



Case Study | Cable, Umbilical, Hose and Flowlines

Jan de Nul selects Caley cable turntable for Offshore Wind Power Plant

Caley Ocean Systems, has been awarded a contract to supply leading dredging and marine engineering company, Jan de Nul NV, with a 5,400Te capacity cable turntable for the MPV Willem De Vlamingh.

Mid 2013, Jan de Nul is installing 245kV export cable connecting the Northwind Offshore Wind power plant, on the Lodewijkbank off the coast of Oostende, to the Belgian power grid. In the first quarter of 2013, the MPV Willem De Vlamingh is being outfitted for cable laying offshore. Caley is undertaking all vessel modification design work and construction of the 28m diameter turntable on deck.

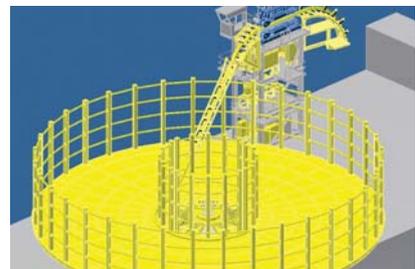
In addition to the 5,400Te storage capacity turntable, Caley is supplying a modular loading tower assembly comprising loading arm, inboard chute, tensioner and control cabin. To ensure smooth loading and deployment of the cable offshore, the Caley turntable includes an integral 5Te tensioner and 10Te deck tensioner.

“Caley Ocean Systems has the experience in the design and manufacture of large turntables needed to ensure timely delivery of the cable lay installation,” said Frederik Deroo, senior manager Vessel Construction, Jan de Nul NV.

Caley – high performance offshore handling

Caley Ocean Systems supplies a range of rigid and flexible product handling systems suitable for loading, storing and laying of most cables, umbilicals, dynamic risers, flowlines and hoses used in offshore, marine and renewable projects.

- High Capacity Carousels, Turntables and Spoolers
- Loading Systems
- Pipe and Cable Tensioners
- Storage Reels
- SMART Winches.



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Twin high capacity, 2,500Te turntables - Global Marine Systems Ltd

Caley Ocean Systems has supplied two, large capacity, 2,500 tonne turntables to Global Marine Systems Ltd (GMSL) to handle deployment of non-coilable cables from their vessel CS Sovereign.

Caley has worked closely with GMSL, and their naval architects, to design the two turntables such that they can be built within the CS Sovereign's existing cable tanks. CS Sovereign is a multi-role vessel capable of undertaking cable maintenance and installation projects for all types of submarine cable systems, principally in the Telecommunications & Energy industries.

The two, 'basket', turntables have open lattice outer walls, a closed hub and post positions for installing partitions, and are designed to operate at a maximum product linear speed of 1,000m/hr (at core). Caley has also supplied the loading arms and cable tracks required to control the cables required 4m minimum bend radius, along with all the system controls. To save time and cost, the turntables systems have been adapted by Caley to accommodate the vessel's existing hydraulic power units (HPUs).

"CS Sovereign has an excellent reputation and a well earned track record on cable installation projects. The addition of these turntables further adds to the capability and flexibility of this vessel!" says Martin Hutchings, Special Projects, Global Marine Systems Ltd. "By adapting the turntable design for non-coilable cable, and where possible re-using existing control equipment, Caley Ocean Systems', because of their experience with the design and build of large capacity turntables, has been an excellent partner in the development and successful installation of this equipment.



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400-tonne mobile turntable for Mooring Systems

Caley Ocean Systems Ltd has designed and built what is believed to be the most adaptable offshore, mobile turntable of its kind in the UK, for spooling equipment hire company Mooring Systems Ltd in Aberdeen.

Capable of handling a wide range of flexible products including cables, umbilicals, dynamic risers and hoses, the 400 tonne modular turntable spooler can be readily configured in either 'reel' or 'basket' modes; and is both sea and road transportable.

Built to the latest Lloyds Register rules for lifting appliances in a marine environment, the Caley turntable is capable of delivering almost 20km (12 miles) of 100mm cable in one batch. The turntable's carousel's dedicated spooling tower and large drum diameter ensure maximum product protection and highly accurate product spooling.

Designed from the outset for rapid deployment from any port in the UK at short notice, the turntable is fully modularised for transport by road and standard 40 foot flat rack at sea. Together with dedicated deck beams, the spooler has its own lifting gear allowing a single lift of the fully assembled system. Moreover, the combination of fully integrated hydraulic power unit (HPU), redundant drives and integral dual redundant braking system, all rated IP56, suitable for a marine environment, significantly reduce mobilisation times and ensure safe handling of overhung loads.

Mooring Systems general manager Douglas Davidson said: "The new turntable spooler has filled a gap in the market for a mobile, modular and - most importantly - transportable system that has particular applications for the burgeoning renewables market. We expect that 2012 will see a massive surge in the number of projects being commissioned and we have already experienced increased interest in our fleet of spoolers."

The new spooler fills the space between conventional reels, which carry smaller payloads and the 1,000Te-plus turntables and carousels that are less adaptable and take longer to deploy. There is nothing quite like this in the UK rental market at present," said Mr Davidson.

