

### **The EIG welcomes new member Corrosion Control Inc., Auburn NY and particularly Bob Marinella.**

#### **Director's Notes**

In January, most of the nation was set into a deep freeze. Unprecedented cold was experienced (except on the west coast) due to the Polar Vortex, spinning off its axis. News programs provided footage of cars sliding off roads and unfortunate people involved in multiple-vehicle accidents.



Other stories were presented on the lack of supplies of deicing salt to protect against ice. Some researchers have suggested that we need to move away from using deicing salt due to the damage it creates to concrete and other structures; however, few materials can meet the effectiveness or the cost of the rock salt, even when its price rises from \$50/ton to \$100/ton.

It would be wonderful if we could have a cheap deicing salt material that doesn't cause corrosion or damage concrete; however, such materials do not exist. For this reason, corrosion protection for reinforcing steel will remain a major focus of the transportation agencies for the foreseeable future.

#### **Illinois Department of Transportation/CRSI Training**

The IDOT/CRSI/EIG epoxy-coating training will take place on February 4, in Skokie. This training is a requirement for all companies wishing to supply product to IDOT contracts.

#### **Chicago Transit Authority**

On January 6, EIG met with the Chicago Transit Authority to discuss epoxy-coated reinforcing steel and its use in protection against stray current corrosion. The CTA currently uses galvanized reinforcing steel and is considering epoxy-coated reinforcing. Issues concerning damage to the bars on the jobsite appear to be the major concern; however, benefits of epoxy-coated bars against stray current corrosion are being considered.



#### **FAA**

In December, EIG worked with the FAA to review the *Standards for Specifying*



*Construction of Airports -- FAA AC 150/5370-10A.* The previous version of this document did not include epoxy-coated dowels for concrete pavements in airfields. We understand that the upcoming version will include epoxy-coated dowels as the principal dowel for these pavements.

#### **VIP - Changes to CRSI Certification Program**

Significant changes are going to occur to the CRSI Epoxy Plant Certification Programs in 2014/15 and preparations should be started at each plant. The program does not permit plants to directly contact the inspection agency; however, EIG is available to provide assistance to individual EIG members.

In July 2014, the Independent Manufacturing Certification Committee of CRSI (IMCC) will be selecting a company to conduct the plant manual and plant inspections for 2015. This may result in a cost change for the program.

In the 4<sup>th</sup> quarter of 2014, plants will be requested to submit Coating Quality Manuals (CQM) to CRSI for review by the Inspection Agency. This Coating Quality Manual (CQM) must comply with the *CRSI Standard Practice for Epoxy Coating Plant; Straight Bar Lines* requirements, which are currently under public ballot. It is recommended that plants start work on documentation soon.

Starting in 2015, plants will be audited to the new *CRSI Standard Practice for Epoxy Coating Plant; Straight Bar Lines*. These inspections will be conducted from March to July 2015 with the goal of having all plants meeting the new requirements by the end of 2015.

In January 2016, certificates will be issued to all plants, indicating that they met the ANSI-compliant CRSI program requirements.

#### **TRB**

The TRB conference attracts over 11,000 people annually and is the principal conference for the transportation industry.

Paul Krauss, John Lawler and James Donnelly from WJE and Michael Todson from the Iowa Department of Transportation provided a presentation comparing the performance of galvanized and epoxy-coated reinforcing steel, based upon field research conducted for Iowa DOT. The effective corrosion threshold for epoxy-coated reinforcing steel is five times (epoxy top/uncoated bottom) to eight times (epoxy top and bottom) that of uncoated bar.

This paper presented the following conclusions:

- Galvanized reinforcement has an expected service life ranging from 35 to 41 years. Galvanized reinforcement offers an extension of 21 to 27 years over uncoated reinforcement.
- Epoxy-coated reinforcement has a *minimum* expected service life ranging from 46 to 58 years. Epoxy-coated reinforcement offers an extension of 32 to 44 years over uncoated reinforcement.



EIG was a sponsor of the American Concrete Paving Association (ACPA) reception, where more than 250 officials and industry colleagues gathered. EIG was prominently displayed during the event.

The CRSI Durability Committee Corrosion Task Group also met with several DOT and FHWA agencies to discuss a proposed strategic plan for corrosion. The plan involves six items, summarized below:

1. Presentation of existing research by CRSI
2. Development of information to educate engineers about corrosion terminology
3. Development of information on the benefits of steel reinforcing compared with fiber reinforced polymer (FRP)
4. Understanding of the role of cracks in corrosion
5. Development of research statements for corrosion
6. Maintenance of dialog with the transportation department

### World of Concrete

EIG attended the World of Concrete (WOC) that attracts 55,000 attendees, along with many EIG members.

Booths from competitors to epoxy were present including stainless, A1035/MMFX, galvanized and FRP.

MMFX introduced a 100 ksi high-strength reinforcing steel



“ChromX™ 4100.” According to the press release, ChromX 4100 has the same mechanical properties of high-strength ASTM A1035 reinforcing steel but modified chemistry. The product does not meet any current ASTM or AASHTO standards.

The EIG steering committee met to discuss work to be conducted in 2014. This discussion included detailed information on:

- Budgets
- Elections and terms for steering committee
- Dues
- DOT visits
- Dowel bar research
- Competitive products

Results of this discussion will be presented at the Tempe meeting.

### Quote

*Winter is the time for comfort, for good food and warmth, for the touch of a friendly hand and for a talk beside the fire: it is the time for home. It is no season in which to wander the world as if one were the wind blowing aimlessly along the streets without a place to rest, without food, and without time meaning anything to one, just as time means nothing to the wind.*

Edith Sitwell

Date	Event
February 5	Utah Pavement Conference, Salt Lake City, UT
February 18 – 19	Pennsylvania Concrete Conference, Harrisburg, PA
March 4 – 7	CRSI, Tempe, AZ
March 9 – 13	NACE, San Antonio, TX
March 24 – 27	ACI, Reno, NV
April 22 – 24	National Concrete Consortium, Jacksonville, FL