

**COURSE OVERVIEW DE0420-4D**  
**API 6A: X-mas Tree & Wellhead Operations,**  
**Maintenance & Testing**

**Course Title**

API 6A: X-mas Tree & Wellhead Operations, Maintenance & Testing

**Course Date/Venue**

Session 1: August 05-08, 2024/Al Aziziya Hall, The Proud Hotel Al Khobar, Al Khobar, KSA  
 Session 2: November 04-07, 2024/Club B Meeting Room, Ramada Plaza by Wyndham Istanbul City Center, Istanbul, Turkey



**Course Reference**

DE0420-4D

**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.***



Christmas trees are used on both sub-surface and subsea wells. It is common to identify the type of tree as either "subsea tree" or "sub-surface tree". Each of these classifications has a number of variations. The primary function of a tree is to control the flow, usually oil or gas, out of the well. A tree may also be used to control the injection of gas or water into a non-producing well in order to enhance production rates of oil from other wells.



When the well and facilities are ready to produce and receive oil or gas, tree valves are opened and the formation fluids are allowed to go through a flow line. This leads to a processing facility, storage depot and/or other pipeline eventually leading to a refinery or distribution center (for gas). Flow lines on subsea wells usually lead to a fixed or floating production platform or to a storage ship or barge, known as a floating storage offloading vessel (FSO), or floating processing unit (FPU), or floating production, storage and offloading vessel (FPSO).



This course is designed to provide participants with a detailed and up-to-date overview on the operations, maintenance and testing of x-mas tree and wellhead. It covers the various wellhead equipment, x-mas tree, tubing hanger, production packages and landing nipples; the barriers principles and well safety; the hydraulic barriers, mechanical barriers, subsurface control valves, packer setting and testing; flanging of the wellhead, casing head housing, tubing spool hanger, checks and tests; the valves and actuators, wellhead safety valves and control systems; and the operating procedures and working under safe conditions.

### Course Objectives

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

- Apply and gain an in-depth knowledge on x-mas tree and wellhead operations, maintenance and testing in accordance with API 6A
- Discuss the various wellhead equipment as well as x-mas tree, tubing hanger, production packers and landing nipples
- Practice barriers principles and well safety and identify hydraulic barriers, mechanical barriers, subsurface control valve, packer setting and testing
- Discuss flanging of the wellhead, casing head housing, tubing spool hanger, check and tests
- Recognize valves, actuators, wellhead safety valves and control system
- Employ proper operating procedures to work under safe conditions

### 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 a complete and up-to-date overview of X-mas tree and wellhead for those who are involved in its operations, maintenance and testing. Field operations, production, maintenance, petroleum, reservoir and field engineers, wellhead maintenance supervisors, wellhead operations supervisors and other staff will definitely benefit from this course.

**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.

**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. 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.

**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**

**Al Khobar:** **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.

**Istanbul:** **US\$ 7,250** per Delegate + **VAT**. This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

**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	<i>Registration &amp; Coffee</i>
0800 – 0815	<i>Welcome &amp; Introduction</i>
0815 – 0830	<b>PRE-TEST</b>
0830 – 0930	<b>Wellhead Equipment</b>
0930 – 0945	<i>Break</i>
0945 – 1100	<b>X-mas Tree</b>
1100 – 1230	<b>Tubing Hanger</b>
1230 – 1245	<i>Break</i>
1245 – 1420	<b>Production Packers &amp; Landing Nipples</b>
1420 - 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day One</i>

**Day 2**

0730 – 0930	<b>Barriers Principles &amp; Well Safety</b>
0930 – 0945	<i>Break</i>
0945 – 1045	<b>Hydraulic Barriers</b>
1045 – 1230	<b>Mechanical Barriers including Subsurface Control Valve, Packer Setting &amp; Testing</b>
1230 – 1245	<i>Break</i>
1245 – 1420	<b>Flanging of the Wellhead</b>
1420 - 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day Two</i>



**Day 3**

0730 – 0930	<i>Casing Head Housing</i>
0930 – 0945	<i>Break</i>
0945 – 1045	<i>Tubing Spool Hanger</i>
1045 – 1230	<i>Checks &amp; Tests</i>
1230 – 1245	<i>Break</i>
1245 – 1420	<i>Valves &amp; Actuators</i>
1420 - 1430	<i>Recap</i>
1430	<i>Lunch &amp; End of Day Three</i>

**Day 4**

0730 – 0930	<i>Wellhead Safety Valves &amp; Control System</i>
0930 – 0945	<i>Break</i>
0945 – 1045	<i>Wellhead Safety Valves &amp; Control System (cont'd)</i>
1045 – 1230	<i>Operating Procedures to Work Under Safe Conditions</i>
1230 – 1245	<i>Break</i>
1245 – 1345	<i>Operating Procedures to Work Under Safe Conditions (cont'd)</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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