Clock Spring Repairs 24-inch Crude Oil Pipeline

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Onshore

Pipe Details

- 610 mm (24-inch) carbon steel X52 crude oil pipeline was dented with a crack in the seam weld

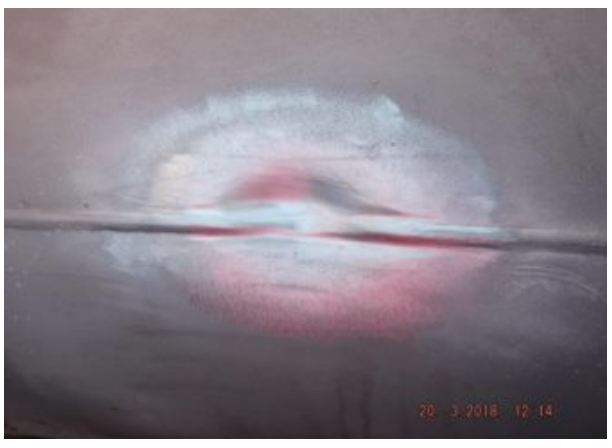
Summary

- 610 mm (24-inch) carbon steel X52 crude oil pipeline was dented with a crack in the seam weld
- A team of 2 local Clock Spring trained technicians completed the installation in 4 hours
- Repair delivered in 25% of the time and at approximately 35% of the cost of alternative composite solutions
- No welding was required
- Minimal impact on operations

An onshore 610-mm (24-inch) carbon steel X52 crude oil pipeline sustained a dent and a crack in a seam weld that was in need of repair. The owner needed an efficient, affordable, and long-lasting solution.

Having used composite repairs in the past, the owner evaluated a carbon fiber system but found it to be too time-consuming and costly. Because one of the safety objectives was to avoid welding, the owner turned to Clock Spring Company, for an alternative composite solution that could meet the schedule and budget requirements.

The Clock Spring repair consisted of two standard 610-mm (24-inch) Clock Spring sleeves, a single-wrap mold, and two filler kits. A team of 2 Clock Spring trained technicians from Process Systems, in the Netherlands, reported to the site to execute the installation.



A carbon steel crude oil pipeline had sustained a dent and a related crack in a seam weld.

Skilled technicians remove the crack in the seam weld with a grinder.

The Clock Spring composite sleeves are installed using the hand spool method.

In the interest of safety, the pipeline operator took the line out of service (but did not evacuate it) while skilled technicians removed the crack in the seam weld with a grinder. When the installers had ground the pipe sufficiently to remove the crack and filled the dent using the filler kits, they were ready to repair the area with the Clock Spring composite sleeves, installing them using the hand spool method.

The team of 2 technicians fully installed the repair sleeves in about 4 hours, executing the installation without introducing safety risks and delivering a complete repair in less than 25% of the time and at approximately 35% of the cost of the carbon fiber composite solution. The rapidly executed installation allowed the owner to minimize downtime and delivered a repair validated for 50 years of service.

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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.