

Corrosion Control by Cathodic Protection

COURSE OBJECTIVES:

- Identifying metallic facilities style, mechanism and corrosion type
- This seminar is to introduce engineers to the recent developments in the field of corrosion control by cathodic protection.
- Execution, planning and selection coatings.

WHO SHOULD ATTEND?

This course is intended for engineers and technicians from power utilities and electrical distribution. Participants must be concerned with corrosion prevention but do not have the necessary background knowledge. Very extensive use of case histories and practical examples in this course has reduced the corrosion theory to a minimum so that any technical personnel will be able to appreciate the technical know-how of preventing corrosion by materials selection and design.

MATERIAL LANGUAGE: English

PRESENTATION LANGUAGE: English/ **ARABIC**

COURSE CONTENTS:

1. INTRODUCTION

- 1.1 Definition of corrosion
- 1.2 Types of corrosion
- 1.4 Significance of corrosion control

2. ELECTRICAL CONCEPTS RELEVANT TO CORROSION

- 2.1 Resistivity, conductivity, impedance
- 2.2 Electron conductor, electrolytic (ionic) conductor and semiconductor
- 2.3 Direction of current and flow of electrons

3. PRINCIPLE OF CATHODIC PROTECTION

4. DIFFERENT FORMS OF CORROSION

5. SACRIFICIAL AND IMPRESSED CURRENT ANODES

6. STRAY CURRENT CORROSION

7. CORROSION IN SPECIFIC ENVIRONMENTS

8. CORROSION PROTECTION BY COATINGS

9. CATHODIC PROTECTION AND ANODIC PROTECTION

10. CORROSION TESTING AND MONITORING

11. CATHODIC PROTECTION SYSTEM DESIGN