

ChemLine® 784/32 Protects Oilfield Tanks in Mexico

ChemLINE®
CASE STUDY

This case study, from Advanced Polymer Coatings México S.A. de C.V, based in Naucalpan, Mexico, presents protective coatings work done for an equipment supplier to PEMEX (Petróleos Mexicanos, the Mexican state-owned petroleum company).

The Need

The supplier to PEMEX provides a range of equipment and project management services for the exploration, drilling and recovery of crude oil.

Advanced Polymer Coatings México was contracted by the supplier over several months to coat and protect more than 1,800 square meters of equipment such as fracking tanks and over-the-road tankers used to transport chemicals such as the Xylol, Hydrochloric Acid, Xylene, and other specially developed fracking chemicals.

2012 – Initial Application Work

Satisfied with lab tests, Solvay USA decided to line two tank railcars in April 2012 with ChemLine® 784/32 to see if their service life could be extended. The 14,500 gallon rail tankcars are leased to Solvay USA. The tankcars were brought to Seaboard Railcar Repair in Hugo, OK where an inspection showed some pitting and other problems. Seaboard prepped the internal surface through grit blasting to clean out contaminants and pitting, grinding the sharp edges caused by grooving, and repairing areas as needed so the tankcars would be structurally suitable for application.

Next, a grey base coat of ChemLine® 784/32 was applied followed by a red top coat. The tanks were then forced hot air cured, per coating manufacturer's specifications. Within a few days, the rail tankcars were put back into service.

Work Conducted by APC Mexico

This project consisted of lining of 5 fracking tanks constructed of carbon steel, and 12 over-the-rail tanker cars, (of which 10 were made of stainless steel and 2 were carbon steel), and



2012 initial application work with two coats of ChemLine® 784/32. First, a grey base coat followed by a red top coat.



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(Top) Fracking tank being readied for internal lining application of ChemLine® 784/32. (Bottom) Inspecting the ChemLine® 784/32 protective coating.



(Left) Inside view showing grey ChemLine®-coated partition inside an over-the-roader tanker trailer, and (center) drain pipe area. (Right) More fracking equipment and accessories also coated with ChemLine® 784/32.

related equipment. All vessels and equipment were lined with ChemLine® 784/32, the patented high functionality polymer coating from Advanced Polymer Coatings in Avon, Ohio, USA. Additionally one vessel was also protected with a specially formulated ChemLine® coating to provide abrasion-resistance service since this vessel handled an erosive product. Fracking equipment accessories were also coated with ChemLine® 784/32 including pipe discharges, caps, flanges, etc.

After the coating was applied, it was cured with forced hot air at a temperature of 120°C for 6 hours. This cure provided ChemLine® 784/32 with a high cross-link density with significant corrosion resistance.

All application work was done in a carefully regulated warehouse environment to control all details of the application process. The ChemLine® 784/32 system was applied approximately in two layers of 6-8 mil each (dry thickness) with close monitoring of film thickness, continuity, curing and hardness.

Excellent Service Results

Apart from just the various fracking chemicals transported, ChemLine® 784/32 can also handle many thousands of chemical products including a wide range of acids, alkalis, and solvents.

After coating the equipment with ChemLine® 784/32, the equipment was put into service safely supplying chemicals to the oilfields with excellent results.

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