

Material selection and maintenance, corrosion management

Module 3: Corrosion phenomena and inspection in Oil & Gas Processes

Introduction

In oil and Gas production, corrosion forms a continuous threat to structures, equipment and vessels, on and offshore installations. Protecting your assets against integrity losses requires thorough understanding of materials used and the degradation mechanism (corrosion phenomena).

This one day course provides you the intellectual tools on how to prevent corrosion and choosing the most effective measures when it is already affecting your valuable assets.

Modular course

The module fits in a full course of three modules for marine, offshore activities and oil and gas production.

Module 1: Corrosion basics and mechanisms.

Metallurgy, Materials and Plastics for marine, offshore, static equipment and oil and gas.

Module 2: Marine and Offshore (Seawater, Brackish Water Natural Water). Materials Selection, Maintenance, Inspection and Corrosion.

Module 3: Oil and Gas. Oil and Gas Processes. Materials for topside equipment. NACE MR0176 (ISO 15156 for H₂S resistant materials), CO₂ Corrosion, de Waard Milliams, NORSOK M506.

Target audience

Process engineers, Maintenance, Design, Piping Engineers, Superintendents, Asset Integrity Managers. Engineers. The course is Dutch or English spoken depending on the audience material will be in English.



Programm:

Materials Selection for Oil and Gas

Steel
Stainless Steel
Copper Alloys
Titanium
GRE
Coatings

ASTM Grades

Pipelines
Piping
Forgings
Cast Alloys

CO₂ Corrosion

Basic mechanism
De Waard Milliams Calculations
NORSOK M506 Calculations
Using excel spreadsheets

H₂S Corrosion and Design

Basic Mechanism
Materials selection and design
NACE MR0175/ISO 15156

MIC in Oil and Gas

Basic Mechanism
Materials Selection
Reservoir Souring

Corrosion in processes

Topside static equipment
Downhole tubing and casing API 587
Subsea Corrosion
Pipeline Corrosion
Corrosion Monitoring

In company trainings are provided in the Dutch or English language on site, world wide and when needed, based on your specific working practice and cases.