

## CASE STUDY

### Overview:

Allseas UK has been engaged in the installation of the Production Flowlines from Laggan-Tormore to the Shetlands and the Export Pipeline from the Shetlands to the MCP-01 platform for the development of the Total Laggan and Tormore gas fields situated some 125km north west of the Shetland Islands. The FL2, Flowline 2 has been damaged due to a dragged anchor from a passing vessel. As such, suffered local buckling and therefore required rectification works of cutting out and replacing the damaged pipework.

In February 2014 UCS were contacted by Allseas to supply all relevant equipment and technicians to assist in the rectification works

### Project Details

#### Product Particulars

- 18 inch (457mm) OD x 25mm WT carbon steel pipe grade SAWL 450 FDU with a 3LPP coating and 50mm thick outer Concrete Weight Coat (CWC)

#### Project Scope

- Dredging of seabed soil beneath the pipeline using UCS's 8" Dredge System
- Subsea rectification works for this part of the project is via ROV
- Removal of Concrete Weighted Coating 50 mm thick and 3LPP coating from the pipeline using UCS Coating Removal Tool (CRT)
- Cutting of pipeline into sections using the UCS 42" Diamond Wire Saw (DWS) to simplify and support safe and "damage free" recovery to the deck of the Allseas vessel



*8" Dredge System*



*Coating Removal System*



*42" Diamond Wire Saw*

## CASE STUDY

### Equipment Suitability

In order to prove that the equipment was suitable for the required work scope, a coating removal and cutting trial was performed at UCS premises. For the trial, the coating removal tool and the diamond wire saw scheduled for mobilising offshore was tested and assessed on a section of pipe replicating the flowline.

It was found that the Coating Removal Tool (CRT) was able to clean a strip of concrete coating the full circumference of the pipe and 2 linear passes 0.5 mtrs. long in < 40 minutes. The trial also showed that the diamond wire saw is very effective at cutting this product with a total cutting time of 45 minutes

The trial tests proved that the CRT and the DWS were suitable for the required task of the concrete coating removal and cutting of the flowline.



Pipe Recovery



8" Dredge System



Coating Removal System

### Project Performance

First part of the project was to dredge a channel under the damaged pipework. This was carried out using UCS 8" dredge system modified and fitted with specially designed high pressure barracuda head. The set up proved to be effective in the dredging operation.

The coating Removal tool worked effectively on the removal of 1.2mtrs. of the concrete coating and the 3LPP undercoating.

UCS's 42" Diamond Wire Saw completed 6 cuts with an average time of 44 minutes per cut.

The project was completed with no lost time incidents or damage. All concrete removal and cutting was successful and completed with minimum downtime on equipment