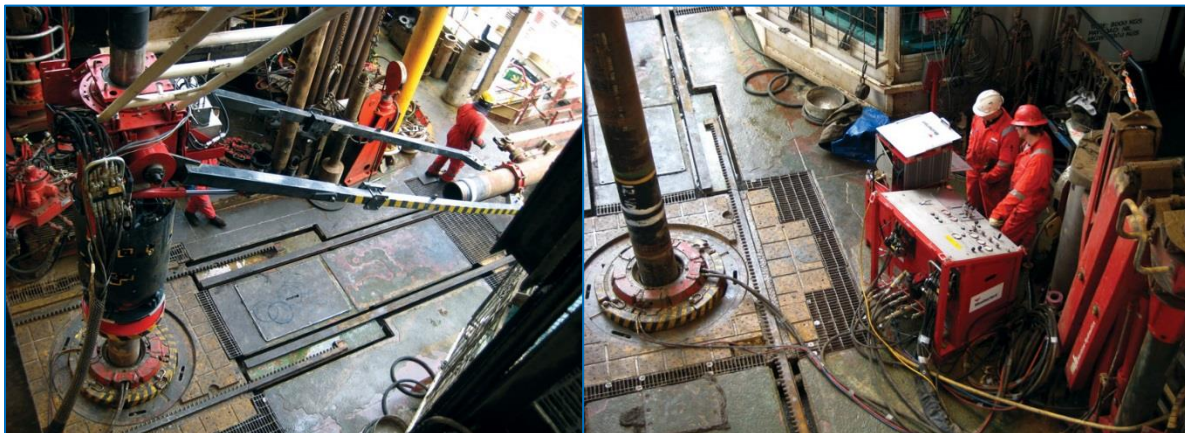




DE176: Advanced Cementing and Completion Operations

Training Description:

This intensive training course covers a detailed and up-to-date overview of advanced cementing and completion operations. It covers the firm foundation in planning, designing, execution and evaluation for a successful cementation; the planning and design consideration covering the essential requirement for a successful primary and secondary cementation; the slurry design and rheology and well parameters to be considered for cementation; the preparation and execution of well successfully; the design and factors to be considered for cementing under loss situation and cementing of well with gas migration; the potential complication and remedies during cementation; and the critical cementation during planning and designing of linear, stage and horizontal well cementing.

Further, this training course will also discuss the techniques of cement job and cement bond tool; the high performance light weight slurries, advancement and H.P.H.T cementing technology and equipment; the thermal cementing; the types and objective of completion operations according to reservoir and production data; the natural flow and artificial lift including single, dual gas lift and ESP well completion; the completion equipment, completion fluid and pressure test function; the main factors influencing completion design as well as well head valves types and applications; the overall approach to a well's flow capacity; and the major types of completion configurations.

During this interactive training course, participants will learn the main phases in completion and considerations, completion equipment, completion fluid, pressure test function, drilling and casing the pay zone; the perforating, treating the pay zone, the special case of horizontal wells, production wellhead and production string or tubing; the tubing specification as well as thread, grade, weight and material; the packers, downhole equipment, subsurface safety valves, running procedure, artificial lift and gas lift; the artificial lift process, completion management and artificial lift operations in open and cased holes; the designing and material selection for sweet and sour gas; the equipment and tender document evaluation; the main types of well servicing and workover, light well servicing, heavy servicing and workover operations on live wells; the servicing and workover operations on killed wells; the deviated, multiple zone, subsea, horizontal, multilateral and HPHT completion; and the well stimulation, hydraulic fracturing and acid stimulation.

Training Objectives:

By the end of the training, participants will be able to:

- ✓ Apply and gain an advanced knowledge on cementing and completion operations
- ✓ Build a firm foundation in planning, designing, execution and evaluation for a successful cementation
- ✓ Determine planning and design consideration covering the essential requirement for a successful primary and secondary cementation
- ✓ Discuss slurry design and rheology and well parameters to be considered for cementation
- ✓ Prepare and execute well successfully
- ✓ Recognize the design and factors to be considered for cementing under loss situation and cementing of well with gas migration
- ✓ Identify the potential complication and remedies during cementation
- ✓ Explain critical cementation during planning and designing of linear, stage and horizontal well cementing

