



OMOHUNDRO WATER TREATMENT PLANT

FEATURED PRODUCTS

**Series N69 Hi-Build Epoxoline II Series 971 Aerolon Acrylic Series 1028T Enduratone
Series 1224 Epoxoline WB**

In 2010, a devastating flood put many facilities in Nashville, Tennessee underwater, including the pipe gallery at the Omohundro Water Treatment Plant. When inspecting the pipes for coating two years later, consultants noticed severe corrosion under insulation (CUI) when removing the insulation jacketing from the boiler line. Tnemec coating consultant, Mark Goulet, informed the owner of an innovative solution that would resist CUI, would adhere directly to the surface, and provide personnel protection from the line's elevated temperatures.

"We provided the customer with the numerous capabilities of the Aerolon coating system," said Goulet. "After this discussion, the engineers were very interested in the possibility and specified the system for application."

The Aerolon system, featuring Tnemec's thermal insulating coating Series 971 Aerolon Acrylic, challenges deficiencies found in traditional insulation methods. Applied direct-to-metal, Aerolon limits the greatest areas of concern for CUI – i.e. gaps between insulation and pipe – and resists moisture intrusion and condensation. On pipes and tanks with higher surface temperatures, where CUI and worksite safety become even more important, the system can be applied on substrates up to 200° F.

Five feet sections of pipe receiving the system were blocked off and prepared in accordance to SSPC-SP 3 Power Tool Cleaning. The steel pipe was primed with Series 1224 Epoxoline WB, an advanced generation, 100% solids waterborne epoxy coating.

Series 971 was spray-applied to the surface at 40-50 mils DFT. The aerogel-infused coating can be applied up to 50 mils DFT per coat, making application more efficient than alternative insulating solutions while still greatly reducing the issues associated with CUI. Following the application of Series 971, a topcoat of Series 1028T Enduratone was applied for added color and gloss stability.

Other carbon steel and ductile iron surfaces in the plant were coated with Series N69 Hi-Build Epoxoline II, a polyamidoamine epoxy with excellent abrasion- and chemical-resistance. The plant has remained in service during application and all work is scheduled to be completed by 2015.

"The resulting surfaces were beyond the owner's expectation," said Goulet. "They were impressed by the safe-touch properties of the finished Aerolon system and appreciated that the system didn't take up the space that the insulation jackets did before it."

PROJECT INFORMATION

Project Location

Nashville, Tennessee

Project Completion Date

Ongoing

Owner

Metro Nashville
Nashville, Tennessee

Engineer

Garver Engineering
Nashville, Tennessee

Applicator

Commercial Painting
Nashville, Tennessee



After discovering severe corrosion under insulation in the Omohundro Water Plant, engineers applied the Aerolon coating system from Tnemec to resist future issues involved with CUI.