Belzona SuperWrap Strengthens Process Gas Line

ID: 10375

Industry:	*Oil & Gas*	Customer Location:	*India*
Application:	*VPF-Valves, Pipes and Fittings*	Application Date:	*November 2016*
Substrate:	*Carbon steel*		
Products:	*Belzona 1982 (SuperWrap II)*		

Problem

In 2016, the customer identified the need to reinforce the 14-inch HDPC package refrigeration bypass process gas line due to internal wall-thickness reduction in the carbon steel (CS) U-bend.
Based on the radiographic testing (RT) and ultrasonic testing (UT) results, the wall thickness had decreased from the original 19.05 mm to approximately 13 mm, indicating significant metal loss. Belzona SuperWrap was therefore required to maintain the structural integrity of the line and ensure safe operation.



Initial condition of the bypass process gas line



Surface preparation was done by grit blasting



Complete application of Belzona SuperWrap

Application Situation

The composite wrap was designed based on the following operational conditions:
Pipe operating pressure: 60 bar
Design pressure: 102 bar
Temperature: Ambient
Maximum depth internal corrosion: 6.25 mm
Corrosion length: 20 inches
A total of seven layers of composite wrap were specified for reinforcement of the affected pipe section.

Application Method

Prior to application, the pipe surface was abrasive-blasted to achieve a surface profile of 80 - 110 microns, ensuring suitable surface preparation for the composite repair system. Seven layers were then applied using Belzona 1982 resin and Belzona 9381 SuperWrap Reinforcement Sheet, followed by final consolidate with Belzona 9382 Release Film, in accordance with the specified repair procedure.

Belzona Facts

Belzona SuperWrap was adopted as a solution that can be applied in-situ, avoiding the need for shutdown.
In addition, the application of Belzona SuperWrap can also be designed and applied in accordance with ASME PCC-2 standards.

ISO 9001:2015
FS 695214
ISO 14001:2015
EMS 695213

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