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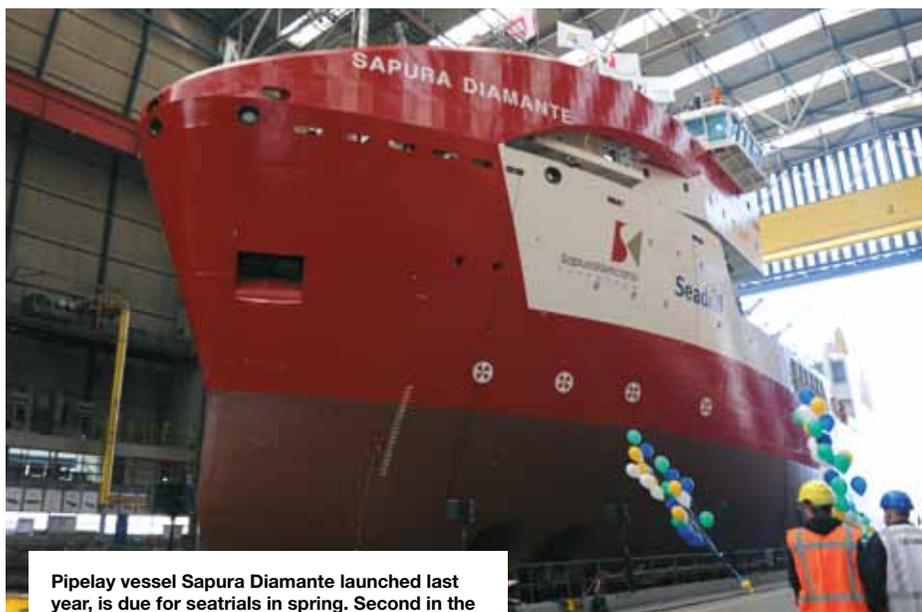


*IHC MERWEDE KEEPS SAPURA
PIPELAYER BUILD IN THE FAMILY*

Tower Installed

“THIS IS ACTUALLY A BIG IHC MERWEDE MILESTONE,” PROJECT MANAGER ROMALD PEETERS STATED. On 8 January the project team for new build Sapura Diamante bolted two steel hinge pins into place – securing not only the flexlay tower to the vessel’s deck, but also securing a place in IHC Merwede’s history. As outfitting of the 550t capacity pipelayer continued apace ahead of seatrials in spring, Mr Peeters outlined their achievement for ShipBuilding Industry’s John Gauldie. >>

WORDS BY JOHN GAULDIE



Pipelay vessel Sapura Diamante launched last year, is due for seatrials in spring. Second in the series, Sapura Topázio was scheduled for launch as ShipBuilding Industry went to print.

For the first time, IHC Merwede has engineered and integrated all of a pipelayer's key functional equipment – a fully in-house designed and built pipelay tower as well as its DP-operated platform. This achievement fulfils the group's strategic goal following its acquisition of UK-based IHC Engineering Business in 2008 and sets a new standard in shipbuilding efficiency for complex offshore construction vessels.

One Point of Contact

In fact, no less than eighteen of IHC Merwede's internal business units have contributed to the Sapura Diamante (build no 728) – from her interiors to her hydraulics. Not least, IHC Drives & Automation delivered the integrated automation system controlling the whole vessel and pipelay tower, the full electrical installation and the complete electrical machinery package.

Mr Peeters: "The advantage for the customer is that they only have one point of contact and that is IHC Merwede. IHC Merwede takes care of all interfacing internally.

"There's also a delivery time advantage," he continued. "At the moment we are still commissioning the vessel systems but we have already installed the tower. So we are doing that in parallel. That makes a huge

difference [in delivery time]. And another huge advantage is that we only go for seatrials once and that is with the complete pipelaying spread installed, commissioned and ready for trials. Normally in the industry, you'd go out for nautical seatrials and then go off and install the pipelay tower and after that go out for a second trial period." Classification for both the vessel and the pipelaying spread is the responsibility of Lloyd's Register.

Brazilian Firsts

Fast-growing global operator SapuraKencana and its partner Seadrill have placed a lot of confidence in IHC Merwede's ability to design, build and deliver the vessel with pipelay tower. For the partners – both experienced offshore rig and drillship owners and operators – Sapura Diamante is their first vessel ordered at IHC Merwede. She will also be their first pipelay vessel, and SapuraKencana's first asset to operate in Brazil. In fact, Sapura Diamante will be the first of their six new pipelay support vessels employed to develop deepwater fields on behalf of Petrobras – a contract worth USD 4.1 billion. The joint venture has entrusted IHC Merwede to build five of these vessels – the key assets required for the timely and successful execution of Petrobras requirements.





SPECS

Owner	Sapura Navegação Marítima
Builder	IHC Merwede
Length o.a.	145.9m
Breadth moulded	29.9m
Depth to main deck	13m
Draught (operational)	7.2m
Draught (max)	8.3m
Deadweight (operational)	7,025t
Deadweight (max)	10,070t
Accommodation	120 people
Classification	Lloyd's Register, including DP2 & CAC 3 Comfort Class level 3

