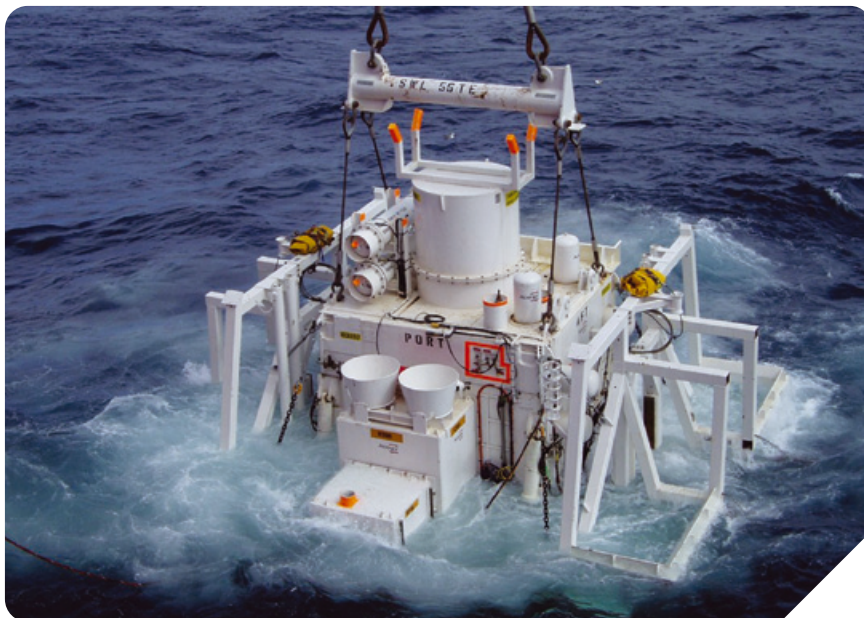


Shell Flags Hot Tap



Client:
Shell

Location:
North Sea

Project Type:
SURF

This SURF project comprised the detailed design, engineering, procurement, fabrication, installation and pre-commissioning of a hot tap assembly, incorporating a 16-inch hot tap valve, piping unit and protection structure.

Our proven experience with hot tap design was key to the successful execution of this project, which included a manually welded nipple enclosed by a mechanical reinforcing sleeve. Preheat for the hyperbaric welding was provided by our patented induction heating system, designed specifically to handle the high heat transfer conditions encountered on a live major oil or gas trunk line.

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Project

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Location

North Sea

Project Type

SURF

Year

2007

Vessels/Spoolbases Utilised

Acergy Osprey

Overview

As part of the Statfjord Late Life Project, Statoil exports gas through the 20km Tampen Link Pipeline to the Flags Pipeline, Operator Shell, connecting in 2km south of Brent Alpha.

Our scope of works involved making the connection by means of a hot tap, whilst the Flags pipeline was under full production conditions. This included the detailed design of hot tap, structure and piping unit, fabrication of protection structure and piping unit and the procurement of materials and equipment.

This was carried out in three phases:

Phase 1 included the offshore pipeline inspection and excavation in preparation for welding habitat installation. This included excavation and examination of the pipeline to verify that it was suitable for the hot tap. The weight coat was removed from the chosen tie-in point and the pipeline checked for suitability using NDE techniques. The site was then protected until phase 2.

Phase 2 included the offshore hyperbaric welding of 16-inch nipple to the pipeline, and the installation of the structure. The temporary protection was removed and a habitat deployed ready for the pipe nipple to be hyperbarically welded onto the pipeline. A high-integrity ball valve was then welded onto the nipple and the protection structure (90T) deployed to position. A guard boat was placed over the site until Phase 3 could start.

Phase 3 included the offshore-performance of the trepanning operation and the installation of the piping unit and pre-commissioning.

The structure was piled and a trepanning spread used to carry out the hot tap into the Flags line. Following this, the piping manifold was deployed into the structure and bolted onto the ball valve. Finally, the manifold and tap were pre-commissioned, ready for tie-in.



Acergy Osprey



The preparation and execution of a Subsea Hot Tap



The preparation and execution of a Subsea Hot Tap