



## TECHNICAL INFORMATION EXCHANGE (TIE)\*

\*Only those who have registered for NACE 2012 Conference. A limited number of hand-outs will be available to attendees. **Pre-registration** for the TIE **on or before March 1, 2012** will ensure that most attendees will obtain hand-outs. For registration, just send an email to: [Bruce.Brown.1@ohio.edu](mailto:Bruce.Brown.1@ohio.edu)

### CORROSION 2012

#### TEG 097X: ELECTROCHEMICAL TECHNIQUES FOR MEASURING CORROSION

### Use of Electrochemical Techniques for Corrosion Measurement and Monitoring

**SUNDAY, MARCH 11, 2012  
8:00 a.m. to 5:00 p.m.**

**SALT PALACE CONVENTION CENTER  
SALT LAKE CITY, UTAH**

The primary objectives of this workshop are:

- To increase the understanding of some of the subtle issues that arise when using electrochemical techniques in corrosion and corrosion control;
- To facilitate effective use of electrochemical techniques for corrosion measurement and monitoring in the laboratory and in the field;

Corrosion in an aqueous medium is an electrochemical process. Therefore, most technology used for understanding and predicting corrosion has an electrochemical backbone. Among the electrochemical techniques, linear polarization resistance (LPR) and electrochemical impedance spectroscopy (EIS) have established themselves to be reliable techniques to measure and monitor corrosion. Interest in the ability to measure *in situ* localized corrosion has also led to the need for more sophisticated methods of electrochemical measurements, so basic fundamentals up to advanced topics will be discussed to provide an interesting informational exchange for all who attend. Questions are welcome!

This Technical Information Exchange/Workshop will be taught by experts who have established themselves as pioneers in their respective areas of specialty. It is anticipated that the participants of the Workshop will acquire knowledge on:

- WHAT are the fundamental principles of measuring corrosion rate using electrochemical techniques;
- HOW to measure corrosion rate using electrochemical techniques in actual field conditions;
- HOW the results should be interpreted; and
- WHY measurement error of the technique should be estimated.

## CORROSION 2012 AGENDA

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**Technical Information Exchange**

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**Chair: Bruce Brown**

**08:00 Call to order by Bruce Brown**

**08:15 Introduction of Meeting Attendees**

**PRESENTATIONS FOR DISCUSSION:**

**“Use of Electrochemical Techniques for Corrosion Measurement and Monitoring”**

**08:30 Polarization resistance (Linear Polarization) - Dr. Pete Peterson (Ivium Technologies)**

**09:30 Electrochemical Impedance Spectroscopy – Dr. Jacob Ketter (Gamry Instruments).**

**10:30 Break**

**10:45 Electrochemical Noise – Dr. François Huet (Université Pierre et Marie Curie-Paris)**

**11:45 Lunch**

**13:00 Corrosion Rate Measurements in Operating Oil and Gas Pipelines – Dr. Sankara Papavinasam (CANMET – Materials Technology Laboratory)**

**14:00 Multi-Electrode Systems – Dr. Lietai Yang (Southwest Research Institute)**

**15:00 Break**

**15:15 Localized Electrochemical Measurements – Dr. Rob Sides (AMETEK).**

**16:15 Questions and Answers Session**

**17:00 Adjournment**

**Chair:**

Bruce Brown

[Bruce.Brown.1@ohio.edu](mailto:Bruce.Brown.1@ohio.edu)

**Vice Chair:**

Kris Szecsy

[Kristopher.Szecsy@CHAMP-TECH.com](mailto:Kristopher.Szecsy@CHAMP-TECH.com)