



CASE STUDY

OIL REFINERY

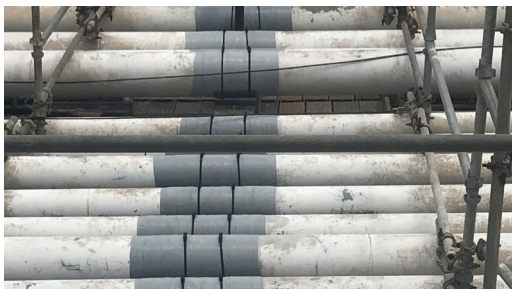
Pipeline Touchpoint Protection



After 1 year, a field trial splashzone test with petrolatum tape & Glass Outerwrap reveals steel surface in perfect condition with no corrosion.



Denso ColorTape, Denso Glass Outerwrap UV, and FRP Spacer held in place by strapping.



Complete system was installed on over 500 individual touchpoints throughout 7 separate dock sites in the refinery.

Project Data

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|--------------------------------|---|
| Location | Texas |
| Completed | 2019 |
| Project Type | Pipe Supports / Touchpoints Corrosion Prevention |
| Products / Systems Used | Denso ColorTape, Denso Glass Outerwrap UV & Denso FRP Spacers |

Project Details

Pipe supports or touchpoints are one of the most critical areas of piping systems that must be protected from corrosion and mechanical damage. It generally occurs anywhere the pipe rests on a support or comes in contact with another structure. These hard to reach areas can without notice, often end up with pitting and crevice corrosion causing unexpected leaks. Sealing off this area from the environment and a good inspection program is critical to the long-term service life of the pipe.

A large oil refinery in Corpus Christi, TX asked Denso North America for a solution to corrosion issues at dock piping supports which extend out over the water near the Gulf of Mexico. Protecting these areas was critical for extending the service life of the pipe as well as protecting the marine life in the area. Opportunity for surface preparation in sensitive areas like this one is very limited. Vibration of these pipes when ships load and unload can be surprisingly violent and easily wear off any paint system that may be present. So, it was vital the solution had to offer both corrosion and mechanical protection while requiring very little surface preparation.

The solution proposed by Denso was to use the Denso Petrolatum Tape System comprised of Denso ColorTape, Denso Glass Outerwrap UV, and the Denso FRP Spacer. The engineering team at the refinery proposed a "splash zone" test program to simulate the environment. A sample piece of pipe was blasted to a near white SSPC SP-10 finish, and left partially submerged in salt water for 1 year. After 1 year the pipe was removed and inspected to reveal the surface was still near-white showing no corrosion at all. After the successful test program, the Denso Petrolatum Tape System was approved.

After a quick hand tool cleaning (SSPC SP 2), the Denso ColorTape was spirally wrapped with a 55% overlap providing a corrosion barrier which chokes out all oxygen and moisture. For additional mechanical and long-term UV protection the Denso Glass Outerwrap UV was then spirally wrapped over the Color Tape. The FRP Spacer was then fastened in place with strapping to provide an abrasion barrier between the Petrolatum Tape System and the pipe support.

This complete system addresses and eliminates the corrosion and abrasion issues that can often cause extreme damage to pipe support areas and the environment. The system was easily installed by hand without special equipment much to the delight of the contractor and owner. This successful project only added to the 90 plus years of case histories behind the Denso Petrolatum Tape System in a wide variety of applications.

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