

# MICHELLVILLE 300,000 GALLON WATER TANK

The pastoral scene depicted on the logo for the 300,000 gallon water tank in Mitchellville, Iowa, belies the high-tech coating system from Tnemec that provided project engineers with labor-saving, fast-curing and ultraviolet (UV) light-resistant performance. "The engineers have had good luck with the interior two-coat system on similar projects, so they decided to use it for this tank," explained Tnemec coating consultant Rory Sudbeck.

Specifications called for the exterior steel to be prepared in accordance with SSPC-SP6/NACE No. 3 Commercial Blast Cleaning. Series FC20 Pota-Pox, a fast-curing polyamide epoxy, was used to accommodate temperature fluctuations. "They used Series FC20 because they were worried about temperatures getting down to 35 degrees F," according to Sudbeck.

The exterior topcoat was Series 1074U Endura-Shield II, an aliphatic acrylic polyurethane, featuring additional resistance to ultra-violet (UV) light. "The UV blocker was added because of the blue, green and yellow colors," Sudbeck acknowledged. Applied by brush and roller, nearly 50 gallons of topcoat were required for the exterior. The high-build capability of Series 1074U together with Series FC20 saves on the cost of labor compared to three-coat systems.

The tank's interior steel was prepared in accordance with SSPC-SP10/NACE No. 2 Near-White Metal Blast Cleaning, followed by two coats of Series FC20, which is certified by NSF International in accordance with ANSI/NSF Standard 61 for use on the interior of potable water tanks and reservoirs. The coating also conforms to the American Water Works Association (AWWA) D 102 Coating Steel Water Storage Tanks. Spray-applied, more than 300 gallons of Series FC20 were needed for the interior and exterior of the tank.

The Mitchellville water supply obtains its water from the Alluvial aquifer. The project was part of a five-year capital improvement that included opening a new water plant with new wells, a new wastewater plant more compliant with state and federal environmental regulations, several street resurfacing projects, improved storm water drainage, reconstruction of rail crossings, construction of a new library and city hall.

## FEATURED PRODUCTS

**Series FC20 Pota-Pox**

**Series 1074U Endura-Shield II**



## PROJECT INFORMATION

**Project Location**  
Mitchellville, Iowa

**Project Completion Date**  
May 2008

**Owner**  
City of Mitchellville

**Engineer**  
V&K, Inc.  
West Des Moines, Iowa

**Field Applicator**  
Maguire Iron  
Sioux Falls, South Dakota

A coating system featuring Series 1074U and Series FC20 was used on the Mitchellville water tank in Iowa because of the high-build properties and labor cost savings.

