

Challenge

Issue

Frequent (1 per year) cleaning procedure to remove accumulated dust required extensive downtime. Dust buildup led to vibration and required shipping off-site for re-balancing.

Goals

- Minimize equipment downtime for cleaning
- Protect bearing life
- Reduce annual fan rebalancing

Root Cause

Build-up of dust, ash, and acid condensate attacks and corrodes substrate leading to imbalance and vibration impacting bearing life.



Ash buildup fan

Solution

Preparation

- Hot water pressure wash 190°F (85°C).
- Grit blast to Sa 2.5 with 3 mil (75 µm) angular profile

Application

1. Apply 2 coats of **ARC S4+** @ 20 mils (500 µm) wft/coat
2. Total DFT 40 mils (1000 µm)
3. High voltage spark test @ 100 v/mil (4 v/µm)



Hot water wash with grit blasting

Results

Client Reported

- Cleaning cycle extended from 1 to 4 years
- Low surface energy of **ARC S4+** reduced dust buildup making cleaning quicker and easier to perform
- After 4 years, there are no signs of any chemical attack to fan blades



ARC S4+ coated fans