Mr. Vijay Arora,

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We appreciate the diligence and hard work of all the professionals who have been involved in every phase of birthing a ship, right from the designing to the commissioning phase. With this article, we aim to highlight some of the best practices followed by the Indian shipbuilding industry. The following are excerpts from our interview with Vijay Arora, Joint Managing Director, Indian Register of Shipping (IRS)...

Talking Ship with IRS

'Sagar Tara'was commissioned last year in August while 'Sagar Anveshika' this year; what are the similarities and differences between the two research vesself?

The vessels, Sagar Tara and Sagar Anveshika, are sister vessels i.e. both the vessels are built to the same design in the same yard. Hence, there are no significant differences between the two referred vessels.

The project comprising of both these vessels have been completed within 36 months, the first vessel was delivered in 30 months from the date of keel laying.

What type of research will be conducted by these vessels?

The vessels, among others, are capable of conducting the following research:

- Survey, sampling, and data collection of air, surface, midwater, and seafloor parameters using modern scientific instrumentation.
- Launch, towing and recovery of scientific packages, both—tethered and autonomous in shallow waters.
- Handling, monitoring and testing of small remotely operated vehicles (ROVs), and autonomous underwater vehicles (AUVs) upto 500 meters' depth.

The vessels are equipped with labs for analysing the collected data.

What upgrades and surveys procedures does IRS need to keep in its books for quality inspections?

IRClass is a member of International Association of Classification Societies (IACS) and is audited by IACS for compliance to the quality standards and implementation of procedures.

IRClass develops its Rules for Construction and Classification of Ships. These rules are prepared and/or updated based on the industry developments, internal research, and IACS Resolutions. Prior to implementation of these Rules, IRClass surveyors are trained & qualified, and checklists & survey procedures are developed. Depending on the impact, IRClass conducts awareness programs for relevant stakeholders.

How much steel is needed to build a tug type vessel and what type of steel grade does IRS recommend to shipyards?

The quantity, type and grade of steel depends on the type of the vessel, its design and with respect to the location of the plates. In any case, the steel used needs to meet the IRClass Rule requirements.

How much involvement of NIOT had been seen to bring up this research vessel?

As owners, NIOT had a large role in deciding the Scientific Mission Requirements (SMR), ergonomic designing and layout of the labs and sample storage facilities. NIOT's team of scientists and officers were real time interacting with the designers and monitoring the construction, ensuring that the SMRs are not compromised. Research Vessels being complex, a complete hands-on approach by NIOT has evolved a concept into a reality by satisfactory completion of the vessels. During the whole process, IRClass had a dedicated team which was assisting in smooth integration of SMR, equipment and other scientific requirements into the vessels construction without compromising the applicable Rules and Regulations.

Which safety practice sare recommended by IRS for welders and shipbuilders?

Prior to commencement of construction a meeting is held with all the stakeholders, where in all aspects of the ship construction are discussed in detail, including the safety training of the yard personnel and verified. The shipyard's safety manuals are reviewed, as required. Safety audits are conducted. Patrol Inspections are also undertaken to ensure that the safety procedures are adhered, apart from quality and other requirements.

Regular meetings are held with the yard personnel and owner's representatives wherein besides many other issues safety aspects and its implementation is also discussed. All IRClass Surveyors undergo safety training related to hot work and enclosed space entry at the time of joining and periodically updated.

Is Dual classification of ships really needed?

Dual classification is an owner's prerogative and hence, it is at their discretion. IRClass, as a Class Society, is fully qualified and capable of single classing vessels.

What are your views about the boostingof shipbuilding in India?

As cargo movement across the country is ever increasing, shifting of cargo movement from road transport to River-Sea Transport will boost the shipbuilding scenario in the country. This will not only reduce the cost of transportation, but willalso help in reduction of the GHG emissions. We see efforts being made in this direction.

To boost shipbuilding in our country, we need to ensure that all machinery and equipment equired should be manufactured in the country itself and these manufacturing units could be located at lose proximity to the yard facility, thereby, nsuring easy and timely availability of required machinery and equipment.

To ensure that we are productive and reliable in our quality we may tie up initially with reputed yards to develop and acquire skills.Once skilled to deal with the construction activity in qualitative and timely manner, we may start working on our own. The construction yards may also handle repair of the facilities so that at times when construction orders are thin the yard/repair facility can engage in repairs as vessels require periodic underwater inspections. The aim is to atleast serve all the existing Indian vessels needing dry dock and repairs while also looking into the enhanced new tonnage requirement. In due course of time, yards can engage in construction of specialised vessels which will not only improve shipbuilding design & techniques, but also improve the exports.

IRClass actively contributes to the Ministry of Shipping, Government of India's initiative—Maritime India Vision (MIV) 2030, through participation in a working group which focuses on the development of Indian shipbuilding, repair, and recycling industry to a world-class level. Our Head of Operations, Mr. P K Mishra, is an IRClass nominee in this working group.

How can digitalisation and automation change shipbuilding in India?

Automation will ensure consistency in quality, while improving the time, and cost effectiveness. Indian shipyards use automation from cutting of plates to employing welding and other available technologies. Leveraging these technologies, Indian yards are now moving to building more sophisticated vessels with complex designs. The adoption of these technologies will assist in reducing the cost and time of construction. The extent of utilising these depends on the shipyards and the type of vessels they intend to construct.

What are the steps taken by the Indian Register of Shipping to become the top classification society globally?

Ships trade around the world and hence, to cater to the requirements of the vessels, IRClass has improved its global presence and operates from East to West with offices located in China, the United States of America, the Middle East and Europe, apart from South Asia. Further,IRClass is recognised by 45 flag states, so as to be able to provide services in the respective local markets and class the vessels either existing or new constructions.

With more than 26 offices in India and an equal number worldwide, IRClass is well positioned to cater to the requirements of the industry globally.