Exhaust Fan Assembly

Chemical Processing — Process Equipment
ARC S4+ Coating
Case Study 121

Challenge

Issue

Existing FRP* linings fail in <5 years causing corrosion and chemical attack. Weld repair and relining does not meet maintenance cycle requirements.

Goals

- Achieve >5 years of service life with no corrosion/chemical attack to fan assembly

Root Cause

Acid vapors attack FRP coating, exposing 304 SS impairing performance of fan.

**Fiberglass Reinforced Polymer*

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 with total DFT of 40 mils (1000 µm)
2. High voltage spark test @ 100 v/mil (4 v/µm)

Results

Client Reported

- Inspection at 9 months rated coating in superior condition
- Based on comparison to FRP at 9 months, ARC S4+ is expected to exceed 5-year goal

Inside the housing after FRP removal

ARC S4+ applied on a housing

Nine month inspection of S4+ shows high gloss finish remains

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