

TAYLORVILLE WATER TANK

Water tank color schemes and graphics represent everything from school mascots and corporate logos to local attractions and landscapes. In Taylorville, Illinois, however, the color orange used for the city's 500,000 gallon double ellipsoidal water tank was dictated by concerns for safety rather than aesthetics. "The tank was painted that color due to its proximity to the Taylorville airport," according to Tnemec coating consultant Erik Otten. "The Federal Aviation Administration (FAA) requires water tanks located near airports to be painted either a checkerboard, teardrop pattern or aviation orange."

The current FAA standard (found in Advisory Circular 70/7460-1K) requires that on structures conspicuous to pilots, "all surfaces should be repainted when the color changes noticeably or its effectiveness is reduced by scaling, oxidation, chipping or layers of contamination." According to the standard, "approved colors shall be formulated without the use of lead, zinc chromate or other heavy metals to match International Orange, White and Yellow. All coatings shall be manufactured and labeled to meet Federal Environmental Protection Act Volatile Organic Compound(s) guidelines including the National Volatile Organic Compound Emission Standards for architectural coatings." The standard also calls for a manufacturer-recommended primer that is compatible with the finish coat to be used on all ferrous iron and steel or non-galvanized surfaces.

Surface preparation for the tank consisted of abrasive blast cleaning in accordance with SSPC-SP10 (interior) and SSPC-SP6 (exterior) to remove the original coatings. Once the interior was blasted, two coats of Series 20 Pota-Pox, a polyamide epoxy primer, were spray-applied at 4.0 to 6.0 mils DFT per coat. On the exterior, Series 65, a polyamide epoxy, was used as a prime coat at 2.0 to 3.0 mils DFT, followed by an intermediate coat of Series 66 Hi-Build Epoxoline, a polyamide epoxy applied by roller at 2.0 to 3.0 mils DFT. A finish coat of Series 73 Endura-Shield, an aliphatic acrylic urethane, was applied in orange at 2.0 to 3.0 mils DFT and a clear topcoat of Series 76 Endura-Clear at 1.0 to 1.5 mils DFT completed the job.

"This was one of the first tanks where we used a complete clear coat on the tank's exterior," Otten recalled. "Prior to this tank, the clear coat was typically applied only on lettering and logo. Back in the early 1990s, for long term color and gloss retention, especially with dark or accent colors, a final coat of a UV absorbing, acrylic polyurethane clearcoat was our best option and it worked very well. Today, after 15 years of exposure, the tank is still as shiny and orange as the day it was coated."

FEATURED PRODUCTS

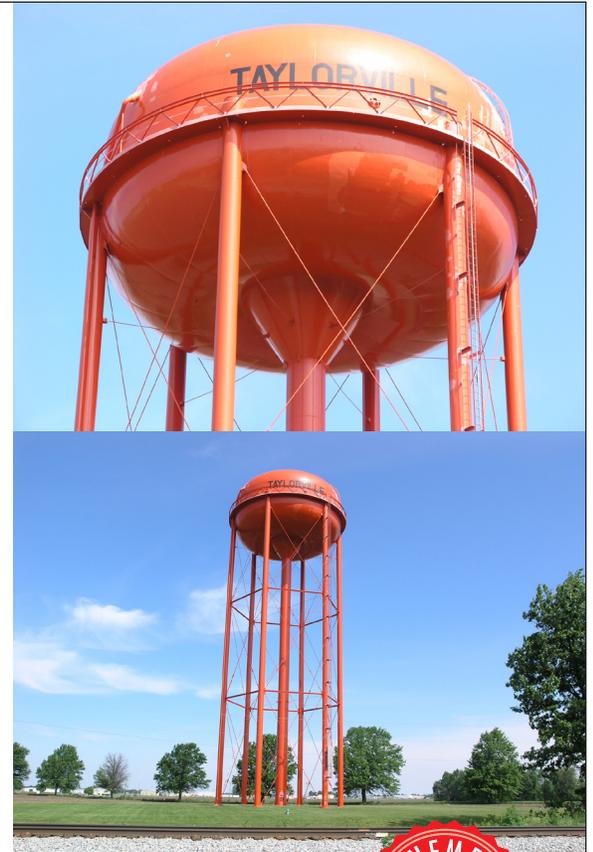
Series 20 Pota-Pox

Series 65 Poxiprime

Series 66 Hi-Build Epoxoline

Series 73 Endura-Shield

Series 76 Endura-Clear



PROJECT INFORMATION



Project Location

Taylorville, Illinois

Project Completion Date

June 2002

Owner / Engineer

City of Taylorville

Applicator

Hanfland Sandblasting & Painting - Sigel, Illinois

After 15 years of exposure, the Taylorville water tank is still as shiny and orange as the day it was coated.

