

Clamp Encapsulation Repair

Overview

A 16" flare line at a downstream oil refinery had sustained external, internal corrosion and through wall defects. Through wall defects were found in four locations along the 30 meter length of pipework. Temporary clamps had been applied on these four identified defected areas.

Scope

Change out of the flare line had been delayed. The four clamps, installed as a short term repair solution, had reached the end of their design life. With some time until line change out, a second maintenance requirement emerged, one which would restore line integrity up to the scheduled change out. Shutdown was not an option and therefore it was critical that the repair method chosen could be installed to live systems.

Challenges

Walker Technical' composite repair systems are a design engineered repair. For this application the repair design has to include the encapsulation of the four clamps as well as repairing the other identified defects in the Flare Line. This design not only included the applied pressure but also axial tensile loads and bending moments as defined by the Client.

Our Approach

A Technowrap 2K HT™ repair was installed onto the Flare Line which included encapsulation of the clamps. The repair restored the structural and pressure integrity extending its lifetime for a further 4 years, as per Client requirements.

Design

Line - Hydrocarbon
Pressure - 6.8 Barg
Temperature - 204.4°C

