



CONCRETE RENOVATIONS

Bring Yale Whale Back to Life

by Stephanie Brown

Ingalls Rink, located in the heart of Yale University, is one of the most distinguished hockey facilities in the country. The home of men's and women's hockey since 1958, the rink has been dubbed the "Yale Whale" because of its hump-backed roof and arching 300-foot backbone originally designed by Eero Saarinen. The rink, which seats 3,386 fans, is made of concrete with an aluminum roof supported by cables. The famous ceiling is 76-feet high at its zenith. The rink also contains a weight room, three locker rooms and a reception room which houses Yale team photos dating back to 1895.

In 1991, renovations totaling \$1.5 million were performed on the rink surface. In addition, an ice-making system was installed and a new 4-inch thick concrete slab with refrigerant tubing was placed over the original slab. Ingalls' playing surface is 200 feet long and 85 feet wide. The rink also is home to the figure skating club, intramural hockey and Yale youth hockey.

In October 2008, renovations were made to the outside of the building using Rapid Set® DOT Cement to repair the deteriorated 4-foot concrete overhang at the entrance. Having used Rapid Set DOT Cement for years, Hoffman Architects selected the product because of its proven performance. It is a highly durable calcium sulfoaluminate-based hydraulic cement with exceptional workability characteristics. DOT cement is

formulated for low permeability, high sulfate resistance, low shrinkage and long life in freeze thaw regions. When mixed with aggregates and water, a fast setting, high quality repair concrete is produced. The cement may be batched to yield about 2 cubic feet per 50-pound bag.

The deteriorated material on the hump-backed roof was removed with wet saws on 8-foot poles and the forms were stripped the next day. NER Construction made forms with cedar boards to match the original architecture on site. The project was completed in two weeks.

The project design required 50 pounds of cement, 100 pounds of sand and an additional 100 pounds of 3/8-inch pea stone. Two holes were bored from the top of the roof perimeter at either end so 2 inches of material could be poured. The material matched the original color perfectly and there was a fluid consistency with no shrinkage.

To the public and fans alike, the Ingalls Rink is once again a source of pride for the university and its students.

CTS Cement Manufacturing Corporation is the largest manufacturer of specialty fast setting cement and shrinkage-compensating cement in the United States. CTS provides innovative products to the construction industry through continual research and development. For more information, visit www.ctscement.com. 