Reflections of a Graduate Naval Architect

Ryan A Miller MEng AMRINA SIMarEST
Graduate Naval Architect – Marine Design International

As a Graduate Naval Architect at Marine Design International the opportunities have been endless and exciting. Building on 2 previous summer internships, I joined the company in June 2020 upon completion of my Masters Degree in Naval Architecture and High Performance Marine Vehicles at the University of Strathclyde. In late October, I was offered the opportunity to travel to Kaohsiung, Taiwan, to conduct surveys of the Squid Jigger vessel fleet. What followed was one of the most rewarding 6 weeks of my educational & professional career.

I believe the first thing that must be considered when travelling internationally for work within the Engineering Sector is the cultural difference. As a British citizen, safety culture has been a constant influence in design. With that mindset it is extremely easy to pass blame on systems which do not co-operate with western understanding of development. Something I quickly learned to understand is the importance of asking questions. Often the response will provide clarity as to the reason the system is as it appears. From this understanding a proposal can be offered which is both in keeping with practice yet influences and encourages safety. More so, it builds trust and a relationship with owners, managers and crew alike. By asking questions and understanding processes allows you to understand the mindset of the crew. Without this perspective it may be seen that you are an outsider who simply passes blame on those not responsible.

And so began the surveys of 21 Taiwanese flagged Squid Jigger Vessels within the haven of Kaohsiung Fishing Port. Now, I couldn't possibly write an article in 2020 without including the infamous: "COVID" and the difficulties it brings with it. With vessels requiring to quarantine on arrival, may that be sending crew to hotels or remaining onboard, the challenges to the operation were clearly evident prior to our departure. To combat this known issue, the development of a survey database and a survey system had been created therefore ensuring the surveys were completed in the most efficient manner possible.

As time progressed our trip became busier and busier. More vessels returning from fishing, completing their 14 days and requesting our services. As many boats follow the same initial design, understanding of onboard operations came quickly. Soon the team were able to survey the vessel for unique differences and potential problem areas, depending on age, design and operational capabilities.

During the surveys of several vessels, I was delighted to spend some time with crews and ask them about operations onboard the vessel. Clarity on travelling to the fishing grounds, the landing of the catch, the trans-shipment of the catch, and bunkering processes all aided the survey output. The crews provided clarity on their adopted methods and subsequently understood our proposals to develop a safer system, that incorporated written procedures, yet retained familiar aspects allowing the safest outcome for crews onboard.

The business trip continued for 6 weeks in total and the experience was un-paralleled to anything else I have experienced both in my academic or professional career. The understanding from being onboard a vessel in my opinion is essential in the development and growth of a Naval Architect. Although for others it may not be in Taiwan, I highly recommend any young Engineer to get out of the office and see these systems, designs, structures, and boats for themselves. I know for sure that I will be taking every opportunity upon my return to the UK to continue my professional development and to learn as much as I possibly can from those around me. By doing so, I aim to develop my own abilities within the sector, and ultimately provide safe, high quality design and consultancy output within my role as a Graduate Naval Architect, at Marine Design International.

Project Notes

Marine Design International has been working to improve the safety of Taiwanese Jiggers since October 2019, prioritising immediately dangerous equipment and practices and now pushing towards partial compliance with the UK MCA MSN1873 under our partner company 101 Marine Consultancy. It is a challenging task and Ryan had been heavily involved in the regulatory analysis against past surveys during his first few months at MDI. It was a great benefit for MDI, 101 Marine Consultancy and the Taiwanese fleet that Ryan was able to take his energy and enthusiasm to Taiwan, particularly at this time of difficult travel and shipboard access.

It is important that we do not let the current restrictions and difficulties stifle the learning and development of our young engineers who are needed in the industry over the coming years.