



## COURSE OVERVIEW DE0931-4D Advanced Gas Lift Design & Deliquification

### Course Title

Advanced Gas Lift Design & Deliquification

### Course Date/Venue

Session 1: August 19-22, 2024/Jubail Hall,  
Signature Al Khobar Hotel, Al  
Khobar, KSA

Session 2: November 25-28, 2024/Ajman  
Meeting Room, Grand Millennium Al  
Wahda Hotel, Abu Dhabi, UAE



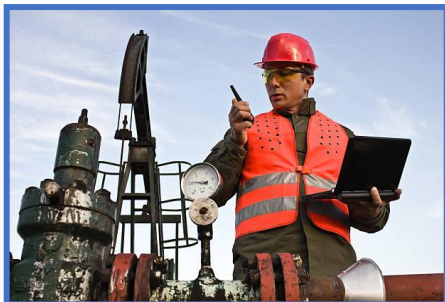
### Course Reference

DE0931-4D

### Course Duration/Credits

Four days/2.4 CEUs/24 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 advanced gas lift design and deliquification. It covers the symptoms of liquid loading in gas wells; the critical velocity to analyze wells loading or not; the techniques with nodal analysis and sizing tubing; and the proper selection, sizing and operation of compression.



During this interactive course, participants will learn the continuous (bypass), conventional and gas assisted plunger lift; the use of foam and beam pumps to deliquefy gas wells; the hydraulic pumps; the electrical submersible pumps and progressive cavity pumps; the gas lift technology, gas lift process, various types of gas lift system and the advantages and limitation of gas lift; the unloading gas lift wells, gas lift equipment and valves mechanism; and the dual gas lift installation, gas lift system evaluation, surging production, troubleshooting gas lift wells and production optimization.



## Course Objectives

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

- Apply and gain an advanced knowledge on advanced gas lift design and deliquification
- Recognize the symptoms of liquid loading in gas wells and the critical velocity to analyze wells loading or not
- Optimize techniques with nodal analysis and apply sizing tubing
- Carryout proper selection, sizing and operation of compression
- Identify the continuous (bypass), conventional and gas assisted plunger lift
- Use foam and beam pumps to deliquefy gas wells and recognize hydraulic pumps
- Identify electrical submersible pumps and progressive cavity pumps
- Discuss gas lift technology, gas lift process, various types of gas lift system and the advantages and limitation of gas lift
- Recognize unloading gas lift wells, gas lift equipment and valves mechanism
- Employ dual gas lift installation, gas lift system evaluation, surging production, troubleshooting gas lift wells and production optimization

## Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive “Howard 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 advanced overview of gas lift design and deliquification for engineers, field technicians, field supervisors, and those who select, design, install, monitor and evaluate, or operate artificial lift systems for use in dewatering gas wells.

## Training Methodology

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

- 30% Lectures
- 20% Workshops & Work Presentations
- 30% Case Studies & Practical Exercises
- 20% Software, Simulators & Videos


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

### 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: -

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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 **2.4 CEUs** (Continuing Education Units) or **24 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.

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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\$ 6,750** per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

### 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. Victor Saran, MSc, BSc, is a Senior Drilling & Petroleum Engineer with over 40 years of offshore & onshore experience within the Oil & Gas and Petroleum industries. His wide expertise covers Wellhead Testing & Operations, Well Stimulation & Reservoir Management, Well Performance, Well Servicing, Well Killing Procedures, Well Completion, Well Fracturing, Well Testing, Acid Additives, Perforating Techniques, Sandstone Acidizing, Carbonate Acidizing, Acid Fracturing, in Electrical Submersible Pumps Application, ESP Assembly & Disassembly Techniques, ESP Modeling & Design, ESP Construction & Operational Monitoring, ESP Troubleshooting & Maintenance, Production Engineering, Well Monitoring & Testing, Applied Reservoir Engineering, Water Flooding, Workover & Completions, Injection Systems, Artificial Lift Systems, Gas Lift, ESP, Rod Pumping, Production Testing & Optimization, Slickline and Electric Line Operations, Perforating & Logging, Coiled Tubing Operations, Nozzles, Motors, Deposits Removal & Inhibition and Asphaltnes-Sulphates, Workover Completion, Water Injection & Gas Lift, Nodal Analysis, Drill Stem Testing, H<sub>2</sub>S Crude Oil and Oil & Gas Production. Further, he is also well-versed in risk assessments, pipelines construction, pump & loading terminals, material and services procurement, budgeting, contracts & logistics, safety and personnel issues, tendering procedures, budget and work program, cost control–cost recovery, selection of materials and services and quality control. Currently, he is the Country Manager of Energean Oil & Gas wherein he is responsible in organizing and supervising the drilling of exploration wells and well connections and testing.**

During Mr. Saran's life, he has gained his practical and field experience through his various significant positions as the **Completions Consultant, Lecturer/Instructors, Part-Time Assistant Lecturer, Part-Time Instructor, Technical Consultant, Drilling & Workover Manager, Production Manager, Production Engineer, Petrochemical Engineer, Mechanical Engineer, Petroleum Services Engineer** for numerous international companies and universities that includes **Lukoil Neftochim, J&P Avax, Kavala Oil Greece, North Aegean Petroleum Company, Petrola International, Dowell Schlumberger, Technological Institute of Kavala, University of Thessaloniki and University of Crete.**

Mr. Saran has **Master & Bachelor** degrees in **Petroleum Engineering** from the **University of Westminster London, UK.** Further, he is a **Certified Instructor/Trainer, a Certified Trainer/Assessor** by the **Institute of Leadership & Management (ILM)** and has conducted numerous trainings, workshops and conferences worldwide.

