

# Limestone Slurry Recirculation Pump

Power-Fossil — Desulfurization
ARC BX2\* and MX1 Coatings
Case Study 104

# Challenge

#### Issue

Failure of rubber lining in <3 years causes blockage of downstream atomization nozzles and requires costly unscheduled shutdowns.

#### Goals

- Reduce risk of delamination and blockage
- Increase MTBR to >3 years

#### **Root Cause**

12-15% limestone slurry undercuts rubber lining, leading to delamination. High chloride slurry attacks exposed metal.



Existing rubber liners

# **Solution**

### **Preparation**

- Use new rubber liner to make template
- Remove old liner
- Grit blast to Sa 2.5 with 3 mils (75 μm) angular profile

## **Application**

- 1. Use ARC BX2\* to rebuild initial thickness of removed rubber liner to 1-1.5" (25-38 mm)
- Apply ARC MX1 @ .25" (6.4 mm) to ARC BX2\*, using template to screed surface to original dimensions

\*ARC BX2 is the "Bulk" package size of ARC 897



Damaged liner removed from casing

## **Results**

## **Client Reported**

- No unscheduled outages to clear blocked atomization nozzles after >4 years
- Inspection at 4 years showed >80% of ARC lining thickness remaining with no undercutting
- Cost of ARC lining was 80% of rubber liner replacement
- ARC coating is easy to repair in field



ARC-coated casing