

## Technowrap™ Engineered Composite Repairs SRS - Stair Tower Repair

**Date**  
2017  
**Client**  
Major North Sea Operator  
**Location**  
UK North Sea



### Scope

The stair tower on large North Sea platform was out of use due to heavy corrosion on the structural members. The operator contracted ICR to deliver a cost effective option to re-instate the stairwell to its original design capacity. Phase 1 took place in July 2017 whereby work commenced on the lower section of the stair tower with approx. 80 metres of beams and tubulars being repaired. Phase 2 began in August 2017 to repair the upper section of the stairwell.

### Solution

Technowrap™ SRS - ICR's structural carbon fibre repair system - was recommended to provide added toughness. A low temperature curing resin was used and designed to suit ambient conditions in the North Sea.

### DESIGN SPECIFICATION

Design Temperature	30°C
Design Lifetime	20 years
Axial Load	60kN (compression)
Bending Moment	6.0kNm (Mxy) / 2.0kNm (Mxz)
Surface Preparation	SA2.5

The client provided a surface profile of SA2.5 (grit blasting). Complexity of the scope required maximum efficiency from the onboard fabric maintenance (FM) team and prior to mobilisation, ICR trained the FM crew on the application of gel coating. This was applied within 4 hours of blasting in order to hold the blast and prevent gingering. A team of four ICR technicians worked back to back within a double skin habitat to maintain a suitable environment. Materials were prepped and ready for the next shift to ensure optimum productivity on the job.

### Results & Benefits

- The stairwell composite repair is a long term integrity solution which will avoid corrosion in the future and is designed for the remaining life of the asset
- Cost effective solution compared with stairwell replacement
- A quicker solution delivered by multi-skilled technicians which ensured the stairwell was back in use as safely and timely as possible