

Challenge

Issue

Excessive abrasive wear to suction spool on limestone recirculation pump for flue gas desulfurization after <30,000 hours reduced flow to spray nozzels

Goal

- Avoid >\$100K in OEM replacement parts costs and extend MTBF

Root Cause

15-20% limestone slurry in corrosive carrier attacked super duplex stainless

Solution

Preparation

- Mold was prepared using new spool section
- Grit blast to Sa 2.5 with 3 mil (75 µm) angular profile

Application

- Install mold section and apply **ARC MX1** to suction spool at 240-350 mil (6-9 mm)
- Topcoat with **ARC SD4i** at 15-20 mil (375-500 µm)

Results

Client Reported

- Repairs carried out in <1 week compared to >6 week lead time for spare parts
- Spools in service now for >6000 hours, showing no sign of abrasive wear

OEM parts replacement	\$ 104,000
ARC repairs	\$ 27,000
Savings	\$ 77,000

\$=USD



Suction spool after 30,000 hours



Installing ARC coating to wear region



Repaired unit ready for install