Haward Technology Middle East

Course Title
OLGA Flow Assurance

Course Reference
DE0392

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

Course Date/Venue

Session(s)	Date	Venue
1	February 25-29, 2024	Oryx Meeting Room, DoubleTree By Hilton Doha-Al Sadd, Doha, Qatar
2	May 26-30, 2024	
3	October 06-10, 2024	
4	November 24-28, 2024	

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.

This course is designed to provide participants with a detailed and up-to-date overview of OLGA Flow Assurance. It covers the challenges of flow assurance in oil and gas production systems; the key features and capabilities of OLGA software; the fundamentals of fluid flow in pipelines and system configuration in OLGA; running and analyzing simple simulations and interpreting data results and initial diagnostics; the PVT modeling, thermal modeling, slug capturing and hydrate formation and prevention; the wax deposition and management; and the use of OLGA for enhancing pipeline design and operational efficiency.

During this interactive course, participants will learn the transient flow phenomena, shut-in and start-up procedures and pressure surge analysis; the effective choke management and ensuring pipeline integrity and risk assessment; extending OLGA's capabilities through scripting; the advanced troubleshooting techniques by solving complex flow assurance problems; enhancing OLGA simulations with external tools and improving pipeline efficiency and performance; the reliability and sensitivity analysis; and addressing flow assurance in deepwater environments.

Course Objectives

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

- Apply and gain an in-depth knowledge on OLGA flow assurance

- Discuss the challenges of flow assurance in oil and gas production systems and the key features and capabilities of OLGA software

- Identify the fundamentals of fluid flow in pipelines and apply system configuration in OLGA

- Run and analyze simple simulations and interpret data results and initial diagnostics

- Illustrate PVT modeling, thermal modeling, slug capturing and hydrate formation and prevention

- Carryout wax deposition and management and use OLGA for enhancing pipeline design and operational efficiency

- Recognize transient flow phenomena and apply shut-in and start-up procedures and pressure surge analysis

- Employ systematic techniques for effective choke management and ensure pipeline integrity and risk assessment

- Extend OLGA's capabilities through scripting and apply advanced troubleshooting techniques by solving complex flow assurance problems

- Enhance OLGA simulations with external tools and improve pipeline efficiency and performance

- Carryout reliability and sensitivity analysis and address flow assurance in deepwater environments

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 OLGA flow assurance for drilling and reservoir engineers, operations managers, flow assurance engineers, production chemists, engineers and other technical staff.

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

Haward Technology Middle East

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.

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. Hussein Jassem is a **Senior Reservoir Engineer** with extensive practical years of experience within the **Oil & Gas**, **Refinery** and **Petroleum** industries. His expertise widely covers in the areas of **Petrel** for **Reservoir** Engineers, **PVT & Phase Behavior** of **Reservoir Fluids**, **Core** Analysis, **SCAL**, **MBAL**, **Well & Reservoir** Management, **Field Development** Planning, **Reservoir** Simulation, **Hydrocarbon Reserves** Estimation, Evaluation & Reporting, **Sandstone & Carbonate** Reservoir (Homogeneous & Heterogeneous), **Gas Cap Reservoir**, **Well Testing** Interpretation, **Well Test** Analysis & Design, **PVT & EOS** Characterization, **PVT Fluid** Characterization, **Drilling** Engineering **& Well** Planning, **Well** Performance & Analysis, **Well** Completion & Operation, **Applied Reservoir** Engineering, **Advanced SCAL** Techniques & Applications, **Water Flooding**, **Gas** Injection, Enhanced Oil Recovery (**EOR**), **OLGA** Well Dynamics, **Oil & Gas** Analytics, **Core Handling & Lab** Analysis, **Wireline** OH Logging & Formation Evaluation, **Horizontal** Drilling, **Production** Engineering, **Production Logging & Reservoir** Monitoring, **Practical Reservoir** Engineering, **Fractured Reservoirs**, **Reservoir & Facility** Management, **Hydrocarbon Reservoir** Permeability, **Integrated Reservoir** Analysis, **Petrophysical** Characterization, **Carbonate Reservoir** Modelling, **Water Quality Parameters** for **Reservoir** Management, **Clastic Reservoir** Characterization and **Petroleum Economics**. Further, he is well-skilled in various **RE** software applications such as Oilfiled Manager (**OFM**), **PVTsim**, **GAP**, **IPM-MBAL**, **PROSPER**, **PETEX**, **WePS**, **PanSystem**, **MoRes/HFPT**, **Petrel**, **Three-Phase Black-Oil Reservoir** and **ECLIPSE** simulation. He is currently the **Senior Reservoir Engineer** wherein he is responsible for the operational reservoir engineering and integrated reservoir studies/environments.

