

Outside the comfort zone

The first project of its kind at the Kinderdijk shipyard, for a new customer, with a third-party design, and in a remarkably short timeframe – the upgrade of DCV BALDER posed many challenges for IHC Services.

During a coincidental conversation last summer, Jeroen Kortenoeven found out that Heerema Marine Contractors (HMC) was seeking a partner to build superstructures on one of its vessels. He immediately identified this as an opportunity. “I saw a chance for us to work with a new customer, and to create work for our production facility at Kinderdijk,” says Jeroen, Production Director for Royal IHC.

The work involved building, installing and commissioning four pipe processing stations, or ‘shelters’, on a deepwater construction

vessel, as part of its PHMJ (pipe handling and multi-jointing) installation. The BALDER is one of two vessels in HMC’s fleet capable of laying rigid steel pipes. These are welded together in the shelters to create pipes up to 70m long, before being installed using a J-lay tower.

HMC required an upgraded pipelaying installation for the BALDER. Two shelters were to be renovated with a number of modifications and freshly installed piping and electrical equipment. A third was to be newly built, and the fourth 50% renovated, 50% rebuilt.

Realising the potential scope of the project, Jeroen contacted the IHC Services department, which quickly gathered all of the relevant IHC business units together to prepare a quote: IHC Metalix, IHC Piping, IHC Drives & Automation, IHC Hytop and the shipyard itself. The steel frames, electrical and hydraulic installations, lifting equipment, alarm systems, ventilation – everything would be provided by IHC.

As Douwe Renkema, Project Manager (EM) for HMC, explains: “HMC was looking for a partner that could start building on a partly

finished design, and one that is used to supplying workshop types of steel constructions, completely outfitted with overhead cranes, hydraulic doors, electrics and utilities such as welding gas, water and air.”

In addition, the vessel’s pipe handling modules (also part of its PHMJ) had already been designed and delivered by IHC SAS (acquired by IHC in early 2015 – as reported in the Spring 2015 issue of *IHC Insight*, ‘Laying foundations for the future’, p18-23). IHC SAS had been awarded the contract to commission the pipe

handling installation on board, so IHC Services also liaised with them to ensure their schedules were in alignment.

Quoting for the project was the job of Key Account Manager Michiel Verzijden and Proposal Manager Dick Stander. “We had a lot of unknowns – how many hours it would take, how many issues there would be, it was a true challenge,” says Michiel, “but because of the cooperation between all the business units, we were able to share those risks.”

Into the unknown

The uncertainties were largely due to the fact that the design for the shelters had been supplied to Heerema by a third party. “We are used to working with different business units and getting them aligned when it is our own product design – then everyone knows exactly what they have to quote for. This was different, because we had to quote from a design that we didn’t make ourselves and the system was new. It was unknown territory,” adds Michiel.

“Normally we quote for an amount of steel – we have a rule of thumb for the weight and time required. But this design was different – the material was lightweight, so we couldn’t measure it in this way, and the scale of the project was quite big.”

One thing that was certain was the delivery deadline. “The BALDER is employed on a multimillion dollar contract, so if it is late, penalties will be incurred,” says Dick. “It also had to travel from the Gulf of Mexico to Rotterdam for the work to be completed, so there was pressure to deliver on time.”

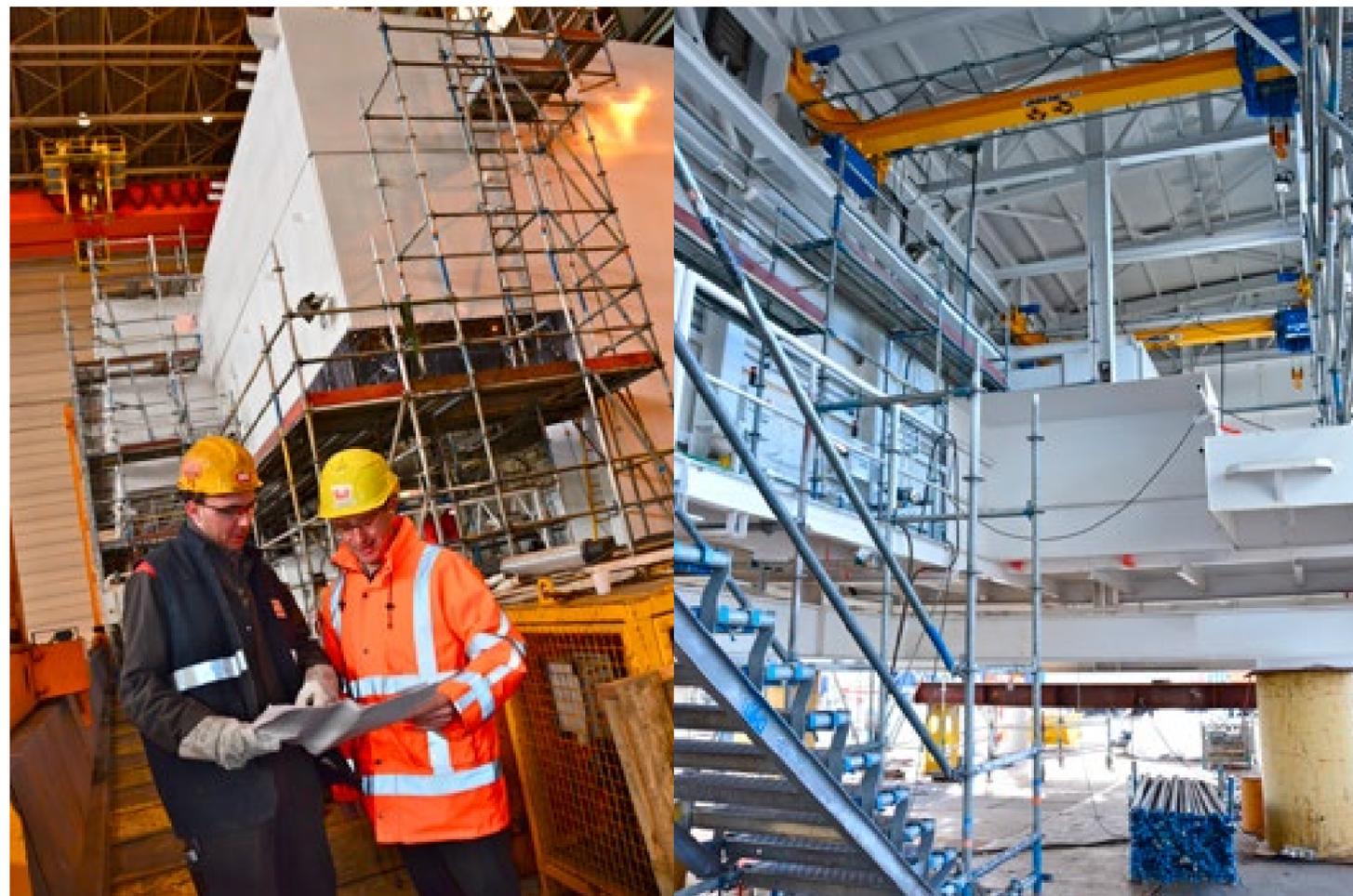
To account for this, IHC Services approached the tender as if they

