Horns Rev 2

Offshore Wind Farm Project relies on Global Marine Systems for subsea cable expertise.

Impending Energy Shortage

Horns Rev 2 completed in September 2009, it is now officially the world's largest offshore wind farm. The wind farm is located in the North Sea 30km off the coast of western Jutland. The 91 turbines, which have a total production capacity of 209 megawatt, will be able to supply power equivalent to the annual electricity consumption of 200,000 households.

The Project

Global Marine Systems completed the burial of 175 flexible pipes, and the installation of 175 concrete mattresses and over 100m of cable protection. In the execution of the project Global Marine System utilised the Stemat 82, Pontra Maris, CS Sovereign and Oil Express as the four main installation vessels undertaking cable installation, cable burial, concrete mattress installation and diver assisted operations.

We had a site office based in Esbjerg managing and overseeing the planning operations of the project.

The Challenge

The challenge during the project was installing 175 mattresses from the Oil Express in specific locations, for protection of the J-Tube extensions, whilst in high currents and high sea status.

Also undertaking additional work, which included re-mobilisation of the installation barge and production of project specific procedures in order to complete the offshore installation of the internal monopole J-Tubes and extension pieces.

An Environmental Implementation

The Company needed to pay particular attention to the surrounding environment to ensure that the cable laying installation and noise did not upset the sea life and bird life in this region.

Resources

Barges: Pontra Maris and the Stemat 82 are both multi-purpose cable lay barges, operating with 4 and 6 point mooring systems. Both barges utilize dedicated anchor handling support tugs.

Burial of the cables was performed by: CS Sovereign, one of the most advanced off-shore engineering ships of its kind in the world, is capable of handling the wide variety of Subsea tasks required by such diverse industries as Telecommunications, Oil and Gas, Renewable Energy and Deep Sea Research.

Submersible during cable burial: Atlas 1 ROV is a powerful, state-of-the-art cable working ROV, designed for cable maintenance, post lay and inspection roles. With 300kW of installed power, the Atlas 1 has substantial cable intervention and burial capability and range down to 2000m water depth.

Ship-side team: This project was led by Captain Chris Neave and Captain Rob Gibson

Shore-side team: The Global Marine worked seamlessly on this project, which was handled by Chris Berridge, Senior Project Manager, Chris has a wealth of experience in Project Management and has been with the company since 1999.

The Esbjerg site office was run by Chris Ensom and the Offshore Superintendents on the project were, Ian Griffiths and Phil Chenford.

For more information on Global Marine's capabilities please contact Chris Berridge, Senior Project Manager - chris.berridge@globalmarinesystems.com

For further information on Global Marine Systems, Energy projects, please visit our website: globalmarinesystemsenergy.com