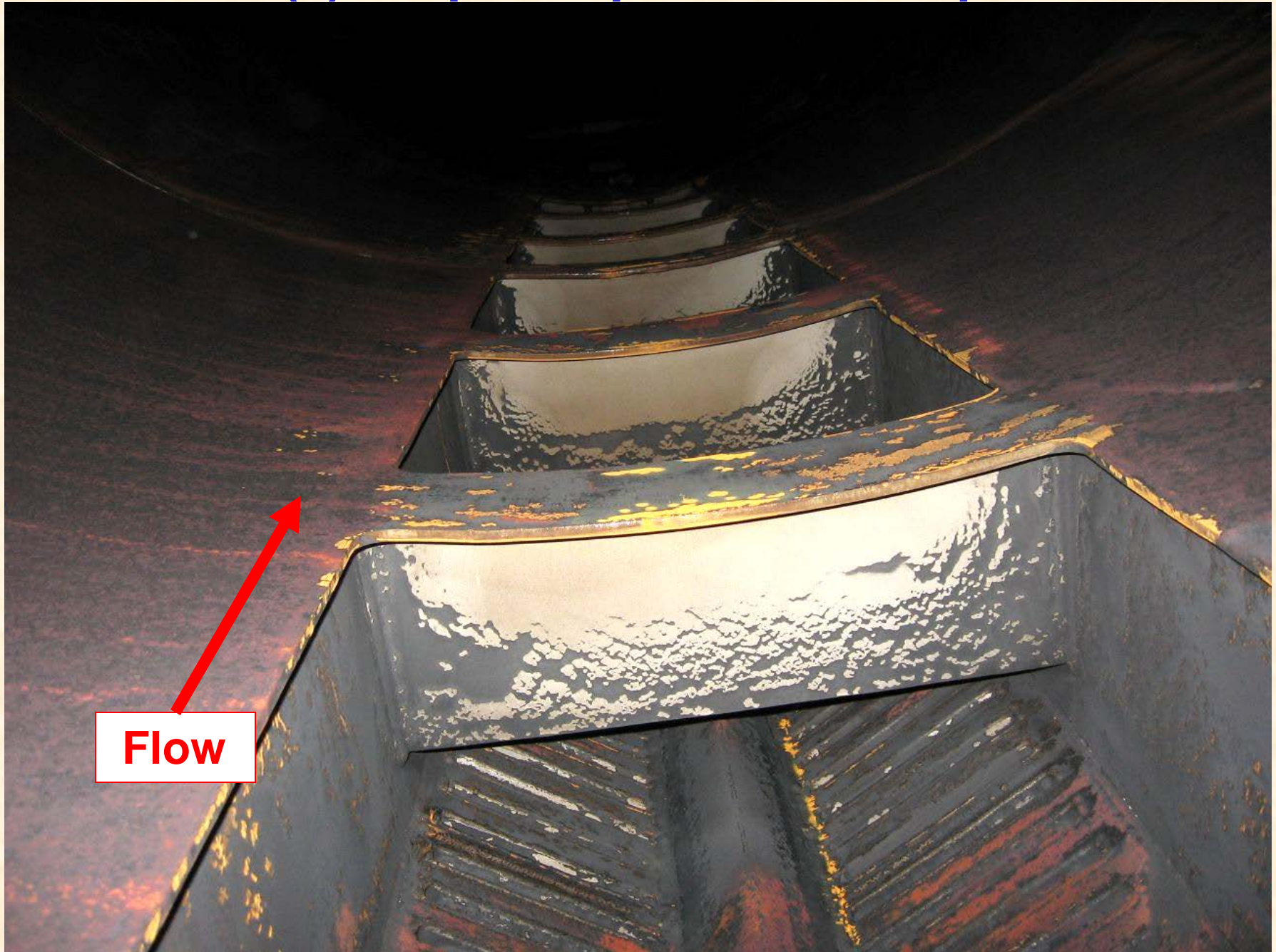
