Corrosion and Corrosion Control in the Oil & Gas Industry

OBJECTIVES

To provide participants with the most updated information on the management of plants (wells, pipes, equipment etc.) subject to internal and external deterioration, starting from the design phase and until operation.

TARGET AUDIENCE

The course is designed for chemical, mechanical, electrical engineers and technicians in charge of, or active in the management of Corrosion Departments (Engineering, Production and Maintenance Departments).

CONTENTS

The Course Adopts An Interdisciplinary Approach To Data Acquisition And Covers The Following Topics:

> Introduction to Corrosion: basic principles - Cost of corrosion. Life Cycle Cost
> Corrosion mechanism. Thermodynamics and kinetics. General corrosion
> Localised corrosion: galvanic coupling, pitting, crevice, intergranular, stress corrosion cracking
> Prevention and control of corrosion. Painting and corrosion inhibitors
> Corrosion tests - Measurements of corrosion potential and corrosion rate
> Reference electrodes - Galvanic coupling - Electrochemical tests
> Corrosion in the Oil & Gas industry
> Materials in oil and gas industry
> CO₂ corrosion - H₂S corrosion
> Cathodic Protection - Corrosion and protection in soil and water
> Galvanic anodes - Impressed current - Design of C.P.
> Monitoring of C.P.
> C.P. in seawater and soil
> Monitoring of Corrosion - Probes
> Equipment
> Methods
> Testing and Failure Analysis
> Non destructive testing - Visual inspection - Optical microscopy
> Scanning electron microscopy
> X ray diffraction

DURATION

5 days From 9 a.m. to 5 p.m.

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