

WINTHROP STANDPIPE

Surrounded by housing and residential development, the 750,000-gallon standpipe in the city of Winthrop presented a logistical challenge when it needed recoating in 1996, which is one reason why project engineers specified a long-lasting coating system from Tnemec Company. "Houses are located within 20 feet of the tank," according to Tnemec coating consultant Larry Mitkus. "The contractor on the project had to move all of his equipment in and out of the job site every day on a flatbed truck. The project also required full containment to prevent paint from drifting onto surrounding properties."

Color and gloss retention was another critical consideration given the standpipe's red, white and blue design. "Those colors are especially susceptible to degradation from ultraviolet (UV) light," Mitkus noted. "And the tank is right on the coast of New England where it's exposed to all the winter weather that comes in from the ocean and constant salt fog. It's a very demanding environment."

The exterior surface of the standpipe was prepared in accordance with SSPC-SP6/NACE No. 3 Commercial Blast Cleaning and primed with Series 90-97 Tneme-Zinc, a zinc-rich urethane. Next, an intermediate coat of Series 27 F.C. Typoxy, a versatile polyamide epoxy, was applied, followed by a topcoat of Series 73 Endura-Shield, an aliphatic acrylic polyurethane that is highly resistant to abrasion, wet conditions and exterior weathering. The exterior then received a clear coat of Series 76 Endura-Clear, an aliphatic acrylic polyurethane, to provide further UV protection for extended color and gloss retention. All exterior coatings were brush- and roller-applied.

For the tank's interior lining, the surface was prepared in accordance with SSPC-SP10/NACE No. 2 Near-White Metal Blast Cleaning before receiving a spray-applied prime coat of Series 91-H₂O Hydro-Zinc, a moisture-cured, zinc-rich urethane. The interior also received two spray-applied coats of Series 20 Pota-Pox, a polyamide epoxy that has been the industry standard for more than 30 years. Both Hydro-Zinc and Pota-Pox are certified in accordance with ANSI/NSF Standard 61 for use on the interior of potable water tanks.

"The exterior of the tank was visually inspected in 2009 and was found to still be in great shape after more than 13 years of exposure in a very demanding environment," Mitkus added. "The clear coat has performed very well in protecting that finish and color from UV exposure and weathering."

FEATURED PRODUCTS

Series 20 Pota-Pox
Series 27 F.C. Typoxy
Series 73 Endura-Shield
Series 76 Endura-Clear

Series 90-97 Tneme-Zinc
Series 91-H₂O Hydro-Zinc



PROJECT INFORMATION

Project Location

Winthrop, Massachusetts

Project Completion Date

1996

Owner

City of Winthrop

Engineer

AECOM/Earth Tech - Concord, Massachusetts

Field Applicator

Marcel Payeur, Inc. - Sanford, Maine

The Tnemec coating system applied in 1996 to the exterior of the standpipe in Winthrop, Massachusetts still looks great after more than 20 years of exposure in a very demanding environment.

