



COURSE OVERVIEW DE1064

Cement-Cementing, Cement Equipment & Well Integrity

Course Title

Cement-Cementing, Cement Equipment & Well Integrity

Course Date/Venue

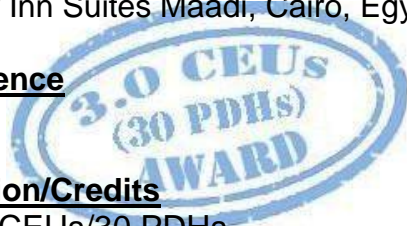
February 11-15, 2024/Hourous Meeting Room, Holiday Inn Suites Maadi, Cairo, Egypt

Course Reference

DE1064

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



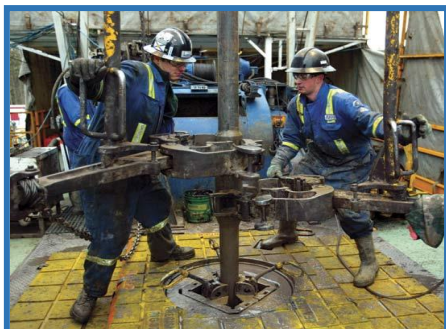
Course Description



This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.



Cementing is a fundamental element of effective well construction. By understanding cement chemistry, additive use, and lab procedures the participants will be able to build a solid foundation to design and execute cement jobs. Mud removal and centralization will be taught so that the participants can apply effective processes to ensure cement job success.



Special purpose cements will be discussed in a way to show when they should and should not be used, as well as how they can be used to solve challenges encountered in complex and extreme well environments. Foamed, engineered particle sized, flexible, and salt cements will also be covered in detail.

During this course, participants will practice cementing calculations, as well as job design exercises and cement evaluation methods using real-life examples. Liner cementing and stage cementing jobs will be developed in the classroom. Cement design software will also be demonstrated.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain an in-depth knowledge on cementing operations
- Demonstrate operational knowledge and understanding on how to use cementing additives properly to improve and reduce job costs
- Demonstrate operational knowledge and understanding on how cements are classified
- Demonstrate operational knowledge and understanding on how to interpret laboratory test results
- Perform primary cementing operations to include casing cementing, liner cementing, multi-stage cementing
- Conduct remedial squeeze jobs and selection of squeeze tools
- Perform remedial cementing plug operations to improve overall job success
- Perform the overall cementing operation i.e. perform primary and remedial cementing operations to include: casing cementing, liner cementing, multi-stage cementing, plug cementing, the use of cementing additives properly to improve and reduce job costs, interpret laboratory test results, conduct squeeze jobs and selection of squeeze tools
- Perform cement plug operations to improve overall job success and interpret cement sheath evaluation logs, all under minimum supervision
- Demonstrate operational knowledge and understanding on how to calculate cement slurry volumes the following types of casing jobs primary casing, intermediate casing, production casing and liners know how to calculate differential pressure to bump the cement plug and to calculate displacement volumes
- Demonstrate operational knowledge and understanding on how to identify cementing float equipment
- Discuss cementing operations, cement rheology, cementing equipment and cementing calculations and laboratory testing
- Explain well parameters to be considered for cementation, preparation of well and successful execution and how to use cementing additives properly to improve and reduce job costs
- Describe how cements are classified and how to interpret laboratory test results
- Demonstrate primary cementing operations, casing cementing, linear cementing, multi-stage cementing, remedial cementing and plug cementing
- Conduct squeeze jobs and selection of squeeze tools, perform cement plug operations to improve overall job, interpret cement sheath evaluation logs and calculate cement slurry volumes
- Explain types of casing jobs, primary casing, intermediate casing and production casing and liners



- Calculate differential pressure to pump the cement plug and calculate displacement volumes
- Discuss ultra light weight cements, horizontal well cementing, evaluation of the job, reasons for failures and cement spacers and flushes
- Describe casing and squeeze tool hydraulics, tuned cementing, right angle set cement, API connection ratings and formulas and H.P.H.T cementing technology
- Explain squeeze techniques, squeezing fractured zones, packer squeeze tools, balance plug method and cementing problems