- ✓ Evaluate and interpret the techniques of cement job and cement bond tool
- ✓ Describe the high-performance light weight slurries, advancement and H.P.H.T cementing technology and equipment
- ✓ Employ thermal cementing in a professional manner
- ✓ Discuss the types and objective of completion operations according to reservoir and production data
- ✓ Interpret natural flow and artificial lift including single, dual gas lift and ESP well completion
- ✓ Identify completion equipment and completion fluid, pressure test function
- ✓ Identify main factors influencing completion design as well as well head valves types and applications
- ✓ Apply overall approach to a well's flow capacity and recognize the major types of completion configurations
- ✓ Determine main phases in completion and considerations, completion equipment, completion fluid, pressure test function, drilling and casing the pay zone
- ✓ Discuss perforating, treating the pay zone, the special case of horizontal wells, production wellhead and production string or tubing
- ✓ Explain tubing specification as well as thread, grade, weight and material
- ✓ Discuss packers, downhole equipment, subsurface safety valves, running procedure, artificial lift and gas lift
- ✓ Choose an artificial lift process and apply completion management and artificial lift operations in open and cased holes
- ✓ Use API designing and material selection for sweet and sour gas
- ✓ Order the equipment and evaluate tender document as well as design, plan, execute open hole and cased hole completion and prepare well program
- ✓ Coordinate with logistic and service companies, run completion string on site according to sequence of well procedure and HSE and optimize operational steps in the completion program
- ✓ Identify the main types of well servicing and workover, light well servicing, heavy servicing and workover operations on live wells and servicing and workover operations on killed wells
- ✓ Discuss deviated, multiple zone, subsea, horizontal, multilateral and HPHT completion
- ✓ Illustrate well stimulation, hydraulic fracturing and acid stimulation

Training Designed for:

This course is intended for advanced cementing and completion operation for supervisors, senior engineers, mud engineers, cementing engineers, drilling engineers, drilling representatives, workover and completions personnel, drilling contractors, cement company personnel and for those who are responsible for the design, planning, implementation and evaluation of a well cementing program.

Training Requirement:

"Hand's on practical sessions, equipment and software will be applied during the course if required and as per the client's request."

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client's learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

DAY ONE:

- ❖ PRE-TEST
- ❖ Introduction
- ❖ Essential Requirement for a Successful Cementation – Primary & Secondary
- ❖ Slurry Design & Rheolog
- ❖ Well Parameters to be Considered for Cementation
- ❖ Preparation of Well & Successful Execution
- ❖ Well Parameters to be Considered for Cementing Under Loss Situation
- ❖ Design & Factors to be Considered for Cementing of Well with Gas Migration

DAY TWO:

- ❖ Planning & Design of Linear Cementation
- ❖ Planning & Design of Stage Cementation
- ❖ Planning & Design of Horizontal Well Cementing
- ❖ Cement Bond Tool & Techniques
- ❖ Cement Bond Interpretation
- ❖ High Performance Light Weight Slurries

DAY THREE:

- ❖ H.P.H.T Cementing Technology
- ❖ Thermal Cementing
- ❖ Types & Objective of Completion Operations According to Reservoir & Production Data
- ❖ Natural Flow & Artificial Lift Including Single, Dual Gas Lift, ESP Well Completion
- ❖ Main Factors Influencing Completion Design
- ❖ Well Head Valves Types & Applications
- ❖ Overall Approach to a Well's Flow Capacity
- ❖ Major Types of Completion Configurations
- ❖ Main Phases in Completion & Considerations
- ❖ Completion Equipment & Completion Fluid, Pressure Test Function

DAY FOUR:

- ❖ Drilling & Casing the Pay Zone
- ❖ Perforating
- ❖ Treating the Pay Zone
- ❖ The Special Case of Horizontal Wells
- ❖ The Production Wellhead
- ❖ The Production String or Tubing
- ❖ Tubing Specification as Thread, Grade, Weight & Material
- ❖ Packers
- ❖ Downhole Equipment
- ❖ Subsurface Safety Valves
- ❖ Running Procedure
- ❖ Artificial Lift: Pumping
- ❖ Gas Lift

- ❖ Choosing an Artificial Lift Process
- ❖ Completion Management Artificial Lift Operations in Open & Cased Holes
- ❖ Use API in Designing & Material Selection for Sweet & Sour Gas
- ❖ Practical Sessions
 - This hands-on, highly-interactive training includes real-life case studies and exercises

DAY FIVE:

- ❖ Order the Equipment & Evaluate Tender Document
- ❖ Design, Plan, Execute Open Hole & Cased Hole Completion
- ❖ Prepare Well Program
- ❖ Coordinate with Logistic & Service Companies
- ❖ Run Completion String on Site According to Sequence of Well Procedure & HSE
- ❖ Optimize Operational Steps in the Completion Program
- ❖ Main Types of Well Servicing & Workover
- ❖ Light Well Servicing & Workover Operations on Live Wells
- ❖ Heavy Servicing & Workover Operations on Live Wells
- ❖ Servicing & Workover Operations on Killed Wells
- ❖ Servicing & Workover Special Cases
- ❖ Deviated, Multiple Zone, Subsea, Horizontal, Multilateral & HPHT Completion
- ❖ Well Stimulation
- ❖ Hydraulic Fracturing
- ❖ Acid Stimulation
- ❖ Course Conclusion
- ❖ POST-ASSESSMENT and EVALUATION

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

CMCT Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

TBA as per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:

Aisha Relativo - Training & Career Development Manager

aisha@cmc-me.com / training@cmc-me.com

Tel.: +971 2 665 3945 or +971 2 643 6653 | Mob.: +971 52 2954615