COURSE OVERVIEW DE0128
Gas Lift & ESP Operations & Optimization

Course Title
Gas Lift & ESP Operations & Optimization

Course Date/Venue
Session 1: January 05-09, 2025/Meeting Plus 8, City Centre Rotana Doha Hotel, Doha, Qatar
Session 2: July 06-10, 2025/Meeting Plus 8, City Centre Rotana Doha Hotel, Doha, Qatar

Course Reference
DE0128

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Description

This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.

This course is designed to provide participants with a detailed and up-to-date overview of Gas Lift and ESP Operations and Optimization. It covers the artificial lift methods, gas lift and ESP; the advantages and disadvantages of each method; the factors to consider when selecting an artificial lift method; the gas lift and ESP design principles and system integration; the tubing size, injection pressure, and injection depth; the gas lift and ESP optimization techniques; troubleshooting common gas lift problems and ESP problems; the advantages and disadvantages of different integration methods; the monitoring and control techniques for artificial lift systems; and the types of sensors used to monitor gas lift and ESP performance.

During the interactive course, participants will learn the control strategies to optimize production and reduce downtime; the downhole equipment used in gas lift and ESP systems; the best practices for installation and maintenance of downhole and surface equipment; troubleshooting common downhole and surface problems; the safety considerations, environmental considerations, regulatory requirements and compliance; the emerging technologies and techniques for artificial lift, including digitalization and automation; the optimization techniques to increase efficiency and production; the best practices for field development planning, including reservoir modelling and production forecasting; and the economic analysis of artificial lift projects.

Course Objectives

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

- Apply and gain an in-depth knowledge on gas lift and ESP operations and optimization
- Discuss artificial lift methods, gas lift and ESP including the advantages and disadvantages of each method and the factors to consider when selecting an artificial lift method
- Explain gas lift and ESP design principles and gas lift and ESP system integration
- Recognize tubing size, injection pressure, and injection depth
- Carryout gas lift and ESP optimization techniques as well as troubleshooting common gas lift problems and ESP problems
- Explain the advantages and disadvantages of different integration methods
- Employ monitoring and control techniques for artificial lift systems and the types of sensors used to monitor gas lift and ESP performance
- Apply control strategies to optimize production and reduce downtime including the downhole equipment used in gas lift and ESP systems
- Implement best practices for installation and maintenance of downhole and surface equipment and troubleshoot common downhole and surface problems
- Carryout safety considerations, environmental considerations, regulatory requirements and compliance
- Apply emerging technologies and techniques for artificial lift, including digitalization and automation
- Employ optimization techniques to increase efficiency and production
- Implement best practices for field development planning, including reservoir modelling and production forecasting as well as economic analysis of artificial lift projects

Exclusive Smart Training Kit - H-STK®

*Participants of this course will receive the exclusive "Haward Smart Training Kit" (**H-STK®**). The **H-STK®** consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of gas lift and ESP operations and optimization for petroleum, reservoir, mechanical and electrical engineers and other technical staff working with ESP systems.

