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Offshore industry

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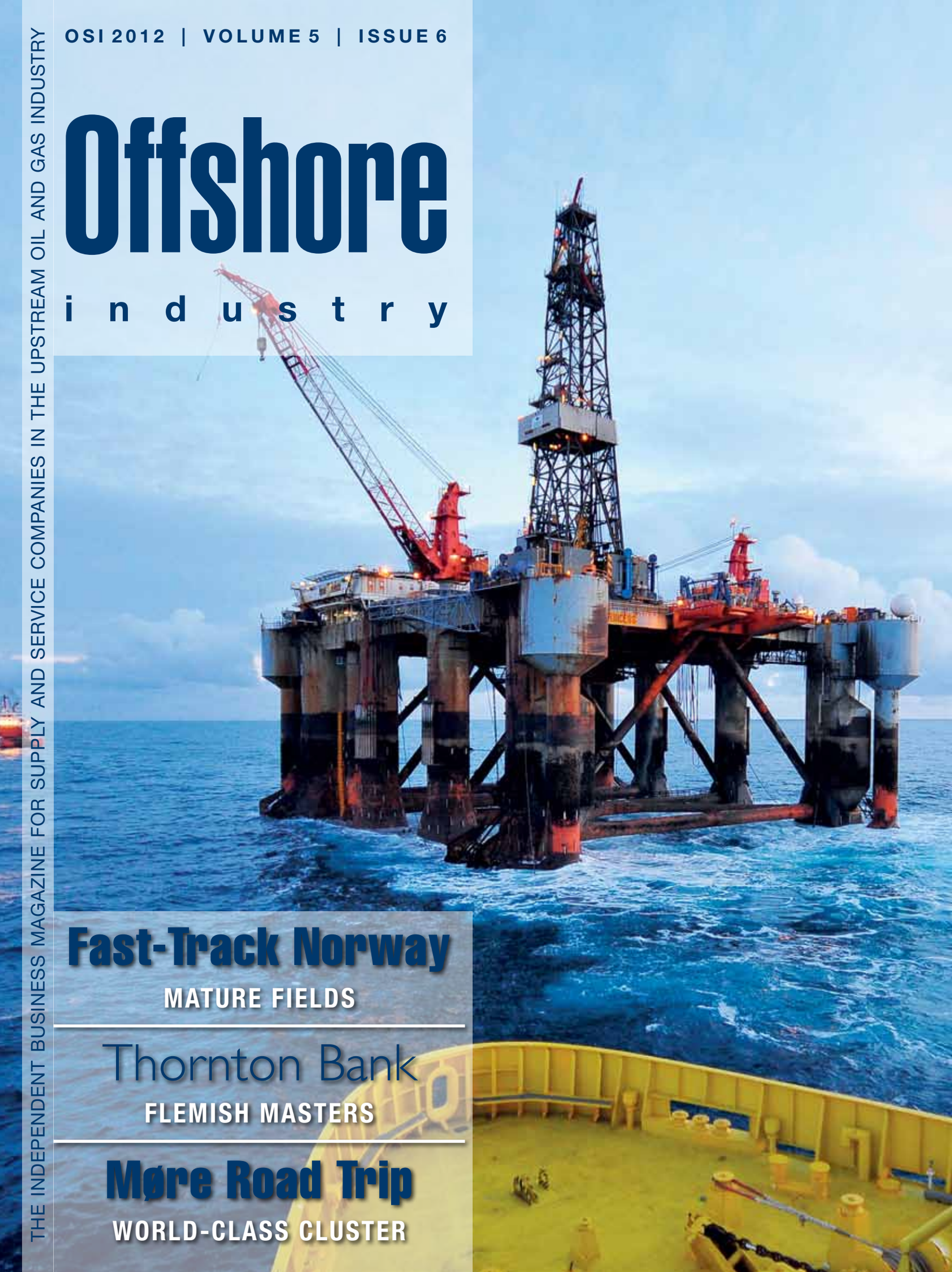

Fast-Track Norway

MATURE FIELDS

Thornton Bank

FLEMISH MASTERS

Møre Road Trip

WORLD-CLASS CLUSTER

Custom of Precision

No Two Cranes Alike

In October Dutch crane builder Lagendijk Equipment delivered one of its largest ever custom-built cranes for the Van Oord and Fugro Seacore joint venture WaveWalker 1. Managing Director Peter Lagendijk spoke to Offshore Industry about tailor-made lifting solutions for specialist offshore applications.

At his busy stand at Amsterdam's Offshore Energy conference in October, Peter Lagendijk flicks through iPad images of offshore cranes designed and manufactured at Lagendijk Equipment's facility in the Netherlands. From high precision knuckle boom cranes for a UK offshore contractor to sweeping arm cranes for Macondo oil spill containment, no two cranes are alike.

The Dutch custom crane manufacturer enjoys a growing global business at the top end of the offshore market. Mr Lagendijk, Managing Director of the family-owned company, points out the company's experience in reliable equipment for harsh environments, ATEX control for explosion-proof cranes and heave compensation. But, most importantly, the company is set up to design and build custom cranes and small series with fast turnarounds. There are no tie-ups with stock production at this yard.

