

BRINE TRANSPORT LINING SYSTEM

Throughout the oilfields of west Texas, New Mexico and across the Barnett Shale natural gas field in north Texas, new drilling sites are attracting a steady stream of salt water haulers that are protected from internal corrosion by a high-build lining from Tnemec. "Viper Blasting & Coatings needed an economical lining to apply to these haulers that would stand up to salt water along with less aggressive chemicals," Tnemec coating consultant Lane Salvato explained. "The applicators liked Series 141 Epoxoline because it can be applied in a single coat. It fits a good niche between a standard polyamide epoxy with minimal chemical resistance and a highly cross-linked chemical resistant novolac."

Drilling operations use massive amounts of water that is trucked to the site to hydraulically fracture or stimulate rock formations around the wellbore so the oil or gas flows easier. Shale formations contain embedded salts that dissolve when injected with brine water during fracturing. The fracturing flow-back water from these shales, which has an extremely high salt concentration, is pumped to the surface for removal by vacuum trailers hauled by trucks to commercial saltwater disposal wells for reinjection into porous rock formation. A single horizontal well can have more than 100 water haulers servicing it during fracture stimulation.

Series 141 Epoxoline is a modified polyamine epoxy that offers excellent corrosion resistance and high-build edge protection. The vacuum trailers are prepared by abrasive blast cleaning prior to coating. "Typically, Series 141 is spray-applied in a single coat of 14 to 20 mils," Salvato noted. "Approximately 15 to 20 gallons of the coating are required per trailer, depending on its size."

The linings are holiday tested using a low voltage wet sponge method and any discontinuities are repaired. The lining is then allowed to cure before the trailer is placed into service. The fast-curing epoxy liners enable holiday testing within hours of application. "The tanker is coated in one day and touch ups are made the following day," Salvato added.

Texas is the nation's leading oil and gas producing state, providing 29 percent of the domestic onshore oil production, and 35 percent of the domestic onshore-marketed gas production in the U.S., according to the United States Energy Information Administration. Texas has remaining proven oil reserves of 5.12 billion barrels, and proven gas reserves of 72.09 trillion cubic feet.

Founded in 2001, Viper Blasting & Coating, Inc. offers complete sandblasting and coating services to the oil and gas industry. Services include equipment sandblasting and painting, tank/trailer sandblasting and internal coating of tanks for use in the oilfield.

FEATURED PRODUCTS

Series 141 Epoxoline



PROJECT INFORMATION

Project Location

West Texas, New Mexico, Oklahoma

Project Completion Date

Ongoing

Owner

Various

Shop Applicator

Viper Blasting & Coating, Inc. - Odessa, Texas

Brine haulers used to transport salt water away from drilling sites in Texas, New Mexico and Oklahoma are lined with Tnemec's Series 141 Epoxoline to protect them from internal corrosion. More than 100 haulers may be required to service one drilling site.

