

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

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

**SUNDAY, APRIL 3 2005  
9:00 a.m. to 5:00 p.m.**

**George R. Brown Convention Center, Houston, Texas**

This tutorial focuses on educating the novice how corrosion can be measured using electrochemical techniques. This tutorial will provide a simple and practical introduction to a number of electrochemical techniques.

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;

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), electrochemical impedance spectroscopy (EIS), and electrochemical noise (EN) have established themselves to be reliable techniques to measure and monitor corrosion. Recent advances include scanning reference electrode technique (SRET), electrochemical quartz crystal microbalance (EQCM), and harmonic distortion analysis (HDA).

This tutorial 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 tutorial will acquire knowledge on:

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

\*Those who have registered for NACE 2005 Conference

