TEXAS A&M CHILLER PLANT

When protective coatings on an elevated water tower near the Texas A&M University power plant began to fail back in 1997, the engineer and coating contractor on the project made an "educated guess" as to the cause of the problem. "One of the theories was that fallout from the power plant's cooling stacks was attacking the coating on the water tank," recalled Pat Barry, Tnemec coating consultant. "In working with the engineer, we were able to come up with a protective coating system that solved the problem and still looks good nine years later."

Given its earlier success, the same coating system was used again in 2005 to perk up the color on the power plant's pipes that were starting to fail. The coating system on both the water tank and the pipes used a prime coat of Series 90-97 Tneme-Zinc, a two-component, moisture-cured zinc-rich aromatic polyurethane which offers superior bonding to SSPC-SP6 prepared exterior steel. An intermediate coat of Series 66 Hi-Build Epoxoline, a polyamide epoxy, and a finish coat of a polyester urethane completed the job. "The original polyester urethane coating that we used on the water tank had been discontinued, so Series 290 CRU replaced the earlier coating," according to Barry. "Polyesters are known for their extreme hardness and chemical resistance, which is why we chose them for this project."

The power plant's two cooling stacks were also coated in 2005 with Series 90E-92 Tneme-Zinc, an ethyl silicate inorganic, zinc-rich primer, and Series 39 Silicone Aluminum, a heat-resistant silicone aluminum finish coat. "The temperature of the stacks reached more than 250 degrees F, which is the cutoff point for other coatings, so we used the Series 39 as a high-heat resistant coating," Barry noted.

The power plant remained in operation throughout both coating projects, so all the preparation and coating work was done under containment. "Everything was abrasive blasted, so scaffolding was constructed around all the structures to contain it and coatings were spray-applied under the tenting," Barry explained. "The project turned out well with bright blue colors on the piping."

FEATURED PRODUCTS

Series 39 Silicone Aluminum
Series 66 Hi-Build Epoxoline
Series 90-97 Tneme-Zinc
Series 90E-92 Tneme-Zinc
Series 290 CRU

PROJECT INFORMATION

Project Location
College Station, Texas

Project Completion Date
June 2005

Owner
Texas A&M University

Engineer
Dunham Engineering - College Station, Texas

Field Applicator
Custom Coatings - Summerville, Texas

The piping and the cooling stacks at the Texas A&M Power Plant in College Station, TX are protected with Tnemec high performance coatings.

TNEMEC®

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