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 Fee

US$ 8,500 per Delegate. This rate includes H-STK® (Haward Smart Training Kit), 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 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. Hossam Mansour is a **Senior Drilling & Petroleum Engineer** with almost **25 years** of **Offshore** & **Onshore** experience within the **Refinery**, **Petroleum** and **Oil** & **Gas** industries. His expertise covers the areas of **Gas Lift Operations**, Advanced **Drilling** Practices, **Horizontal & Directional Drilling** (Planning, Techniques & Procedures), **Horizontal & Multilateral Drilling**, **Directional & Horizontal Drilling** Techniques & Procedures, **Directional Drilling**, **Horizontal & Multilateral Drilling**, Advanced **Drilling** Technology, **Drilling & Workover** Operations, **Offshore Drilling** & **Testing**, **Drilling & Completion Fluids**, Extended Reach Drilling (**ERD**), **Cementing** Operations, **Cementing** Equipment, **Cement** Slurry Volumes, **Casing**, **Directional & Horizontal Well** (Planning, Techniques & Procedures), **Horizontal & Multilateral Wells**, **Horizontal Well** Control, **Horizontal & Multilateral Wells** (Analysis & Design), **Directional**, **Horizontal Well** Performance & Optimization, Geological & Engineering Aspects of **Horizontal Wells**, **Sucker Rod Pumping** System, **SRP** Maintenance, **Rod Pumping** Optimization, **Rod Lift** Method, **Beam Pump**, **Well Production Control & Management**, **Rigging**, **Tubular Handling**, **HPHT**, Well **Stimulation**, Well **Cleaning**, Well **Testing Analysis** & **Design**, Well **Control**, Well **Reconciliation**, **Drilling Water Wells Design & Operations**, **Coiled Tubing Perforating Operations**, **ESP** Design & Operation, **Tubing**, **Well Heads**, Drill Stem Test (**DST**) **Operations**, **Offshore Drilling** and **Drill String**. Further, he is also a well-versed in **Workover Rigs**, **Open** & **Cased Hole Logging**, **Wire Line Perforations**, **FRAC Design & Operations**, **Log Interpretation**, **Stuck Pipe Prevention**, **Fishing Operations**, **Tools** & **BHA Design** and **Rig & Rigless Completion Operations**. He is currently the **Operations General Manager** of **IPR Energy Group-International Oilfield Services**, where-in he is managing, planning, directing and coordinating the operations of companies and responsible for formulating policies, managing daily operations and planning the use of materials.

During his career life, Mr. Mansour held significant positions such as the **Operations General Manager**, **Drilling Engineering Manager**, **Drilling Superintendent**, **Drilling & Workover Superintendent**, **Senior Drilling Supervisor**, **Drilling & Workover Supervisor**, **Night Drilling Supervisor**, **Land Rig Drilling Supervisor**, **Senior Drilling Engineer**, **Senior Drilling Consultant**, **Trainer/Instructor** and **Cement Operator** for numerous international companies like the **Saudi ARAMCO**, PetroSannan-JV NaftoGaz, PetroShahd, **ENAP Sipetrol**, **NAFTOGAZ**, **Romanna**, **Apache**, **Khalda Petroleum Company**, **RWE Dea AG Co.**, **SUCO** (**Suez Oil Company**) and **Halliburton**.

Mr. Mansour has a **Bachelor** degree in **Petroleum Engineering** with the major in **Drilling**, **Production** & **Reservoir**. Further, he is a **Certified Instructor/Trainer** and a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management** (**ILM**). Moreover, he is a member of the **Society of Petroleum Engineers** (**SPE**) and has delivered innumerable technical courses, related sciences and studies, seminars, workshops and conferences worldwide.

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 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

0730 – 0745	*Registration & Coffee*
0745 – 0800	*Welcome & Introduction*
0800 – 0815	***PRE-TEST***
0815 – 0930	***Introduction to Artificial Lift*** *Artificial Lift Methods, Including Gas Lift and ESP • Advantages and Disadvantages of Each Method • Factors to Consider when Selecting an Artificial Lift Method*
0930 – 0945	*Break*
0945 – 1030	***Gas Lift Design & Optimization*** *Gas Lift Design Principles, Including Tubing Size, Injection Pressure, and Injection Depth • Gas Lift Optimization Techniques, Including Simulation Software and Data Analysis • Troubleshooting Common Gas Lift Problems*
1030 – 1230	***ESP Design & Optimization*** *ESP Design Principles, Including Pump Selection, Motor Sizing, and Cable Selection • ESP Optimization Techniques, Including Flow Rate Optimization and Performance Monitoring*
1230 – 1245	*Break*
1245 – 1420	***ESP Design & Optimization (cont'd)*** *Troubleshooting Common ESP Problems*
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 - 0830	***Gas Lift & ESP System Integration*** *Advantages and Disadvantages of Different Integration Methods*
0830 – 0930	***Gas Lift & ESP System Integration (cont'd)*** *Case Studies and Best Practices for Integration*
0930 – 0945	*Break*
0945 – 1230	***Artificial Lift Monitoring & Control*** *Monitoring and Control Techniques for Artificial Lift Systems • Types of Sensors Used to Monitor Gas Lift and ESP Performance*
1230 - 1245	*Break*

