Primary Fan Pump

Pulp and Paper — Paper Machine
ARC 855 and 858 Coatings
Case Study 028

Challenge

Issue

Primary fan pump damaged by erosion/ corrosion had high replacement cost for cast steel spare ($75K), and stainless steel ($105K) with long lead times (>4 weeks).

Goals

- Provide reduced cost option to spare parts replacement with equivalent service.
- Quick turn around ability to meet shortened shut down periods

Root Cause

Increased use of clay as a blocking agent in the paper stock was abrading away internals of cast iron pump.

Solution

Preparation

- Decontaminate surface
- Reestablish damaged cutwater by using expanded metal mesh
- Grit blast to Sa 2.5 with 3 mil (75 µm) angular profile

Application

1. Imbed ARC 858 in metal mesh to rebuild cutwater
2. Apply ARC 858 to fare pitted areas
3. Apply 2 coats ARC 855 to a total DFT of 30-40 mils (0,75 mm - 1 mm)

Results

Client Reported

- At 1 year inspection no damage to coating
- Client saved over $70K compared to purchasing new high alloy pump
- Repair completed in 36 hours vs 4 week lead time for spare parts
- Application has been repeated several times at this mill on other pumps including mill effluent pumps and various stock transfer pumps

$=USD

Damaged surfaces of pump

Re-building with ARC 858

Final topcoat of ARC 855

A.W. Chesterton Company
860 Salem Street, Groveland, MA 01834 USA

EN23593.27
09/14

CHESTERTON
Global Solutions, Local Service.