

# DAL-TILE MANUFACTURING PLANT WASTEWATER PIPING

With a price tag of \$180 million, the Dal-Tile ceramic tile plant and distribution center in Dickson, Tennessee, is a showcase for advanced technology, including Tnemec's ceramic-modified epoxy lining used to protect ductile iron pipe (DIP) from corrosion.

"The protective lining was chosen for its hydrogen sulfide gas (H<sub>2</sub>S) and industrial chemical resistance," explained coating consultant Mark Goulet, Tnemec Representative, NexGen Coating Resources. "The lining was shop-applied to 735-feet of 12-inch diameter DIP and arrived at the jobsite ready to go."

The pipe is part of the infrastructure to handle wastewater generated during manufacturing. Sections of pipe located on the site of the plant were the responsibility of Dal-Tile contractors, while off-site portions were under the jurisdiction of the municipal utility in Dickson.

Both the municipal and private sections of pipe were lined with Series 431 PermaShield PL, a 100 percent solids, high-build modified polyamine epoxy liner developed by Tnemec for the unique needs of steel and ductile iron pipe and fittings used to transport wastewater. The interior of the pipe was prepared and coated by Consolidated Pipe & Supply Company, Inc., at its steel fabrication shop in Bessemer, Alabama.

The interior of the DIP was prepared in accordance with NAPP 500-03-04: Abrasive Blast Cleaning of Ductile Iron Pipe. After preparation, Series 431 was spray-applied using plural component (PC) equipment at 40 mils dry film thickness (DFT) to provide a barrier against wastewater and gases that can corrode sewer pipes.

Series 431 contains high-quality, ceramic microspheres (20 percent by volume), which add exceptional abrasion resistance to an already durable epoxy film. Its light green color also facilitates visual inspection of DIP using lamping, camera and closed-circuit television.

Located 30 minutes west of Nashville, the 1.4-million-square-foot manufacturing facility and distribution center is located on 184 acres in Dickson County Industrial Park. A Dallas-based division of Mohawk Industries, Dal-Tile is the largest manufacturer and marketer of ceramic tile and natural stone products used in residential and commercial design and construction across North America.

## FEATURED PRODUCTS

**Series 431 Perma-Shield PL**



## PROJECT INFORMATION

### Project Location

Dickson, Tennessee

### Project Completion Date

December 2015

### Owner

Dickson County, Tennessee

### Architect / Engineer

James + Associates, Inc. - Nashville, Tennessee

### Shop Applicator

Consolidated Pipe & Supply Co. - Bessemer, Alabama

Ductile iron piping in and around the Dal-Tile facility in Dickson, Tenn., was delivered to the jobsite with Tnemec's Series 431 Perma-Shield PL epoxy lining already applied.

