

NOTTINGHAM WATER TREATMENT PLANT

When engineers at the Nottingham Water Treatment Plant in Cleveland, Ohio, needed a coating system to protect new concrete against aggressive chemical exposure, a novolac vinyl ester lining from Tnemec passed the acid test. "The project involved the chemical feed area, which is the most aggressive exposure in a water treatment plant," according to Tnemec coating consultant Sean Carlin. "Series 120 Vinester was selected because it is a proven performer against hydrofluorosilicic acid and sodium hypochlorite."

The project involved both new and existing concrete in the plant's chemical feed rooms, which were being upgraded. Sacking material was removed from concrete in the designated structure in accordance with SSPC-SP13/NACE No. 6 Surface Preparation of Concrete. The concrete was abrasive-blasted to achieve a minimum surface profile of ICRI-CSP5, which exposed some of the aggregate. Vinester was then spray-applied, providing splash, spillage and fume protection for the structural surfaces and secondary containment against organic and inorganic acids. Approximately 100 gallons of Vinester were required for the project.

"For less aggressive chemicals, we specified Series 280 Tnemec-Glaze, a modified polyamine epoxy," Carlin noted. Tnemec-Glaze was spray-applied to provide chemical and abrasion resistance for concrete surfaces.

"Cleveland Division of Water has used Tnemec coatings for several projects over the years," Carlin acknowledged. "The project contractor likes these products and their ease of application, plus the service," Carlin added. "The product really proved itself when acid accidentally leaked on the concrete surface and the material remained resistant."

In late 2002, the Nottingham Water Treatment Plant converted from chlorine gas to sodium hypochlorite, or liquid bleach, as its disinfectant. With a 640-square-mile surface area that encompasses more than 1.5 million people throughout the City of Cleveland and 72 neighboring suburbs, the Division of Water is the largest water system in Ohio and among the ten largest in the U.S.

FEATURED PRODUCTS

Series 120-5001 Vinester
Series 280 Tnemec-Glaze
Series 282 Tnemec-Glaze



PROJECT INFORMATION

Project Location
Cleveland, Ohio

Project Completion Date
August 2003

Owner
City of Cleveland Division of Water

Engineer
Camp Dresser McKee - Cleveland, Ohio

Field Applicator
Dave Goodrick, Guist Decorators, Inc. -
Canton, Ohio

The chemical feed area at the Nottingham Water Treatment Plant in Cleveland, Ohio was coated with Series 120 Vinester because of its resistance to various chemicals.

