



## ZCMI CAST IRON FACADE RESTORATION

### FEATURED PRODUCTS

Series 90-97 Tneme-Zinc

Series 66 Hi-Build Epoxoline

Series N69 Hi-Build Epoxoline II

Series 135 Chembuild

Series 215 Surfacing Epoxy

Series 1072 Fluoronar

Series 1078 Fluoronar Metallic

Series 1079-0762 Metallic Clearcoat

Although separated by more than 135 years, the first major department store in Salt Lake City, Utah, and the city's newest retail destination share one thing in common - a historic cast iron façade restored with an advanced fluoropolymer coating system from Tnemec. "The amount of craftsmanship and handiwork that goes into restoring cast iron architecture like this is unbelievable," Tnemec coating consultant Michelle Call explained. "That's why landmark projects require high-performance coating systems."

The iconic façade, which is listed on the National Register of Historic Places, belonged to Zion's Cooperative Mercantile Institution (ZCMI) founded by Brigham Young in 1868. The 75-foot high by 140-foot long facade features cast iron colonnades with ornamental castings and a cornice section made of galvanized metal. The façade is now part of the new Macy's department store in the downtown City Creek development.

During restoration, original cast iron and replacement pieces re-cast in aluminum were prepared by abrasive blast cleaning and shop-primed with an epoxy coating that doubled as field-applied tie coat. Specified primers were Series 90-97 Tneme-Zinc, Series 66 Hi-Build Epoxoline and Series N69 Hi-Build Epoxoline II.

Pitted cast iron pieces were reconditioned using Series 215 Surfacing Epoxy and primed with a coat of Series 90-97 Tneme-Zinc, a zinc-rich aromatic urethane. Structural steel used to secure cast iron components to the building was blast-cleaned and primed by the fabricator with Series 90-97.

The façade's cornice section was prepared in accordance with SSPC-SP1 *Solvent Cleaning*. "They originally tried abrasive blasting, but the sheet metal was too thin," Call noted. "So they used a chemical stripper on the metal and pressure-washed it." The cornice section above the window bays were galvanized metal that was 100 percent shop-applied. The section was primed with Series 66, followed by a finish coat of Series 1072 Fluoronar, a high-solids fluoropolymer resin that offers outstanding color and gloss retention. Among the custom colors specified was an elegant gold accent, matched to simulate 24-karat gold leafing, in Series 1078 Fluoronar Metallic. The Fluoronar was then coated with Series 1079-0762 Metallic Clearcoat, a clear coat used to both enhance the finish and extend the long-term weathering qualities of metallic pigmented coatings. Structural steel for these sections was primed with a high-build epoxy, Series 135 Chembuild.

During the recoating, the façade was surrounded by scaffolding and enclosed to help control environmental conditions. Tie-coats, finish coats and the gold accent finishes were applied with brushes, rollers and sprayers to the cast iron columns and individual decorative castings that were then reassembled and attached by screws. Approximately 2,300 hours and 500 gallons of coatings were needed to complete the project.

### PROJECT INFORMATION

#### Project Location

Salt Lake City, Utah

#### Project Completion Date

Spring 2011

#### Owner

City Creek Reserve, Inc.  
Salt Lake City, Utah

#### Engineer

Historical Arts & Casting, Inc.  
West Jordan, Utah

#### Applicator

Daniels Painting  
Salt Lake City, Utah

#### Surface Preparation & Primer

Historical Arts & Casting, Inc.  
West Jordan, Utah



The historic cast iron façade of the ZCMI building in Salt Lake City, Utah, was restored to like-new condition using an advanced fluoropolymer coating system from Tnemec. The façade is now part of the new Macy's department store in the downtown City Creek development. Photos courtesy of Robert A. Baird., Historical Arts & Casting, Inc.