

Challenge

Issue

A large fish processing facility was experiencing contamination of liquid fertilizer due to corrosion on carbon steel tanks.

Goals

Eliminate source of contamination and extend the service life of the storage tank against further corrosion losses.

Root Cause

Mild acid is added to tank contents to prevent fermentation and control storage. This mild acid reacts with unlined carbon steel resulting in corrosion and scale, contaminating tank contents.



Liquid fertilizer storage tanks before maintenance.

Solution

Preparation

The tanks were prepared for maintenance by decontaminating surfaces, grit blast to Sa 3 with 3 mil (75 µm) angular profile.

Application

Chesterton® ARC S3 was applied to a total thickness of 30 mil (750 µm) through an airless pump. Two coats of 15 mils each were applied.



ARC S3 applied to interior of carbon steel tank.

Results

Client Reported

After using ARC S3 to protect the tanks, the customer was able to save significant maintenance costs. The alternative cost of preventing corrosion was stainless steel cladding. The repair using ARC S3 was 1/6th the cost of the alternative method.

The customer was so pleased with the results they have scheduled all remaining tanks to be coated with ARC S3 at the next annual shutdown.



Tank interior after ARC S3 application.