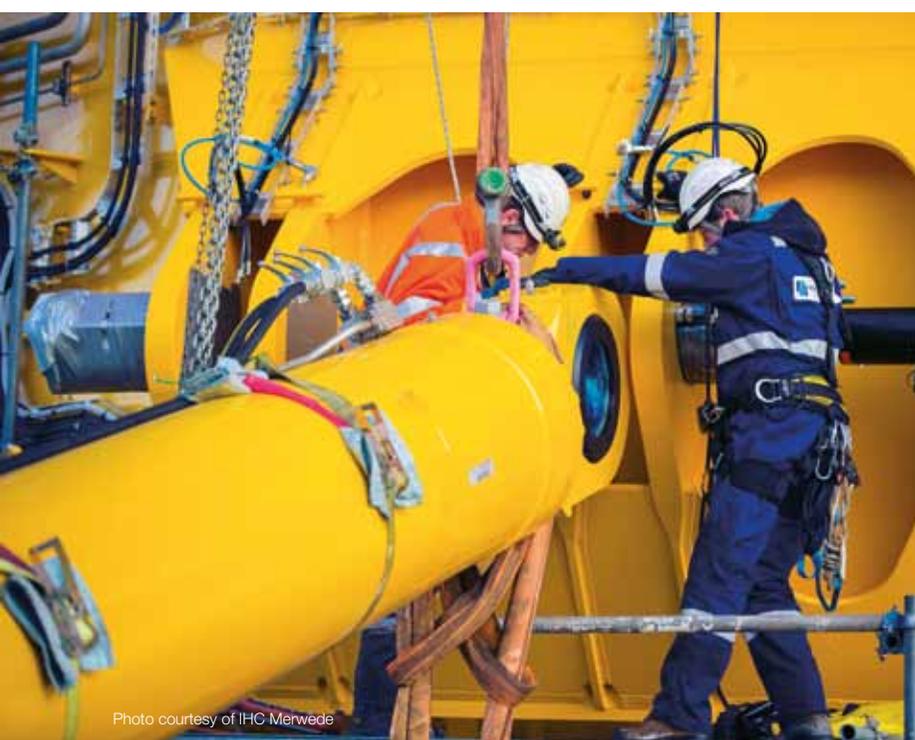


Photo courtesy of IHC Merwede

The second in the series, Sapura Topázio (build no 729), was scheduled for launch at the yard as this article went to print. At the launch of Sapura Diamante in September, SapuraKencana's Project Manager Mark Allpress commented: "Sapura is pleased to be working with IHC Merwede on the building of this series of sophisticated flexible pipelay vessels. With proven technologies, IHC Merwede has shown that it can bring together all of the expertise and equipment from its internal companies in the Netherlands and UK, as well as the many local subcontractors, to build high-quality complex vessels in accordance to contract schedule."

Experience & Capacity

Key to winning the contract was IHC Merwede's track record in building >>

high-value pipelay vessels – in particular a series of vessels for Subsea 7 for which IHC Offshore & Marine designed and built the DP-operated platform. Mr Peeters: “We’ve shown that we meet or improve on our milestones – we deliver on time.” IHC Merwede’s strong financial position also helps customers in financing construction. Additionally, Mr Peeters said the buffer capacity created by IHC Merwede’s many facilities creates a lot of flexibility to distribute work in-house – further reducing risk for the customer. IHC Engineering Business is a well-established supplier of custom-built, high-specification pipelay systems as well as advanced offshore handling equipment. For example, the UK-based division recently won an order for a 2,000t J-lay system for a large multi-lay and heavy lift construction vessel for Petrofac.

Mission Critical Gear

For Sapura Diamante, IHC Engineering Business designed the complete pipelay spread. Two below-deck storage carousels, with capacities for 1,500 and 2,500t of product (100 to 630mm diameters), were designed and fabricated at Maats Tech UK and delivered in segments to IHC Merwede’s Krimpen aan den IJssel yard. IHC Merwede built the pipelay tower itself at IHC Beaver Dredgers’ Sliedrecht facility in the Netherlands. The vertical lay system, with a 550t top tension capacity, is permanently installed forward of the moon pool – freeing up deck space aft. IHC Vreemac delivered the cylinders supporting the tower to the accommodation, which increases the working area on deck. The tower features two SAS tensioners, each with a 275t capacity that can be opened clear of the firing line, and with one wire centralisers. SAS also delivered two abandonment & recovery (A&R) winches of 610 and 200t, both with 2,500m of steel wire. The vessel will have to load-in pipe in Brazil at a port behind a bridge with restricted air draught of 48m. To stay within this design limit for the vessel, the top assemblies can be folded down. This keeps the vessel under the 48m. The vessel is equipped with a pipeline flushing spread installed in the carousel hold, which can be used to pressure test the



IHC Merwede Project Manager Romald Peeters spoke with ShipBuilding Industry’s John Gauldie.

pipes on the seabed. Further equipment integrated on board includes two TMT Australia ROVs rated to operate at 3,000m working depth, two LARS systems from Subsea Innovation UK and the cranes – one 250t heave-compensated NOV subsea crane and one TTS auxiliary crane with a capacity of 20t @ 25m. In addition to the wheelhouse, DP console and engine control room, the vessel accommodation block also has an ROV control room with two workstations and an operations room for Petrobras. The pipelay control room is elevated one level above the decks beside the tower.

Internal Integration

Since engineering began in January 2012, the internal divisions at IHC Merwede have found themselves working together at

unprecedented levels – and not without the inherent challenges, Mr Peeters explained. “The business units involved, they are very professional and experienced in their own areas. Doing it all together – this is the first time, so there’s only limited experience. IHC Engineering Business knows how to deliver pipelay equipment and deliver it to a shipyard. Or IHC Drives & Automation would be involved in a

build, but not together with IHC Engineering Business, and not together with IHC Offshore & Marine. But we knew we had the capability to combine all of IHC Merwede’s technology, innovation and organisation into one vessel. That’s what we demonstrated on Sapura Diamante in January when we successfully installed the tower on time.” However, he was quick to add, “the biggest achievement will be when she completes sea trials and is delivered on time to her owners.”

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