

ETHANOL FUEL STORAGE TANK LINING

With winter weather just around the corner and the bottom plates of an ethanol fuel storage tank in need of relining, the Massachusetts-based refinery finished the job before the holiday rush by specifying a 100 percent solids epoxy lining system from Tnemec. "The project was done over the Thanksgiving break, so the contractor was dealing with low temperatures in terms of the environment," Tnemec coating consultant Larry Mitkus recalled. "But the temperatures didn't impact the cure or workability of the products."

The steel tank's bottom and shell were prepared in accordance with SSPC-SP5/NACE No. 1 White Metal Blast Cleaning to remove existing coatings and provide a minimum angular anchor profile of 3.0 to 3.5 mils. The contractor used Series 351 Tank Armor, a 100 percent solids flexible polysulfide/novolac epoxy polymer repair and base coat putty, for seams, rivets and the chime area at the floor-wall transition. Series 351 was applied at 40 mils to ¼-inch dry film thickness (DFT).

Once Series 351 had cured, the bottom and shell were topcoated with Series 350 Tank Armor, a tightly cross-linked high-build epoxy phenolic lining that offers excellent resistance to 100 percent ethanol over a wide range of temperatures. "Using plural component equipment, the lining was applied to the floor and around the interior of the 80-foot diameter shell to a height of 24-inches," according to Mitkus. "The lining applied well and built to 30-plus mils DFT in a single coat."

Ethanol and other biofuels must be stored in dedicated storage tanks that are especially challenging environments for protective linings, which is why it is important to consider chemical resistance when specifying protective coating and lining products. "The entire project lasted less than two weeks," Mitkus added. "They were in and out of there pretty quickly, which was important for this project."

The 25-acre marine terminal serves customers in New England, Eastern Canada and Quebec with a range of finished energy products, including gasoline, diesel, home heating fuel, jet fuel and complementary products and services.

FEATURED PRODUCTS

Series 350 Tank Armor
Series 351 Tank Armor



PROJECT INFORMATION

Project Location

Rever, Massachusetts

Project Completion Date

November 2006

Field Applicator

Amex Corp. - East Boston, Massachusetts

The Tank Armor lining system applied to the interior of an ethanol fuel storage tank at a Massachusetts refinery offers excellent resistance to 100% ethanol over a wide range of temperatures.

