

Challenge

Issue

Corrosion related damage required replacement of duct after only 4 years.

Goal

Increase service cycle of flue gas system by increasing corrosion of ducting. Alternative option to coating is replacement with costly duplex stainless steel.

Root Cause

High concentrations of acids (H_2SO_4 and HF) at 266-320°F (130-160°C) condense on cool duct walls causing corrosion.



Transport pipe damaged by corrosive flue gas

Solution

Preparation

- New carbon steel pipes were fabricated
- Grit blast to Sa 2.5 with 3 mil (75 μ m) angular profile

Application

1. Apply [ARC 858](#) to the weld seams
2. Apply 2 coats of [ARC S7](#)



Applying ARC 858 to the weld seams

Results

Inspection at 14 months

Client observed that ARC coating performed without degradation.

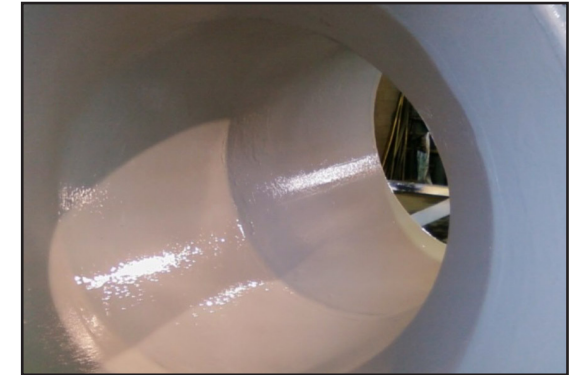
Alternative Solution Cost

Duplex steel pipe option: €125K

Carbon steel substrate with [ARC S7](#) cost

[ARC Repair \(labor and materials\):](#) -€ 26K

Client Total Savings: € 99K



A finished section of ARC S7 pipe