

# MORGRIP® PROVIDES RAPID, HOLISTIC SOLUTION FOR MAJOR NORTH SEA OIL PROJECT

## CASE STUDY

WHEN SUBSEA HYDROCARBON PIPELINES SERVING A STRATEGICALLY SIGNIFICANT OIL PLATFORM IN THE NORTH SEA REQUIRED EXTENSIVE UPGRADES, MORGRIP® WORKED TO STRICT DEADLINES TO FACILITATE THE MULTI-STAKEHOLDER PROJECT AND ITS CONTINGENCY REQUIREMENTS.

### THE CHALLENGE

The customer's North Sea pipeline, which required extensive up-grades, carries in excess of one million barrels per day; 30% of the UK's daily oil production. The line services more than 80 offshore fields and is forecasted to be operational until at least 2030.

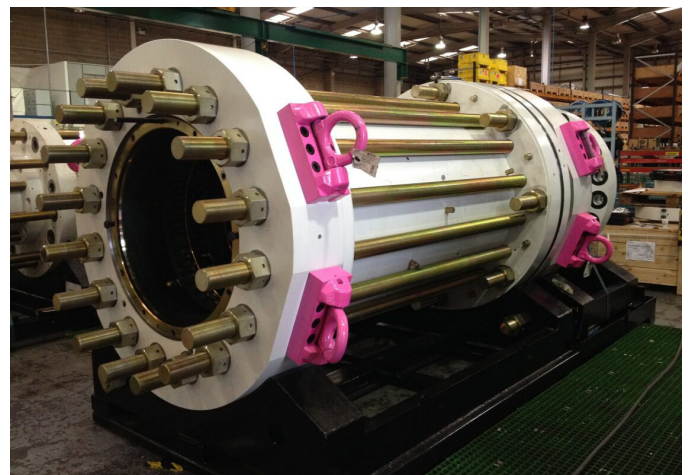
The customer's oil platform is connected to the Main Oil Pipe-line (MOL) via two major hydrocarbon subsea trunk lines; 30" diameter import pipeline and the 36" diameter export pipeline.

In 2013, the operator determined that Subsea Isolation Valves (SSIVs) should be retrofitted on the import and export pipelines to protect personnel, the environment and the platform itself. These pipelines were identified as high risk due to the inventory held.

### THE SOLUTION

MORGRIP® was initially contracted to provide comprehensive package of subsea bolting equipment to the contractor for use on three vessels involved in the SSIV installations. The equipment included subsea bolt tensioning, nut splitting, and ancillary equipment for break out of and box up of subsea bolted flanged joints. Due to the criticality of the overall project, the contractor invited MORGRIP® to take part in on-land trials, which were conducted at the National Hyperbaric Centre in Aberdeen, to prove the planned activities ahead of commencement of the project scope of work subsea.

Subsequently MORGRIP® was instrumental in delivering an Emergency Pipeline Repair System (EPRS) as stipulated by the key project stakeholders before the planned project work could commence. Due to the critical nature of the project, the operator was happy to invest significantly in these contingency measures.



01 // MORGRIP® subsea connector solution



02 // MORGRIP® subsea connector being loaded for transport

*“With the assistance of MORGRIP®, we have been able to execute the project seamlessly and within exceedingly tight deadlines. The supplied personnel, equipment and contingency solutions were remarkable and provided full assurance to all stakeholders.”*

*Feedback from engineer responsible  
from operating company*

## EPRS PIPELINE REPAIR SOLUTION

To install each of the SSIVs and spool pieces, the pipelines would need to be isolated using remote plugs. The procurement of a mechanical connector solution was necessary in the event that an isolation plug became stuck in the pipeline during operation, the associated pipeline section had to be removed, and then re-terminated back to the existing pipeline.

Vendors were initially requested to adhere to a 40 week lead time to supply the solution, however this was later reduced to 20 weeks. MORGRIP® was the only company able to design, manufacture, test, and deliver a suitable mechanical connector solution. The nearest competitor quote was 40 weeks.

During further discussions with the operator, MORGRIP® were requested to provide details on their subsea leak sealing clamp as a final contingency measure to be acquired. The device is part of the MORGRIP® range of innovative on-line leak sealing technology services and is designed to be compact and easy for divers to install. The clamp solution was to be procured and held in contingency should one of the subsea bolted flanged joints leak during hydrotest. During the commercial and technical clarification phase, MORGRIP® committed to reduce an already tight 10 week lead time to 3 weeks to meet the customer’s compressed project delivery schedule, winning the order before competitors were able to return their quotations. MORGRIP® was even able to accommodate urgent specification changes from the client and modify the clamp in the last week

of production prior to delivery to the operator.

Rani Mahey, EPRS Market Manager for MORGRIP®, said: “This was a complex and strategically significant project requiring co-ordination between multiple stakeholders. We provided holistic joint integrity and EPRS solutions, from planning and procurement to equipment, product and personnel.”

The Subsea Job Responsible Engineer for the operator said: “We’re indebted to MORGRIP® for their rapid response and flexibility on this critical project. It cannot be overstated how important it was for the installation to be successful. With the assistance of MORGRIP®, we have been able to execute the project seamlessly and within exceedingly tight deadlines. The supplied personnel, equipment and contingency solutions were remarkable and provided full assurance to all stakeholders.”

A lead QHSE Engineer for the contractor also stated: “We would like to congratulate MORGRIP® in delivering a 36” pipeline connector in what was an extremely tight and challenging project schedule. MORGRIP® personnel have worked long and hard and with diligent perseverance, have overcome adversity and lived up to the challenge to deliver on time for which the project team is extremely grateful. Again, our congratulations to the MORGRIP® team for a job well done.”

For more information, visit [www.connectorsubsea.com](http://www.connectorsubsea.com).



03 // MORGRIP® subsea leak sealing clamp



04 // MORGRIP® subsea tensioner used in this project