

Challenge

Issue

The exhaust fan required unscheduled weld repairs every 2 months and complete replacement after only 6 months. Cost and service life were unacceptable.

Goals

- Extend MTBR of fan to a minimum of 3X previous cycle time
- Reduce maintenance cost

Root Cause

Attack of the fan by the corrosive exhaust gases from smelting operation at 120°C.

Solution

Preparation

- Dynamically balance fan and adjust as required
- Grit blast to Sa 2.5 with 3 mil (75 μm) angular profile

Application

- 1. Use ARC 858 build eroded volute and parts
- 2. Apply 2 coats ARC HT-T to total DFT of 40 mils (1 mm)
- 3. Statically balance fan

Results

Client Reported

MTBR has increased from 2 months to 6 months with inspection and minimal repairs done in field without fan disassembly.

Fan life extended from 6 months to 3 years

Annual cost of previous method: Annual ARC Solution Cost:	€47,000 -€26,000



Condition of fan rotor after sandblasting



Fan being coated



Completed application to 1600 mm fan

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

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