

Korea Tank Lorry Co. Employs ChemLine® for OTR Tanker Sulphuric Acid Service

ChemLINE®
CASE STUDY

Korea Tank Lorry Co. (KTL), founded in 1990, is a land-based transport company that carries petroleum, hazardous chemicals, other liquids, as well as other containers for a number of the leading chemical companies. The company is headquartered in Ulsan City, Korea.

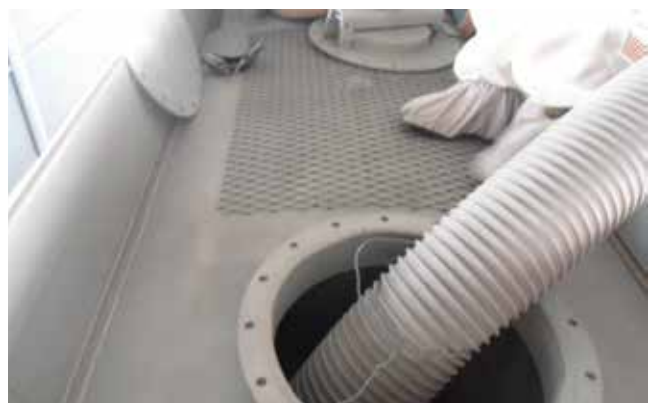
Passing All Tests

KTL has used rubber and other linings inside the tank, however, both the performance and the high cost of these has not always been competitive against other options. One of the cargoes that KTL transports in its fleet of the over-the-road (OTR) trailers is Sulphuric Acid, in various concentrations. KTL looked at the ChemLine® 784/32 high performance coating from Advanced Polymer Coatings for this chemical service. ChemLine® is a lining system that is designed to handle many different types of hazardous and aggressive cargoes, and it has a long history of performance in the transportation industry.

KTL first tested a ChemLine® 784/32 sample in a Sulphuric Acid 8% solution for 3 weeks. After passing this test, KTL selected one of its existing tankers, a used stainless steel 304 trailer, without any lining, to be coated with ChemLine® 784/32 as a working test. The entire project consisting of tank preparation, coating application and heat curing, was done on-site at the KTL operation by ChemLine Korea.

After proper blasting and surface preparation of the tank, two coats of ChemLine® were applied at 12-mills DFT. This started with a grey basecoat, followed by stripe coating, and then a final red topcoat. The tank was then heat cured at 121°C (250°F) for 6 hours (soaking time). In addition to the tank lining, KTL also asked to coat ChemLine® on the outside spill tank areas, including all 7 hatches, for added protection during loading and unloading of chemicals.

Korea Tank Lorry uses over-the-road tank trailers to carry various chemicals, including Sulphuric Acid. KTL asked ChemLine® Korea for a tank lining solution for this chemical service. (Middle) Inside of stainless steel tanker prior to blasting. (Bottom) Blasted surface of spill tank area prior to coating.



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This tanker will be an ongoing test for KTL. However, after just 2 carriages of Sulphuric Acid Service, KTL asked for an inspection of the tank to see if there were any problems and none were found, with the tank performing as expected carrying the 8% Sulphuric Acid solution.



(Left) Running dehumidification equipment during coating application. (Right) Heat curing of tank after ChemLine® coating application.

Added Benefits

KTL is also looking for this tanker to carry all possible percentages of Sulphuric Acid from 1 to 99%. The tanker will also have the ability to carry a much wider range of liquid cargoes, providing KTL with much flexibility should they wish to switch and carry other types of chemicals after a simple tank cleaning.

In addition, because ChemLine® 784/32 is a much lighter coating than rubber, more chemical cargo (capacity) can be carried each time, thus improving return on investment. ChemLine® will also provide better acid resistance and protection than any rubber lining, and be much easier and

faster to repair if needed.

To contact a ChemLine representative about your next project, send an email to APC, or if you have operations in Korea, contact ChemLine Korea directly.

After two carriages of 8% Sulphuric Acid, the spill box (left) and the inside of the tank were checked for corrosion resistance performance, and still look like when they originally coated.