During Mr. Hussein's career life, he has gained his practical and field experience through his various significant positions as the **Cluster Development Leader & RE Section Head/Trainer**, **Operation Reservoir Engineer**, **Reservoir Engineer** from numerous international companies such as the Omar/Thayyem Cluster, Al Furat Petroleum and Syrian Petroleum company just to name a few.

Mr. Hussein has a **Bachelor's** degree in **Petroleum Engineering**. Further, he is a **Certified Instructor/Trainer** and has further delivered numerous trainings, courses, 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 workshop 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	**PRE-TEST**
0830 – 0930	**Overview of Flow Assurance:** *The Challenges in oil & Gas Production Systems*
0930 – 0945	*Break*
0945 – 1030	**Introduction to OLGA:** *Key Features & Capabilities of the OLGA Software*
1030 – 1130	**Basic Principles of Multiphase Flow:** *The Fundamentals of Fluid Flow in Pipelines*
1130 – 1215	**System Configuration in OLGA:** *Setting up Basic Pipeline Models*
1215 – 1230	*Break*
1230 – 1330	**Simulation Basics:** *Running & Analyzing Simple Simulations*
1330 – 1420	**Data Interpretation:** *Results & Initial Diagnostics*
1420 – 1430	**Recap**
1430	*Lunch & End of Day One*

Day 2

0730 – 0830	**PVT Modeling:** *Importance & Methods of Fluid Characterization*
0830 – 0930	**Thermal Modeling:** *Heat Transfer & Temperature Prediction in Pipelines*
0930 – 0945	*Break*
0945 – 1100	**Slug Capturing:** *Understanding & Modeling Slug Flow*
1100 – 1215	**Hydrate Formation & Prevention:** *Strategies for Managing Hydrates*
1215 – 1230	*Break*
1230 – 1330	**Wax Deposition & Management:** *Techniques for Modeling & Mitigating Wax*
1330 – 1420	**Use of OLGA for Design & Optimization:** *Enhancing Pipeline Design & Operational Efficiency*
1420 – 1430	**Recap**
1430	*Lunch & End of Day Two*

Day 3

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0730 – 0830	**Transient Flow Phenomena:** *The Dynamics of Multiphase Flow*
0830 – 0930	**Shut-in & Start-up Procedures:** *Modeling Pipeline Operations*
0930 – 0945	*Break*
0945 – 1100	**Pressure Surge Analysis:** *Predicting & Managing Pressure Surges*
1100 – 1215	**Choke Modeling & Optimization:** *Techniques for Effective Choke Management*
1215 – 1230	*Break*
1230 – 1330	**Pipeline Integrity & Risk Assessment:** *Ensuring Safety & Compliance*
1330 – 1420	**Case Studies:** *Real-World Applications & Problem-Solving Using OLGA*
1420 – 1430	**Recap**
1430	*Lunch & End of Day Three*

