Saipem Dolphin Emergency Pipeline Repair System (EPRS)

The Dolphin Project is a development by Dolphin Energy Ltd for the production of natural gas from Qatar’s offshore ‘North Field’. The Dolphin Project supplies around 30% of UAE’s energy requirements. The 48-inch export pipeline and 36-inch sealines are therefore major strategic assets for the region.

This Subsea 7 scope involves the design, procurement and fabrication of a hyperbaric welding system capable of performing repairs to the 48-inch gas export line and 36-inch sealines located offshore of the United Arab Emirates (UAE).

The scope also includes qualification of welding procedures and preparation of intervention manuals and procedures.
Overview

The objectives of the Dolphin Emergency Pipeline Repair (EPRS) Project include the development of a pipeline repair capability encompassing the organisation, resources, documentation and processes to enable an intervention at short notice utilising vessel(s) of opportunity, and the recovery from an accidental damage situation in the shortest possible time period.

Subsea 7 is sub contracted to Saipem for the provision of hyperbaric welding services, encompassing qualification of project specific welding procedures and the provision of hyperbaric welding equipment and personnel.

The scope of work for the project consists of:

Project Management:
- Management of all engineering, design, procurement and fabrication activities, including supporting the interface between Dolphin, Saipem and Subsea 7.

Development Phase:
- Prepare and qualify the welding and related control procedures, including obtaining third party sign off
- Design a 48-inch capable habitat with an integrated alignment system, which can be interfaced with the pipeline handling tools.
- Consider integration with the isolation, decommissioning and re-commissioning strategy prepared by Saipem
- Presentation of functional specification for the habitat in the form of a design premise document.

Procurement & Contracts:
- Design, fabricate and fit out a 48-inch capable hyperbaric welding habitat complete with umbilical, power unit and any ancillary equipment for interfacing with a vessel of opportunity
- All the required testing rigs, transportation, storage, deployment suites, spare parts, consumables and related services all leading to the delivery of the EPRS hardware at the designated storage location
- Preparation of operation and maintenance manuals, training procedures, troubleshooting guides, repair procedures, periodic inspection and testing plans.

Maintenance:
- Provision of support to Saipem in maintaining the overall EPRS in the context of the EPRS Hyperbaric welding capability
- The safe keeping and maintenance of the EPRS hardware in a state of readiness, including periodic inspection and testing
- The periodic training of personnel
- The timely re-stocking of consumables, if and when they become time expired, the safe and environmentally friendly disposal of outdated consumables.

This project demonstrates Subsea 7’s commitment to continue to support client’s project requirements by utilising our world leading hyperbaric welding capability.