

### Mining/Mineral & Ore Processing — Beneficiation ARC BX5 & S2 Coatings Case Study 026

# Challenge

#### Issue

Ceramic tile lasts 4 – 6 months in this application before cracking and delamination occurs. Exposed steel wears through and requires weld repair before retiling. Previous patch material lasts <7 days.

#### Goals

- Extend patch repair to >30 days
- Reduce maintenance cycle time to <12 hours</p>

#### **Root Cause**

Brittle fracture failure of ceramic tiles results from impact of coal up to 10 cm (4 inch) diameter. Acidic wash water corrodes steel.

# Solution

#### Preparation

- Grind down residual ceramic epoxy with power tool
- Decontaminate surface with solvent (MEK)
- Roughen with a rotary grinding tool

### Application

1. Apply ARC BX5 at 120 – 200 mils (3 – 5 mm) to steel and cove up onto the ceramic tile

2. Apply ARC S2 at 12 mils (300  $\mu\text{m})$ 

# Results

### **Client Reported**

- ARC repairs completed in 8 hours
- ARC solution provided over 6 months service before a touch-up was required
- Due to success client has selected ARC coatings as "patch repair" for all tile-lined chutes and lines



Damage to existing ceramic tiles caused unscheduled shutdown and loss of production



Installation of ARC BX5



ARC BX5 with ARC S2 topcoat cures rapidly, allowing fast return to service of chute

Technical data reflects results of laboratory tests and is intended to indicate general characteristics only

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