



CASE STUDY

MOVING SPOOLS FOR GORGON PROJECT

Tutt Bryant contracted to lift & shift spools for Gorgon Project.

Subsea 7, a leading international provider of seabed-to-surface engineering construction and services to the offshore industry contracted Tutt Bryant to undertake heavy lift crane and load-out of subsea spools on the Chevron operated Gorgon Project.

The scope of work undertaken by Tutt Bryant included the receipt of spool data, proposal of optimal crane configurations to match the fabrication yard and wharf layout and production of crane lift study engineering data. Complex lifting work activity included - client lift study approval, trial lift of spools to check dimension, pitch and roll when suspended and ensure suitability for trouble free subsea installation. Then once the spool passed compliance and met all specifications, Tutt Bryant would then lift and shift the spools onto the wharf and barges.

The complexity of the work scope meant Tutt Bryant had to effectively plan and provide comprehensive and varied solutions. In Tutt Bryant's favour was the availability of a 1600 tonne HL crawler crane, the only one of its type in Australia. The provision of the 1600 tonne crawler crane along with ancillary cranes supported by project superintendents, project supervision, SPMT and low loader transport, crane operators and riggers enabled Tutt Bryant to systematically plan and offer a range of holistic solutions.



Above - The Terex-Demag CC8800-1 setup and readied for the major moves and lifts.



Above - Trial lift of spool data ensuring trouble free subsea installation.



Above - Load out of subsea spool and lifting aid onto barge.



Introducing the big lifters

Tutt Bryant commenced on December 2013 with the mobilisation of the Terex-Demag CC8800-1 1600 tonne crawler crane and a 350 tonne support crawler crane to the Australian Marine Complex Common User Facility in Henderson, Western Australia. The CC8800-1 1600 tonne crawler crane is the largest and only one of its type in Australia, proving to be a significant difference maker with its lifting capacity making life much easier for Tutt Bryant project planners.

Lifting operations ramped up into 24 hour, 7 days a week shift work operations for the peak work load of the contract. As the contract progressed, a number of sequence and fabrication changes were required to maintain productivity and cost effectiveness for fabrication and subsea installation being completed by the client. The flexibility and higher capacity of the CC8800-1 super lift crawler crane proved to be significant throughout the life of the project, so as to accommodate revised lift plans and increased radii to optimise the limited fabrication and trial lift work areas.

Completion of the heavy lifting and moves

An approved and custom designed tugger winch system was installed on the CC8800-1 crane to improve safe systems of work and eliminate risks related to use of manual tag lines for such long and heavy objects under hook. In particular, the pick and carry lifting activity to the load out wharf was impressive to watch due to the diligent and highly skilled crane operators in the team. The ease and smoothness of travel for such large and heavy loads made a complex job look easy.

The ability for Tutt Bryant to offer a “one stop shop” solution without needing to engage numerous third party providers ensured a streamlined transition from one area to another allowing for more efficient timelines. Tutt Bryant completed the final lift in December 2014.

Key Equipment - Terex-Demag CC8800-1

The Terex-Demag CC8800-1 boasts a 1600 tonne lifting capacity and a maximum load moment of 24,002 metre tonnes.

It features a flexible pick-and-carry and high-availability design, and offers significant efficiencies in the erection and installation of large-scale facilities when compared to alternate methods such as ring lift cranes and jacking towers.



Above - Tutt Bryant's Terex-Demag CC8800-1 Crawler Crane