

CASE STUDY

Radio Tower Repair

Overview

A braced circular column of a Radio Tower suffered significant section loss due to external corrosion. Due to its location on an offshore platform, no hot works were permitted during completion of the repair.

Technowrap™ Structural Rehabilitation System (SRS) was used to provide structural reinstatement of the column.

Scope

The Radio Tower had the following specifications:

Structure	Radio Tower column and bracing member
Surface Preparation	St3
Class Approval	N/A
Design Load	750 kN
Design Temperature	80°C
Application Temperature	20°C
Design Life	20 years
Wrap Length	800 mm
Pipe Diameter	150 mm
Geometry	Bracing joint / Cluster
Corrosion Type	External
Defect Details	Hole (through-wall)



Through-wall defect



Application of Technowrap™ SRS

Solution

- Rope access used to complete surface preparation, application of repair and coating
- Bristle blasters used to prepare the surface to St3 and a surface profile of between 65 and 130 microns
- The large through-wall defects covered with pre-cured sections of Technowrap™ and bonded in place to act as a former for the Technowrap™ SRS

Benefits

- No hot work required to complete the repair
- No shut-down required, maintaining platform productivity
- Technowrap™ SRS flexibility in application allowed the rope accessed repair works to be stopped and started as required due to weather conditions on the platform
- Documented QA/QC procedures provide a complete record of the repair materials and application process for future reference



Completed Technowrap™ SRS repair with coating