

Export cable lay solution for offshore windfarm

CLIENT Tideway, now DEME
ASSET Offshore
Hornsea One offshore windfarm
LOCATION North Sea, UK and onshore in Europe

Equipment configuration is an important consideration when dealing with delicate cables and need to save deck space

BENEFITS

Tensioner system with suitable number of tracks, track length and track pads

Data logging and serial output for continual monitoring of cable laying activities

Technical support throughout

Zero down time during nine-month project



CHALLENGE

- Hornsea One is to be the world's largest offshore wind farm when commissioned
- The client needed to install all the export cables for the windfarm from 30km offshore to a repeater station and three substations
- The cable to be laid was eight 37km sections of 255mm 245KV 30kN/m clamping limit and four 37km sections of 240mm HVAC 65kN/m clamping limit
- A tensioner was required which was capable of handling the cables from NKT and ABB without going over the clamping limits
- The tensioner also needed to integrate into the subsea installation and construction vessel Lewek Connector's lay spread system
- Data from the tensioner needed to be forwarded remotely to the vessel bridge, with data output into Tideway's software.

SOLUTION

- Supply of two 36Te four track tensioners with suitable track pads
- Engineering calculations to prove suitability of track pads and tensioner track interface with cable to maintain clamping within the cable's allowable limits
- 3D models of the tensioners were provided to allow the client to design the lay system for the Lewek Connector
- Sparrows shipped a tensioner from the USA to allow a second tensioner to be installed on the vessel as a back-up as requested by client
- Sparrows provided a consistent crew of operators on rotation throughout the nine-month campaign along with 24/7 assistance from onshore if required. The operators performed routine maintenance throughout the project to keep the equipment in working order at all times
- Sparrows operators assisted the vessel's crew with operations and maintenance of other lay equipment, tensioners and carousels
- Our data logging software was updated to allow serial output of data. Not only were data logs captured by the Sparrows PLC system but also fed to the client's software for comparison with their dynamic positioning measurements. This allowed verification of the correct installation location, of the lengths of cable installed and ensured that the cable installation limitations were adhered to.

SUMMARY

Equipment sale and rental

- Cable / pipe handling systems

1.



2.



1. Sparrows' 36 Te tensioner on board the Lewek Connector.

2. Sparrows' tensioner holding cable under tension being laid in the North Sea.

Please visit www.sparrowsgroup.com/contact to find your nearest office