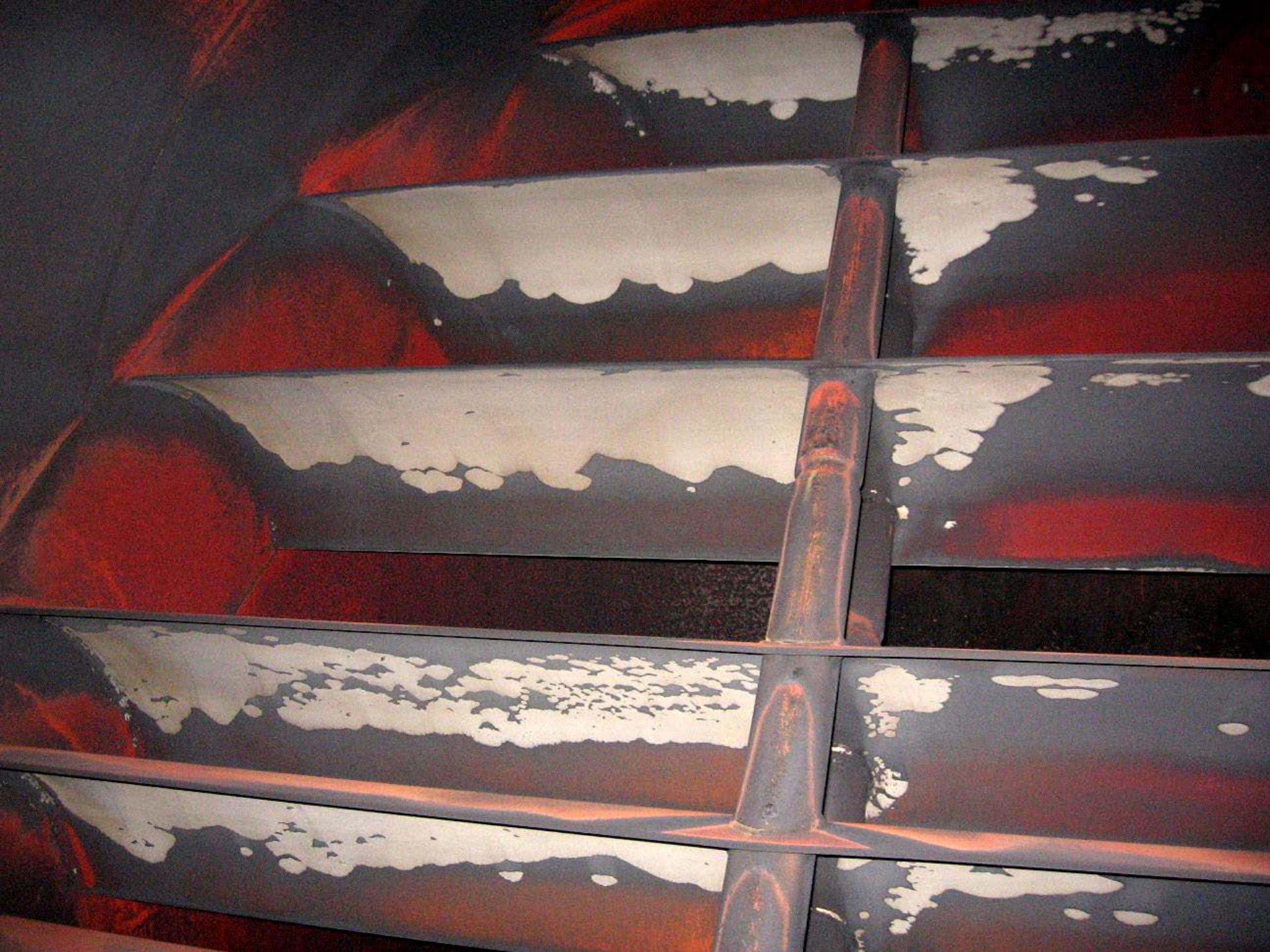


