EPOXY INTEREST GROUP

ANTI-CORROSION TIMES

WWW.EPOXYINTERESTGROUP.ORG Volume 25, No. 1 – FEBRUARY 2010

Reporting on industry news, noteworthy applications & new developments on fusion bonded epoxy coatings for corrosion protection of reinforcing steel

Welcome

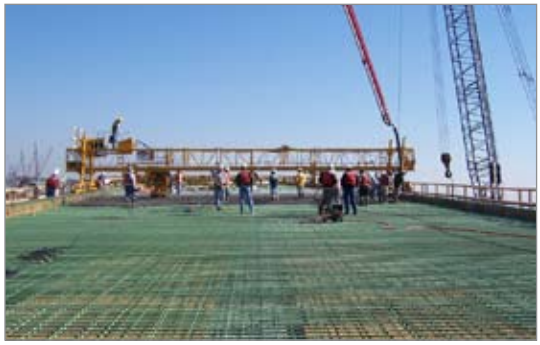
Welcome to the new format of the Anti-Corrosion Times. Anti-Corrosion Times is a publication of the Epoxy Interest Group of the Concrete Reinforcing Steel Institute (CRSI), a not-for-profit trade association providing valuable resources for the design and construction of quality cast-in- place reinforced concrete. The Anti-Corrosion Times is produced to help specifiers, engineers, architects, fabricators and end-users receive the most recent information about how and where epoxy-coated reinforcing steel is used, recent technical changes and information resources.

Projects

Biloxi Bay Bridge, U.S. 90

Biloxi, Mississippi

The Gulf Coast of Mississippi suffered massive damage from the impact of Hurricane Katrina on August 29, 2005. During this storm, the Biloxi Bay Bridge was destroyed. As a consequence, Biloxi and Ocean Springs commuters faced a 30-minute detour to what was normally a one-minute commute from one community to the other. The new, much- improved structure was rebuilt in less than 21 months, and its six lanes were opened to traffic on November 1, 2007.



The old bridge was built in 1962 and featured two side-by-side structures, two lanes each and no shoulder, with about 21 ft of clearance between the water and the bridge. The new 1.6-mile bridge was designed by Parsons and the contractor was GC Constructors, a joint venture of Massman Construction Co. of Kansas City, Traylor Bros. Inc. of Evansville, Ind., and Kiewit Southern Co. of Peachtree, Ga.

MORE

Trump International Hotel & Tower

Chicago,IL

The Trump International Hotel and Tower is located on the Chicago River and was opened on January 30, 2008 and completed in 2009 at a cost of $847 million. This 92 storey Hotel and Condominium complex, built for the Trump Organization, stands almost 1400 ft including the tower. The building is the second tallest in the United States. Upon its completion in 2009, the building became the seventh-tallest building in the world.

IN THIS ISSUE

FOR INSPIRATION

"Live with intention. Walk to the edge. Listen Hard. Practice wellness. Play with abandon. Laugh. Choose with no regret. Appreciate your friends. Continue to learn. Do what you love. Live as if this is all there is."

— Mary Anne Radmacher

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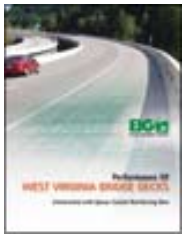
The building was designed by Skidmore, Owings and Merrill, Structural engineering was by William F. Baker and the Contractor was Bovis Lend Lease. Of the $600 million construction budget, $130 million was earmarked for the James McHugh Construction Co, who handled the 180,000-cubic-yard (140,000 m3) concrete-only portion of the job.

MORE

New Publications from the Epoxy Interest group



The following documents may be downloaded from www.epoxyinterestgroup.org or if you wish hard copies, please contact us at info@epoxyinterestgroup.org

West Virginia studies of epoxy-coated bars

This document summarizes an evaluation of six bridges in West Virginia containing epoxy-coated bars. This study found that the structures built in 1974 to 1976 with black reinforcing bars were overlaid in 1993, while the structures built at the same time with epoxy-coated bars are in good to excellent condition.

Epoxy Coated Reinforcing in Bridges

This document highlights the specification and use of epoxy-coated bars in bridges.

Corrosion Resistance of Epoxy-Coated Reinforcing Bars, Bridge Sub-structure in a Marine Environment

This document presents a summary of work conducted in 2006 on four concrete bridges constructed using epoxy-coated bars, constructed in the mid-1980s. It was further found that coating adhesion was a poor indicator of bar performance and despite poor coating adhesion, a number of epoxy-coated bar segments were found to resist high chloride concentrations (up to five times the threshold normally assumed for uncoated bars).

Corrosion-Resistance of Reinforcing Bars: An Accelerated Test

This document summarizes work conducted on the performance of epoxy-coated reinforcing bars alongside other products including galvanized, stainless and ASTM A1035 (MMFX2) under a salt spray test.

Fast facts on Epoxy-Coated Rebar (ECR)

This document provides a quick outline of the use and performance of epoxy-coated reinforcing steel in concrete

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New EIG Website

In 2009, the Epoxy interest Group launched their new website at www.epoxyinterestgroup.org. We will be using this website to provide relevant information to specifiers, engineers, architects, fabricators and end-users of epoxy-coated reinforcing bars and other products.

We hope that you find information on this website useful and please contact us if additional information is required.

Questions from the Field

Question: *In Section 6 of ASTM D3963 "Standard Specification for Fabrication and Jobsite Handling of Epoxy-Coated Reinforcing Steel Bars" it is required that: "Placed coated bars shall be covered with opaque polyethylene or similar protective material if cumulative environmental exposure of the coated bars, including previously uncovered storage time, of greater than two months prior to concrete embedment is expected."*

Answer: The provision for two-months of exposure was developed from testing conducted by C-SHRP where bars were left exposed and then tested. (See: http://www.cshrp.org/products/outdoor.pdf) It is known that extended exposure is often unforeseen and that bars may be exposed for longer periods than that suggested by ASTM D3963. Fusion-bonded epoxy coatings may undergo surface discoloration and chalking from exposure. The Epoxy Interest Group of CRSI cannot endorse the use of products in non-specified manners; however, should extended exposures occur, it is strongly recommended that the bars be carefully inspected and any site of damage or localized corrosion be repaired following Section 7 of ASTM D3963 using a 2-part epoxy, recommended for use on epoxy-coated steel reinforcing.

Editors Note:

We hope that you find information on this website useful and please contact us if additional information is required.

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