



# THE UNIVERSITY OF NORTH CAROLINA CHILLER PLANT

## FEATURED PRODUCTS

Series 90-97 Tneme-Zinc    Series 66 Hi-Build Epoxoline    Series 1070 Fluoronar

The University of North Carolina in Chapel Hill is experiencing an unprecedented construction boom on its 729-acre central campus, where the future meets the past through architecture that blends the old with the new. Among the recent improvements is a new 10,000-ton chiller plant where special attention was given to the appearance of the building and structural steel to make them blend attractively into their surroundings.

"The chiller plant is essentially two large cooling towers surrounded by a brick building to make it more visually appealing," explained Dave Keeler, Tnemec coating consultant. "The building is constructed with louvers on one side and brick on the other three that are supported by architecturally exposed structural steel. The architect wanted long-term appearance retention on the exposed steel, so the coating specification called for a fluoropolymer topcoat."

The chiller plant represented the first use of fluoropolymer technology at the university, according to Keeler. "We have done several projects on campus with conventional urethanes and clear coats, but fluoropolymer technology offers superior color and gloss retention under severe exposure conditions compared to conventional urethanes. This technology is pretty much the epitome of performance."

The coating system included a prime coat of Series 90-97 Tneme-Zinc, a two-component, moisture-cured zinc-rich polyurethane, shop-applied at 2 ½ to 3 ½ mils thickness and which offers superior bonding to SSPC-SP10 *Prepared Exterior Steel*. An intermediate coat of Series 66 Hi-Build Epoxoline, a polyamide epoxy, applied at 3 to 5 mils thickness and one coat of Series 1070 Fluoronar, a high-solids fluoropolymer, applied at 2 to 3 mils thickness completed the job. "After the steel was primed in the shop, it was sent out to the field where it was touched up with Tneme-Zinc, followed by the intermediate and finish coats," Keeler noted. "The applicator said it was very easy material to work with."

And unlike fluoropolymer systems of the past that had to be applied in the shop and baked at high temperatures, today's fluoropolymers can be field applied and, unlike their predecessors, are readily recoated. "So 20 years from now, if the university decides to recoat the Fluoronar, all they have to do is make sure the surface is clean, apply another coat and it will go another 20 years," Keeler added.

## PROJECT INFORMATION

### Project Location

Chapel Hill, North Carolina

### Project Completion Date

February 2006

### Owner

University of North Carolina

### Architect

Ayers Saint Gross  
Baltimore, Maryland

### Engineer

Affiliated Engineers Inc  
Chapel Hill, North Carolina

### Applicator

Southern Paint & Waterproofing  
Greensboro, North Carolina



The Chiller Plant at the University of North Carolina is protected with a coating system that includes Series 1070 Fluoronar which offers superior color and gloss retention.