### Accommodation

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



**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 - 0800	Registration & Coffee
0800 - 0815	Welcome & Introduction
0815 - 0830	<b>PRE-TEST</b>
0830 - 0930	<b>Recognize Symptoms of Liquid Loading in Gas Wells</b>
0930 - 0945	Break
0945 - 1045	<b>Critical Velocity to Analyze Wells Loading or Not</b>
1045 - 1145	<b>Optimize Techniques with Nodal Analysis</b>
1145 - 1200	Break
1200 - 1300	<b>Sizing Tubing</b>
1300 - 1420	<b>Compression: Selection, Sizing &amp; Operation</b>
1420 - 1430	<b>Recap</b>
1430	Lunch & End of Day One

**Day 2**

0730 - 0830	<b>Plunger Lift: Continuous (bypass), Conventional &amp; Gas Assisted</b>
0830 - 0930	<b>Use of Foam to Deliquefy Gas Wells</b>
0930 - 0945	Break
0945 - 1045	<b>Hydraulic Pumps</b>
1045 - 1130	<b>Use of Beam Pumps to Deliquefy Gas Wells</b>
1130 - 1230	<b>Electrical Submersible Pumps</b>
1230 - 1245	Break
1245 - 1330	<b>Progressive Cavity Pumps</b>
1330 - 1420	<b>Gas Lift Technology</b>
1420 - 1430	<b>Recap</b>
1430	Lunch & End of Day Two

**Day 3**

0730 - 0830	<b>Gas Lift Process</b>
0830 - 0930	<b>Types of Gas Lift System</b>
0930 - 0945	Break
0945 - 1045	<b>Advantages &amp; Limitation of Gas Lift</b>
1045 - 1130	<b>Unloading Gas Lift Wells</b>
1130 - 1230	<b>Gas Lift Equipment</b>
1230 - 1245	Break
1245 - 1330	<b>Valves Mechanism</b>
1330 - 1420	<b>Dual Gas Lift Installation</b>
1420 - 1430	<b>Recap</b>
1430	Lunch & End of Day Three

**Day 4**

0730 - 0900	<b>Gas Lift System Evaluation</b>
0900 - 0915	Break
0915 - 1030	<b>Surging Production</b>
1030 - 1145	<b>Trouble Shooting Gas Lift Wells</b>
1145 - 1200	Break

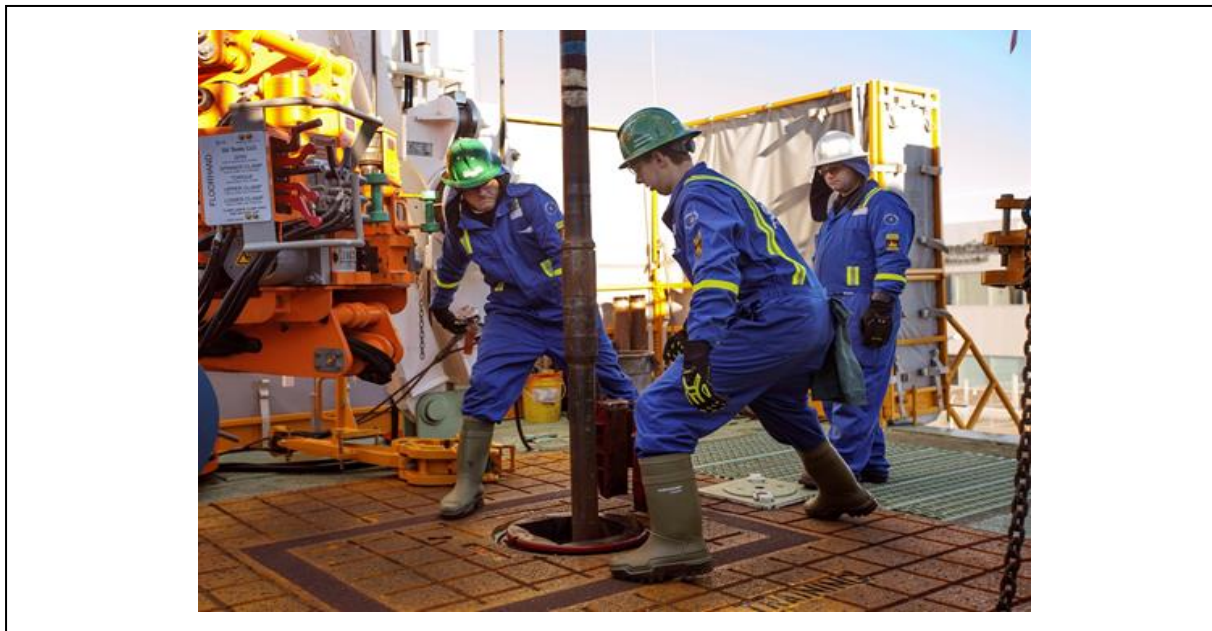




1200 - 1330	<i>Production Optimization</i>
1330 - 1345	<i>Case Study</i>
1345 - 1400	<i>Course Conclusion</i>
1400 - 1415	<i>POST-TEST</i>
1415 - 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch &amp; End of Course</i>

**Practical Sessions**

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



**Course Coordinator**

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