Short delivery time

The pace of the project was unprecedented at the Kinderdijk shipyard. Primarily used for shipbuilding, its projects take an average of one-and-a-half to two years, whereas this was to be completed in three-and-a-half months.

Director of IHC Services Wouter Kruijt explains: “The speed of services is two to three times faster than shipbuilding, which makes for a competitive market. The speed of response and operation are vital. It requires a change of mindset.”

As this was the first construction of its kind to be built at Kinderdijk, IHC mobilised its wealth of offshore experience from within the group and assembled a dedicated team on location. The project



management and production teams were assembled next to each other, helping to create faster lines of communication and decision-making, to tackle the short delivery time.

Time constraints weren’t the only challenges, however, as the project got underway. During both the engineering and construction phases, the design of the shelters continued to develop and evolve, resulting in many changes that had to be incorporated, and an increase in requirements from HMC.

To tackle this, IHC drew from its in-house expertise and also took on additional responsibilities to realise the design safely, on time, on spec and within budget. For example, IHC Services had a large procurement scope to speed up the process, so parts such as cranes, lights, floor grating and ventilation were procured for HMC on a reimbursable basis.

Close cooperation

The high level of cooperation between IHC and HMC also helped to deal with changes and resultant issues, and was essential for the project’s success. “Not all of the details were finalised on the LOI from Heerema and we understood this,” says Dick. “So we tried as much as possible to incorporate what they required, within the timeframe allowed. We managed Heerema in that respect, IHC was in the driving seat.” Michiel adds: “We were both aiming for the result, and not playing the role of customer and supplier.”

Douwe agrees on the importance of close cooperation to the end result: “The goal was achieved by working closely together, looking for opportunities, challenging standard methods of working, and subcontracting when required. Working with the IHC Services project team was pleasant and constructive, and we saw it as a positive that they had an open mind for changing the IHC safety procedure to the Heerema practice where possible.”

Such cooperation meant frequent meetings to discuss details extensively, and planning to a high level of detail. The delivery date shifted twice but was still in line with the overall planning because the BALDER itself was also delayed.

Despite the numerous challenges presented in this project, by the end of February, three of the four shelters were ready to be installed on the BALDER in Rotterdam’s Caland Canal. The final shelter remained in Kinderdijk, requiring further modifications, and was due to be completed by mid-March.

IHC had demonstrated its capability to cope with challenges in design, construction, installation and commissioning. By developing an effective project management structure, and service and supplier network, it helped HMC to upgrade the BALDER to a high standard, and in the shortest possible time.

“HMC is satisfied as the shelters were delivered completely outfitted in time for installation on the BALDER, and the quality of the work was good,” says Douwe. “Some additional items are still to be solved, which IHC will take care of on board the BALDER.”

“We needed to prove what we could do,” says Michiel. “You can only prove it by doing it, and I think trust was gained. We wanted to form a partnership, and hope that we can work together on future projects.”

Dick adds: “Heerema was looking for a trustworthy party, flexible with locations and sourcing capacity, and with skilled employees. IHC meets this criteria, we understand the scope and know how to manage such projects. By connecting the available resources within IHC we met the challenging deadline.”

According to Douwe, the advantage of working with IHC was an understanding of the work involved, “and that knowledge on all aspects of the work was available and mobilised easily. The turnkey, all-inclusive approach makes IHC Services unique,” he adds.

Growth potential

The success of this project for HMC is an exciting development for IHC Services, which contributes 20% of the IHC group’s annual revenue. The department has expanded significantly in recent years and further growth is predicted.

IHC Services has a unique offering to customers, as Wouter explains: “Our USP in this market is the combination of our shipbuilding and engineering knowledge and experience, our mission equipment portfolio, and a worldwide network of service centres that can deliver turnkey projects anywhere in the world.”



had already received the order. “That way, if we were successful, we would be ready to go – so we put in some hours on the engineering, and did some preparations in advance,” says Michiel. He believes this approach helped IHC Services to win the order: “We were asking Heerema so many questions on a detailed level, I think their confidence in us grew a lot at that stage.” Sure enough, in August 2015, IHC was appointed preferred supplier, a letter of intent (LOI) was received on 16 September and the contract was awarded on 25 September. The shelters were due for delivery in February 2016.