

## Challenge

### Issue

Unlined steel pipes exposed to corrosive coke gas presented serious environmental and safety risks due to leaking toxic and flammable gases. Client required corrosion resistant liner for newly purchased pipe.

### Goal

- Provide corrosion resistant lining for new pipe

### Root Cause

Corrosive constituents of converter gas condensed onto the bottom of the pipes and aggressively destroyed previous lining and steel substrate.



Sections of pipe prior to protection with ARC S4+

## Solution

### Preparation

- Grit blast to Sa 2.5 with 3 mil (75  $\mu\text{m}$ ) angular profile

### Application

1. Airless spray 2 coats ARC S4+ at DFT of 14 mils (350  $\mu\text{m}$ ) per coat to the bottom of the pipes where the condensate collects. Coating application terminated 6" (150 mm) from weld connection
2. After pipe sections are welded together in field, ARC S4+ brush applied @ 30 mils (750  $\mu\text{m}$ ) on ID of girth weld

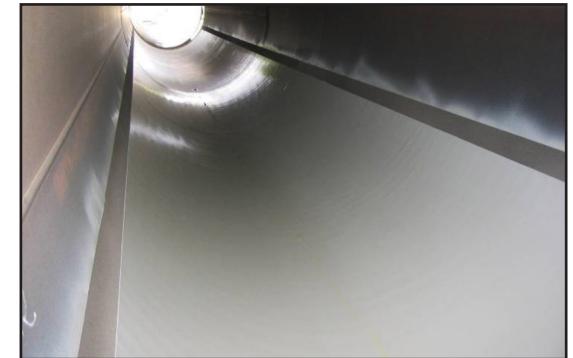


Application of the ARC S4+ was completed using airless spray equipment

## Results

### Client Reported

- ARC S4+ based third party testing against competitive coatings
- 350 linear meters of pipe lined in 2006
- No failures after 8+ years in service
- By 2010 an additional 1500 linear meters of pipe was lined with ARC S4+



Completed application of the lining only to the bottom of pipe where condensate created severe corrosion problems