Wastewater Bar Screen

Water Treatment — Preliminary Treatment
ARC S2 Coating
Case Study 068

Challenge

Goals

- Reduce annual costs (est. $3.9K/year) of corrosion and erosion maintenance for bar screens
- Avoid 5-year (average life) purchase of new bar screen (est. $19K)

Root Cause

Corrosion from H_2S gas attacked an ineffectively protected frame structure. Erosion abrasion from solids removal was accelerating attack.

Solution

Preparation

- Pressure wash and decontaminate surfaces
- Grit blast to Sa 2.5 with 3 mil (75 µm) angular profile

Application

- Apply two coats of ARC S2 to internals for corrosion/erosion resistance

Results

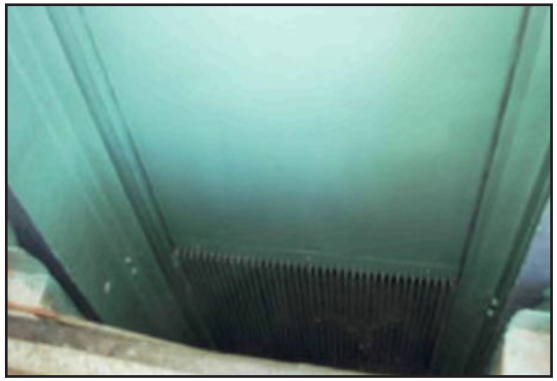
10 Year Inspection Outcome

- Doubled 5 year service life
- ARC S2 optimally performed for over 10 years
- Plant data indicates that bar screen associated maintenance activities are negligible
- Based on previous repair costs, the estimated savings, less the cost of the ARC solution

Total repair cost saved (over 10 years):	**$34K**
2 New Bar Screens Cost Avoidance:	**$38K**
Total:	**$72K**

$=USD

Screen in operation prior to coating



Screen frame surface after coating

ARC coated surfaces

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