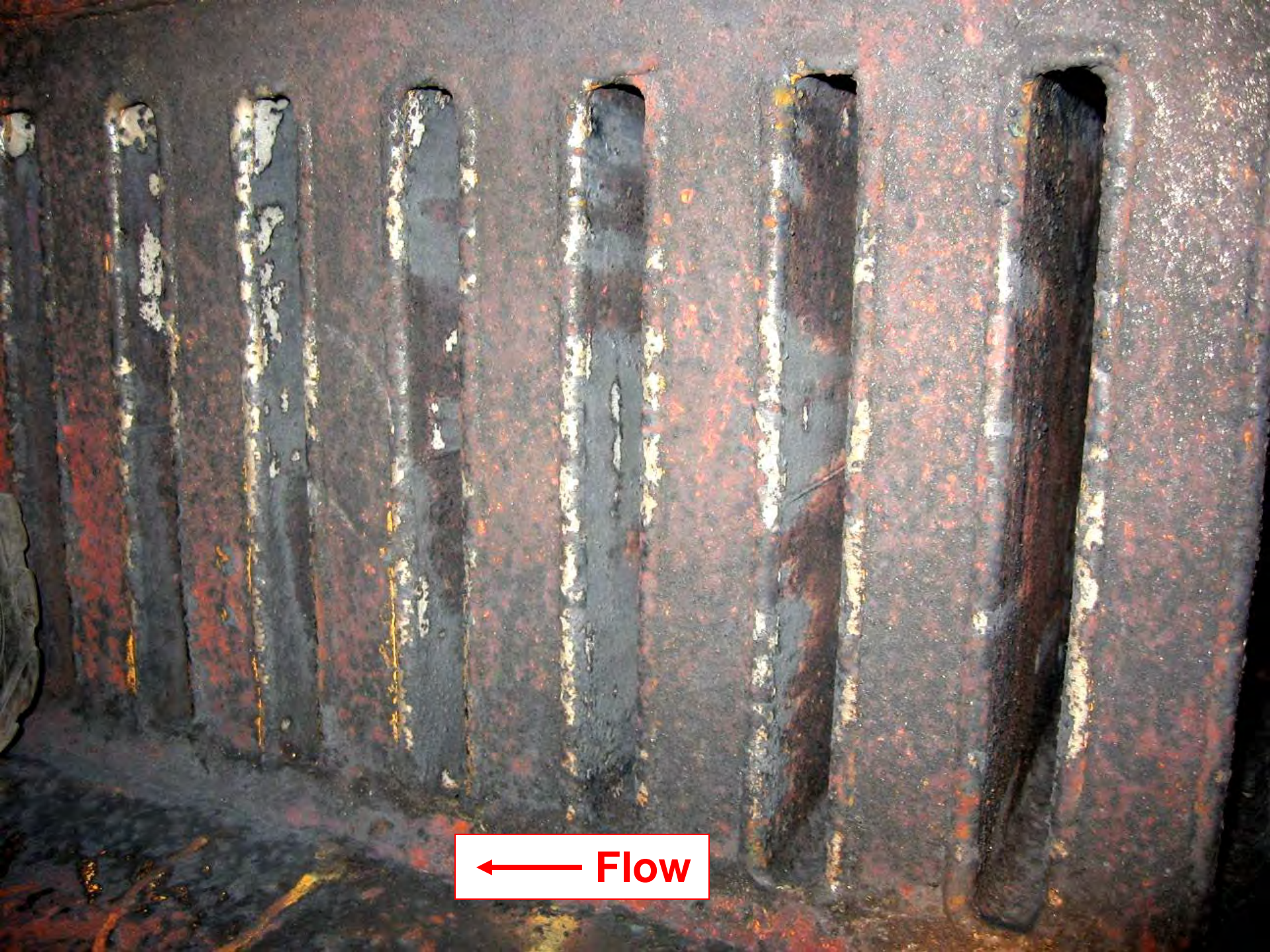
Comanche 3 Air Cooled Condenser Initial post-operational Inspection

