

DiamondWrap® – External Corrosion Patch Repairs in Ecuador

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EQUADOR

Pipe Details

Customer: Tank Operator

Location: Ecuador

Tank Diameter: 150 ft.

Pressure: Head Pressure

Tank Contents: Crude Oil

Tank Defect: External Corrosion

Summary

A terminal operator in Ecuador reached out to us about one of their floating roof tanks suffering external corrosion from ground moisture along several parts of the tank. Numerous points along the base of the tank upward about 6 to 8 feet had been identified as corroded areas needing repair. The environmental risk of leaking crude oil as well as a solution to stop further external corrosion led them to us.

Citadel Technologies’ team of engineers designed several patch repairs for each corroded area according to ASME PCC-2 Article 4.1, and recommended a DiamondWrap® repair solution. Utilizing equation 6 from the Article for repairing metal loss, Citadel’s engineers designed a conservative repair while optimizing the amount of layers and installation time.

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 terminal operator to safely keep the tank in production, while eliminating future external corrosion risk along the tank’s base. This saved the operator valuable production time, while ensuring the integrity of the tank for many years to come.

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.