MIAMI COUNTY COURTHOUSE RESTORATION

In what has been described as the largest restoration of a cast iron facade in the U.S., the historic Miami County Courthouse in Troy, Ohio, required the judicious reconditioning of more than 15,000 ornamental and structural components using a long-lasting coating system from Tnemec.

"Due to the building's historical significance, everyone wanted a protective finish that wasn't going to alter its aesthetics," recalled Dan Haines of Ohio Coating Consultants. "Tnemec coatings were specified for the structural steel support members and on both sides of the cast iron cladding that covered the building's domes and pavilions."

Before restoration could get underway, an estimated 43,000 pounds of pigeon waste and other debris were removed from the work areas. Each piece of the original cast iron façade was given a numerical code and catalogued prior to being dismantled and removed to an off-site location for restoration or replacement. "The process resembled an architectural dig," Haines explained. "Old components were being removed at the same time that reconditioned parts were being returned. Some of the pieces were small, while others were 4 feet by 6 feet and obviously very heavy."

Reusable cast iron components were abrasive blast-cleaned to remove old coatings and shop-primed with Series 90-97 Tneme-Zinc, an advanced technology zinc-rich urethane coating. An intermediate coat of Series 161 Tneme-Fascure, a low temperature-cure polyamide epoxy, was also shop-applied. The same primer and intermediate coatings were used on replacement cast iron components created from hundreds of patterns custom-manufactured by Historical Arts & Casting to replace original parts that were severely corroded after decades of water intrusion.

The riveted iron framework used to support the cast iron cladding was field-coated with Series 135 Chembuild, a high-build modified polyamidoamine epoxy for marginally prepared rusty steel and tightly adhering old coatings. After the cast iron cladding was reinstalled, the exterior surfaces were field-coated with Series 73 Endura-Shield, an aliphatic acrylic polyurethane finish coating, which is highly resistant to abrasion, wet conditions and weathering. A clear coat of Series 76 Endura-Clear, an aliphatic acrylic polyurethane coating, was also applied to extend the long-term weathering properties of the Endura-Shield topcoat.

"The coating application was very meticulous and the contractors did an excellent job," Haines added. "The courthouse is a focal point in the county, so its restoration attracted considerable attention." Upon the project's completion, a rededication of the courthouse attracted more than 34,000 people.

Built in 1888, the courthouse was listed on the National Register of Historic Places in 1975. The building currently houses the Miami County Municipal Court.

FEATURED PRODUCTS

Series 73 Endura-Shield
Series 76 Endura-Clear
Series 90-97 Tneme-Zinc
Series 135 Chembuild
Series 161 Tneme-Frascure

PROJECT INFORMATION

Project Location
Troy, Ohio

Project Completion Date
July 1998

Owner
Miami County, Ohio

Architect
John Ruetschle Associates Inc. - Dayton, Ohio

Engineer
Historical Arts & Casting, Inc. - West Jordan, Utah

Shop Applicators
Brian Painting Company - Piqua, Ohio

Field Applicators
E.B. Miller Company - Cincinnati, Ohio

This historic courthouse located in Troy, Ohio was the sight of one of the largest cast iron restorations in the United States. With use of Tnemec coating systems, the courthouse has regained its beauty. Photos courtesy of Mike Ullery, Miami Valley Photography.

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