

## RUGBY WATER TANK

When engineers hired by Rugby, North Dakota, found the town's elevated water tank pitted and leaking, they decided it was time to "trade up" to a new 250,000 gallon hydrocone bowl protected by an ultra-durable, corrosion-resistant, fluoropolymer coating system from Tnemec. "The original tank's interior had a coal-tar epoxy that was falling off, extensive corrosion, and metal loss to the point that the tank was springing leaks in its side walls," Tnemec coating consultant Kevin Renslow explained. "The project involved the fabrication of a new tank and renovation of the original pedestal. After the new tank was welded together on a parking lot next to the existing structure, the old bowl was cut off from its pedestal and lowered to the ground by a crane. Then the new bowl was lifted into place and welded onto the original stem."

Interior steel on the new tank was prepared by the fabricator in accordance with SSPC-SP10/NACE No. 2 Near-White Metal Blast Cleaning, then spray-coated with Series 91-H<sub>2</sub>O Hydro-Zinc, a two-component, moisture-cured, zinc-rich aromatic urethane. Exterior steel was prepared in accordance with SSPC-SP6/NACE No. 3 Commercial Blast Cleaning and shop-primed with Series 91-H<sub>2</sub>O, which was also used in the field to touch up the tank's welded seams. "They also blasted the exterior steel on the original pedestal and field-primed it with Series 91-H<sub>2</sub>O," Renslow added.

Following assembly, the tank's interior received two coats of Series 20 Pota-Pox, a polyamide epoxy, which was spray-applied. Exterior steel received an intermediate coat of Series 73 Endura-Shield, an aliphatic acrylic polyurethane, which was roller-applied. A finish coat of Series 700 HydroFlon, an advanced thermoset fluoropolymer polyurethane especially designed for tanks and other exposed steel substrates, was brush- and roller-applied.

"Series 700 was specified for its long-term color and gloss retention and excellent resistance to ultraviolet (UV) light," Renslow added. "Artwork on the tank featured the Rugby High School's Panthers mascot and orange and black school colors, so a high level of aesthetics was also a must. After more than three years, the tank still looked like the day it was painted."

The town of Rugby promotes itself as the Geographical Center of North America based on findings from a geological survey conducted by the U.S. Department of the Interior.

### FEATURED PRODUCTS

- Series 20 Pota-Pox
- Series 73 Endura-Shield
- Series 91-H<sub>2</sub>O Hydro-Zinc
- Series 700 HydroFlon



### PROJECT INFORMATION

**Project Location**

Rugby, North Dakota

**Project Completion Date**

September 2007

**Owner**

City of Rugby

**Engineer**

Bartlett & West Engineers - Bismarck, North Dakota

**Shop Applicators**

General Construction Services - Stillwater, Minnesota

Industrial Painting Specialists - Hugo, Minnesota

**Field Applicator**

Deloughery Painting - Burlington, North Dakota

Series 700 HydroFlon protects the exterior of the Rugby, North Dakota water tank from the harsh effects of UV light.