Who Should Attend

This course provides an overview of all significant aspects and considerations of cementing operations for subsurface 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 in cementing operations.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Fee

US\$ 8,000 per Delegate + **VAT**. This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Accommodation


Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations


Certificates are accredited by the following international accreditation organizations: -

- 
The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units (CEUs)** in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

- 
British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Mr. Shehab Al-Hamoud, MSc, BSc, is a **Senior Petroleum Engineer** with over **25 years** of **offshore** and **onshore** experience in the **Oil & Gas, Refinery & Petrochemical** industries. His wide expertise includes **Advanced Production Logging, Well Testing & Software Application, Wellhead & X-mass Tree, Completion Design, Well Integrity, Drilling & Workover Operations, Completion Design & Fishing, Well Control, Stuck Pipe Principle & Practical, Advanced Coiled Tubing Operations & Fishing, Rigless Solutions, Advanced Wire Line & Fishing, Well Completion Design & Performance** for Production Engineering, **SCSSV Problems, Well Testing Operations, Well Intervention (IWCFR), Workovers & Completions, Petroleum Risk & Decision Analysis, Well Testing Analysis, Engineering & Simulation, Reservoir Monitoring, Artificial Lift Design, Gas Operations, Oil & Gas Production, Well Cementing, Production Optimization, Production Logging and Project Evaluation & Economic Analysis**. He is currently the **Well Service & Field Operations Engineer/Supervisor** wherein he is in-charge of rigless package operations, kill well, coiled tubing operations, acidizing and fracturing, slick line operations, well completion and exploratory well testing operations, safety and emergency exercises on site.

During his career life, Mr. Shehab has gained his practical and field experience through his various significant positions and dedication as the **Field Operations Engineer, Well Services Engineer, Completion & Well Service Supervisor, Rigless Package Supervisor, Completion & Workover Supervisor, Completion & Workover Supervisor, Well Site Supervisor** and **Senior Technical Train/Lecturer** from various international companies such as the AFPC, ADCO and SPC just to name a few.

Mr. Shehab has a **Bachelor’s** degree in **Petroleum Engineering**. Further, he is a **Certified Instructor/Trainer** a **Certified Petroleum Engineer**, held certificates on **IADC/ IWCF Well Control** and **H2S Training** and has delivered numerous trainings, courses, seminars, workshops and conferences internationally.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: Sunday, 11th of February 2024

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0900	Introduction to Cementing Operations
0900 – 0915	Cement Rheology
0915 – 0930	Cementing Equipment



0930 - 0945	Break
0945 - 1030	Cementing Calculations & Laboratory Testing
1030 - 1130	Well Parameters to be Considered for Cementation
1130 - 1230	Preparation of Well & Successful Execution
1230 - 1245	Break
1245 - 1345	How to Use Cementing Additives Properly to Improve & Reduce Job Costs
1345 - 1420	How Cements are Classified
1420 - 1430	Recap
1430	Lunch & End of Day One

Day 2: Monday, 12th of February 2024

0730 - 0830	How to Interpret Laboratory Test Results
0830 - 0900	Primary Cementing Operations
0900 - 0930	Casing Cementing
0930 - 0945	Break
0945 - 1030	Linear Cementing
1030 - 1130	Multi-Stage Cementing
1130 - 1230	Remedial Cementing
1230 - 1245	Break
1245 - 1345	Plug Cementing
1345 - 1420	Conduct Squeeze Jobs & Selection of Squeeze Tools
1420 - 1430	Recap
1430	Lunch & End of Day Two

Day 3: Tuesday, 13th of February 2024

0730 - 0830	Perform Cement Plug Operations to Improve Overall Job Success
0830 - 0900	Interpret Cement Sheath Evaluation Logs
0900 - 0930	Calculate Cement Slurry Volumes
0930 - 0945	Break
0945 - 1030	Types of Casing Jobs
1030 - 1130	Primary Casing
1130 - 1230	Intermediate Casing
1230 - 1245	Break
1245 - 1345	Production Casing & Liners
1345 - 1420	Calculate Differential Pressure to Pump the Cement Plug
1420 - 1430	Recap
1430	Lunch & End of Day Three

