

# 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<sup>2</sup> 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<sup>2</sup> rich environment at elevated temperature.

# 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.

## **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



Deaerator on offshore platform



Preformed ARC sleeves for nozzles <2" OD



Finished Application of ARC S2

Technical data reflects results of laboratory tests and is intended to indicate general characteristics only

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