He believed that Malaysia's focus on carving a niche in the category of small to medium-sized vessels which includes coastal tankers and container ships and offshore supply vessel (OSV) for the oil and gas industry, is the right way to go.

However, he felt that it is crucial that the key agency responsible for the guideline's implementation, in this case the Malaysian Industry-Government Group for High Technology (MIGHT), must maintain its focus at all times monitoring the implementation of the plan and ensure that there is healthy growth for every player in the industry.

In addition, Ir. Nordin also believed the country should produce more engineers who specialise in ship design and construction. By doing so, this will enable the country to become a hub for offshore support vessels and the building of smaller capacity vessels.

In terms of ship repair, he stated that Malaysia should capitalise on ship repair as it has the capability to repair vessels both small and big, including LNG ships. The reason he gave was that the country's location was not only very strategic, but also because there would be plenty of spillover opportunities from neighbouring Singapore.

Ir. Nordin said that there was also economic potential in ship recycling which, unlike the current practice of turning old ships into scrap metal, involve the beaching of these ships in countries such as Bangladesh, Pakistan and India. With tighter regulations and environmental control being implemented, he believed that ship recycling could be a big thing in the near future. ■