

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



## Welcome

Pete Rahn, Chairman, State Transportation Commission, New Mexico recently outlined the changing financial conditions of Departments of Transportation. He indicated that the period of a fully funded transportation system from the 1950s to the 1990s was an anomaly and that fiscal constraints are going to become routine.

Transportation departments are evaluating operations and activities, including selection of materials. Epoxy-coated reinforcing steel has been shown to have low initial costs compared with other corrosion-protection technologies. It has also been shown in multiple studies to provide long lives for concrete bridges. For example, a study for the Michigan Department of Transportation showed that their existing bridge decks have lives of 70+ years. A similar study in Nebraska showed lives of 90+ years. With reduction of concrete permeability and cracking and improved coating technologies, significantly greater service lives from concrete decks are expected.

Improvements to the epoxy coating have also been made, at little or no cost to the purchaser. These improvements include improved surface adhesion and elastic properties of the polymers being used. Additional coating thicknesses are also providing a more robust system. These improvements are also maintained by an independent certification program directed by CRSI. No other concrete reinforcing product undergoes such strict certification procedures.

## Projects Using Epoxy-Coated Reinforcing Steel Wanted

EIG wants 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](mailto:info@epoxy.crsi.org).

## Projects



### I-90 Dresbach Bridge Replacement

Dresbach, MN and La Crosse, WI

The I-90 Bridge spans the Mississippi River between Dresbach, Minnesota and La Crosse, Wisconsin. Built in 1967, it is a 2,490-foot steel girder bridge carrying four lanes of traffic. The existing, fracture-critical bridge has narrow shoulders that cause lane closures when vehicles are stranded or during routine maintenance operations. In addition, the I-90 and Highway 61 interchange has substandard geometrics and higher than average crash rates.

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### I-65/I-70 South Split

Indianapolis, IN

INDOT closed I-65 and I-70 to reconstruct and lower one-half mile of pavement beneath seven bridges. The project required increasing the bridges' clearance to reduce the potential for collisions from unpermitted and off-route trucks with oversize and unsecure loads that had repeatedly hit the bridges. The new pavement was constructed using 2200 tons of epoxy-coated reinforcing steel in a continuously reinforced concrete pavement (CRCP).



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### Patricia and Phillip Frost Museum of Science

Miami, FL

The Patricia and Phillip Frost Museum of Science (formerly known as the Miami Science Museum) is located in Miami, Florida. The 250,000 sf museum is structured around a lushly landscaped indoor and outdoor "living core" of terrestrial and aquatic spaces, featuring a 600,000 gallon aquarium facility, a full dome 3-D planetarium, interactive exhibits, innovative technology and two additional wings of exhibition space, learning center and cafes. Over 300 tons of epoxy-coated reinforcing steel was used in the construction of the unique aquarium space.

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### FOR INSPIRATION

*"Engineering is the art of modelling materials we do not wholly understand, into shapes we cannot precisely analyze so as to withstand forces we cannot properly assess, in such a way that the public has no reason to suspect the extent of our ignorance."*

— Dr. AR Dykes, *British Institution of Structural Engineers, 1976*

MORE

## New Publications from the Epoxy Interest Group

EIG continues to develop publications to assist with the use of epoxy-coated reinforcing steel. The following document may be downloaded from [www.epoxyinterestgroup.org](http://www.epoxyinterestgroup.org) or if you wish hard copies, please contact us at [info@epoxyinterestgroup.org](mailto:info@epoxyinterestgroup.org).



### Field Handling and Field Repair

This NEW two-page document outlines methods to reduced damage during field handling and methods to repair any visible damage using a two-part epoxy. It describes where to obtain materials and basic procedures to obtain optimum performance of the epoxy-coated reinforcing steel. It is beneficial to engineers, field inspectors, contractors and ironworkers.

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## Epoxy Interest Group now on Facebook

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

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## Questions from the Field

**Question:** *What is the best way to repair epoxy-coated reinforcing steel?*

**Answer:** If properly handled, epoxy-coated bars require minimal repair at the jobsite. When repairs to the coating are needed, a two-part epoxy should be obtained from the bar fabricator. Prior to coating the damaged areas, the areas should be scrubbed with a wire brush to remove any rust or corrosion deposits. The coating is then painted onto the bar surface. Time should be provided for the coating to cure prior to placing the concrete.

For more information see [www.epoxyinterestgroup.org](http://www.epoxyinterestgroup.org)

### Editor's Note:

We hope that you find the information in our newsletter useful. Please [contact us](#) if additional information is required.



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