

## Challenge

### Issue

Various areas with high metal loss were found when inspecting a salt water pump, which were affecting performance.

### Goals

- Resurface internals and recover efficiency
- Protect equipment from corrosive operating conditions
- Reduce 10 month delivery time for new pump

### Root Cause

The corrosive conditions added to content of solids in pumped fluid, cause corrosion and erosion.



Pump body as inspected

## Solution

### Preparation

- Clean with 338 SRR and hot water
- Grit blast to Sa 2.5 with 3 mil (75 - 125 µm) profile

### Application

1. Weld metal plate in cut water and apply **ARC BX1** @ 250 mils (6 mm)
2. Apply **ARC 10** @ 80 to 160 mils (2-4 mm) on flanges and machine to level
3. Apply **ARC 858** @ 250 to 315 mils (3-8 mm), to mold wear ring seats and smoothen all internal surface
4. Apply **ARC S2** in a 2 coat system @ 20-24 mils (500-600 µm) on all internals



Repair being performed, body and cover

## Results

### Client Reported

■ New pump:	\$126,800
■ New impellor and accessories:	-\$ 39,016
■ <b>ARC solution:</b>	<b>-\$ 24,215</b>
■ <b>Total savings:</b>	<b>\$ 63,569</b>
■ Delivery time for new pump:	300 days
■ <b>Repair time with ARC:</b>	<b>20 days</b>

\*ARC BX1 is the "Bulk" package size of ARC 890

\$=USD



Reconstructed and finished pump