1245 – 1420	***Artificial Lift Monitoring & Control (cont'd)*** *Control Strategies to Optimize Production and Reduce Downtime*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Downhole Equipment & Maintenance*** *Downhole Equipment Used In Gas Lift and ESP Systems • Best Practices For Installation and Maintenance of Downhole Equipment*
0930 – 0945	*Break*
0945 – 1030	***Downhole Equipment &Maintenance (cont'd)*** *Troubleshooting Common Downhole Problems*
1030 – 1230	***Surface Equipment & Maintenance*** *Surface Equipment Used in Gas Lift and ESP Systems • Best Practices for Installation and Maintenance of Surface Equipment*
1230 - 1245	*Break*
1245 – 1420	***Surface Equipment & Maintenance (cont'd)*** *Troubleshooting Common Surface Problems*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

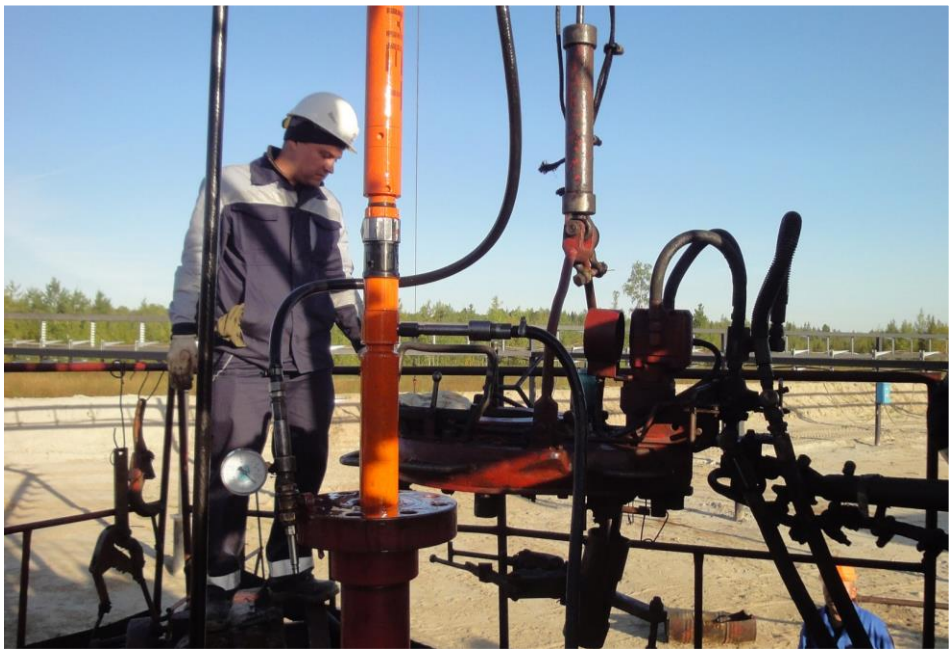
0730 – 0830	***Safety & Environmental Considerations*** *Safety Considerations for Gas Lift and ESP Operations • Environmental Considerations, Including Emissions and Water Usage*
0830 – 0930	***Safety & Environmental Considerations (cont'd)*** *Regulatory Requirements and Compliance*
0930 – 0945	*Break*
0945 – 1230	***Advanced Topics in Artificial Lift*** *Emerging Technologies and Techniques for Artificial Lift, Including Digitalization and Automation*
1230 - 1245	*Break*
1245 – 1345	***Advanced Topics in Artificial Lift (cont'd)*** *Case Studies and Best Practices for Unconventional and Offshore Operations*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 5

0730 – 0830	***Advanced Topics in Artificial Lift (cont'd)*** *Future Trends in Artificial Lift*
0830 – 0930	***Artificial Lift Optimization & Field Development Planning*** *Optimization Techniques to Increase Efficiency and Production*
0930 – 0945	*Break*
0945 – 1230	***Artificial Lift Optimization & Field Development Planning (cont'd)*** *Best Practices for Field Development Planning, Including Reservoir Modeling and Production Forecasting*
1230 - 1245	*Break*
1245 – 1345	***Artificial Lift Optimization & Field Development Planning (cont'd)*** *Economic Analysis of Artificial Lift Projects*
1345 – 1400	***Course Conclusion***
1400 – 1415	***POST-TEST***
1415 - 1430	*Presentation of Certificates*
1430	*Lunch & End of Course*

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises:-



Course Coordinator

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