3rd Annual ACC User's Group * September 19-20, 2011
Andrew Howell * Xcel Energy

Reason(s) for post-operational inspections



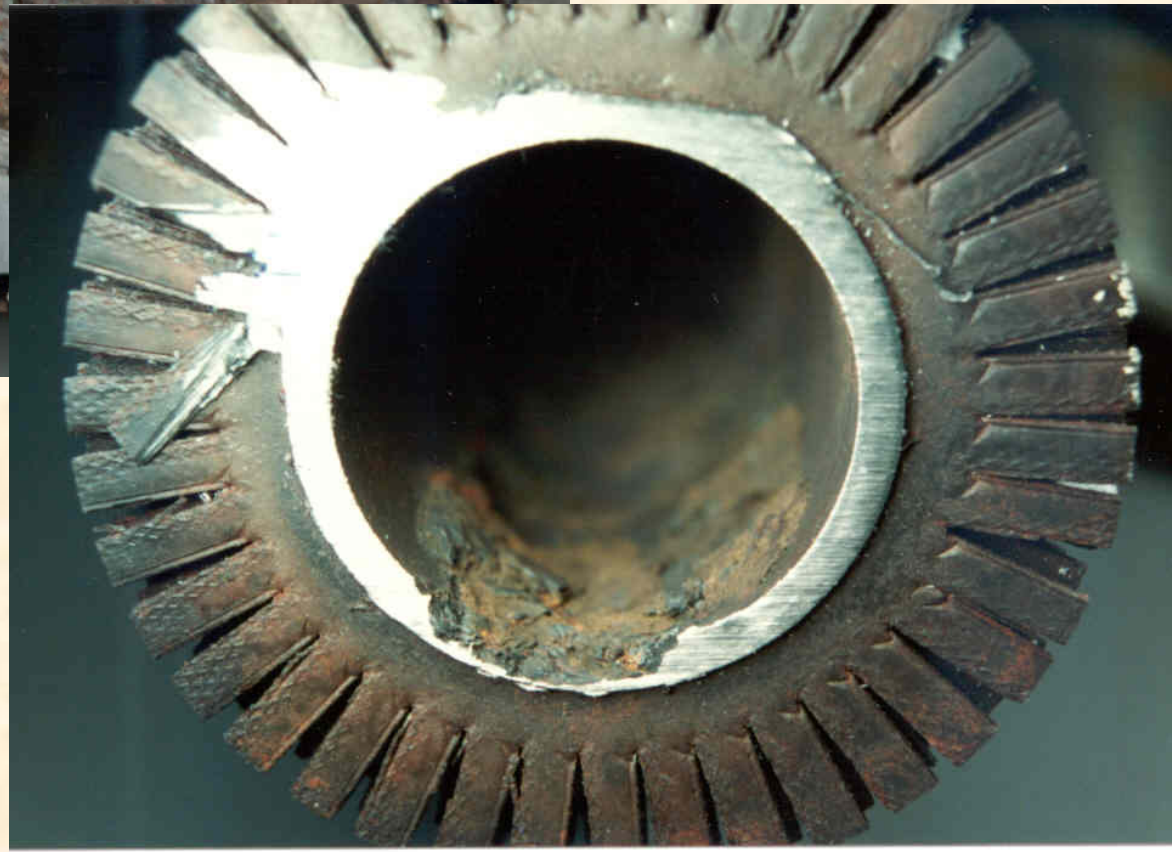
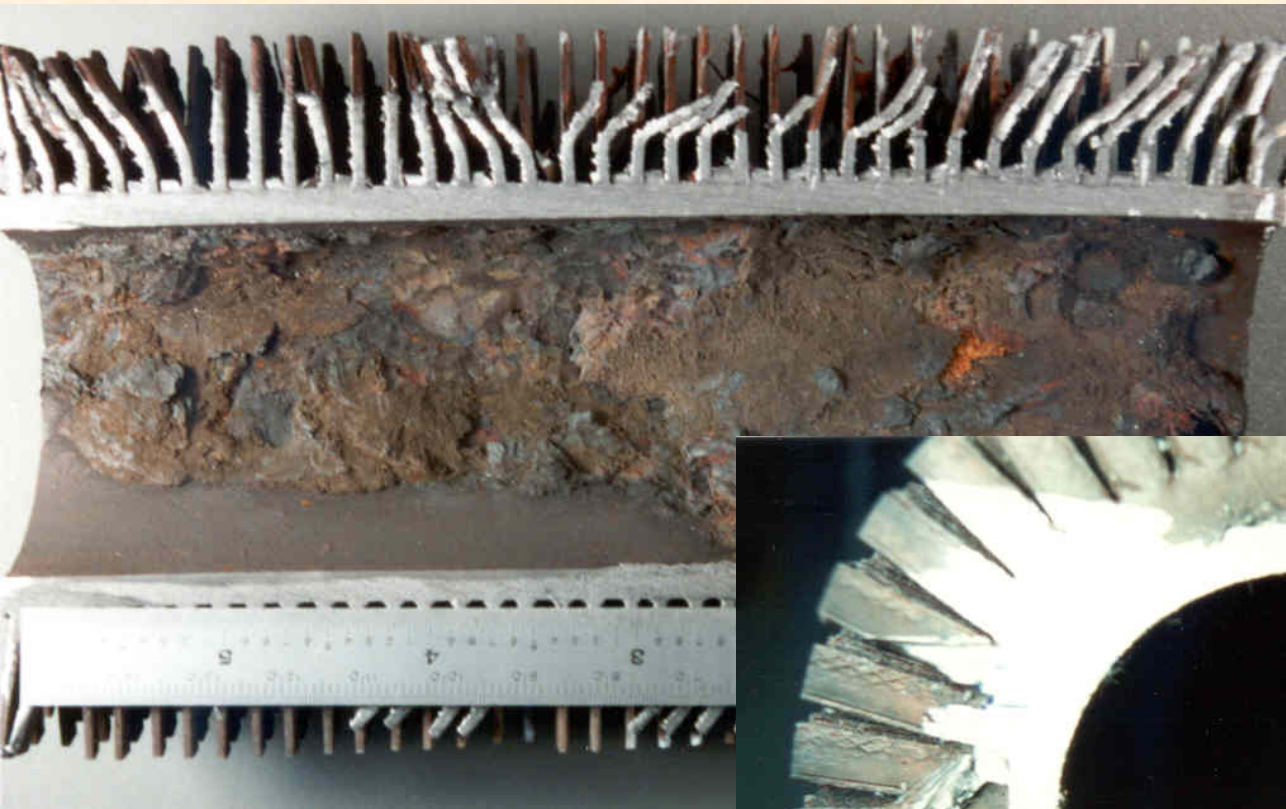




