

DARIEN STANDPIPE

Visitors to Darien, Illinois, probably wonder what a lighthouse is doing so far from the ocean when they first set eyes on the city's award-winning 1.5 million gallon standpipe with its multi-colored, fluoropolymer coating system from Tnemec. "The new standpipe was designed, built and coated to resemble a lighthouse," reported Tnemec coating consultant Erik Otten. "It's an impressive structure with its conical roof, five pilasters, two balconies and ten (10) three-dimensional, simulated windows."

The tank was fabricated by CB&I Constructors, Inc., where the exterior steel plates were prepared in accordance with SSPC-SP6/NACE No. 3 Commercial Blast Cleaning and primed with Series 94-H₂O Hydro-Zinc, a moisture-cured, zinc-rich urethane. The interior steel was prepared in accordance with SSPC-SP10/NACE No. 2 Near-White Metal Blast Cleaning and a prime coat of Series 94-H₂O was spray-applied.

After the tank was erected, the exterior steel was spot-primed with Series 91-H₂O Hydro-Zinc, a moisture-cured zinc-rich aromatic urethane primer, followed by an intermediate coat of Series 73 Endura-Shield, an acrylic polyurethane that is highly resistant to abrasion, wet conditions and weathering. The finish coat was Series 700 HydroFlon, an advanced thermoset fluoropolymer with outstanding ultraviolet (UV) light resistance and excellent color and gloss retention. "Four different colors of HydroFlon were used on the exterior," according to Otten. "One color was used to accent the pilasters, balconies and window frames, another for the roof, a third for the windows and a fourth for the base color of the tank."

HydroFlon is becoming the finish coat of choice for new water storage tanks in Otten's service area. "HydroFlon was first specified as a finish coat in this area back in 2003," Otten recalled. "Today, everyone seems to be specifying it based on its performance over the past six years. People are especially happy with its gloss and color retention."

Field coating of the tank's interior steel involved spot-priming with Series 91-H₂O, followed by two coats of Series 20 Pota-Pox, a polyamide epoxy that is the industry standard for potable water epoxy coatings.

In 2007, the Steel Tank Institute/Steel Plate Fabricators Association (STI/SPFA) selected the Darien "lighthouse" as its Tank of the Year in the Standpipe Category. The award was presented to the tank's fabricator, CB&I Constructors, Inc. The Darien standpipe was also featured in Tnemec's 2009 Water Tank Calendar and CoatingsPro™ magazine.

FEATURED PRODUCTS

Series 20 Pota-Pox
Series 73 Endura-Shield
Series 91-H₂O Hydro-Zinc
Series 94-H₂O Hydro-Zinc

Series 700 HydroFlon



PROJECT INFORMATION

Project Location

Darien, Illinois

Project Completion Date

October 2007

Owner

City of Darien

Engineer

Christopher Burke Engineering - Rosemont, Illinois

Shop Applicator

CB&I Constructors, Inc. - Houston, Illinois

Field Applicator

CB&I Water - Plainfield, Illinois

The City of Darien standpipe in Illinois used four different colors of Tnemec's advanced thermoset fluoropolymer because of its exceptional color and gloss retention.

