

FPSO Produced Water Line Repairs

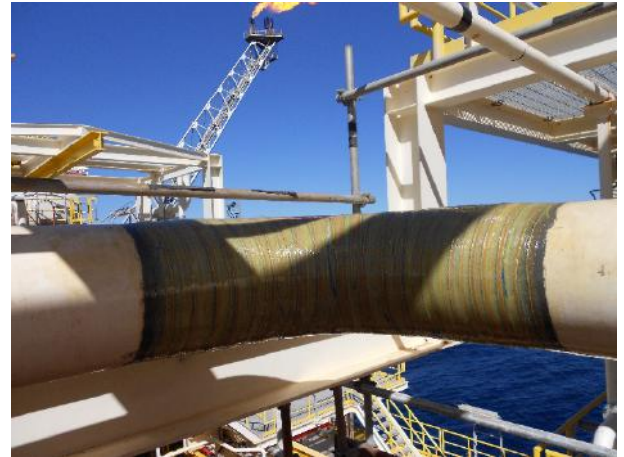
Overview

A produced water system on an FPSO was experiencing internal corrosion in a number of locations. To ensure there was no production loss, the repairs across 10 locations needed to be completed while the system was live. This required surface preparation, repair application and final coating to occur at the operational temperature of 50°C. Due to the internal corrosion rate, the repair was required to seal a potential through wall defect at the size of a 20mm hole. This solution also required ABS class approval for a design life of 10 years.

Scope

The produced water line repair had the following specifications;

Design Pressure	1,650kpa
Class Approved	ABS
Design Temperature	80°C
Application Temperature	50°C
Design Life	10 years
Surface Preparation	Sa2.5
Wrap Length	1,200mm
Pipe Diameter	324mm
Corrosion Type	Internal
Defect Details	20mm Hole (through wall)
Geometry	Elbow



Challenges

The surface preparation utilized low dust dry abrasive with controlled surface impact so that thin walled live line blasting could take place.

All repairs had to be completed while the system was live at 50°C which meant that the wrap application had to be smooth and quick while ensuring that the required QA/QC checks were met.

Solution

The solution to this project included;

- Technowrap 2K™ HA system with temperature resistance up to 90°C;
- Application at 50°C by experienced and skilled specialist technicians ;
- Design to accommodate significant internal corrosion over the life of the repair;
- 10 year design life;
- ABS class approval;
- Complete repair to a live line without production loss.