Walking Jack-Up

In March 2012 Dutch crane builder Lagendijk Equipment signed a contract to deliver two custom-designed and built electric/hydraulic cranes for the Van Oord and Fugro Seacore joint venture WaveWalker 1. On board the innovative walking jack-up barge, the offshore knuckle boom crane and offshore wire crane with lattice boom operate in rough weather, up to Sea State 5.

WaveWalker 1 was named at the Neptune Shipyard in Hardinxveld Giessendam, the Netherlands, on 21 September 2012. The naming ceremony was performed by Sonja Jonkman, wife of André Jonkman, Chief Financial Officer and Member of the Board of Management of Fugro N.V. WaveWalker 1 is set to begin operations in late 2012 in Brazil.

Knuckle Boom

Mr Lagendijk says Lagendijk Equipment won the contract for the WaveWalker 1 project in part thanks to a fast turnaround. The tailor-made knuckle boom crane was constructed in just 26 weeks and handed over to her principal on 29 October.

Mr Langendijk says the company designed the crane for a harsh marine environment, conforming to GL Class, with recommended operation up to Sea State 5. It has a lifting capacity of 10 t at 20 m and constant tension on the main winch; its hydraulic grab function works to 20 m below sea level. With steel fatigue at temperatures down to -20°C another key concern for the operators, Lagendijk Equipment ensured the materials were fully tested and certified.

One of Van Oord and Fugro Seacore's specifications was a lightweight crane. By taking the crane back to the drawing board, every effort was made to reduce weight – leading to a reduction from an 80t standard to 58 t. Weight was also saved by removing the power pack in the crane, and designing the power requirements around the platform's onboard network.

Subsea Grabber

The second, a newly designed Electric/ Hydraulic LWC 900 Offshore Wire Crane with lattice boom, is one of Lagendijk's largest-ever tailor-made projects. It has a lifting capacity of

SWL 100 t at 8 m, or SWL 78 t at 8 m in Sea State 5. The design, also conforming to GL classification, is suited for high dynamic forces during subsea grabber operation, with a capacity of SWL 20 t at 20 m below sea level. Van Oord and Fugro Seacore also chose an operating cabin and a constant-tension system on the main winch to reduce dynamic loads on wire rope in both normal and sub-surface operations.

Ever Flexible

Lagendijk Equipment, a family-owned business for more than a century, is a leading technology source for the offshore, pipe-laying, dredging, and shipping industries. The company's strength lies in its ever flexible, intelligent solution to each client's needs. "We have more than a century of experience building specialized equipment, a dedicated in-house design operation, and our own machine factory, all resulting in fast, efficient delivery of all types of cranes and dedicated offshore gear," Mr Lagendijk noted.

i. www.lagendijkequipment.com

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Drilling & Blasting

WaveWalker1 operates in conventional four-legged mode, or as an eight-legged self-contained walking jack-up platform, with bi-directional movement when elevated. The jack-up will be operational end 2012 on drilling and blasting works for the Brazilian Suape Outer Channel, a contract awarded to Van Oord.

Van Oord and Fugro Seacore jointly developed the platform to operate in rough seas, surf zones, beaches, and other intertidal settings. Undertaking geotechnical site investigations, drilling and other underwater activity from a stable platform with the added benefit of relocation without floating will reduce the impact of sea conditions on the operational hours in harsh coastal zones.

Fugro Seacore's & WaveWalker BV's Business Manager, Les Lugg: "WaveWalker is an innovative jack-up that can be operated in conventional four-legged mode, or as an eight-legged self-contained walking jack-up platform, capable of safely operating and bi-directional movement whilst elevated. This will bring great market advantages when undertaking geotechnical site investigations, drilling, trenching, pipeline and cable laying, blasting and other underwater work."

Jelle Mens, General Manager Wicks (Van Oord's business unit responsible for Marine Drilling and Blasting) and WaveWalker BV Business Manager, continued, "Indeed, WaveWalker 1 will boost the productivity of a variety of our traditional barge and jack-up operations as we can now undertake our drilling and blasting works from a stable platform with the added benefit of relocation without floating. This reduces the impact of sea conditions on the operational hours required for the anticipated drill and blast operations in Brazil."

The development of the walking jack-up concept has been thoroughly tested over fourteen years by Fugro Seacore in heavy seas, surf and high winds. The concept has been successfully used in activities such as installing pipelines through surf zones, excavating trenches, geotechnical drilling and drilling and blasting in areas where floating equipment or conventional jack-ups would experience extensive delays due to weather down-time. It also offers safety advantages over operating floating equipment in nearshore, large swell locations.

MAIN FEATURES	
Name	WaveWalker 1
Type	Self elevating pontoon
Hull dimensions	32 x 32 x 4.5 m
Max. displacement	2,400 t (includes payload)
Payload (8 leg walking mode)	400 t
Payload (4 leg conventional jack up)	850 t
Jacking system	FSCL gripper system

BASIC STATISTICS	
Size	32 x 32 x 4.5 m
Moon pool	17 x 9 m with full cover if required
Payload	400 t
Marine construction crane	100 t at 8 m – 17.61 t at 32 m
Assisting crane	10 t at 20 m
8 legs	1.80 x 40 m long
Fugro Seacore jacking system c/w air-inflated grippers	
GL Certification	