

BELLEVUE WATER TANK

When the Village of Bellevue erected a new 1 million gallon water tank on the site of a future public park, project engineers had high performance expectations for its exterior coating system. "The owner and engineer wanted a premium coating system to lower the life-cycle maintenance costs," according to Tnemec coating consultant John Laird. "Series 700 HydroFlon was chosen for its excellent color and gloss retention, as well as its 15-year warranty."

Laird invited the project's engineer and village public works director to a luncheon presentation where he presented performance and research data comparing the fluoropolymer chemistry found in HydroFlon with conventional polyurethane and acrylic coatings. "They concluded that HydroFlon was what they wanted to put on the tank," Laird recalled.

Exterior steel was prepared in accordance with SSPC-SP6/NACE No. 3 Commercial Blast Cleaning, then primed with Series 91-H₂O Hydro-Zinc, a two-component, moisture-cured, aromatic urethane zinc-rich primer. Next, the tank's exterior received an intermediate coat of Series 73 Endura-Shield, an aliphatic acrylic polyurethane, which was spray-applied to provide additional film thickness for corrosion resistance. Series 700 HydroFlon, a fluoropolymer polyurethane, was roller-applied as the topcoat using colors from the Village of Bellevue's logo.

Series 660 Prime-A-Pell 200, a solvent-borne siloxane water repellent, was spray-applied to the concrete pedestal base of the tower to protect it from rain and freeze/thaw spalling. "Series 626 Dur A Pell GS was then applied to the bottom 12 feet of the support pedestal for graffiti protection as a park will be built around the tank site in future years," Laird noted. Dur A Pell GS is a clear, silicone rubber-based graffiti protectant and water repellent, which protects vertical concrete block, brick, cast concrete, stone and other masonry substrates with little or no change to the appearance of the substrate. The concrete substrate was prepared in accordance with SSPC-SP13/NACE No. 6 Surface Preparation of Concrete prior to the application of these coatings.

The tank's interior steel also received a prime coat of Hydro-Zinc following surface preparation in accordance with SSPC-SP10/NACE No. 2 Near-White Metal Blast Cleaning. Two coats of Series 20 Pota-Pox, a polyamide epoxy, completed the interior coating system.

Evidence of the owner's satisfaction with the overall project was apparent in the village's decision to use the same coating system on an existing 400,000 gallon water tank that needed repainting.

FEATURED PRODUCTS

Series 20 Pota-Pox
Series 73 Endura-Shield
Series 91-H₂O Hydro-Zinc
Series 626 Dur A Pell GS

Series 660 Prime-A-Pell 200
Series 700 HydroFlon



PROJECT INFORMATION

Project Location

Bellevue, Wisconsin

Project Completion Date

July 2006

Owner

Village of Bellevue

Tank Fabricator

Landmark - Ft. Worth, Texas

Engineer

Robert E. Lee & Associates - Oneida, Wisconsin

Field Applicator

Diversified Coatings - O'Fallon, Illinois

Series 700 HydroFlon provides excellent color and gloss retention for the exterior steel of the 1 million gallon water tank in Bellevue, Wisconsin, while Series 626 Dur A Pell GS protects the tank's concrete pedestal base from graffiti.

