FOUNDOCEAN

Jacket Stabilisation

Using bespoke grout bags to restabilise a platform to extend its life expectancy

Seabed scour had occurred at the platform and hydrodynamic loading was causing the jacket to move about the driven piles. This movement could be felt in the steel platform and topside. The movement was expected to reduce the life of the jacket had it not been rectified.

The jacket has six main legs and is fixed to the seabed by one pile driven through each corner leg. The jacket was secured to the driven piles by crown shims welded at the top of each corner leg. The structural integrity of the jacket was dependant on a strong welded crown shim connection and the mudmats resting on the seabed.

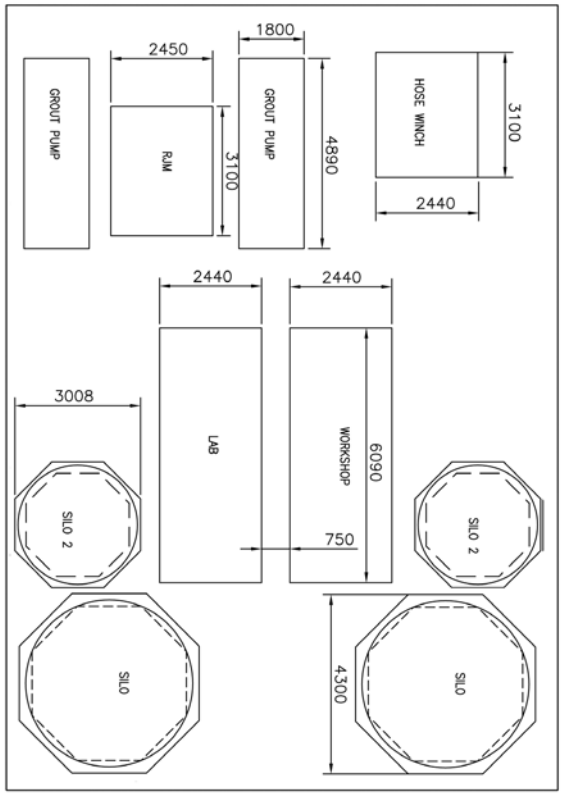
Scour had occurred at the bottom of the jacket legs and as such, the mudmats were no longer sitting on the seabed and this was putting stress on the welded connection. The solution was a three stage fix to strengthen the leg-to-pile connections and reinstate the mudmat supports.

Each bespoke donut-shaped grout bag was placed under and around the mudmats. This formed a seal for the next phase which involved pumping grout into the void under each mudmat. As well as giving additional support to the jacket, grouting the void formed a seal at the bottom of the pile annuli as they had not been designed with grouted connections in mind. The final stage of the project was to fill the annuli with grout, eliminating any movement in the jacket.

PROJECT FACTS

Industry	Oil & Gas
Region	Southern North Sea
Services	Jacket Stabilisation
Project year	2011
Operator	*undisclosed*
Contractor	*undisclosed*
Water depth	22 m
Cement type	OPC CEM I 52.5
Total cement	69 t
Mixer type	Recirculating Jet Mixer
Grout specification	60 MPa
Mixing rate	Up to 25 m^3/hr

TYPICAL RJM DECK PLAN



Liston Exchange, Liston Court, Marlow, SL7 1ER, UK • +44 1628 567 000
info@foundocean.com • www.foundocean.com