

Riser Repair – Structural and Pressure Containing

Overview

A 500mm NB gas riser on an offshore platform had experienced significant wall thinning due to external corrosion below the platform sea deck. A Technowrap™ solution was provided which met the required standards of ASME B31.8 (gas transmission and distribution, as an AEA class 3 pipe repair) and ISO 24817 with structural loadings for axial and bending moment. The repair documentation included drawings, work method statement, detailed design and the typical ICR.IAS JV quality documentation.

Scope

The repair had the following specifications:

Structure	Riser
Surface Preparation	Sa2.5
Technowrap™ Fibre	Carbon (triaxial) Carbon (uniaxial) Glass (triaxial)
Design Pressure	125bar
Design Temperature	80°C
Design Life	20 years
Wrap / Repair Length	500mm
Corrosion Type	External
Axial Loading	331kN
Bending Moment	143kNm
Design Code	ISO 24817 & ASME B31.8



Corrosion location on Riser



Technowrap™ repair partially completed

Solution

- Combination of Technowrap™ fibres to deliver the structural requirements and minimise material and labour costs
- Technowrap 2K™ LT system used to wrap all fibre types

Benefits

- ICR.IAS JV Repair register to track repair details
- Local ICR.IAS JV engineering experience driving the scope
- No hot work required to complete the repair
- No shut-down required, maintaining platform productivity
- Documented QA/QC procedures provide an excellent record of the repair materials and application process for future reference



Completed Technowrap™ repair with 2k fibre final coating