Cement - Air Separator

Mining/Mineral & Ore Processing — Separator
ARC BX1* and BX2* Coatings
Case Study 095

Challenge

Issue

Abrasion to internals of separator prohibited client from achieving warranty requirements. Oversize particles contaminate kiln operation. Client did not want to spend money on metallurgical upgrade.

Goals

- Client wish to avoid warranty cost
- Avoidance of $30K for metallurgy upgrade

Root Cause

High velocity sliding wear wore vanes to such a degree that excessively large particle passed into kilns.

Solution

Preparation

- Grit blast surfaces to 3 mil (75 µm) angular profile

Application

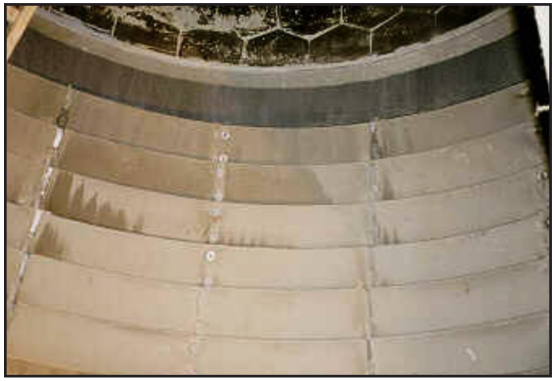
1. Upper half of vanes lined with ARC BX1* at .25-.375" (6,4 - 9,6 mm) due to coarse particle wear
2. Lower regions coated with ARC BX2* at .125-.175" (3,2-4.5 mm) for fine particle wear

**ARC BX1 is the "Bulk" package size of ARC 890*
**ARC BX2 is the "Bulk" package size of ARC 897*

Results

Client Reported

- MTBF is now 3+ years, which exceeds warranty requirements
- Client has specified **ARC Efficiency and Protective Coatings** as one of their primary suppliers for wear-resistant protection of air separators
- >6 ARC-coated units have been installed in Europe, Latin America, and North America



Typical wear regions on internals of separator

Lined rotor unit ready for installation

Installed rotor inside stator

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