

Challenge

Issue

Customer was considering replacing lower section of stack liner due to severe flue gas induced corrosion. Replacement cost and unscheduled downtime was estimated at \$500K.

Goals

- Avoid costly stack liner replacement
- Protect existing stack from further corrosion

Root Cause

Condensing flue gas was generating corrosive acid concentrations on unprotected steel.



Severe corrosion inside the stack

Solution

Preparation

- Mechanical removal of scale and corrosion with scrapers
- Power wash to remove invisible salts in metal
- Grit blast to Sa 2.5 with 3 mil (75 µm) angular profile

Application

1. Apply **ARC S7** stripe coat to weld seams
2. Apply 2 coats of **ARC S7**, total ~DFT: 40 mil (1.0 mm)



First coat of ARC S7

Results

Client Reported

- **ARC S7** prevents corrosion of remaining metal

Cost Savings

■ Replacement cost for stack:	\$500K
■ ARC for lower section of stack:	\$ 10K
Total Cost Savings:	\$490K

The customer subsequently coated the rest of the stack and duct work from the bag house with ARC coatings.

\$=USD



Second coat of ARC S7 applied, completing the project