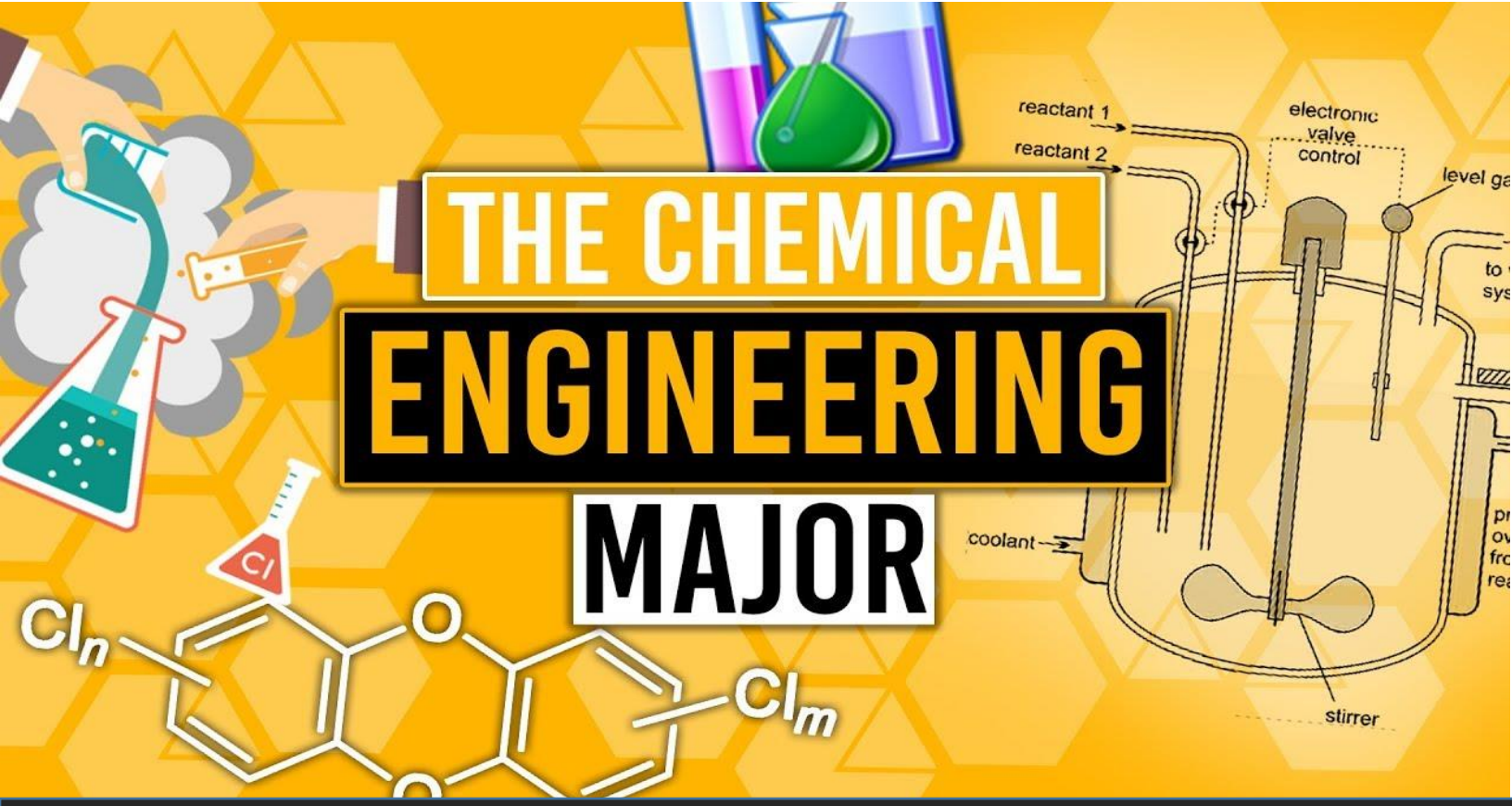

Corrosion Control in Oil & Gas, Chemical & Petrochemical Industry

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Training & Consultancy

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Introduction:

The pursuit of assets corrosion management should be an objective of any organization. The course contents fully explain the corrosion process, forms of corrosion, corrosion control within the framework and the common understanding of Asset Corrosion Management. Successful corrosion management influences the economic outcome of the company by ensuring cost effective selection of materials, chemical treatments, coatings, cathodic protection systems and appropriate designs. The ultimate goal of this course is to equip participant with an integrated theoretical and practical knowledge of corrosion and corrosion control options.

Who Should Attend?

Corrosion Control Engineers & Personnel, Process Engineers, Metallurgists, Inspection Personnel, Mechanical Engineers, Material Selection Personnel, Plant Contractors, Operations Engineers, Team Leaders & Supervisors, Maintenance Supervisors, Senior Plant Supervisors, Mechanical Engineers, Corrosion Control & Monitoring Systems Personnel, Oil and Gas Production Facilities Personnel, Chemists,

Chemical Engineers, Technicians and Supervisors, New Petroleum Engineers, Asset Management Personnel, Design & Construction Engineers, Team Leaders & Coordinators, Construction Coordinators, Maintenance Engineers, Technologists, Maintenance Team Leaders & Engineers, Personnel who are / will be responsible for detecting, inspecting, monitoring, controlling corrosion in oil and gas piping, pipelines used in production operations and Personnel responsible for metallurgy, corrosion or the prevention of failures in plant and equipment.

Course Objectives:

By the end of this course delegates will be able to:

- Gain solid understanding of the corrosion process both internally and externally
- Address forms of corrosion and failure mechanisms.
- Identify the six corrosion control techniques
- Elaborate on inspection, monitoring, prediction and testing protocols to ensure full understanding of the corrosion damage mechanism and mitigation measures
- Develop and improve skills to develop corrosion control schemes and implementation plans
- Explore innovative control techniques with particular focus to problematic areas
- Have an insight to Downhole flow assurance problems and control techniques (Chemical, Mechanical, Process & Design)
- Discuss major operatorâ€™s advancement in corrosion management realities.

- Have an expert views to Non-metallic materials application in the Oil and Gas industries.

Course Outline:

Introduction

- Overview of the Chemical Processing Industry
- Chemistry of the Processing Industry
- Safety for the Operation and Maintenance Groups

Principles of Corrosion

- Aqueous Corrosion
- High Temperature Oxidation
- High Temperature Corrosion
- Corrosion Kinetics
- Galvanic Corrosion
- Galvanic Corrosion Case Study

Types of Corrosion

- Pitting Corrosion
- Crevice Corrosion
- Under Deposit Corrosion
- Stress Corrosion Cracking
- Stress Corrosion Cracking Case Study

Type of Corrosion

- Hydrogen Embrittlement

- Erosion Corrosion
- Erosion Corrosion Case Study
- Cavitation Corrosion
- H2S Corrosion
- CO2 Corrosion
- Microbiological Corrosion
- Under Insulation Corrosion
- Corrosion of Welds
- External vs. Internal Corrosion

Corrosion Control (Materials of Choice)

- Metallurgy Guidelines
- Stainless Steel
- Plastics
- Carbon Steel

Corrosion Control

- Inhibitors
- Catholic Protection

Corrosion Monitoring

- Current Corrosion Monitoring Procedures
- Non Destructive Testing
- Behaviour of Metals in different environments