

Promoting Use and Advancing Quality of Epoxy-Coated Reinforcing Steel.

IN THIS ISSUE



Welcome

Epoxy-coated reinforcing bars were chosen for use in concrete in 1973 after considerable research by the National Bureau of Science, now the National Institute of Science and Technology. While the outside appearance of the bars has appeared the same, significant changes have occurred to

the product during the past 38 years.

ASTM specifications for the bar now include requirements for epoxy power conditioning prior to use, steel surface preparation that includes a roughness requirement and cleanliness to remove any contaminants on the bar prior to coating. Requirements for coating thickness has increased and the number of locations which may allow electrical conductivity have been reduced. The bars now exhibit increased flexibility and the coating adhesion is improved.

In 2011, the industry will celebrate 20-years of the Fusion-bonded Epoxy Coating Applicator Plant Certification program, a voluntary industry-sponsored program that has been extremely effective in improving the quality of epoxy-coated rebar.

For more information on the benefits of epoxy-coated bars, visit www.epoxyinterestgroup.org

Projects Using Epoxy-Coated Reinforcing Steel Wanted

EIG would like to feature your project in upcoming editions of Anti-Corrosion Times and our Project Gallery. All project types are welcome. Please send basic information on the project and information on how to access photography (construction and/or finished, all photo credits) to info@epoxy.crsi.org.

Projects



Crystal Bridges Museum of American Art

Bentonville, Arkansas

The Crystal Bridges Museum of American Art is being built in 100 forested acres in Bentonville, Arkansas, and takes its name from the unique glass-and-wood building design. Designed by world-renowned architect, Moshe Safdie, Crystal Bridges will be both museum and culture center. Two structures, which are both dams and bridges, will be placed across the ravine forming two great ponds. These structures are formed using concrete containing epoxy-coated reinforcing bars.

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FOR INSPIRATION

"The boss drives people; the leader coaches them. The boss depends on authority; the leader on good will. The boss inspires fear; the leader inspires enthusiasm. The boss says 'I'; the leader says 'we.' The boss fixes the blame for the breakdown; the leader fixes the breakdown. The boss says 'go.'; the leader says 'let's go!'"
— H. Gordon Selfridge, American-British retail magnate

University of New Hampshire Pier Facility

New Castle, New Hampshire

The University of New Hampshire received a grant to modify the pier at a 5-acre, former U.S. Coast Guard parcel of land located on Fort Point in New Castle, New Hampshire.



I-88 Fox River Bridge

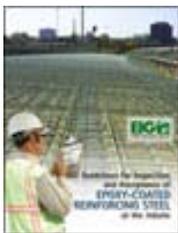
North Aurora, Ill.

Officials at the Illinois State Toll Highway Authority wanted to maintain the state's only arched bridge during a widening and rebuilding of the I-88 Reagan Memorial Tollway in North Aurora, Ill. The final precast design, which added a second bridge of similar design alongside the original, proved so effective that Tollway officials decided to replace the existing bridge, too.



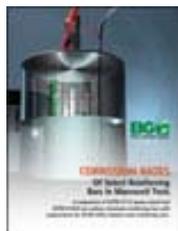
New Publications from the Epoxy Interest group

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



Guidelines for Inspection and Acceptance of Epoxy-Coated Reinforcing Steel at the Jobsite

This 8-page brochure provides guidelines for the inspector as to items that should be considered during an inspection process. It does not eliminate requirements for inspectors to determine compliance with appropriate contract documents.



Corrosion Rates of Select Reinforcing Bars in Macrocell Tests

This 4-page document is a comparison of ASTM A775 epoxy-coated and ASTM A 1035 low-carbon, chromium reinforcing bars with requirements for ASTM A955 stainless-steel reinforcing bars.

Epoxy Interest Group now on Facebook

Become a fan of the Epoxy Interest Group on Facebook and be updated as we find new research and projects.



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Questions from the Field

Question: *Where can I purchase Epoxy-Coated Steel Reinforcing Bar?*

Answer: Epoxy-Coated Steel Reinforcing Bar is produced and inventoried nationwide. Currently, 37 plants are certified under the CRSI Fusion-bonded Epoxy Coating Applicator Plant Certification program. For most current CRSI certified Epoxy-Coated Steel Reinforcing Bar Manufacturers please see www.crsi.org.

Question: *Sometimes when I store coated welded wire reinforcement outdoors, I observe staining at the welded intersections. What should I do?*

Answer: Mesh is coated according to ASTM A 884 Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement. During the manufacturing process, sharp edges and undercutting, such as found at the welded intersections of welded wire reinforcement, present areas that make coating more difficult, resulting in minor coating voids at these locations.

Section 8.2.2 of ASTM A 884 requires the mesh to contain less than 1 holiday per foot. During evaluation of holidays, voids at the weld intersections are not be counted. Section 13.1 requires that all visible damaged coating be repaired with patching material. Based upon review of sections 8.2.2 and 13.1 as voids are not a result of damage, but occur as a normal part of the manufacturing process. Thus, voids do not require repair.

Once bars are stored outside, in humid or wet environments, corrosion may initiate at the void locations and red rust staining may occasionally be observed. It is important to determine the source of the corrosion staining. If they are occurring at void intersections, then repair is not required according to ASTM A884.

While the specifier may decide that repair of these intersections is important, this repair is over and above that required by the ASTM specifications and additional costs may be incurred by the owner. If repair is to be conducted it should be made using a two-part epoxy material, compatible with the coating and the concrete.

Editors Note:

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