CASE STUDY

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JOINT VENTURE

High Temperature (HT) Steam Line Repair

Overview

A weld crack was found in a pump room steam line on an FPSO. This line required an in service repair without the use of hot work, met the design temperature of 183^{0}C, and a defect modelled as a circumferential loss of 5mm was required to meet ABS class approval.

Scope

The repair had the following specifications:

Structure	Steam line
Class Approval	ABS
Design Pressure	970kpa
Design Temperature	183^{0}C
Surface Preparation	Sa 2.5
Application Temperature	50^{0}C
Defect Type	Circumferential
Design Life	2 years
Wrap Length	1,000 mm
Pipe Diameter	200 mm NB
Corrosion Type	Cracking
Defect details	Circumferential through wall
Post Cure	Yes – heat tapes

Repair location before surface preparation

Post curing of repair via heat tapes

Solution

- Technowrap™ 2K HT system with temperature capability up to 220°C
- Heat tapes used to provided post cure temperature of 60°C - 80°C
- Crack modelled as complete section loss over weld section
- Spongejet™ surface preparation used for surface preparation

Benefits

- Spongejet™ fully recyclable system reduced equipment and materials footprint led to improve freight costs
- Start-up design was used to bring line back on line two days quicker
- ABS approved repair
- Technowrap provided both structural loads and pressure containing requirements

Completed repair