

On-Rope Repairs To Live Service Water Lines

OVERVIEW

At an LNG facility in Western Australia, through-wall defects were discovered on service water lines. To avoid shutdown of the lines, a repair solution was required that could address the defects while encompassing the existing temporary repairs.

SCOPE

The line had the following specifications:

Structure	Service water lines
Surface Preparation	ST3
Design Pressure	10.0 bar
Design Temperature	65°C
Application Temperature	20°C - 40°C
Design Life	19 years
Repair Length	550mm
Pipe Diameter	114mm
Geometry	Wrap over pipe and flanges
Damage Mechanism	Internal corrosion, perforation
Defect Details	250mm axial, fully circumferential, through-wall



The repairs were completed on ropes by ICR IAS JV Application Specialists

SOLUTION

- Temporary repairs were not removed and were instead treated as defects, allowing for live line repairs without additional leak sealing requirements
- 12 layers of Technowrap™ 2K glass fibre was applied, adhering to prepared surfaces adjacent to each defect and providing a 19-year design life
- As scaffolding was deemed impractical, repairs were completed on ropes by ICR IAS JV Application Specialists

RESULTS/BENEFITS

- No shutdown required
- No material removal required
- Safety - No hot works



Temporary repair wraps were left in place, allowing the lines to remain active



The engineered repairs were designed for a 19-year life, matching the lifetime of the original piping