

DiamondWrap® – Firewater Line Crack Repairs in Mexico

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MEXICO

Pipe Details

Customer: Offshore Operator

Location: Mexico

Pipe Diameter: 12.75"

Operating Pressure: 150 psig

Design Pressure: 225 psig

Pipe Contents: Firewater Line

Pipe Defect: Severe Cracking

Summary

One of our partners reached out to us about their client's 12" firewater line that was beginning to crack due to stress and corrosion. Keeping this line operational was vital to maintaining production and their client could not suffer down time. Multiple geometries were needing repair, particularly elbows, tees, and flanges. Circumferential cracking was especially bad and prominent in the elbows, and in some cases, completely separated the piping.

Citadel Technologies' team of engineers designed repairs for each geometry according to ASME PCC-2 Article 4.1, and recommended a DiamondWrap® repair solution. Utilizing equation 14 from the Article for circumferential slot defects, Citadel's engineers designed a repair able to withhold a completely separated pipe. Multiple kits were specified for the repairs in different locations, each kit specific to the geometry.

A team of trained and certified installers layered carbon fiber over the specified repair area, according to the calculations prepared by the Citadel Technologies engineer. No heavy equipment or hot work was required for the installation, and the line was in operation with no disruption in production. Below are photos of the completed repair:



The DiamondWrap® carbon fiber repair has enabled the offshore platform to safely maintain full production, until they could shut down, cut and replace. This saved the operator valuable production time, while ensuring the integrity of the platform until its next turnaround.

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.