← Flow

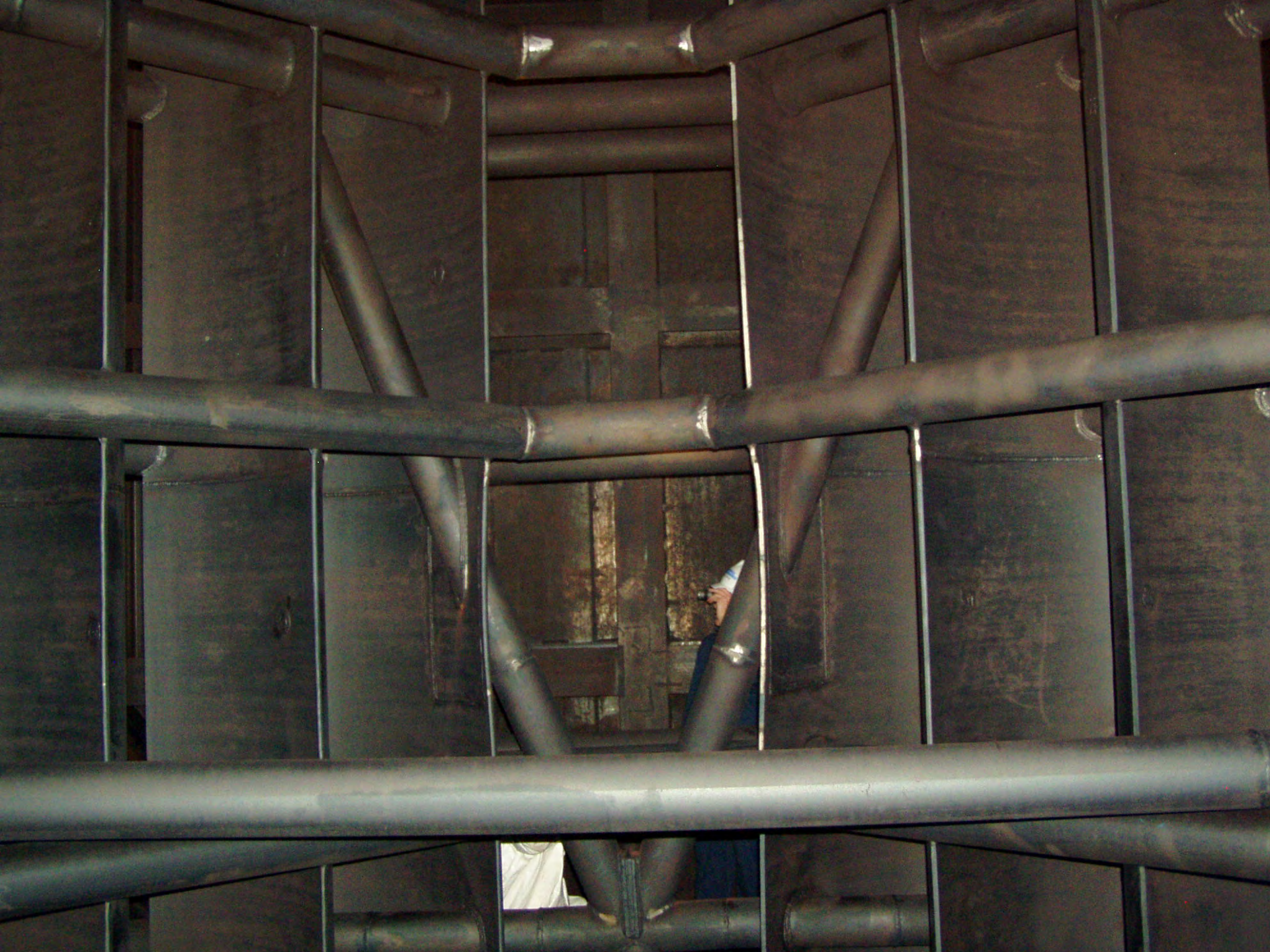
Units with air-cooled condensers must address corrosion product release from the large carbon steel surface area.

