

KITTIWAKE MOORING RECOVERY - POWERED REEL TO RECOVER MOORING LINES COST-EFFECTIVELY

Acteon company Aquatic played a key role in 2008 in the decommissioning and removal of a redundant loading buoy in Venture Production's Kittiwake field in the central North Sea with a specially designed powered reel used to recover mooring lines cost-effectively.

THE PROJECT

Aquatic was responsible for recovering the eight mooring lines that had secured the structure in 85m of water, plus its two, 8in flexible risers and an umbilical used to convey power to valves on the buoy's pipeline end manifold.

Rather than using an anchor handler, Aquatic chose to fit one of its modular powered reel systems to the back deck of a less-costly DP2 class vessel, the Volantis.



Photo: The system was fitted aboard the Volantis, a DP2 class vessel normally used for jet trenching operations.

Once cut at the seabed using an ROV, the mooring lines (individually comprising 765m of wire rope terminated at the top and bottom by 265m and 82.5m, respectively, of 3¼in chain) were each recovered directly to a reel specially designed to withstand the unusually high compression forces generated by the spooled chain.

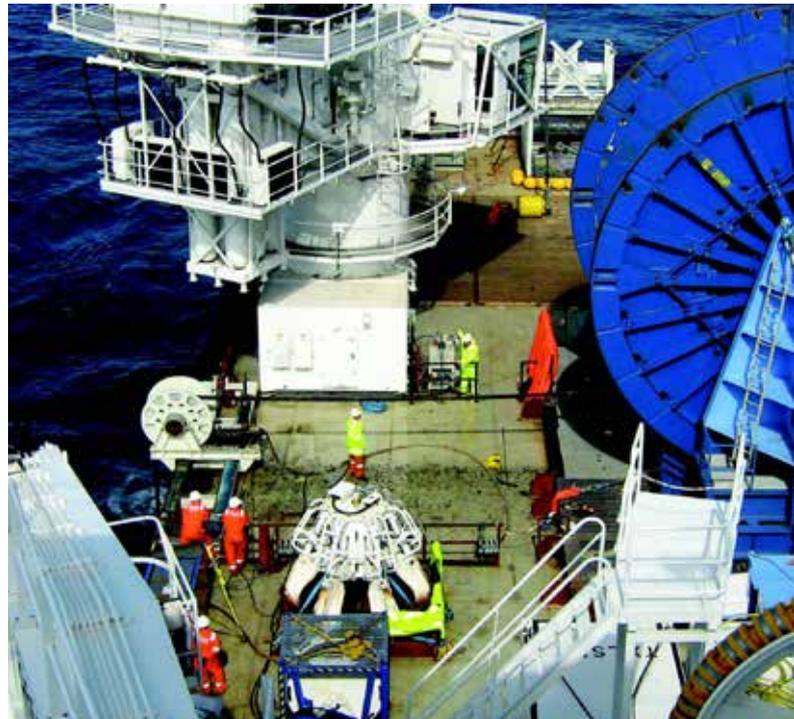
Rather than the 10 tonnes spooling-on load rating of the company's standard AQSR50 reel, the one used here had a reinforced hub rated at 30 tonnes; its tower drive system was also upgraded to provide a maximum torque rating of 150 Te/m.

Aquatic completed the project in just two trips from the shore. Four mooring lines plus the risers and the umbilical were recovered to the single reel on the first trip; and the remaining four lines recovered on the second.

This was the first project of this kind carried out by Aquatic. It came in on budget and the offshore operations were without incident.

FUTURE USE AND DEPLOYMENT

The company is reviewing the design of the powered reel system used here in order to increase its recovery capacity and is looking forward to applying the lessons learned on this occasion to similar projects in the future.



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