

Chemicals used in Production Activities

5 days
Overview

CHIMIC-EN-P

LEVEL

Knowledge

PURPOSE

This comprehensive course provides an advanced knowledge on how production chemicals may improve production processes and cure problems in Oil & Gas production. Chemical natures, properties, selection, treatments monitoring, troubleshooting, optimizations are covered.

LEARNING OBJECTIVES

Upon completion of the course, participants will be able to:
detail the nature and purpose of each frequently used production chemicals, their specificities and limits,
explain in which domain and how chemical treatments are applicable,
select and apply safely the best treating chemicals,
monitor chemical treatments and detect dysfunctions,
evaluate chemical performance in a given process, optimize chemical treatments.

WAYS AND MEANS

Highly interactive training by industry specialist lecturers.
Several applications and case studies.

LEARNING ASSESSMENT

Assessment by test at the end of the course.

PREREQUISITES

Engineer degree or equivalent experience in Oil & Gas industry.

Agenda

INTRODUCTION TO CHEMICAL TREATMENT IN PRODUCTION FIELD

0.5 d

Review of different types of chemicals used in Oil & Gas production.
Brief description of the associated logistics and chemical-specific hazards.
Methods for implementing chemical treatment.

CHEMICALS FOR OIL TREATMENT

1.5 d

Purpose, nature and specificities of each: demulsifiers, defoamers, corrosion inhibitors, paraffin control chemicals, drag reducers...
Methodology for selecting the correct chemical and field testing.
Ways for monitoring during operation.
Optimization of the chemical injection and chemical performance evaluation.
Troubleshooting case study.

CHEMICALS FOR GAS TREATMENT

0.75 d

Purpose, nature and specificities of each: defoamers, foamers, corrosion inhibitors, hydrate inhibitors (Methanol, DEG, TEG, KHI)...

Methodology for selecting the correct chemical and field testing.

Ways for monitoring during operation.

Optimization of the chemical injection and chemical performance evaluation.

Troubleshooting case study.

CHEMICALS FOR INJECTION & PRODUCED WATER PROCESSING

1.5 d

Purpose, nature and specificities of each: polyelectrolyte, chlorine, bactericide, oxygen scavenger, deoilers, corrosion inhibitors, acids, mineral scale inhibitors...

Methodology for selecting the correct chemical and field testing.

Ways for monitoring during operation.

Optimization of the chemical injection and chemical performance evaluation.

Troubleshooting case study.

SPECIAL OPERATIONS

0.75 d

Scale removal and prevention in well tubing, electrochlorinator, furnaces and heat exchangers.

Use of H₂S scavenger.