

# 100 FEDERAL STREET CHILLER TANK

Large office complexes and apartment buildings use extensive heating and cooling systems to provide a comfortable, habitable interior environment. In many of these buildings, the heating and cooling facility is located in the basement or ground floor and uses chiller tanks for the ground water being pumped through the system. Because the tanks and surrounding piping are at temperatures below the dew point, they require insulation to reduce thermal loss and excess condensation.

The owners at 100 Federal Street in Boston, Massachusetts, were seeing problems with their chiller tanks caused by traditional insulation. Previously insulated using fabricated foam, the tanks became subject to corrosion under insulation (CUI) and wide-spread steel pitting. The foam pad insulation, not continuous and containing gaps where moisture could migrate to the substrate, was causing problems where it was supposed to be solving them.

"We offered the client an innovative solution to solve their issues on one chiller tank in particular," said Larry Mitkus, Coating Consultant with Righter Group, Inc. "Our thermal insulating coating system, featuring Series 971 Aerolon Acrylic, would present them with the most viable solution available."

The chiller tank received a prime coat of Series 1224 Epoxoline WB, a low odor and low VOC, water based epoxy coating, roller-applied to the steel prepared in accordance with SSPC-SP 3 Power Tool Cleaning. Following Series 1224, the owner applied Tnemec's advanced-generation thermal insulating coating, Series 971 Aerolon Acrylic, using a texture spray gun. This coating can be easily applied in a high-build, thick coat to help prevent the harmful effects of condensation and CUI.

Once cured, the system was completed with a roller-applied topcoat of Series 1028T Enduratone. This acrylic polymer coating provides long term protection and is available in a wide variety of colors. Once applied and cured, this Aerolon system created one continuous coat on the tank where the former insulating material left gaps and seams.

"The labor and material costs for the Aerolon system were significantly less than that of the previous foam installations," commented Mitkus. "The coating system has been in service through the hot summer months, and has shown little, if any, signs of condensation."

The building at 100 Federal Street is a 37-story, Class A office tower in Boston's Financial District. It is nicknamed the "Pregnant Building," because of the structure's unusual architecture, with several stories protruding outward on the building's bottom half.

## FEATURED PRODUCTS

- Series 971 Aerolon Acrylic
- Series 1028T Enduratone
- Series 1224 Epoxoline WB



## PROJECT INFORMATION

### Project Location

Boston, Massachusetts

### Project Completion Date

October 2014

### Owner / Applicator

Boston Properties - Boston, Massachusetts

Before being coated with Tnemec's thermal insulating coating, Aerolon, the chiller tank's foam insulation was allowing moisture to penetrate and cause accelerated corrosion.