Day 4: Wednesday, 14th of February 2024

0730 - 0830	Calculate Displacement Volumes
0830 - 0900	Cementing Float Equipment
0900 - 0930	Ultra Light Weight Cements
0930 - 0945	Break
0945 - 1030	Horizontal Well Cementing
1030 - 1130	Evaluation of the Job, Reasons for Failures
1130 - 1230	Cement Spacers & Flushes
1230 - 1245	Break
1245 - 1345	Casing & Squeeze Tool Hydraulics
1345 - 1420	Tuned Cementing
1420 - 1430	Recap
1430	Lunch & End of Day Four

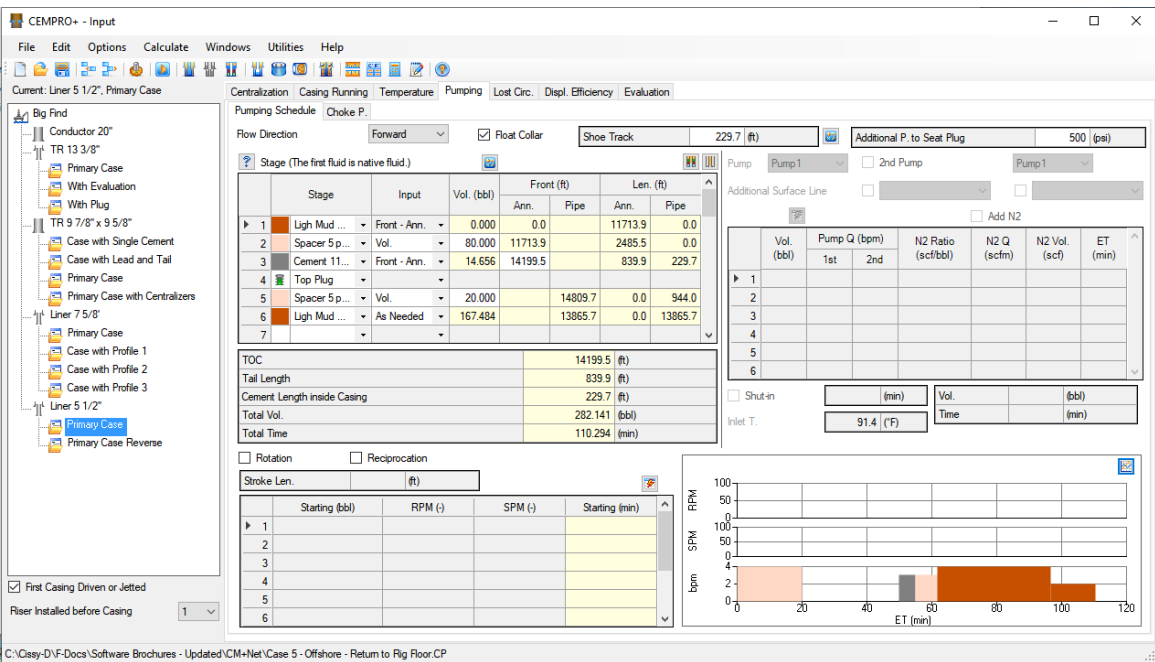


Day 5: Thursday, 15th of February 2024

0730 – 0830	Right Angle Set Cement
0830 – 0900	API Connection Ratings & Formulas
0900 – 0930	H.P.H.T Cementing Technology
0930 – 0945	<i>Break</i>
0945 – 1030	Squeeze Techniques
1030 – 1130	Squeezing Fractured Zones
1130 - 1230	Packer Squeeze Tools
1230 - 1245	<i>Break</i>
1245 – 1315	Balance Plug Method
1315 - 1345	Cementing Problems
1345 – 1400	Course Conclusion
1400 – 1415	POST-TEST
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & End of Course</i>

Simulator (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using the “CEMPRO + Integrated Cementing” software.



CEMPRO+ Integrated Cementing Software

Course Coordinator

Kamel Ghanem, Tel: +971 2 30 91 714, Email: kamel@haward.org