

Protection of stainless-steel scrubber vessel from chemical attack

ID: 9328

Industry: Water / Wastewater

Customer Location: Ontario, Canada

Application: TCC-Tanks and Chemical Containment Areas

Application Date: May 2022

Substrate: Stainless-steel

Products: Belzona 1111 (Super Metal), Belzona 4311 (Magma CR1)

Problem

Newly fabricated stainless-steel scrubber vessels were put in service without a coating thinking the stainless-steel will provide enough protection. After 3 months they were having through wall defects in several parts of the vessel.



Vessel initially after chemical attack.



After grit blasting.



Weld seams and gaps covered with Belzona 1111.



After application of two coats of Belzona 4311.

Application Situation

They had already invested in the fabrication of 4 of these vessels, so they needed to do something to protect their investment. The surface area that needed to be protected was around 2000 sq.ft per vessel. The contents in the vessel were very acidic and it got more concentrated at the bottom of the scrubber which is where they had the most problems.

Application Method

The whole vessel was grit blasted. They had welds and irregular surfaces which were smoothed and filled with Belzona 1111. Then Belzona 1111 was frost blasted and two coats of Belzona 4311 were applied.

Belzona Facts

We were able to secure the job as we created coated samples for the customer and sent them for immersion testing. The product performed well so they decided to proceed with the application. The vessel was opened after 3 months and then after 1 year and the coating was still in good shape protecting the vessel.

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