Consequences of particulate transport





FEB 8 2007









Pre-Operational Inspection



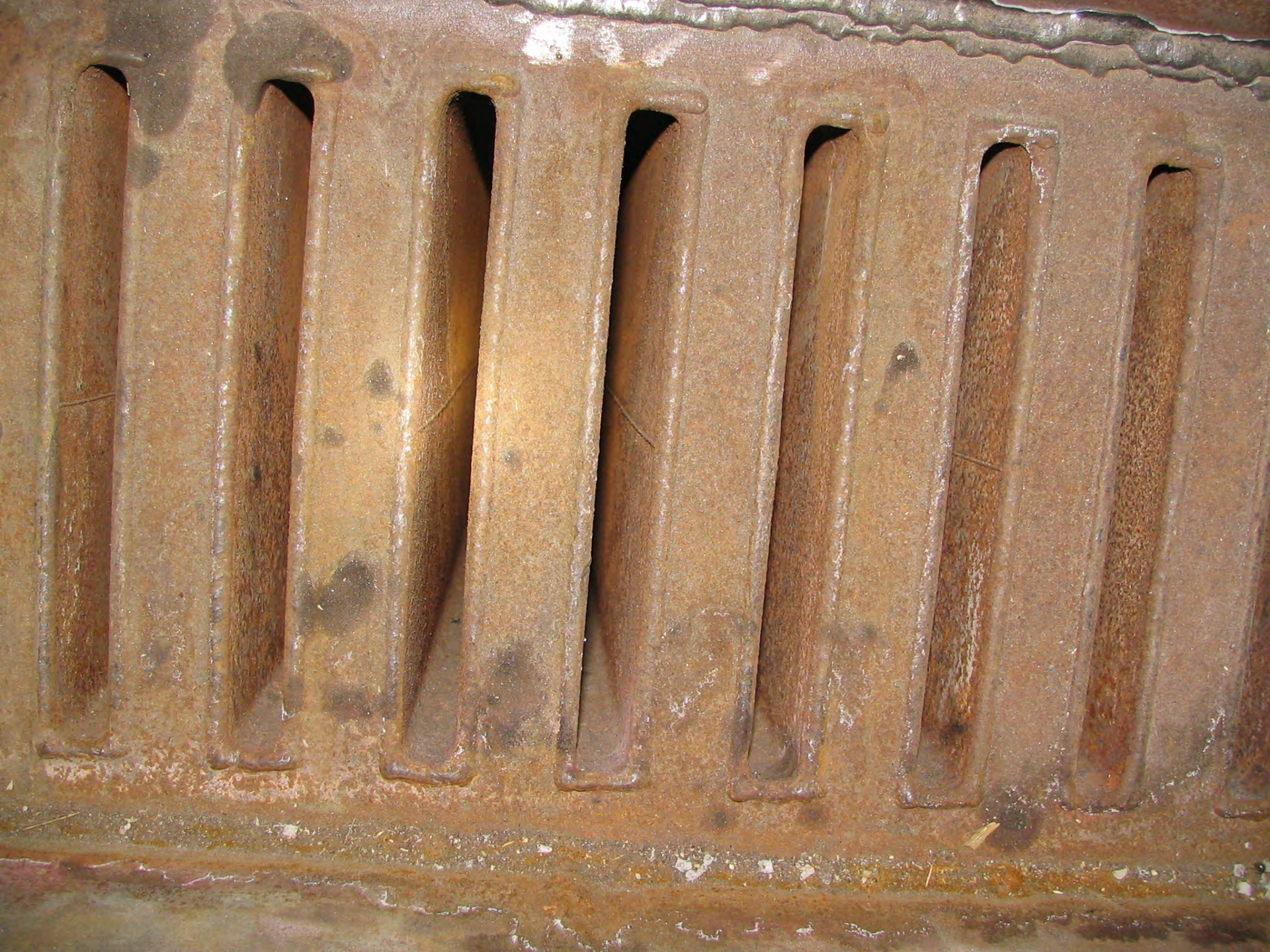




18-05

18-05





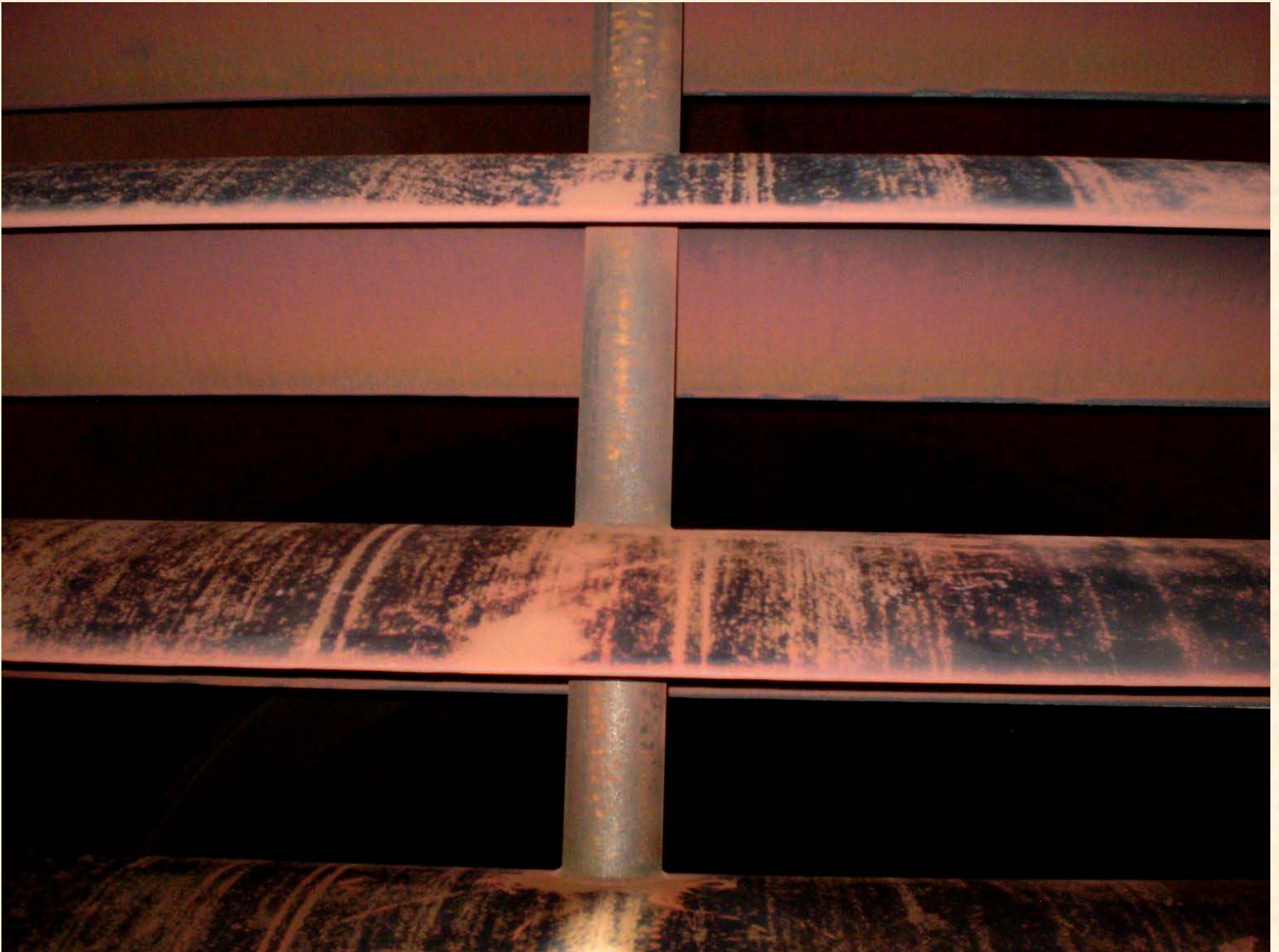


Post-Operational Inspection





Row 1











Flow →







