

## THE CHALLENGE

Aquatic was subcontracted by Bibby Offshore Ltd to replace subsea infrastructure in the Central North Sea as part of BP's \$1billion Eastern Trough Area Project (ETAP) Life Extension Project. Aquatic deployed its carousel system to install 35 kilometres of umbilical ensuring electrical control capability between ETAP's central processing facility and the Machar field.

ETAP, located 240 kilometres east of Aberdeen, is one of the largest and most complex developments in the North Sea, comprising nine oil and gas reservoirs, six of which are operated by BP. The ETAP Life Extension Project (ELXP) will help secure the future of the fields until 2030 and beyond.

## THE CAPABILITY

The carousel is designed to offer flexibility. A 12m-reel diameter and variable hub diameter mean that it can handle multiple products and meet the full range of customers' needs.

The AQCS-01-1500 can handle product loads of up to 1500Te, operates at a maximum speed of approximately 1km per hour and uses a built-in tensioner with a maximum line pull of 5Te to maintain product tension.

The tensioner is mounted on a level-wind tower, which ensures proper spooling on and off the carousel.

Unlike other options on the market, the AQCS-01-1500 is genuinely modular and can be broken down to components that fit in standard, 12-m shipping containers and are easily reconstructed without welding.

## THE EXECUTION

Aquatic provided a team of offshore supervisors and technicians to mobilise and operate the carousel and integrated five-tonne tensioner system, as well as a 15-tonne two-track tensioner complete with all ancillary equipment. For this project, our Alliance partners, James Fisher Offshore (JFO), provided a 20-tonne abandon and recovery winch to support the operation. On this occasion, the Aquatic offshore team managed and operated the JFO equipment, optimising back deck personnel during the month-long operation. The beauty of the Aquatic equipment portfolio is that it can be assembled in advance of the vessel arriving at the quay-side. The images below document the five-week long site preparation, equipment assembly, testing and mobilisation (and demobilisation) onto Bibby's *Olympic Ares*.



day 0 - day 4

### FOUR DAYS:

Carousel load out from the Aquatic Operations Centre to the Peterhead Quayside at Smith Quay



day 4 - day 9

### FIVE DAYS:

Unloading containers and site preparation



day 9 - day 24

### FIFTEEN DAYS:

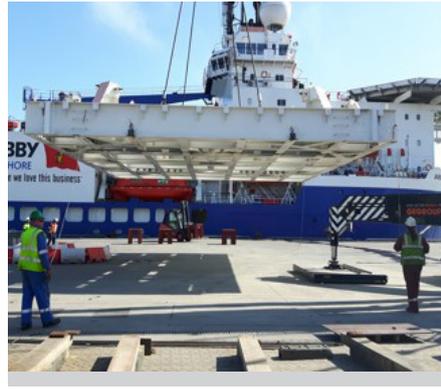
Carousel assembly in the staging area



day 24 - day 27

**THREE DAYS:**

Factory Acceptance Testing and function testing



day 27 - day 30

**THREE DAYS:**

Carousel dismantling and repositioning to alongside the vessel



day 30 - day 34

**FOUR DAYS:**

Mobilisation onto vessel



day 0 - day 2

**TWO DAYS:**

Demobilisation from vessel to quayside

**IN HOUSE ENGINEERING EXPERTISE**

The object of our engineering team is twofold: to provide support for the project work Aquatic takes on and to use this experience in conjunction with good engineering skills to design and develop, build and operate equipment which functions according to Aquatic values, principles and processes.

Aquatic's engineering approach is based on a triumvirate of modularity, reliability and capability – the equipment is easy to transport and assemble, it is dependable and consistent and it is capable and adaptable. We are often required by our customers to become part of their design team for the project and we offer experiences and skills which we happily utilise.



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