Day 4

0730 – 0830	**Custom Modeling & Scripting:** *Extending OLGA's Capabilities Through Scripting*
0830 – 0930	**Advanced Troubleshooting Techniques:** *Solving Complex Flow Assurance Problems*
0930 – 0945	*Break*
0945 – 1100	**Integration with Other Software Tools:** *Enhancing OLGA Simulations with External Tools*
1100 – 1215	**Optimization Strategies:** *Improving Pipeline Efficiency & Performance*
1215 – 1230	*Break*
1230 – 1330	**Reliability & Sensitivity Analysis:** *Assessing the Robustness of Simulations*
1330 – 1420	**Interactive Session:** *Hands-on Practice & Problem-Solving with Expert Guidance*
1420 – 1430	**Recap**
1430	*Lunch & End of Day Four*

Day 5

0730 – 0930	**Deepwater Production Challenges:** *Addressing Flow Assurance in Deepwater Environments*
0930 – 0945	*Break*
0945 – 1100	**Case Study Analysis:** *Detailed Examination of Specific Flow Assurance Challenges*
1100 – 1230	**Group Project:** *Participants Work on a Flow Assurance Project Using OLGA*
1230 – 1245	*Break*
1245 – 1345	**Project Presentations:** *Sharing Insights & Solutions from Group Projects*
1345 – 1400	**Course Conclusion**
1400 – 1415	**POST-TEST**
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

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 one of our state-of-the-art simulators "OLGA software".

OLGA Software
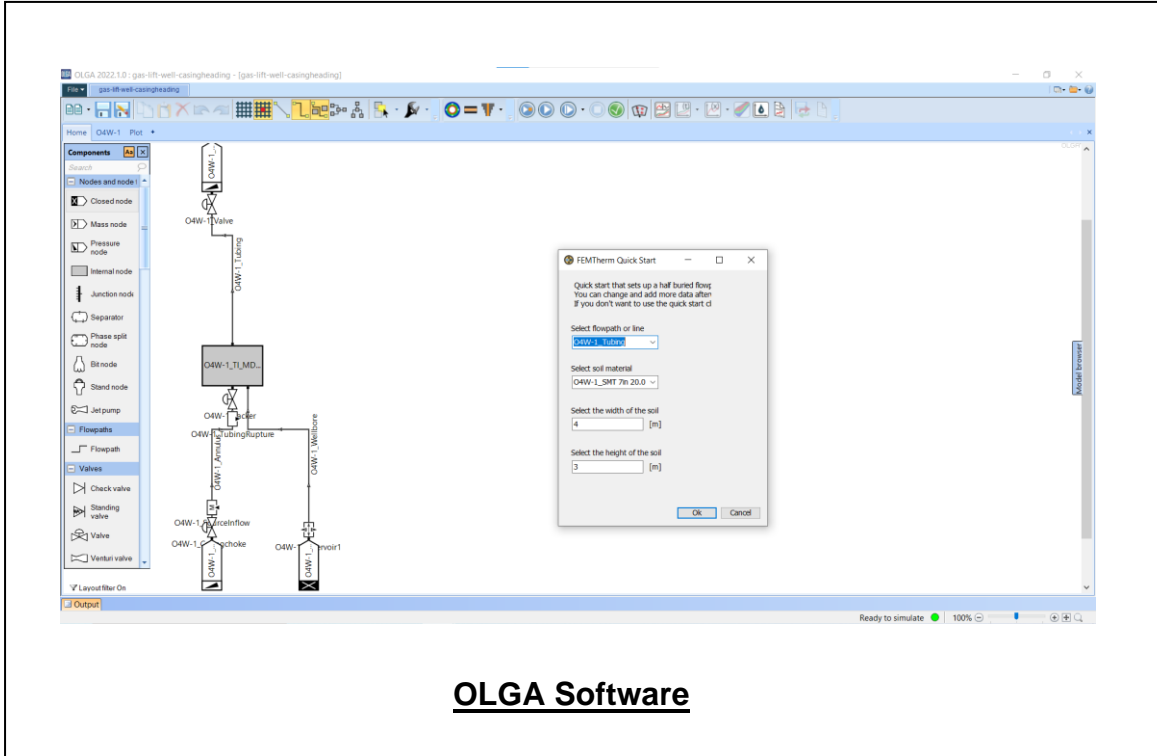
Course Coordinator

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