

Slurry Discharge Chute

Mining/Mineral & Ore Processing — Comminution
ARC BX1 Coating
Case Study 140

Challenge

Issue

Rubber liner in discharge chute that connects ball mill discharge hopper to slurry pump is wearing exposing metal to abrasion.

Goals

 Extend MTBR of discharge chute and reduce associated maintenance cost

Root Cause

High volume of abrasive slurry surpasses abrasion resistance of rubber liner.

External metal patch welded on chute to extend MTBR.

Solution

Preparation

- Clean surface from dust and particles
- Flapper wheel to Sa 2.5 with 2 mil (50 μm) angular profile on metal, and to roughen rubber lining surface.

Application

1. Apply ARC BX1 to complete internal surface at a thickness of >500 mil (12.5 mm)

Results

Client Reported

 ARC-coated chutes have extended MTBR to more than 3X that of rubber lined

Repair Costs

Loss production every 2 hours: \$ 50,000

ARC repair: - \$ 6,000

Savings on an 2 hour outage*: \$ 44,000

*Savings are based on 1 outage due to equipment failure.



Rubber surface is prepared by roughening with flapper wheel.



Chute protected with ARC BX1 over rubber and worn metal.

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