

Contour Addresses Internal Erosion on Offshore Production Unit

Contour Addresses Internal Erosion on Offshore Production Unit

West Africa

Pipe Details

- 406-mm (16-inch) diameter
- 12.7 mm (0.5 inch) original wall thickness
- Multiple internal erosion defects
- Oil inlet to separator

Summary

- Severe internal defects in a 406-mm (16-inch) line threatened to compromise offshore production operations.
- Clock Spring designed a repair suitable for the line transporting hydrocarbons.
- Clock Spring trained installers repaired the damage so production would not have to be suspended, saving time and money, and averting a potential environmental incident.
- Operator safely continued normal production operations until scheduled maintenance could be carried out 12 months later.

NDT inspection revealed several severe internal defects in a 406-mm (16-inch) line running into the main high-pressure separator on an offshore production facility. The erosion was significant, affecting multiple places along the pipe and growing at such a rate that imminent failure was likely. If the damage were to reach a critical point, the platform would have to be shut in, resulting in a huge loss of production. In addition to the financial impact, there was potential for considerable environmental impact in the event the eroded pipe developed a leak.

The operator needed a way to reinforce the pipe without halting production. The goal was to find a safe and reliable repair that would allow the line to function safely until the next planned shutdown, nearly a year away.

A Clock Spring Contour repair was designed in accordance with ISO 24817 2015 guidelines, which provide requirements and recommendations for qualifying, designing, installing, testing and inspecting the external application of composite repair systems to corroded or damaged pipework, pipelines, tanks, and vessels used in the petroleum and natural gas industries.

A team of Clock Spring trained technicians cleaned the section of damaged line using power tools to remove the external coating and then bristle blasted it to create a surface profile equivalent to SA2.5 before applying the Contour repair.

Following the completion of this repair, the platform continued to operate without incident until the planned shutdown 12 months later, when the damaged section was scheduled to be replaced.





Internal Erosion Completed Repair

The Clock Spring repair allowed production to continue without danger to the environment.

There are nearly 3,000 trained Clock Spring installers around the world who are qualified to provide repairs with Clock Spring products. Clock Spring regularly offers training classes for installers and can custom design training for individual company needs.