



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

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 lead 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

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Vice Chair:

Kris Szecsy

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