

# **CHEMICAL FIELD TRIALS; (SELECTION, BOTTLE TESTS AND FIELD TRIALS)**



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**TRAINING TITLE**

CHEMICAL FIELD TRIALS; (SELECTION, BOTTLE TESTS AND FIELD TRIALS)

**VENUE**

Dubai, UAE

**DURATION**

5 Days

**DATES**

24 - 28 November 2019

**PRICE**

US\$4,000 per attendee including training material/handouts, morning/afternoon coffee breaks and Lunch buffet.

**TRAINING INTRODUCTION**

Chemicals of various types are being used to aid the production of crude oil and natural gas from the drilling step of the well, through the separation in the treatment plant, so that the crude oil is in a stable condition for transfer via a pipeline or tanker to the tank farm of the refinery. With the strict laws on the quality of water discharged into the sea, the use of suitable chemicals is of increasing concern for production chemists. Moreover, as oilfields age, the need for chemicals to ensure steady production increases.

Production chemistry issues result from changes in well stream fluids, both liquid and gaseous, during processing. Since crude oil production is always characterized by variable production rates and unpredictable changes to the nature of the produced fluids, it is essential for production chemists to have a range of chemical additives available for rectifying issues that would not otherwise be fully resolved.

In modern production methods, the need to upgrade crude oils of variable quality and environmental constraints demand chemical solutions. Thus, oilfield production chemicals are necessary to overcome or minimize the effects of the production chemistry problems. Which includes coverage of the chemical application mechanisms, deployment methods, and, where available, environmental properties. It provide details on the synthesis, testing, theory, and application of each type of chemical and a general overview of production chemistry issues, the factors that affect the choice

of production chemicals, environmental regulations, suggestions for designing greener chemicals.

### **TRAINING OBJECTIVES**

Upon completion of the course participants will be able to:

- Know all the processes steps required for crude oil and natural gas to be produced; from the exploration survey through marketing of the final products.
- Familiar with the main problems associated with Hydrocarbons productions and treatment required.
- Know the trade names of all chemicals used for different types of crude and natural gas and its application methods.
- Know how to carry out bottle test inside their laboratory.
- Know how to make statistical evaluation methods for chemical evaluation.
- Explain which of the chemical could be more efficient and safer in cost.
- Study the principle of No Cure No Pay basis.
- How to evaluate and compare between different bidders.
- Discuss some live Oilfield problems.

### **TRAINING AUDIENCE**

These Program is intended and designed for:

- Laboratory Managers, Chemists and Supervisors
- Experienced laboratory technicians
- Production Chemists, Engineers and Supervisors
- Experienced production technicians
- R & D Chemists and Engineers

### **TRAINING OUTLINE**

Day 1:

General Overview of Petroleum Industries from Exploration Through Refinery to Product Marketing

Petroleum exploration  
Drilling and completion  
Production and treatment  
Refinery and petrochemical industries  
Chemical treatment used in each stage  
Common process problems

Day 2:

Crude Oil Treatment Chemicals, Evaluation, Screening, Laboratory Testing and Field Trials

Crude oil treatment units  
Chemicals used for crude treatment  
Defoamers  
Demulsifiers  
H<sub>2</sub>S Scavengers  
Pour Point depressant  
Viscosity Modifiers  
Paraffin and Asphaltene Dissolvers  
Corrosion Inhibitors

Day 3:

Crude Oil Treatment Chemicals, Evaluation, Screening, Laboratory Testing and Field Trials

Evaluation of each type of chemicals  
Screening bottle test of chemical demulsifiers (Bottle test)  
Field trials of each type of chemical  
Chemical deployment methods

Field trials evaluations

Reporting data results

Day 4:

Gas Processing Chemicals, Evaluation, Screening, Laboratory Testing and field Trials

Gas processing plants

Chemical used for gas treatment

Gas drying chemicals

Corrosion inhibitors

Scale inhibitors

H<sub>2</sub>S Scavenger

Evaluation of each type of chemicals

Chemical deployment methods

Laboratory screening tests

Field trials

Reporting data results

Day 5:

Wastewater Treatment Plants

Wastewater treatment plant

Constituent units of wastewater plant

API Skimmer

Floatation units (DAF unit)

CPI units

Chemicals used for effluent water treatment

Field trials of used chemicals

Reporting data results

## **TRAINING CERTIFICATE**

**MAESTRO CONSULTANTS** Certificate of Completion for delegates who attend and complete the training course.

## **METHODOLOGY**

Our courses are highly interactive, typically taking a case study approach that we have found to be an effective method of fostering discussions and transferring knowledge. Participants will learn by active participation during the program through the use of individual exercises, questionnaires, team exercises, training videos and discussions of “real life” issues in their organizations. The material has been designed to enable delegates to apply all of the material with immediate effect back in the workplace.