CORTEC Laboratories
October 2012

The LEADING Edge

European Sales Meeting

October 10-13, 2012 in Zagreb, Croatia

The EcoCortec® team was happy and honored to welcome the record breaking number of attendees to this year's European Sales Meeting at the five star Westin.

This year being Cortec's 35th anniversary, Boris Miksic remembered in his presentation, Cortec's journey throughout the years from its humble beginnings to becoming a global leader in corrosion protection. Educational presentations and sessions were featured by Cortec®/ EcoCortec® team members and our distributors, highlighting Cortec's products, technologies, the latest developments, and successes.

The participants were taken to Beli Manastir where a tour of the EcoCortec® facility was conducted and wrap up sessions and distributor presentations were held at Patria hotel.

New Products

Eco Tire Duragloss

Eco Tire Duragloss is the best way to highlight a great looking vehicle. It provides tires with a like new, shiny look and helps to prevent cracking, fading, and hardening of tires. EcoTire Duragloss also helps to revitalize rubber while leaving a rich shine.

This environmentally friendly product goes on easily and clings to the tires. The durability of EcoTire Duragloss outlasts the average tire dressing by providing a deep, black, wet look for weeks. EcoTire Duragloss is available in 16 ounce EcoAir® – alternative aerosol packages bottles with an adjustable spray pattern.

New Products

VpCI® 392

A new self-crosslinking waterborne dispersion aliphatic urethane coating designed for industrial applications requiring excellent gloss, flexibility, and adhesion to a variety of substrates. Designed with VpCI® technology it can be used as a direct to metal (DTM) coating or over a primer such as VpCI®-375, 395, or 396. This coating will crosslink at ambient temperatures and offers a unique balance of UV and chemical resistance. Being a single component package this product doesn't have the complications associated with pot life of a two component mixture. In addition this coating exhibits excellent adhesion to difficult substrates such as aluminum, brass and copper.

Advantages:

- Excellent exterior durability, when used over a primer.
- Water based
- Excellent adhesion
- Excellent UV resistance
- Excellent gloss and clarity
- Single component package
- Could be used in construction applications
- Can be used (DTM) concrete and wood

MCI® CorteCure®

MCI® CorteCure® is a water-based, membrane-forming, curing compound that contains Migrating Corrosion Inhibitor (MCI®). It is made of biobased renewable materials.

Features:

- Enhances durability of reinforced concrete
- Ensures proper curing of fresh set concrete
- Removable after initial curing of the concrete (4-8 weeks UV weathering)
- Cured concrete surfaces are able to received subsequent treatment such as tiling, paint and sealer
- Safe and environmentally friendly
- Easily applied by spray, roller, squeegee, or paint brush to concrete surfaces
- USDA certified biobased product
- ASTM C-309 "Specification for Liquid Membrane-Forming Compounds for Curing Concrete" compliant

MCI® Super Remover

MCI® Super Remover is a powerful product for removing calcium carbonate and oxides, including hardened concrete residues, encrusted hard water scales, and rust on mild steels. MCI® Super Remover is an acid replacement technology that uses low pH organic salt to replace traditional mineral and organic acids.

Features:

Excellent replacement of muriatic acid for removing hardened concrete residues and aged materials on equipment surface:

- Ready-mix trucks
- Batching Plants
- Drum Mixers
- Construction equipments

Excellent at removing encrusted hard water scales from:

- Water treatment facilities
- De-scalers/de-limers

MCI® Window Protector

MCI® Window Protector is designed to repel rain, snow, and reduce ice and grime build up on the windows of buildings and automobiles. This product greatly reduces the need to clean the outside of windows reducing labor costs and improving visibility.

