Cladhan Field subsea control system

Client:

Taqa Brantani Ltd

Location:

North Sea, UK Sector

Equipment:

Proserv Multiplexed Electro-Hydraulic Subsea Control System

Background

The Cladhan field is located on Blocks 210/29a and 210/30a in the UK sector of the North Sea in a water depth of 498 metres (1,634 feet). Located 20 km north west of the South Cormorant platform and 150 km north east of the Sullom Voe oil terminal.

The development has two production wells. One water injection provided reservoir support in the initial development phase.

Project Description

The Cladhan Subsea Production Control System (SCS) will control and monitor both production and injection wellheads and associated topside equipment.

The design of the SCS is based on the multiplexed electro-hydraulic control architecture; the design of the system offers:

- Power supply and communications
- Fail safe operation
- High availability and reliability based on equipment selection, design principals and dual redundancy
- Low electrical power consumption
- Low maintenance

The hydraulic system utilises synthetic oil in a closed loop configuration, allowing safe operation of the tree valves, the sub-surface controlled subsea safety valve and chemical injection valves, which when vented, will return to the Hydraulic Power Unit (HPU).

All retrievable subsea equipment has been designed for installation and retrieval by divers and has been engineered to minimise and simplify the intervention procedure without affecting other subsea equipment and systems.

Scope of Work

The project will include topside equipment including MCS/EPU, HPU a Cladhan TUTU and an SSIV TUTU. The Subsea Control System consists of a DSUTU, SCM's & SCMMB's for the production and injection wells along with associated jumpers, couplings and stabplates. Additional to this, provision has been made to supply SSIV SUTU along with associated jumpers, couplings and connectors for use on the SSIV manifold.

The Benefits

- Bespoke concept and design to suit customers requirements
- Tree temperature transmitter incorporated into the design of the Subsea Control Module Mounting Base (SCMMB)
- SAM design for limited footprint for installation & retrieval
- Combined SCS & Subsea Isolation Valve (SSIV) HPU, with PLC controllable logic
- MSC comprising of engineering workstation with panel mounted HMI
- Supplied with additional remote operating workstation
- TCP/IP interface with MCS PLCs