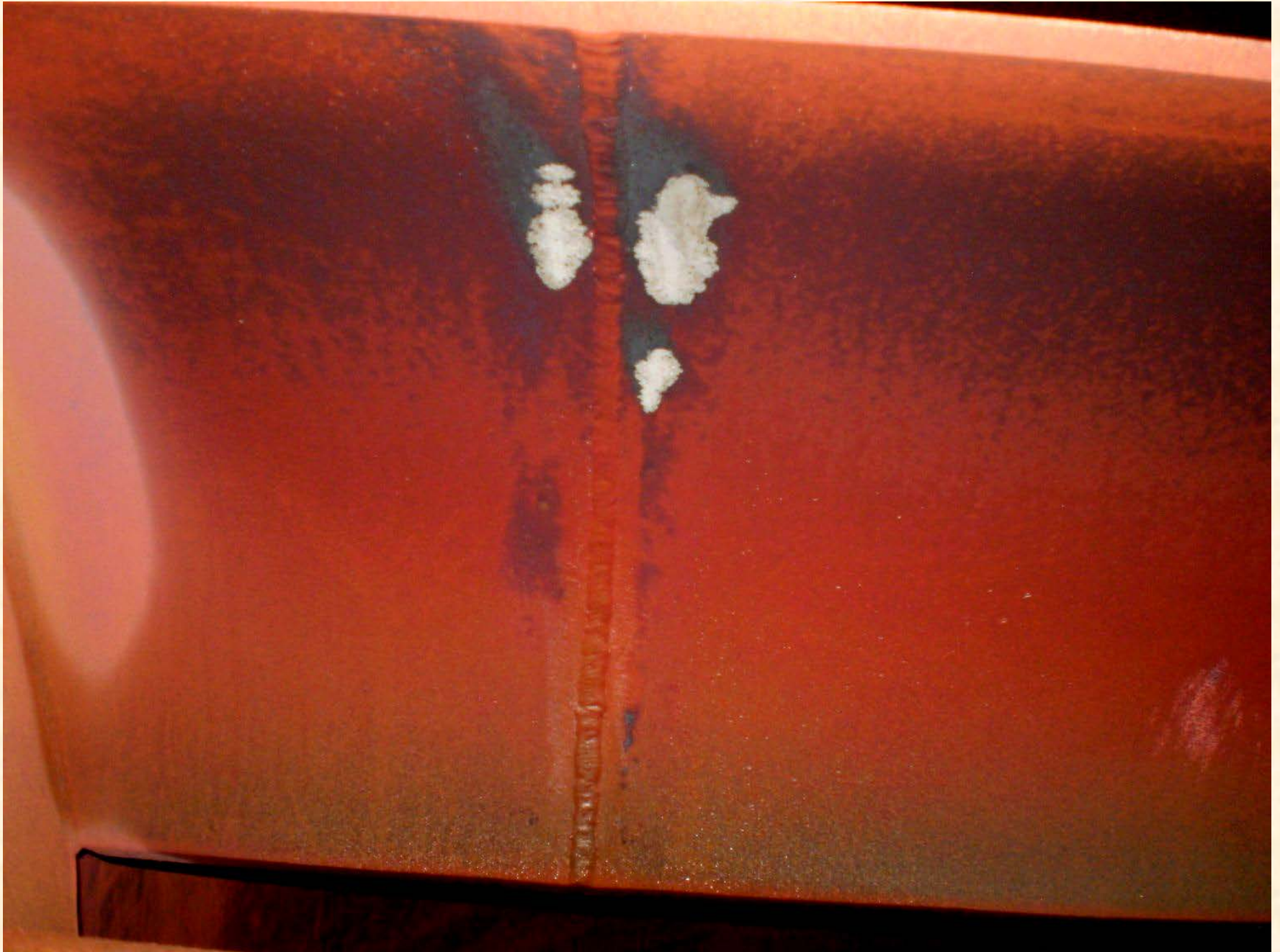




DHACI Rating: Upper Duct #1

3 (on a scale of 1 to 5)

Row 2







2-2

2-7

DHACI Rating: Upper Duct #2

3 (on a scale of 1 to 5)

Main Exhaust Duct



















DHACI Rating: Main Exhaust Duct
B (on a scale of A to C)

ACC / WCC Interface









Conclusions regarding steam cycle pH control in air-cooled condensers

Corrosion is present at pH 9.6 – 9.8 with ammonia feed.

Alternative pH control agents (e.g. amines) may be preferred to minimize corrosion, where applicable.