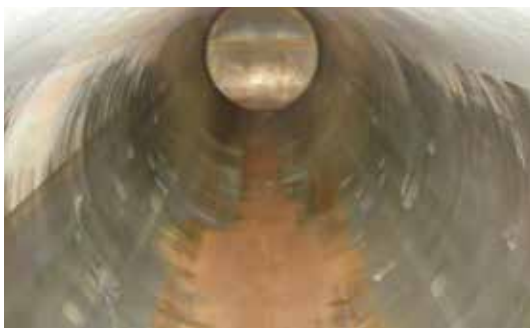


Matlack Leasing Employs ChemLine® for OTR Tankers

ChemLINE®
CASE STUDY



Matlack Leasing LLC is one of North America's leading lessors of over-the-road cargo tank trailers, ISO tank containers, and specialized chassis. The company's vast inventory serves tank operators, motor carriers, manufacturers, and chemical, petrochemical, agricultural, and environmental service companies.



Matlack Leasing (www.matlackleasing.com) is highly regarded in the industry for its tank trailer and tank container designs, knowledge and innovation, providing unique value to customers. They visit with manufacturers around the world to study the latest developments and then engineer these into Matlack vehicles to improve performance and to meet specific customer needs.

Matlack vehicles carry a wide range of liquids including harsh chemicals such as acids, corrosives, hazardous waste, petroleum products, chlorine, and others. Customers want the ultimate in protection for these tanks, to prevent unwanted corrosion, to ensure product (cargo) purity, and to extend the service life of the unit.

(Above) Interior pitted tank with corrosion prior to ChemLine® application. (Below) Finished tank with ChemLine® coating.

The solution? Line these tanks with ChemLine® protective coatings, according to Mr. Chuck Verna, Matlack Leasing Director National Operations & Technical Services.

Why ChemLine®? It Offers the Best Solution

As background, most Matlack containers are constructed of stainless steel. To carry aggressive cargoes, the company lines its tanks for added corrosion protection. Matlack has used a range of lining technologies such as rubber, fiberglass reinforced products, Kynar, Teflon, and various coatings including ChemLine® from Advanced Polymer Coatings. Each lining system presented different challenges.

(Right) Manway entrance coated with ChemLine®.



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Rubber Linings

Rubber linings have typically been used to handle highly corrosive cargoes that cannot be handled by traditional epoxy, phenolic epoxy, or polyurethane coatings, and even stainless steel. The working premise is that although there is some penetration into the rubber from the chemical cargo, in time this becomes saturated enough to provide a protective barrier called a 'pickling layer.' This makes the rubber suitable for handling Phosphoric, Hydrochloric and waste acids, however it is NOT suitable for Nitric and Sulphuric acids as they oxidize the rubber. Nor should rubber be used for vegetable oils, animal oils or solvents.

Other drawbacks to rubber linings are 1) they are costly to install and must be applied only under ideal conditions;

2) rubber will NOT perform well if perforated during service; and 3) over time, a rubber lining degrades and must be replaced, an expensive process.

Other Linings & Coatings Including ChemLine®

Mr. Verna notes that Matlack has also used and studied other linings such as Kynar, sheet- & spray-applied Teflons, Plasite and epoxy and phenolic epoxy coatings. Each of these has its uses, but there are drawbacks as well. No single lining/coating has been versatile enough in the past to cover a wide breadth of solutions. Some of these linings are very expensive to install and maintain, he adds.

Matlack Leasing started studying ChemLine® coatings several years ago to see if these could fulfill the need for a superior protective solution to handle a wide and versatile range of aggressive cargoes. ChemLine® test coupons were analyzed in a number of different chemicals. Based on positive results, several Matlack tank trailers were lined with ChemLine®.

Recently, those tanks were checked after two years of service carrying 30-70% sulfuric acid and all types of general chemicals. Today, the tanks and the coatings still look brand new. No repairs have been needed.

Mr. Verna notes, "ChemLine® offers a superior solution at a competitive price. It is a versatile coating that can withstand adverse environments and carry a large footprint of cargoes, including food grade products. Having the flexibility to carry many cargoes, and know that our tank assets are being protected, are very important benefits. We also know that when a ChemLine® tank is properly cared for, it will outlast other competitive linings. Usually a flush wash or rinse is enough for ChemLine® cleaning."

Matlack Leasing works primarily with two companies for the ChemLine® application work of its tanker fleet; Techni-Kote, Inc. in Houston, Texas (www.techni-kote.com) and Resist-a-Line Industries Inc. in Joliet, Illinois (www.resist-a-line.com).

Beyond the internal tank lining, Matlack asks its applicators to also apply ChemLine® to select areas on the outside of the tanks including coating a 50-60 inch wide belly band (or center band) to protect against spills, and in spillways, and the rear discharge area. This additional protection has been very beneficial in extending the life of the tank.



(Above) Manway lid showing corroded rubber lining, due to HCl exposure. (Below) Manway lid and surrounding spill area properly protected with ChemLine® coating.





ChemLine® coating also used as a protective exterior belly band around tank center, and in rear discharge area.

A Customer Partnership

Matlack Leasing works closely with its customers to understand and service their needs. Mr. Verna emphasizes "It is important to know the actual chemical service they want to transport. Are there any kinds of blends? What happens when these different chemicals interact? What about operating temperatures during transport? And how will you clean the tank after discharge? These are all operating questions that need answers."

He adds that Matlack promotes the benefits of ChemLine® to its customers if they are not fully aware of the full capabilities of the coating. "We offer to have them first test ChemLine® coupons with their specific chemicals to verify the coating will serve in their application," says Verna. "Customers are pleased that ChemLine® achieves the same or better tank protection compared to sometimes more costly linings. So when using ChemLine®, Matlack passes these savings back to customers and they really like that," he adds.

Now under development for a Matlack customer is the application of ChemLine® for four new OTR tankers. These will be completed in early 2014.

For more information on ChemLine® for your transportation needs, contact your Advanced Polymer Coatings representative.

