PetroSkills

Production Chemistry - OGPC

COURSE

About the Course

This course covers the selection and use of chemicals in oil and gas production. As oilfields mature more water is produced which requires the use of more chemicals to maintain production. Chemicals used for controlling corrosion, emulsions, foaming, mineral scales, paraffins (waxes), asphaltenes, gas hydrates, hydrogen sulfide scavengers, and water clarifiers are covered.

The course includes methods to determine the need for chemical treating, how to select the proper chemicals, and how testing for chemical compatibility with the formation and other chemicals is performed. Requirements for environmentally friendly products and products for deep water production are discussed. The course will include cover the ways the use of chemicals can prevent problems, improve production and economics, and extend the life of the production equipment.

Due to its modular construction, this course can be offered on an in-house basis with expansion of some of the major sections and deletion of others to suit the needs of individual client groups. Should you desire this approach, please contact us.

"The amount of time we spent on each subject was good. Discussions are very practical." - Production Engineer, United States

"Liked corrosion part (control, origin of corrosion). The best teacher to date." - Participant, Croatia

Target Audience

Production engineers, facilities engineers, chemists, and technicians involved with production systems from the wellbore through the topside production equipment, transmission pipelines, and storage facilities who are responsible for recognizing and treating problems which might require treatment chemicals.

You Will Learn

Participants will learn how to:

- Recognize corrosive conditions and monitor corrosion rates
- Select and apply corrosion inhibitors
- Predict and treat emulsions
- Understand causes and control of foaming
- Predict scale forming conditions

- Select and apply scale inhibitors
- Control gas hydrate formation
- Predict and control paraffin (wax) deposition
- Evaluate methods for asphaltene control
- Scavenge low concentrations of H2S
- Select and apply water clarifiers
- Select chemicals for use in deep water
- Select environmentally friendly chemicals

Course Content

- Corrosive agents
- Corrosion inhibitor selection and application
- Predicting and monitoring corrosion rates
- Basics of oilfield emulsions
- Demulsifier selection and field application
- Foams
- Defoamers
- Foam basics
- Field application of foams
- How defoamers work
- Compounds that cause scaling
- Prediction of scaling tendency
- Scale inhibitors
- Solvents to dissolve scales
- Requirements for gas hydrates to form
- Types of compounds used to control hydrate formation
- Causes of paraffin (wax) problems
- Paraffin treatment chemicals
- Asphaltene stability tests
- Asphaltene treatment chemicals
- Chemicals used as H2S scavengers
- Application of H2S scavengers
- Oil carryover in water
- Removal of oil and oily solids
- Tests required for chemicals used in deep water
- Green chemicals (environmentally friendly chemicals)

Product Details

Categories: Upstream

Disciplines: Production and Completions Engineering

Levels: Intermediate

Product Type: Course

Formats Available: In-Classroom Virtual

Instructors: PetroSkills Specialist Carlos Palacios