

Course Overview:

This course is given as an introduction to the use of electrochemical techniques in corrosion applications. Emphasis is placed on the use of modern instruments to acquire pertinent data. Participants will have the opportunity to operate state-of-the-art instruments in laboratory sessions designed to complement the lecture material. Techniques for proper interpretation of data for use in corrosion prediction and prevention are emphasized. Examples where these methods have been successfully utilized are presented.

Course Objective:

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Course Outline:

- CHEMISTRY AND ELECTRICITY
- ELECTRONEUTRALITY
- ELECTRODES AND ELECTRODE REACTIONS
- INTRODUCTION TO CORROSION
- BASIC THERMODYNAMICS
- POLARIZATION CURVES
- ELECTROCHEMICAL CORROSION
- CONTROL OF CORROSION
- POLARIZATION RESISTANCE
- OHMIC RESISTANCE
- ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY
- EFFECTS OF FLUID VELOCITY
- CURRENT DISTRIBUTION
- CATHODIC PROTECTION

Who Should Attend:

- Mechanical Engineers
- Production Engineers
- Chemists
- Department Managers

Training Language:

EN / AR

Training Methodology:

- Presentation & Slides
- Audio Visual Aids
- Interactive Discussion
- Participatory Exercise
- Action Learning
- Class Activities
- Case Studies
- Workshops
- Simulation