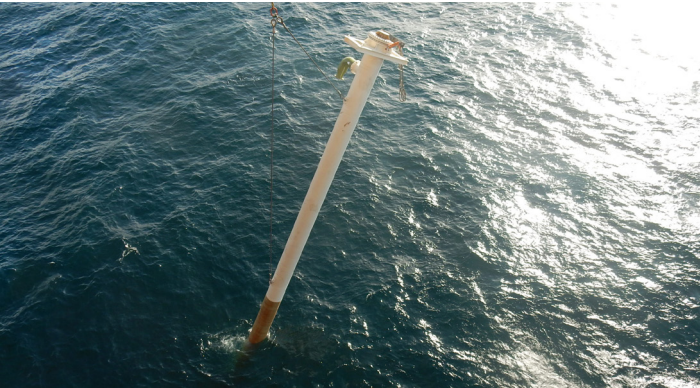


Technowrap™ Engineered Composite Repairs  
2K HT - Caisson Corrosion Protection

**Date**  
August, 2019  
**Client**  
Major North Sea Operator  
**Location**  
Onshore Aberdeen



Scope

ICR were engaged to provide a engineered composite repair solution on a produced water caisson prior to installation offshore. The previous caisson was corroded due to wave action causing thermal cycling.

Solution

Two new sections of a 12" caisson were fabricated and sprayed with an internal coating prior to ICR applying the composite solution. It was a design requirement that surface preparation to Sa2.5 and was achieved prior to the application of 4 layers of Technowrap™ 2K using HT (High Teemperature) resin.

These were then welded together and an angular profile of 45μ was achieved using bristle blasters. A composite wrap was then applied to cover the welded section. Heat blankets were used throughtout the process to assist curing.

|                     |             |
|---------------------|-------------|
| Design Temperature  | 100°C       |
| Design Pressure     | 2.5 bar     |
| Material grade      | SuperDuplex |
| Surface Preparation | Sa2.5       |

The change in temperature was taken into consideration by derating the allowable strains in line with ISO 24817.

Results & Benefits

- ICR technicians worked day and night for a total of 7 days to complete the repair
- A repair lifetime of 20years was given
- The solution will prevent future corrosion due to thermal cycling, maintaining the integrity of the structure