Application Directions

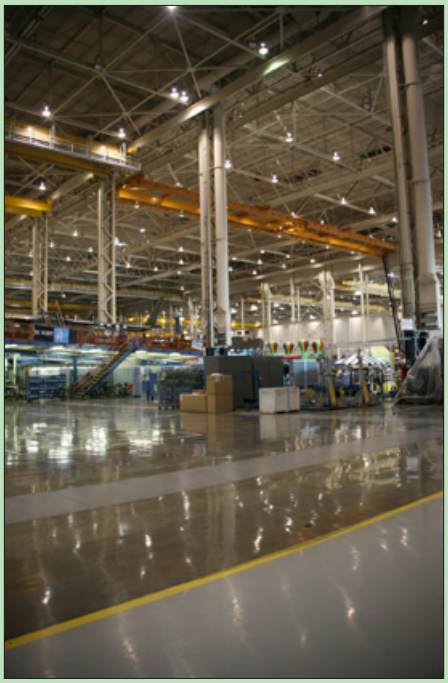
- Clean and dry exterior glass area.
- Apply product to a dry cloth and wipe glass with firm, circular, overlapping strokes
- Allow slight haze to appear
- Repeat application
- Buff surface with dry cloth until haze is removed

MCI®-2027 Aliphatic Polyurea Coating

MCI®-2027 is a single component, 90% solids, UV-stable, VOC Compliant, Aliphatic Polyurea that was developed for high gloss floor top-coats, chemical resistance, and corrosion control. This coating provides reliable performance in a wide range of temperatures and climate conditions. It has excellent resistance to UV rays, abrasion, and many of today's harshest chemicals.

Advatages

- Displays excellent adhesion characteristics to a variety of substrates / coatings.
- Unlimited pot life increases the workability of the coating, providing consistent aggregate broadcasts and uniform topcoat applications.
- Will provide a glossy smooth finish when cured.
- Coating displays excellent chemical and abrasion resistance.
- Emits virtually no odors and can be applied indoors with minimal disturbance to surrounding activities.
- VOC FREE
- 100% UV-Stable Aliphatic Chemistry
- Versatile, crystal clear topcoat for use on both horizontal and vertical applications.
- Can be used for immersion and non-immersion service.
- Single component means no possible mixing errors, thus eliminating the human error factor.
- Extended cure time delivers great self-leveling properties and glass-smooth finishes.



Primary Applications

- Heavy traffic areas
- Aircraft hangar floors
- Maintenance facilities
- Offshore platforms
- Industrial shop floors
- Commercial kitchens
- Bathrooms and Lavatories
- Chemical manufacturing plants
- Wastewater treatment applications
- Bar, table, and countertop sealer

The sons of Cortec's Italian Distributor, Ugo Spada of Carte Dozio S.R.L. Mario and Alessandro in EcoCortec® Team jerseys!

Electrochemical and SCC Inhibition of Multi-alloy Systems using (VpCI®) Vapor Phase Corrosion Inhibitors

Commercially available inhibitors were successfully investigated for their effectiveness in reducing the corrosion susceptibility of the turbo expander and steam/gas turbine industry alloys. However, due to the fact that the power generating system is complex and consists of a multi-alloy system, the investigation was expanded to study the corrosion behavior and stress corrosion susceptibility of other alloys such as, copper, brass C36000, C69300, red brass C83600, and nickel plated-copper in the presence of these inhibitors. Electrochemical behavior (cyclic polarization and EIS) of these alloys in a 200 ppm Cl- solution + different percentages of inhibitor showed significant improvement in passivity, and breakdown potentials. The data acquired from electrochemical tests showed that inhibitor adsorption to the alloy surfaces fits with the Langmuir adsorption isotherm; the enthalpy of adsorption is about -10 to -16 kJ/mol, suggesting that this chemical compound provides physisorption to the alloy surfaces. During testing per ASTM standards G44 and G38, no susceptibility to environmentally-assisted cracking was observed upon the addition of 10% inhibitor.

Keyword: VCI, SCC, Critical pitting temperature, steam turbine, Volatile Corrosion Inhibitors, physisorption, brass and copper alloys

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Cheers to Boris, Happy Birthday!!!
Cortec® Laboratory 2012
front-left to right: Liz Austin, Debbie Hannan, Cindy Johnson, Josh Hicks
back-left to right: Brian Benduha, Ming Shen, Rick Shannon, Robert Kean, Alla Furman, Eric Uutala, Caleb Pheneger, Margarita Kharshan

Caleb Pheneger is the new Technical Service Engineer for Cortec® Laboratories. He is from Champlin Minnesota and went to Michigan Tech for his Bachelor of Science in Chemical Engineering degree with a minor in Bioprocess Engineering. Caleb graduated in May of 2012.

Things Caleb likes to do during his free time: playing sports volleyball, basketball, running, CC skiing, hiking, fishing, camping. He also likes to cook.

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