

Live Leak Full Encapsulation Repair

Overview

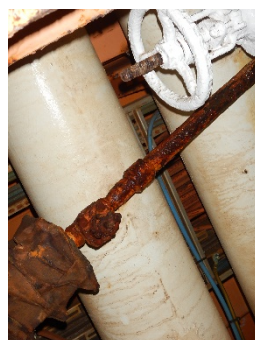
IC Integrity was engaged to provide a live leak repair over a severely corroded flange, clamp, elbow and cold chiller line. IC Integrity site team provided a turnkey solution for the client to meet a rapid turn around requirements and manage risks which included the line breaking off due to being so thin from wall loss. There were large sections which were not surface prepared and had pre-cured Technowrap sections applied initially to strengthen the line before the full wrap repair was applied.

Scope

Structure	Valve, elbow, clamp
Load Requirements	YES – full system loads
Outer Diameter	33.4mm
Design Pressure	690kpa
Design Temperature	40°C
Application Temperature	10°C
Design Life	5 years
Surface Preparation	ST3 – only at the ends of the repair for 200mm
Wrap Length	2,500mm
Fibre Layers	8
Corrosion Type	External Corrosion
Defect Details	Through wall – circumferential slot
Geometry	Complex over structure preformed half pipes



Extreme corrosion prior to Technowrap solution



Structural half shells



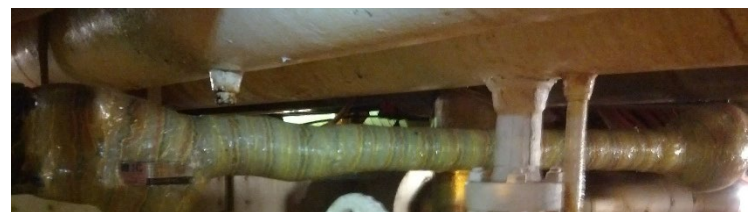
Live leak seal steps

Solution

- Technowrap 2K™ HA system with temperature resistance up to 100°C.
- Complex geometry application according to ISO 24817 and designed for full structural loads.
- Staged approach to manage the risks associated with existing leaks and the potential for the line to break (very thin wall).
- A range of resin systems used to manage sweating pipe, live leak sealing and pre-formed pipe sections.
- Detailed engineering and risk assessment completed in-house as part of the planning and work pack development.

Benefits

- One site team to provide structural repairs, live leak sealing, surface preparation and long term Technowrap solution.
- Structural requirements met within pipe repair design and code approved.
- Rapid turn around of engineering and application services.



Completed Repair