

Challenge

Issue

Premature wear of basalt-cast-lined connectors in <6 months result in loss of production capacity. Repair of basalt liner requires shipping off-site with increased lead time.

Goals

- Increase MTBR to >6 months
- Reduce production losses
- Avoid shipping costs for outside repairs

Root Cause

Impact and wear from fine coal particles cause brittle fractures and wear of basalt liner.



New “T” pieces awaiting coating

Solution

Preparation

- Remove existing liner
- Grit blast to Sa 2.5 with 3 mil (75 µm) profile

Application

1. Fabricate UHMWPE* mold to ID – 16 mm
2. Prime ID with **ARC MXP** @ 10 mil (250 µm)
3. Preheat part A of **ARC MX1** to 110°F (42°C) then mix with part B and part C
4. Center mold and pour **ARC MX1** into annular gap, then compact with tool
5. When cured, remove mold

* Ultra High Molecular Weight Polyethylene



Compacting ARC MX1

Results

Client Reported

- Extended connector life to >18 months (3X)
- Connectors easily repaired on site
- Offsite shipping eliminated
- Turnaround time improved by 16 days
- Client requested **ARC MX1** as OEM liner for new “T” pieces



ARC coated surfaces