

THERMO-WRAP™

CONDENSATE LINE REHABILITATION

CZECH REPUBLIC, JULY 2014



Problem

The steel condensate pipes in a butadiene rubber production plant kept experiencing severe corrosion. When replacement pipes, constructed of 316L steel, corroded after three (3) months, the asset owner turned to NRI for a customized solution that could keep the plant in operation until the next scheduled shutdown.

Conditions

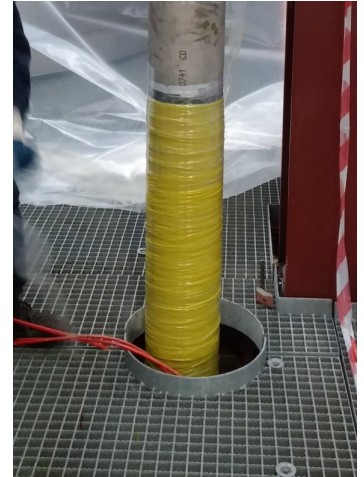
Designed for the transportation of condensate, the line's working temperature can exceed 158°F (70°C). Inspection revealed leaks, as well as corrosion defects and cracks. These issues needed to be immediately addressed.

Solution

Following the inspection and, a technical evaluation by NRI's engineering staff, a composite system solution to repair and reinforce the pipe was agreed upon. First, crews performed surface prep by removing surface contamination through grinding and degreasing. Next, any voids in the metal were filled with Thermo-Fill™ HT, a titanium-reinforced, two-part epoxy compound. This was followed by an application of twelve (12) layers of Thermo-Wrap™ composite on all compromised straight pipe, elbows, tees, and welded joints.

Result

The composite installation was performed without incident and the line continued operating safely during the repairs. An inspection conducted three (3) months after the work confirmed that the system was in good working order. A six (6)-month inspection has shown that the installation is still in safe operating conditions. The asset owner is extremely pleased with the outcome, and looks forward to utilizing NRI composites and NRI engineering for future projects.



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