FORTA®

Project Profile

Slab On Ground

Clow Stamping Company

Merrifield, MN
July 2012

2012 FORTA Teamwork Project Award

A large portion of the summer 2012 expansion project for Clow Stamping Company included over 52,000 square feet of concrete slab on ground. As a major manufacturer and supplier of OEM metal parts for a wide variety of industries including agriculture, recreational vehicles, exercise equipment, and commercial refrigeration, Clow required additional space for parts storage that involved considerable rack and floor loading. Partnering with the FORTA Corporation design-assistance team, design/builder Nor-Son Inc. and contractor Kasella Concrete were able to take advantage of the material and labor cost savings afforded by the three-dimensional macro-fiber reinforcement vs. the conventional #4 rebar 20" O.C. matt reinforcement. An engineered calculation provided ample evidence that a dosage of 7.5 lbs/cu yd of the FORTA-FERRO® macrosynthetic fiber would offer sufficient loading capacity and improved crack control for the 12 ft x 12 ft jointed panels at a design slab thickness of 6 in. Even at the relatively high fiber dosage, FORTA-FERRO® offered no negative issues in the mixing, buggy delivery, placement, laser-guided screeding, or finishing processes. The final fiber-inclusive concrete slump of 3 to 4 in. allowed for easy placement of the mix, which included a coarse aggregate blend of 1 ½" and ¾" aggregates and a total cementitious content of 550 lbs (429 lbs Type I Portland, 121 lbs Class C fly ash) in the 4,000 psi design mix.

Project reflected a positive partnership between design/builder, contractor, concrete supplier, and owner.

FORTA-FERRO® offered no issues in buggy transport, laser-guided screeding, initial float, or final burnished finish.

Project Details:

Owner: Clow Stamping Company, Merrifield, MN
Design/Build: Nor-Son Inc., Baxter, MN
Concrete Contractor: Kasella Concrete Co., Pierz, MN
Ready-Mix Supplier: Knife River Corporation, Baxter, MN
Fiber: FORTA-FERRO® macrosynthetic 2 ¼" @ 7.5 lbs/cu yd

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