

Clock Spring Provides Permanent Repair to Damaged Refinery Pipeline

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United States

Pipe Details

- 8-inch (203-mm) diameter pipe
- Air/Gas mixture
- 900 feet (274 m) of pipeline

Summary

- Extensive corrosion from an airborne drift from a cooling tower that affected 900 feet (274 m) of line
- A Clock Spring trained repair team applied 903 Clock Spring units over 900 feet (274 m) of pipe that included 90-degree and 45-degree fittings in tight spaces
- The pipeline and surrounding lines and process equipment remained in service during the repair.
- Work was completed within 3 weeks
- No hot work or heavy equipment required
- The Clock Spring solution addressed the immediate problem and provided a repair that would prevent future corrosion for at least the next 50 years

A US refinery discovered that a segment of aboveground pipeline had sustained corrosion from an airborne drift from a cooling tower. Damage was extensive. Corrosion spots covered 900 feet (274 m) of line that ran parallel to the tower.

This repair posed significant challenges. The line was very close to process equipment and other product lines that posed safety hazards. The damaged line would have to remain in service during the repairs, and the repair would have to resist future corrosion.

A conventional solution would have encountered serious challenges, in part because welding would have been required. Additional work permits would have been required from various divisions and companies to contend with the safety hazards created by the proximity of process equipment and the fact that some product lines were a mere 3 inches (76 mm) away from the line under repair. A traditional repair would have been, arduous, time-consuming and expensive.



Pipeline Corrosion



Pipeline Corrosion





Clock Spring was the logical choice for this repair because it could be carried out relatively quickly – a complete cure can be achieved within two hours – and would prevent future corrosion for at least the next 50 years.

A team of Clock Spring trained technicians installed 903 Clock Spring units over 900 feet (274 m) of pipe at approximately 75 feet (23 m) to 100 feet (30 m) per day. As a cleaning crew prepped the pipe, three installation crews applied the Clock Spring to areas that included 90-degree and 45-degree fittings.

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.