

Partial Cover of Clamp on Crude Header Line

Overview

Internal corrosion of a crude header line was identified through NDT inspections. The corrosion was expected to form a 20 mm through-wall defect within 5 years.

Technowrap 2K™ High Temperature (HT) was required due to the high design temperature of the line. The defect was within 100mm of an existing metal clamp that had been installed to repair an earlier defect, presenting a challenge in achieving the required wrap bonding length.

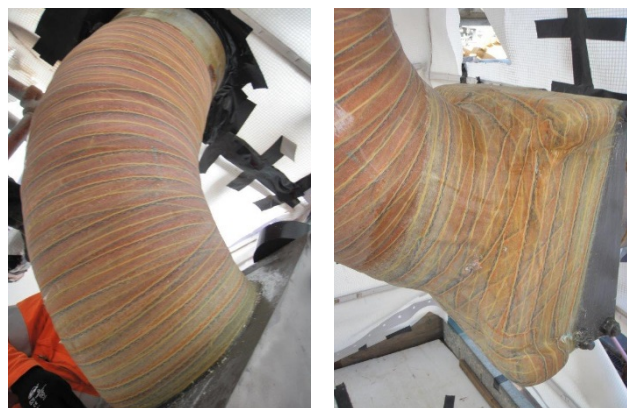
Scope

The line had the following specifications:

Structure	Crude header line
Surface Preparation	Sa 2.5
Class Approval	N/A
Design Pressure	1,960 kPa
Design Temperature	120°C
Application Temperature	20°C
Design Life	5 years
Wrap Length	1 meter
Pipe Diameter	300 mm
Geometry	Clamp and elbow joint
Corrosion Type	Internal
Defect Details	Circumferential



Heat tape to assist with cure speed



Technowrap 2K™ HT applied to elbow and clamp

Solution

- The high design temperature necessitated using the Technowrap 2K™ High Temperature (HT) system
- Wrap applied to both the corroding elbow and the adjacent metal clamp to ensure sufficient bonding
- Heat tape required for elevated temperature cure
- Rapid delivery of repairs (24 hours)

Benefits

- The repair was completed without the use of hot works
- Line remained live and repair completed without a shut-down
- The Applicator's extensive experience allowed the repair to be expertly applied to the complicated geometries of the pipe elbow and clamp
- Documented QA/QC procedures provide a complete record of the repair materials and application process for future reference
- Repair designed to accommodate internal corrosion causing a 20 mm through-wall defect



Technowrap 2K™ HT completed repair