

VILLAGE OF MONTGOMERY WATER TANKS

In the Village of Montgomery, Illinois, the sun rises and sets on a pair of matching potable water tanks – one located east of town and one west – that share the same design, colors, logo and long-lasting protective coatings from Tnemec. “The two 750,000-gallon Torospheres were recoated under the same contract,” recalled Tnemec coating consultant Erik Otten. “The project specified the complete removal of all interior and exterior lead-based paint from both tanks, as well as the application of the same three-coat interior lining and fluoropolymer exterior finish.”

Work on the “east” tank was completed in the fall of 2004, while the “west” tank was finished the following year. Surface preparation consisted of SSPC-SP10/NACE No. 2 Near-White Metal Blast Cleaning for interior steel and SSPC-SP6/NACE No. 3 Commercial Blast Cleaning for exterior steel. The interior coating system used on both tanks consisted of Series 91-H₂O Hydro-Zinc, moisture-cured, zinc-rich urethane primer, followed by two coats of Series 20 Pota-Pox, a polyamide epoxy known for its benchmark performance. Both interior coatings were airless spray-applied and are certified by NSF International in accordance with ANSI/NSF Std. 61 for use on the interior of potable water storage tanks.

Series 91-H₂O was also airless spray-applied to the exterior steel on both tanks, followed by an intermediate coat of Series 73 Endura-Shield, an aliphatic acrylic polyurethane used to provide additional film thickness for corrosion resistance. Series 700 HydroFlon, an advanced thermoset fluoropolymer, was roller-applied as the finish coat to provide long-term gloss and color retention and excellent resistance to ultraviolet (UV) light. “Due to the time of year and temperatures, Series 44-710 Urethane Accelerator was added to the HydroFlon for application,” Otten noted. Series 218 MortarClad, an epoxy-modified cementitious mortar, was used to patch the foundation.

In addition to being specified for the two 750,000 Torospheres, the same coating system was used on a new 1 million gallon waterspheroid that was constructed by CB&I in Montgomery in 2006. For that project, interior steel was prepared in accordance with SSPC-SP10/NACE No. 2 Near-White Metal Blast Cleaning, while non-immersion interior and exterior steel was commercial blast cleaned according to SSPC-SP6/NACE No. 3. Both interior and exterior steel was shop-primed with Series 91-H₂O, while field application consisted of two coats of Series 20 on the interior and Series 73/Series 700 on the exterior. Overall, nearly 2,500 gallons of coatings were required for the three tanks. “All of the tanks have a nice Montgomery logo painted on them and feature several shades of blue,” Otten added.

FEATURED PRODUCTS

Series 20 Pota-Pox
Series 44-710 Urethane Accelerator
Series 73 Endura-Shield

Series 91-H₂O Hydro-Zinc
Series 218 MortarClad
Series 700 HydroFlon



PROJECT INFORMATION

Project Location

Montgomery, Illinois

Project Completion Date

November 2004-2006

Owner

Village of Montgomery

Engineer

Engineering Enterprises - Sugar Grove, Illinois

Field Applicator

Jetco, Ltd. - Prospect Heights, Illinois

All tanks received high-performance, fluoropolymer coating systems from Tnemec.

