

## LAKE FOREST WATER TANK

An exterior overcoat and interior repainting project on a 1.5 million gallon Waterspheroid tank in the city of Lake Forest, Illinois, stands as evidence of the outstanding long-term corrosion resistance of Series 91-H<sub>2</sub>O Hydro-Zinc, an organic, zinc-rich aromatic urethane primer for potable water immersion. "A seven-year inspection was conducted on the interior of the Lake Forest tank in 2005 by the engineer and the project still looks great," according to Tnemec coating consultant Erik Otten. "Here's a tank that was inspected at the standard one year anniversary mark, and also by TIC at its two year anniversary, and once again at its seven year anniversary. After over eight years in immersion service there is still virtually no failures."

The project, which was completed in July 1997, used the spray-applied two-component primer on the tank's interior steel. The primer offers superior adhesion and corrosion resistance. The interior steel was prepared by abrasive blast cleaning in accordance with SSPC-SP10 to remove the original coatings. The prime coat of Hydro-Zinc was followed with two interior coats of spray-applied Series 20 Pota-Pox, a polyamide epoxy at 4.0 to 5.0 mils DFT per coat. The 15-year-old polyurethane coating system on the tank's exterior was brush-off blast cleaned before receiving a tie coat of Series 27 F.C. Typoxy, a polyamide epoxy, followed by a topcoat of Series 74 Endura-Shield, an acrylic polyurethane. Both exterior coats were roller-applied.

Prior to 1998, specifications for immersion service usually called for two or three coats of Series 20, which was the industry standard for potable water epoxy coatings at that time. "Longer life expectancy was the selling point for using the Hydro-Zinc primer," Otten recalled. "Bill Hensel, who worked on the project for the city of Lake Forest, called us and the original applicator after the tank was inspected the third time to state how impressed he was with the application and the performance of the coating system." The use of the Hydro-Zinc primer can extend the life of the interior system by 45 - 50 percent over the use of conventional two or three-coat epoxy systems alone.

"This was quite a revolutionary product to be using when we first released it," Otten added. "Tnemec was the first company to use an organic, zinc-rich urethane as a primer on tank interiors for potable water immersion service. All of our competitors were claiming it shouldn't be done or that it would never work, but time has proven them wrong and now priming steel potable water tanks with organic zinc has become the industry standard."

Series 91-H<sub>2</sub>O Hydro-Zinc was the first organic zinc-rich primer to be ANSI/NSF Standard 61 certified for use on interior potable water tanks.

### FEATURED PRODUCTS

- Series 20 Pota-Pox
- Series 27 F.C. Typoxy
- Series 74 Endura-Shield
- Series 91-H<sub>2</sub>O Hydro-Zinc



### PROJECT INFORMATION

**Project Location**

Lake Forest, Illinois

**Project Completion Date**

July 1998

**Owner**

City of Lake Forest

**Engineer**

McMahon & Associates - Menasha, Wisconsin

**Applicator**

Neumann Company - Romeoville, Illinois

Series 91-H<sub>2</sub>O Hydro-Zinc, the first organic zinc-rich primer to be ANSI/NSF Std. 61 certified for use on the interior of potable water tanks, was chosen to protect the 1.5 million gallon waterspheroid tank in Lake Forest, IL.

