

## Challenge

### Issue

Severe pitting corrosion throughout the vessel led to an immediate need for repair or risk failure of the deaerator which is required to maintain well production O<sub>2</sub> levels.

### Goal

Repair, restore, and provide long-term protection to deaerator vessel with expected reliability based maintenance cycle of >3 year.

### Root Cause

Failure of previous lining exposed steel to a highly corrosive, chloride, and O<sub>2</sub> rich environment at elevated temperature.



Deaerator on offshore platform

## Solution

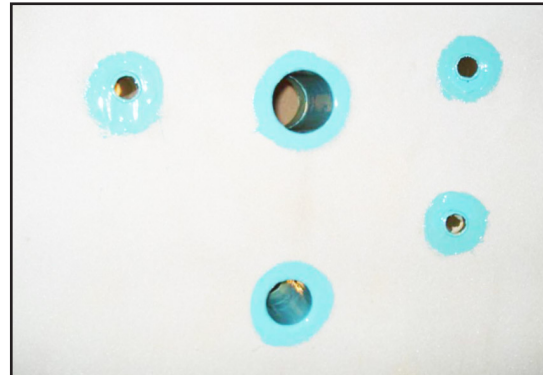
### Preparation

- Grit blast remove residual failed lining
- Decontaminate to remove chlorides
- Abrasive blast to Sa 2.5 with 3 mil (75 µm) surface profile

### Application

1. Stripe coat welds with **ARC S2**
2. Spray apply 2 coats of **ARC S2** total DFT of 32 mils (800 µm)

**Note:** Repair nozzles <2" (5 cm) OD using preformed sleeves made of **ARC S2** with carbon fiber cloth.



Preformed ARC sleeves for nozzles <2" OD

## Results

### Client Report After 5 Years

- ARC lining was installed in 2009
- At 5 years, no evidence of corrosion has been found and no repairs associated with protected areas have been required
- This exceed their reliability based maintenance cycle by 66% allowing deaerators to go to 4 year inspection cycle as opposed to 3 years



Finished Application of ARC S2