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# Offshore

i n d u s t r y

Touch Down in  
the German North Sea

GERMAN OFFSHORE WIND

**FIT FOR OFFSHORE**

OFFSHORE VESSELS

*New Era for Well Abandonments*

P & A



# *First Steel for Borssele Offshore Windfarm in the Water*

HSM Offshore has successfully completed the fabrication, shipment and installation of the 3,000MT steel jacket for the Borssele Alpha project.

Photo courtesy of HSM

122 nx 36.6m

DUTCH COMPANY HSM BOASTS A TRACK RECORD OF MORE THAN A CENTURY IN STEEL FABRICATION FOR THE CIVIL ENGINEERING AND OIL & GAS SECTORS. THE COMPANY'S OFFSHORE DIVISION, HSM OFFSHORE, HAS SUCCESSFULLY CONSTRUCTED AND DELIVERED PLATFORM, MODULE AND JACKET PROJECTS FOR THE OFFSHORE OIL & GAS AND RENEWABLES INDUSTRIES.

**B**eing aware of the ever-increasing dimensions and weight of offshore substation platform topsides, HSM has invested in extending the length of their largest fabrication and assembly hall this year, from 80m to 100m. This allows for a volume increase of up to 13,000m<sup>3</sup>.

The company now has two 100m-long halls, which enhance their capabilities considerably, since the production of decks and modules, as well as the construction of larger decks, can now be accommodated simultaneously.

The reasons behind the hall extension also led HSM to upgrade their 50m-long load-out quay. New piles have been driven and the concrete slab is being renewed entirely. Once the upgrade works are completed, the quay will safely support loads up to 5,000MT.

HSM Offshore is currently working on a number of projects simultaneously.

### Tennet TSO Borssele Alpha Jacket

After being awarded the EPCIC contracts for the Borssele Alpha and Beta 700MW Offshore Substation Platforms in 2017 by TenneT TSO, HSM Offshore successfully completed the fabrication, shipment and installation of the 3,000MT steel jacket for the Borssele Alpha project this summer.

Prior to the transport and installation of the jacket, soil investigations, bottom levelling and rock dumping were carried out by HSM Offshore's specialist subcontractors.

In 2019, a 4,000MT platform topside will be placed on the jacket, followed by the jacket for the Borssele Beta project. The Borssele Beta platform topside will be installed in 2020. After installation of the topsides, HSM Offshore will provide a jackup which will be placed next to the platform to provide accommodation and construction support during the hook-up and commissioning phase.

### Completion of Ørsted Borkum Riffgrund 2 Offshore Substation

Earlier this summer, HSM successfully completed the delivery of the Ørsted Borkum Riffgrund 2 offshore substation, featuring a HV transformer capacity of 450MW and combined platform weight of 5,500MT. Subsequent to last year's installation of the jacket, the 2,500MT topside was installed on 25 June this year, followed by commissioning and handover to Ørsted. This was the first project that HSM Offshore had carried out for Ørsted, and the first in the German sector.

### NAM L13-FI Monotower Platform Production Started

The L13-FI monotower platform that HSM successfully delivered to its long-term client NAM, recently started production from three wells – significantly ahead of schedule. This was achieved by a high level of standardisation and an extensive use of new technology, which allowed for a large amount >>

The 2,500MT topside for the Ørsted Borkum Riffgrund 2 was installed in June this year.



Photo courtesy of Ørsted/Matthias Ibeier - Topside Borkum Riffgrund 2

of commissioning to be done whilst the platform was still situated at the HSM yard, including the remote operation of control systems for the NAM operations base in Den Helder. The minimal steady state power requirements of 700W are fully provided by renewable energy sources, comprising wind turbine generators and a large array of solar panels, connected to twin battery banks which provide redundancy. This was the fifth monotower platform that HSM has built for NAM and Shell, following a four-platform contract in 2007.

### Delivery of Subsea Crossover Manifold for Shell Clipper Project

40 years since HSM was awarded the prestigious contract for the Shell UK Cormorant Underwater Manifold Centre, which weighed an impressive 2,500MT and was one of the very first major subsea structures to be employed in the North Sea, HSM was again entrusted with a subsea structure contract from this customer. The so-called 'XO' manifold structure was

delivered and installed this summer. The structure will connect the Clipper South platform with Shell's Clipper platform, to facilitate continued production of the first-mentioned field following the closure of the Theddlethorpe terminal, which was the original destination of the Clipper South gas.

### New Certifications

Earlier this year, the company successfully qualified for the new ISO 9001:2015 and ISO 14001:2015 standards following extensive auditing by DNV GL. HSM is now certified for development design and construction of large multi-disciplinary projects involving heavy steel structures. In addition, HSM has been certified for factory production control under the EN 1090-1:2009 standard as well as for the construction of heavy steel structures for offshore and civil markets under the ISO 3824-2:2005 standard, having been successfully audited by DNV GL.

HSM has also been a member of the Achilles FPAL community for many years. The

company is certified for the Advanced Registration Questionnaire (ARQ) as well as for the FPAL Verify scheme, which involves bi-annual audits on the topics of Quality, Health & Safety, Environment and Competence & Training.

With a focus on the Scandinavian markets, HSM also has been registered in the Achilles JQS system. Achilles has specifically certified HSM for the Northern and Central Europe Utilities scheme for the Offshore Renewables market.

In early 2018, the management system of HSM for CO<sub>2</sub> awareness was successfully certified by DNV GL under the applicable NACE requirements for level 3. HSM is actively developing CO<sub>2</sub> emission reduction initiatives, including the provision of charging connections for electrical cars and large-scale application of LED lighting fixtures.

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The so called 'XO' subsea crossover manifold structure will connect the Clipper South platform with Shell's Clipper platform.



Photo courtesy of HSM