

CRYSTAL LAKE WATER & WASTEWATER TREATMENT PLANTS

When the City of Crystal Lake water and wastewater departments bundled their maintenance budgets under one contract, the project required specialized coatings from Tnemec to cover floors, walls, ceilings, and almost everything in between. "Work was needed on equipment from the '70s, '80s and '90s," explained Erik Otten of Taylor Coating Sales. "To achieve the best performance, several different Tnemec coating systems were used."

Among the coatings specified was Series 971 Aerolon Acrylic, a fluid-applied, thermal insulating coating, which was applied on five hot air blowers which could not be turned off more than a couple hours at a time. "The surface temperature of the blowers and its piping was up to 180 degrees F," according to Otten. "The Aerolon coating system was one of the only coating systems that could be applied to a surface this hot."

The pipes and motors were hand-sanded and primed with Series 1224 Epoxoline WB, a water-based epoxy coating that offers excellent adhesion over marginally prepared steel. It was roller-applied at 8.0 mils dry film thickness (DFT). Aerolon was spray-applied with a Graco 2000 GTX, at 40 mils DFT, followed by a finish coat of Series 1028T Enduratone, a water-based High Dispersion Pure (HDP) acrylic polymer, which was spray-applied and backrolled at 2.0-3.0 mils DFT. The resulting surface was more durable and safe; less likely to create any work-related accidents because of the system's "safe-touch" properties.

Other epoxy-coated pipes were primed with Series 135 Chembuild, a high-build modified polyamidoamine epoxy for tightly adhering to old coatings, followed by a finish coat of Series N69 Hi-Build Epoxoline II, an advanced generation epoxy, which resists abrasion and chemical contact exposure.

Floors in the wastewater treatment plants were sanded, primed and sealed with Series 203 Epoxoprime LV, a modified polyamine epoxy, which is moisture-tolerant. The floors also received a topcoat of Series 281 Tneme-Glaze, a high-gloss, modified polyamine epoxy that imparts a smooth, aesthetically pleasing finish coat. The floors in the water treatment plants received a decorative flooring system that consisted of Series 287 Enviro-Pox, a waterborne epoxy-amine primer; Series 224 Deco-Fleck, a decorative-flake-filled modified polyamine epoxy; and Series 296 Enviro-Glaze Clear, a waterborne polyurethane floor coating for enhanced abrasion and stain resistance.

Existing CMU and concrete walls and ceilings were primed with Series 151 Elasto-Grip FC, a waterborne modified polyamine epoxy, which is an excellent tie-coat for specialized finishes over sound existing coatings. The finish coat was Series 113 H.B. Tneme-Tufcoat, a waterborne acrylic epoxy, which is stain-, abrasion-, chemical- and moisture-resistant.

Overall, the project required more than 530 gallons of specialty coatings to complete.

FEATURED PRODUCTS

- Series N69 Hi-Build Epoxoline II
- Series 113 H.B. Tneme-Tufcoat
- Series 135 Chembuild
- Series 151-1051 Elasto-Grip FC
- Series 203 Epoxoprime LV
- Series 224 Deco-Fleck
- Series 281 Tneme-Glaze
- Series 287 Enviro-Pox
- Series 296 Enviro-Glaze Clear
- Series 971 Aerolon Acrylic
- Series 1028T Enduratone
- Series 1224 Epoxoline WB



PROJECT INFORMATION

Project Location

Crystal Lake, Illinois

Project Completion Date

March 2013

Owner / Engineer

City of Crystal Lake

Fabricator / Applicator

Tecorp, Inc. - Joliet, Illinois

Among the many Tnemec coatings applied in the City of Crystal Lake water and wastewater treatment plants was Series 971 Aerolon Acrylic. It was applied to hot air blowers to combat corrosion and to protect personnel.

