

# WILLIAMS STATION COOLING TOWER

The Williams Station Cooling Tower in Goose Creek, South Carolina, required a rebuild of the existing tower after 30 years in the harsh environment of a coal-fired power plant. The 550 ft. structure was susceptible to intense corrosion and abrasion which had taken its toll during its long lifespan. The facility's owners had worked with Tnemec on the previous iteration of the cooling tower, so they elected to return to Tnemec for a solution that would protect their new structure for another 30 years or more.

"The project was a rebuild of an existing cooling tower where Tnemec was used back in 1985," said Dan Anderson, local Tnemec representative with TSE, Inc. "The older coatings performed for over 30 years in a very aggressive environment. The owner was so pleased he asked for Tnemec on the renovation of the steel and large piping."

The coating of the new tower presented a few problems over the duration of the project. When the applicators removed the riser piping for coating they found pits that required special attention. The facility also remained open during the project, which meant that the header piping had to be contained to protect the freshly-applied coatings and help them dry quickly and perform correctly. Plus, work was ongoing during the coldest time of the year, which required low temperature accelerators to ensure that the coatings cured properly.

"The cold weather was an obvious problem, along with the harsh environment they were being applied in. But the applicators were up to the task and the coatings are designed for this type of tough environment, so it all worked out," Anderson said.

Applicators used Series 215 Surfacing Epoxy to spot-prime and fill pitting in the steel. Then, all steel received a prime coat of Tnemec's single-component, zinc-rich urethane primer, Series 94-H<sub>2</sub>O Hydro-Zinc, for long-lasting corrosion protection. Due to the corrosive environment, the owner elected to use an intermediate coat of Series 66HS Hi-Build Epoxoline at 8.0-10.0 mils dry film thickness (DFT). The system then received a topcoat of the time-tested aliphatic acrylic polyurethane, Series 73 Endura-Shield.

South Carolina Electric & Gas provides electric and/or natural gas service to homes and businesses in a large portion of southern, eastern and western South Carolina. The Williams Station coal facility is just one of the numerous power generation facilities owned by SCE&G, who also generate electricity via solar, hydroelectric, and nuclear power.

## FEATURED PRODUCTS

Series 66HS Hi-Build Epoxoline

Series 73 Endura-Shield

Series 94-H<sub>2</sub>O Hydro-Zinc

Series 215 Surfacing Epoxy



## PROJECT INFORMATION

### Project Location

Goose Creek, South Carolina

### Project Completion Date

May 2018

### Owner / Architect

South Carolina Electric & Gas - Columbia, South Carolina

### Field / Shop Applicator

Phillips Industrial Services Corp. - Goose Creek, South Carolina

The replacement of the Williams Station Cooling Tower used multiple Tnemec coatings to protect the new tower after their products covered the previous tower for more than 30 years.

