

Contour Composite Repair Restores Offshore Firewater Line

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West Africa

Pipe Details

- Multiple through-wall defects in a 203-mm (8-in) diameter main firewater line
- 8.17 mm (0.32 in) original wall thickness

Summary

- Multiple through-wall defects in a 203-mm (8-in) diameter main firewater line
- A team of 2 local Clock Spring trained technicians completed the Clock Spring Contour repair in 2 days
- No hot work was required during the Contour installation

Workers on an offshore platform discovered multiple through-wall defects at a bend on the main firewater line when they pressurized the line and it failed. The decision was made to repair the line immediately to mitigate the risks associated with a compromised system.

The operator wanted a leak repair solution that would restore safe operation until the line could be replaced at the next planned shutdown. The answer was Clock Spring Contour, an engineered wet-applied repair system that uses bi-axial or quad-axial stitched fiberglass cloth applied in a wet-lay system with two-part epoxy and a filler material.

Clock Spring trained and certified installers moved to the installation site to execute the Contour repair, removing the coating on the damaged line using power tools and using a bristle blaster to produce the required surface profile, equivalent to SA2.5.



Corrosion led to multiple through-wall defects on an 203-mm (8-in) diameter firewater line on an offshore platform.



Installers used power tools to clean the spool sections in preparation for the composite repair.

With the line prepared, installers applied a Contour repair designed in accordance with ISO 24817, which outlines 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, petrochemical, and natural gas industries.

Following the established installation process, the team applied filler material to the holes, followed by epoxy and quad-axial stitched fiberglass cloth.

Two installers completed the repair in 2 days, ensuring that the firewater line would be able to operate safely until the next planned shutdown.

The installation met the operator's expectations of minimized disrupting to ongoing operations and without the need for welding or heavy lifting on the worksite.

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.



A Contour composite repair restored the damaged line to safety.