

# HALLIDIE BUILDING RESTORATION

After decades of exposure to fog and moisture intrusion, the historic curtain wall façade of the Hallidie Building in San Francisco, California, needed mending with hundreds of restored or replaced metal components protected by advanced fluoropolymer coatings from Tnemec.

“Wendy Amos worked with the design team to select a coating system that would achieve the highest level of performance in terms of color and gloss retention,” according to Carl Bowers with Amos and Associates in Auburn, California. “Given the structure’s significance as one of the world’s first glass curtain wall buildings, those involved with the project wanted the longest lasting coating technology available.”

The overall project involved removal, repair and reinstallation of approximately 735 sheet metal and railing components for the building’s ornamental balconies and fire escapes, along with 513 windows. Disassembly and removal of individual components was carefully monitored for compliance with environmental regulations related to the proper capture and disposal of lead-based paint. Existing paint on the façade was removed in blasting chambers by the coating applicator. Ornamental components were prepared in accordance with SSPC-SP6/NACE No. 3 Commercial Blast Cleaning, while window frames, sashes, metal grates and railings were prepared in accordance with SSPC-SP10/NACE No. 2 Near White Blast Cleaning. Each component was primed with Series 90-97 Tneme-Zinc, an aromatic urethane, zinc-rich primer.

Metalwork that required repair or fabrication was primed with Series 135 Chembuild, a modified polyamidoamine epoxy, which is an ideal foundation for the specified intermediate coat of Series 1075 Endura-Shield II, an aliphatic acrylic polyurethane coating. Nearly 235 gallons of Series 1075 was used.

More than 300 gallons of high-solids fluoropolymer coatings that offer outstanding color and gloss retention were applied as the finish coat to exterior metal, including structural steel. Blue-colored components received either Series 1071V Fluoronar, a low-VOC semi-gloss fluoropolymer coating, or Series 1072V Fluoronar, which offers a satin finish. Gold accented components received a coat of Series 1078 Fluoronar Metallic, followed by a coat of Series 1079 Metallic Clearcoat. “The advantage to this coating system is unsurpassed protection against ultraviolet (UV) light attack and the elements of weather, such as San Francisco fog,” Bowers explained.

Structural steel outriggers on the interior of the façade were primed with Series 115 Uni-Bond DF, a hydrophobic acrylic coating, followed by a coat of Series 1029 Enduratone, a High Dispersion Pure acrylic polymer coating. In 1971, the Hallidie Building was listed on both the National Registry of Historic Places and the San Francisco Historic Landmarks and Districts. In 2013, the restored facade was named winner of the Charles G. Munger Award presented by the Society for Protective Coatings to an outstanding industrial or commercial coatings project that demonstrates longevity.

## FEATURED PRODUCTS

Series 90-97 Tneme-Zinc  
Series 115 Uni-Bond DF  
Series 135 Chembuild  
Series 1029 Enduratone  
Series 1071V Fluoronar

Series 1072V Fluoronar  
Series 1075 Endura-Shield II  
Series 1078 Fluoronar Metallic  
Series 1079 Metallic Clearcoat



## PROJECT INFORMATION

**Project Location**  
San Francisco, California

**Project Completion Date**  
Spring 2013

**Owner**  
Edward J Conner & Herbert P McLaughlin - San Francisco, California

**Architect**  
McGinnis Chen Associates - San Francisco, California

**Shop & Field Applicator**  
Abrasive Blasting & Coating (ABC) Inc. - Vallejo, California

Coating systems from Tnemec helped to restore the historic Hallidie Building, in San Francisco, California, to its former glory. It was one of the first buildings in America to utilize the glass curtain wall structure. Photos courtesy Sherman Takata, Takata Photography.

