

September 2010

Barcelona Airport Control Tower

A new control tower platform at the Barcelona Airport was being built and protection of the corrugated reinforcing steel was needed. The platform is the base to the 49 yard (45 m) tall control tower facilities and services.

Cortec Corporation's MCI[®] Coating for Rebar NT was the selected corrosion protection product, which was applied directly to the corrugated steel. The product was chosen for its ease of use in areas with limited access. In order to completely protect the 678 yd³ (518.4 m³) platform slab, 40 gallons (152 liters) of MCI[®] Coating for Rebar NT was needed.

The product cures as a non-sticky, soft film that eventually hardens. MCI[®] Coating for Rebar NT has been tested for affect on adhesion of concrete with reinforcement in accordance with standard ASTM A944-99. The results of this test were exceptionally good, confirming this product does not interfere with the bond strength of corrugated steel reinforced concrete. The concrete for the tower was poured during the days following the application of MCI[®] Coating for Rebar NT.



Kriel Power Station Repair

The Coal Staiths at Kriel Power Station needed to be repaired and then coated in order to prolong the structures lifespan. Defective concrete was removed and replaced with repair mortars Pro-Struct 528 VO and Pro-Struct 531, both containing MCI[®]-2006 NS. Both of the structures were then coated with Pro-Struct MCI 2020 to mitigate corrosion within the rest of the structure.







MCI® Anti Graffiti Coating Protects Reykjavik City Tunnel

Distributor: E.M. ehf

Consultant:

VSO Counsel

Problem:

The City of Reykjavik spends millions of Krona on graffiti removal each year. They wanted a durable coating which would allow for easy graffiti removal.

Application:

This pedestrian tunnel runs under the intersection of Flugvallavegur and Hlidarfotur, which is close to Hotel Loftleidir (Icelandair Hotels) by the Reykjavik airport. The tunnel is 115 feet (35 m) long, 13 feet (4 m) wide, and 8 feet (2.4 m) high. A total of 383 yd² (320 m²) of concrete was coated with MCI[®] Anti Graffiti Coating. The coating was applied with a special roller in order to achieve the proper coating thickness.

Cortec® Sponsors Webinars for the *Coucil of American Structural Engineers (CASE)*

Structural Engineers (CASE)

Cortec is a sponsor of the upcoming CASE Best Practice Webinars for Structural Engineers. The goal of the webinars is to disseminate important business practice information to members of the Council of American Structural Engineers (CASE), Structural Engineering Institute (SEI) and the National Council of Structural Engineer Associations (NCSEA). Each webinar will be given twice per day, at 12:30 p.m. eastern time (for eastern and central zones) and 2:30 eastern (for mountain and pacific zones). Each session will last approximately 70 minutes.

2010 Fall Schedule

Thur. Oct. 7	Project Management for Structural Engineers asa sub-Consultant	Scott Braley 404 252-9840 scott@braleyconsulting.com
Thur. Oct. 14	CASE Doc. 6 – Commentary on AIA C401 Background – Understanding AIA B101 Agreement between Owner & Architect	Bill Geisen, Attorney 859 578-2424 wgeisen@graydon.com
Thur. Oct. 28	CASE Doc. 6 - Understanding and Using AIA C401, Agreement between Architect & Consultant and CASE's recommendations to it. How various CASE firms are implementing this agreement	Bill Geisen, Attorney and Panel of CASE members
Thur. Nov. 11	Your Employees Deserve a Good Retirement Plan. What Plan is Best for Your Firm?	Robert Kuna, Wachovia Securities 248 433-8510 Robert.kuna@wfadvisors.com

The above topics address important issues facing structural engineering firms. The 2nd and 3rd webinars are especially timely because the AIA no longer supports their 1997 contract series and has made drastic changes in the 2007 documents. Thus structural engineering firms that work for architects must become familiar with these new contracts.

