

World's Largest Construction Vessel Ready for Action



Following its inauguration ceremony in Rotterdam on 27 February 2015, Allseas' *Pioneering Spirit* will start its first job offshore Norway this summer with an integrated Dynamic Positioning (DP) and manoeuvring system based on state-of-the art Kongsberg Maritime technology. The Kongsberg Maritime delivery includes forward and aft bridge systems in addition to an extensive automation network and the HiPAP subsea position reference system.

Eight years in the making, Allseas' *Pioneering Spirit* single-lift vessel is the largest construction vessel in the world. Kongsberg Maritime has been involved with this ground-breaking project from near the very start, having been selected by Allseas to provide the Dynamic Positioning system early in 2008.

Pioneering Spirit's role as a platform installation, decommissioning and pipelay vessel demands the most comprehensive, reliable and feature rich DP and manoeuvring system available. With sea trials already completed in summer 2014, Kongsberg Maritime's Class 3, fully redundant DP system and other vital systems will next be put through their paces this summer, when *Pioneering Spirit* starts its first and particularly challenging project, the removal of the 'Yme' platform topsides in the North Sea.

Networked Vessel

The Kongsberg Maritime integrated Dynamic Positioning and manoeuvring concept for *Pioneering Spirit* relies on a distributed and open system design, which employs a fully backed-up system-wide standardised communication network. The communication network integrates the K-POS Dynamic Positioning, K-Thrust thruster control, K-Bridge Navigation and K-Chief machinery automation systems, into a complete solution with unique positioning and manoeuvring capabilities required for *Pioneering Spirit*'s complex operations.

Pioneering Spirit features two fully equipped redundant Kongsberg Navigation bridges with Multi Function Displays (MFD); forward and aft (in separate fire zones). The K-Bridge system utilises new Radar Transceiver interface technology distributing radar signals from the eight radar transceivers on a Local Area Network (LAN). This enables the possibility for long cable runs (500m) allowing for locating two radars in each 'corner' of the *Pioneering Spirit*. The K-Bridge system is delivered with innovative features such as the ability to combine radar images from multiple radar transceivers and display them as a single composite picture. This eliminates blind sectors and provides a 360 degree view around the vessel.

Kongsberg Maritime has also provided subsea position reference systems to ensure the accuracy of the Kongsberg Maritime DP, including the industry standard HiPAP high precision acoustic positioning system.

Image: Pioneering Spirit. Image courtesy: Allseas.