

Challenge

Issue

Chrome hardened liners wear out in <3 months and carry high spare parts replacement cost (\$240K per year).

Goals

- Provide MTBR >12 months
- Reduce spare parts replacement cost

Root Cause

Severe high velocity abrasion from the pneumatic transport of fly ash wears liners.



Chrome liner after only 3 months operation

Solution

Preparation

- Grit blast to Sa 2.5 with 3 mil (75 μm) angular profile

Application

1. Fabricate urethane mold using new liner with annular gap of .75" (1.9 cm)
2. Insert mold and center in cone
3. Fill annular gap between OD of mold and ID of cone with **ARC MX1** and compact



Final stage of molding ARC MX1

Results

Client Reported

- At 12 months, **ARC MX1** showed no noticeable wear
- Liner MTBR extended to >36 months
- The plant has eliminated the use of chrome liners and is exclusively utilizing **ARC MX1** in all abrasion areas

Savings

- New chrome linings: \$240,000/year
- **ARC MX1** lining: -\$ 32,000/year
- Net Savings: \$208,000/year

\$=USD



Ash cone after molding ARC MX1 in place