The cost to structural engineering firms will be \$129 per webinar or \$249 for the entire series of four webinars. Each firm can have as many attendees watch the webinar as they like. To register, visit: http://clients.targetwarexm.com/accounts/acec/temp/newsletters/150/CASEFall10SeminarReg.pdf





Runib Switchyard Foundations Repair

Distributor:

United Corrosion Technologies

Contractor:

Arabian Industries

Consultant:

Worley Parsons

Products:

MCI®-2020, VpCI Corrverter®, MCI Mini Grenades®

Application:

Concrete foundations at the Petroleum Development of Oman (PDO) Runib Switchyard in Oman were experiencing visible cracking, spalling, and delamination. Structures were over twenty years old with some previous repairs (circa 2002) already failing again. The main threat to the structural integrity of buildings in this region lies in the highly saline soil and shallow groundwater. The prevalence of Sabkha in the Gulf region introduces highly corrosive mineral deposits in the soil with salinity levels exceeding three times that in seawater. A field investigation was done by United Corrosion Technologies to determine cause of failure and it was confirmed that failure was due to the ingress of chlorides from the soil.

Repair methodology was developed to prevent structural failures, extend the switchyards service life and allow for safe application in the live station. United Corrosion Technologies provided a supervisor to oversee the work of the contractor and assure that all procedures are strictly followed.



It is estimated that concrete foundations were given an extended service life of 30 years after the repair. This extended service life is derived from the proper execution of repair utilizing patented MCI[®] technology. Cortec's patented MCI[®] technology protects reinforcing metal in concrete from corrosion therefore extending its service life. Being bio-based, it is environmentally friendly and safe. It is NSF-61 certified for use with potable water.



1. Foundations were excavated to allow for chiseling of all spalled and delaminated concrete.





2. Application of MCI[®]·2020 to all exposed concrete surfaces and VpCI Corverter[®] to exposed rebar. VpCI Corverter[®] was selected because it can be applied onto rusted steel avoiding the use of abrasive blasting which was not allowed in the live Switchyard.





3. Shuttering and repair with Unicrete 500 microconcrete reinforced with MCI Mini Grenades[®].





4. Proper curing of repair followed by application of Unicrete W350 cementitious waterproofing



5. Curing and backfilling



New Face at Cortec®

We would like to extend a warm welcome to the newest member of Cortec's MCI[®] team. Josh Hicks has joined our team as MCI[®] Technical Service Engineer. Josh has a biochemistry degree and comes to us with previous experience working for Pace Analytical with regulatory affairs at 3M. He can be reached at jhicks@cortecvci.com, or by phone (651) 429-1100 ext. 147. Please introduce yourself and welcome him the next time you call or visit our offices!



Upcoming Events:

ASBI Annual Convention – October 11-12, 2010 – Vancouver, BC European Sales Meeting – October 13-15, 2010 – Madrid, Spain ICRI Fall Convention – October 20-22, 2010 – Pittsburg, PA ACI Fall Convention – October 24-28, 2010 – Pittsburg, PA Asian Sales Meeting – November 17-19, 2010 – Macau, China World of Concrete 2011 – January 17-21, 2011 – Las Vegas, NV

New MCI® Website Coming Soon!

Cortec[®] will soon be publishing a new and improved MCI[®] website. The new website will be much more user friendly while still providing all necessary MCI[®] information to users. A new MCI[®] CD will follow the launch of the website and will be available for shipment in early 2011.



Rebar Recap

We will continue to host bi-weekly WebEx meetings to discuss MCI[®] topics. Meetings are held on Mondays at 9AM and 6PM Central Standard Time unless otherwise noted. Invitations to join a webinar will be sent the week prior and will contain all information needed to participate in the meetings. All webinars will be recorded and saved. If you have missed any past meetings, please contact Matt Drew at mdrew@cortecvci.com, to receive a copy. As always, if there is a specific topic you would like to learn more about, please let us know and we will use those topics to fill in our to be announced (TBA) webinars.

Upcoming Webinar Dates/Topics:

9/20/2010 9 am, 6 pm MCI[®] Repair

10/4/2010 9 am, 6 pm MCI Specialty

10/18/2010 9 am, 6 pm TBA

11/1/2010 9 am, 6 pm TBA

11/15/2010 9 am, 6 pm Year End Update

12/6/2010 9 am, 6 pm TBA

12/20/2010 9 am, 6 pm



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