DiamondWrap® 4" Internal Corrosion High Pressure Repair

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TEXAS, USA

Pipe Details

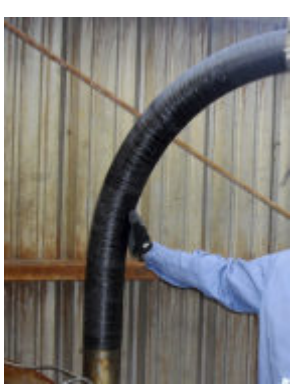
- 4" pipe
- 2,350 psi
- Temperature: 375oF
- Urea Offgas From Stripper
- Internal Corrosion

Summary

A plant in Texas came to CSNRI with internal thinning occurring on a 4" diameter long-radius elbow with Urea offgas flowing from the stripper. At a high pressure of 2,350 psi, thinning pipe is at danger of explosion. Agrium was in a tight spot as the temperature was higher than most composite repair systems could handle, and a clamp would have been too heavy and expensive to fabricate. Overall, 4 different elbows required repair.

CSNRI team of engineers designed a repair according to ASME PCC-2 Article 4.1, and recommended a DiamondWrap® repair solution. Only two layers of the high-strength DiamondWrap® composite repair system was required to repair the 4" long-radius elbows.

A team of trained and certified installers applied 2 layers of carbon fiber over the specified repair area of each elbow, according to the calculations prepared by CSNRI engineers. The repair cured within 24 hours. The unit did not have to be shutdown while the repair was installed, saving the customer time and money.



The customer was highly satisfied with the rapid repair of its potentially catastrophic defect, and will continue to use CSNRI's engineered composites moving forward. The composite solutions saved the customer the expense of a costly shutdown while ensuring that their pipes would not rupture in the future.