



**MAESTRO**  
CONSULTANTS

# **CEMENTING OPERATIONS**

## **COURSE OUTLINE 2020**

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## **TRAINING TITLE**

CEMENTING OPERATIONS

## **VENUE**

Dubai, UAE

## **DURATION**

5 Days

## **DATES**

16 - 20 February 2020

## **PRICE**

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

## **TRAINING INTRODUCTION**

A successful cement job is one of the most important factors for the productive life of any well. Some of the challenges that oil and service companies face today include U-tubing, high ECD, loss of circulation and excessive pump pressure, temperature prediction, etc. These concerns can be best analyzed using computer models, which allow engineers to see the effects of different design parameters prior to any job being performed. Using these models, potential problems can be identified and cementing designs can be tuned before pumping begins.

This course covers the engineering basics involved in cementing operations.

## **TRAINING OBJECTIVES**

**Upon successful completion of this course, the delegates will be able to:**

- Selection of casing sizes and setting depths to achieve well objectives
- Determination of casing loads for design purposes

- To design casing properties to meet burst, collapse and tensile strength requirements
- To conduct casing running operations safely and successfully
- Specification of cement slurry properties and volumes to meet well objectives
- Determination of best procedures for attaining successful primary cementing
- To conduct stage jobs, squeeze jobs, and set cement plugs, liner cementing and stage cementing jobs

## **TRAINING AUDIENCE**

The course is designed for Drilling Engineers, Drilling Supervisors, Cement Engineers, Well Integrity Engineers, Petroleum Engineers, Reservoir Engineers, Petro-physists.

## **COURSE OUTLINE**

### **Day 1**

Introduction to Cementing Operations

- API cement classification
- Basic cement chemistry and manufacturing
- Primary cementing

### **Day 2**

- Cement Technology
- Cementing goals
- Understanding cementing design
- Lab tests
- Cement lab tour and lab demonstrations

Basic cementing goals and mud removal methods will be covered. Cement design software will be explained and used to illustrate key design objectives.

A lab visit will give participants an understanding of how tests are performed and will show how these test results are related to cement slurry design.

### **Day 3**

#### Equipment and Job Performance

- Cementing equipment overview
- Gel strength and gas migration
- Cement placement calculations
- Plug cementing
- Squeeze cementing theory
- Lost circulation

Today participants will learn about cementing equipment, job performance, and important cement properties related to gas migration. Practical sessions will be used to ensure participants are familiar with cement job placement topics. Squeeze cementing theory will be discussed as a foundation for remedial cementing.

### **Day 4**

#### Cement Job Evaluation

- Cement bond logs
- Cement evaluation log interpretation
- Cement bond log workshop
- Plug and squeeze cementing calculations
- New technologies in cementing (demonstrations)
- Rig site cement job practical

On the last day, participants will gain an understanding of the cement bond, cement evaluation log limitations, and log uses. Working with several examples participants will learn how to interpret different logs and make conclusions as to the effectiveness of cement jobs. Applying the theories learned the prior day, participants will gain confidence in calculating plug and squeeze cement jobs. Participants will also learn about the application for cement technology through demonstrations of new and special application technology.

## **Day 5**

### **Specialized and New Technology Cement Systems**

- New technology cement systems
- Introduction to deep-water cementing
- Roundtable and course close

The final day will review new technology cement systems such as light-weight slurries, lost circulation solutions, self-healing cements, flexible cement, and ultra-HT cementing. The final classroom presentation will introduce the participants to deep-water cementing and the associated challenges. The course will conclude with a roundtable and feedback session before closure.

### **Course summary and Evaluation**

## **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.