

ChemLine® Provides Over 10 Years Sulphuric Acid Service in Canada

ChemLINE®
CASE STUDY

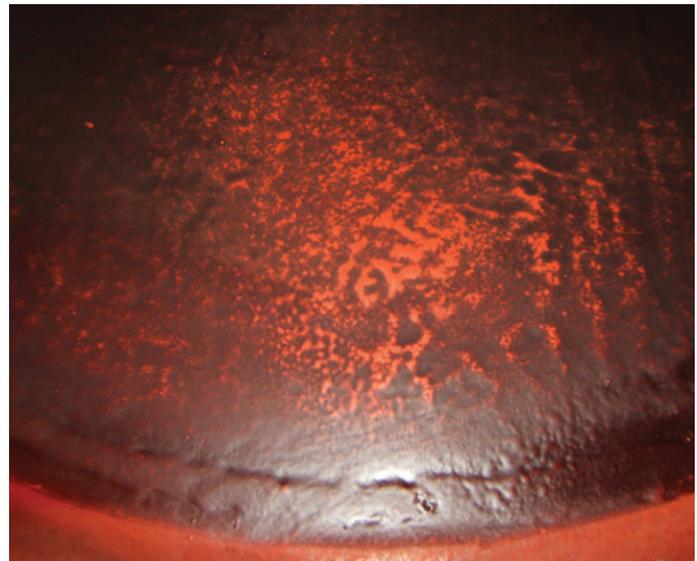
This case study highlights several sulphuric acid tank coating projects done with Advanced Polymer Coating's ChemLine® 784/32 polymer coating more than a decade ago, and which are still in service today.

Background

A major H₂SO₄ producer and worldwide solution provider for handling industrial bi-products, had corrosion issues with several of its Sulphuric Acid Tanks. In August 2000, they contacted Brother's Specialized Coatings, in Edmonton, Alberta, Canada, and contracted them to internally line an uninsulated carbon steel above ground yard storage tank (called tank #2). This comprised lining the lower 22 feet of shell, and a floor area of 28 feet high x 30 feet in diameter. The cargo is 93% Sulphuric Acid at ambient temperatures. ChemLine® 784/32 was the recommended lining.

In August 2002 a second nearly identical yard storage tank (called Tank #1) was also internally lined with ChemLine® 784/32.

Tank Inspection



ChemLine® 784/32 coating intact after 10 years service (left). Staining can be removed (right).

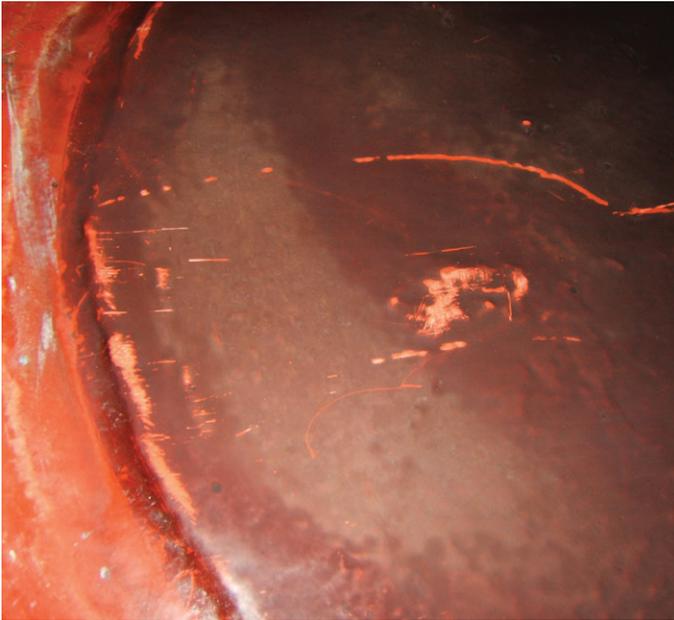
In the Spring 2010, both Tank #1 and Tank #2 were drained, cleaned and inspected. The ChemLine® lining in Tank #2 was observed to have stained, however the lining was fully intact and no other anomalies were noted. The tank was placed back

into service. Inspection of Tank #1 revealed a small area of intercoat delamination approximately on the southwest side of the tank approximately 4 feet to 6 feet up from the tank floor. The topcoat had delaminated but the first (base) coat was still



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Staining from acid (left). No loss of coating thickness (right).

fully adhered to the substrate and was providing protection to the substrate in this area. In May 2010 this tank was abrasive blasted to NACE 1 White-Metal cleanliness and recoated with Chemline® 784/32.

The photos are of the manway lid for storage Tank #1 after it was removed for tank inspection. These photos are indicative of the staining of the lining system that was found in both storage Tanks #1 and #2. Some mechanical damage can also be observed. This appears to have happened during removal and transport of the lid. Scrubbing with a damp cloth removed some of the staining and the coating could be observed as being close to its original color before being placed in service.

In July 2007 two additional horizontal carbon steel storage vessel tanks, each 10 feet in diameter x 22 feet long, used for 98% Sulphuric Acid service were coated with ChemLine® 784/32.

Results

The owner is very satisfied with the performance of the ChemLine® 784/32 lining and the services provided by Brother's Specialized Coatings Services.

For more information on how ChemLine® Coatings can solve your corrosion problems, contact your ChemLine® Representative and visit the Advanced Polymer Coatings website.

