Main Seawater Cooling Pump

Power-Fossil — Coal Fired
ARC 858 and 855 Coatings
Case Study 025

Challenge

Issue

The pump performed inefficiently, and increased downtime and maintenance. It had been treated biannually with a combo of cathodic protection and coal tar epoxy coating.

Goal

Provide 6 year's of service life to the main seawater cooling pump.

Root Cause

Severe corrosion at bottom part of the pump, bell housing, and diffuser vanes.

Solution

Preparation

- Remove remainder of coal tar epoxy coating
- Grit blast to Sa 2.5 with 3 mil (75 µm) angular profile

Application

1. Repaired and rebuilt severe corrosion pitting using ARC 858
2. Three coats of ARC 855 with DFT of 14 mils (350 µm) per coat

Results

Service Life Since Coating with ARC

- 18 years

Client Reported Cost Avoidance:

- A new pump, estimated: DKK 6M (€ 800K)

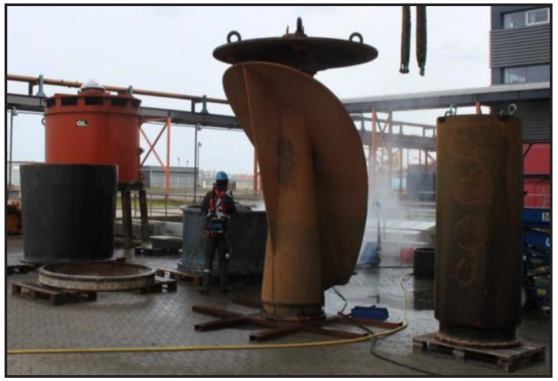
Client Estimated Maintenance Savings

Elimination of pump disassembly and biannual coating assessed at: DKK 1M (€ 130K)

Total Savings in 18 years **DKK 7M (€ 930K)**

Pump diffuser after removal of old coal tar epoxy coating

Completed application of ARC 858 and ARC 855 to all the wet end pump components



Inspection after 18 years service revealed the ARC 855 coating still to be in excellent condition

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