# **Belzona Repairs Grayloc Flange Damage in Water Injection Line**

ID: 7967

Industry: Oil & Gas Customer Location: Ghana, FPSO
Application: VPF-Valves, Pipes and Fittings Application Date: March 2019

Substrate: Carbon Steel

Products: \* Belzona 1111 (Super-Metal),

#### Problem

The topside end fitting connection joint on the riser used a Grayloc system to contain the high pressure. Due to a material defect a small area on the gasket had worn away, causing a leak.









## **Photograph Descriptions**

- \* 1. Defect area,
- \* 2. Cleaning in progress,
- \* 3. Area built up with Belzona 1111,
- \* 4. Repair made level and smooth with abrasive paper,

## **Application Situation**

Riser connection flange on FPSO top side, operating at 345 bar pressure up to 60°C.

### **Application Method**

The application was carried out in accordance with Belzona System Leaflet VPF-13. After the Belzona 1111 was applied, a fine grain abrasive paper was used to achieve a smooth and level finish.

#### **Belzona Facts**

Welding was impractical for this repair as hot work on the pressurized equipment would require further hydrostatic testing to confirm the integrity of the equipment. It was also deemed undesirable due to the intrusions of heat stresses on the substrate, and the potential to introduce galvanic corrosion. Belzona was a fast and easy cost effective repair that was cured and returned to service within 24 hours.

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