

Challenge

Issue

After 50+ years in service, existing wicket gates were showing evidence of severe damage, which was impacting the performance of the turbine.

Goals

To provide a new erosion-resistant protective liner with high build and edge-retentive properties that would help to prevent further damage to the wicket gates.

Root Cause

Entrained solids and cavitating exposures were causing the damage.

Solution

Preparation

All surfaces were HP water blasted and then grit blasted to Sa 2.5 cleanliness with a 3+ mil angular profile.

Application

Chesterton® ARC S1HB was applied by a plural component spray system at a DFT of 120 – 150 mils to >4000 ft² of surface area.

Results

Client Reported

The entire application took less than 12 hours. The contractor noted how easy and quick the product was to apply.

The client liked the 100% solids characteristic of ARC S1HB compared to the 15% solids vinyl system they had been using.

Fluorescing pigment made the in-process inspection very efficient.



Damage to wicket gates.



Plural component spraying of ARC S1HB up to 150 mils in a single coat.



Measuring DFT at 120 mils.