



# LIBERTY BELL CORROSION COURSE

## CONCRETE CORROSION CONTROL

**February 11 and 12, 2009**

**LOCATION:** Williamson's Restaurant & Conference Center, Easton Road and Blair Mill Road, Horsham, PA 19044

This is an interactive course on corrosion control technology. Recognized experts from leading-edge companies will be presenting classes on a variety of topics.

**Sponsored by NACE International**

### Course Schedule

Wednesday, February 11, 2009		
Class Period	Topic	Instructor
7:30	8:00	<b>Registration</b>
8:00	9:30	<b>Basics of Corrosion and CP Fundamentals</b> - Discussion of basic corrosion theory, types of corrosion, how it differs from steel in water and soil, properties of concrete, and the rate of corrosion of steel in concrete. Siva Venugopalan, Siva Corrosion Services, Inc.
9:30	10:30	<b>Impressed Current Cathodic Protection</b> - Theory of impressed current cathodic protection, how it is applied, materials used, installation, advantages and disadvantages, and costing. <b>Examples of Impressed Current CP</b> – Highways, bridges, parking garages, tunnels, airports, marine structures, water & waste water structures, pipelines, and other structures. Clem Firlotte, Corpro Companies
10:30	11:00	<b>Break</b>
11:00	11:45	<b>Stray Current Corrosion</b> - Time varying and steady state stray current, sources and methods of testing and control. Ed Wetzel, UTRS
11:45	1:15	<b>Lunch provided by LBCC</b>
1:15	3:15	<b>Galvanic Cathodic Protection</b> - Theory of galvanic cathodic protection, levels of protection, how it is applied, materials used, installation, advantages, disadvantages, and costing. <b>Examples of Galvanic CP</b> – Highways, bridges, parking garages, tunnels, airports, marine structures, water & waste water structures, pipelines, and other structures. David Whitmore, Vector
3:15	3:45	<b>Break</b>
3:45	5:00	<b>Non-Destructive Testing for Corrosion</b> – In-Situ corrosion test systems for reinforced concrete, non-destructive evaluation, and equipment demonstrations. Claus Peterson, Germann Instruments

Thursday, February 12, 2009

Class Period		Topic	Instructor
8:30	10:00	<b>Monitoring &amp; Troubleshooting CP Systems</b> – Evaluating the effectiveness of CP systems, troubleshooting rectifiers, and identifying problems with CP systems.	Siva Venugopalan, Siva Corrosion Services, Inc.
10:00	10:30	<b>Break</b>	
10:30	11:45	<b>Coatings for Concrete &amp; Steel Structures</b> – Use of steel coatings to address corrosion problems.	Ted Hopwood, Kentucky Transportation Center
11:45	1:30	<b>Lunch provided by LBCC</b>	
1:30	2:30	<b>Admixtures for Concrete</b> – Use of admixtures to achieve increased corrosion resistance, includes Concrete 101.	Rod Meyers, BASF
2:30	2:45	<b>Break</b>	
2:45	3:30	<b>Environmental Benefits of CP</b> – a detailed discussion on how CP will provide a positive impact on the environment, quantify the benefits to the environment, and our role as responsible users of various infrastructure systems.	Ben Witter, Siva Corrosion Services, Inc.
3:30	4:30	<b>Q &amp; A</b>	All Instructors

**Fees:** Advanced (before December 31, 2008): NACE Member \$350.00 Non-member \$350

Onsite (on or after December 31, 2008): \$370.00

One day registration: NACE member or non-member: \$185.00

Obtain registration form online at [www.nace-philapa.org](http://www.nace-philapa.org)

**For Further Information:** Contact Ben Witter, Siva Corrosion Services, Inc. (610) 692-6551

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