



COURSE OVERVIEW DE0048 Blowout Preventer (BOP) Closing Unit and Stack

Course Title

Blowout Preventer (BOP) Closing Unit and Stack

Course Date/Venue

Session 1: May 11-15, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

Session 2: October 13-17, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE



Course Reference

DE0048

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 blowout preventer (BOP) control systems-choke manifold. It covers the well control, barriers, risk management and causes of kicks; the kick warning signs and kick indicators; the well control management, influx characteristics and behaviour, barriers and shut-in procedures; the well control equipment's /BOP/diverters including blowout preventer (BOP) equipment and redundant BOP equipment; and the casing bowls, sliplock, lower kelly cock valve and bleed-off system.



During this interactive course, participants will learn the mud-gas separator(s) (degasser), primary degasser and secondary degasser (critical sour wells); the flare line(s), flare pits, flare tanks and kill system; the flexible hoses, degasser vent line, winterizing BOP, accumulator, bleed-off, and kill systems; the BOP control systems, accumulator system and backup nitrogen (N2) system; the BOP floor controls, remote controls, master hydraulic control manifold location; the BOP function test and accumulator sizing calculations; the BOP component hydraulic fluid requirements and sizing calculation; and the backup nitrogen sizing calculations and usable backup N2 fluid volume at a minimum pressure of 8400 KPA.



Course Objectives

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

- Apply and gain an in-depth knowledge on blowout preventer (BOP) control systems-choke manifold
- Discuss well control, barriers, risk management and causes of kicks
- Recognize kick warning signs and kick indicators, well control management, influx characteristics and behaviour, barriers and shut-in procedures
- Identify well control equipment's/BOP/diverters including blowout preventer (BOP) equipment and redundant BOP equipment
- Discuss the casing bowls, sliplock, lower kelly cock valve and bleed-off system including class I wells, well classes II–VI and critical sour wells
- Identify mud-gas separator(s) (degasser), primary degasser and secondary degasser (critical sour wells)
- Discuss the flare line(s), flare pits, flare tanks and kill system
- Identify flexible hoses, degasser vent line, winterizing BOP, accumulator, bleed-off, and kill systems
- Discuss the BOP control systems, accumulator system and backup nitrogen (N2) system
- Recognize the BOP controls covering floor controls, remote controls, master hydraulic control manifold location
- Carryout BOP function test and accumulator sizing calculations
- Discuss BOP component hydraulic fluid requirements and apply sizing calculation
- Carryout backup nitrogen sizing calculations and identify usable backup N2 fluid volume at a minimum pressure of 8400 KPA

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 overview of all significant aspects and considerations of blowout preventer (BOP) control systems-choke manifold for drilling engineers, field engineers, petroleum engineers, supervisors, directional drillers and assistant drillers.

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: -

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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.

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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 **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.

Course Fee

US\$ **8,000** 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:



Dr. Hesham Abdou, PhD, MSc, BSc, is a Senior Drilling & Petroleum Engineer with over 35 years of integrated industrial and academic experience as a University Professor. His specialization widely covers in the areas of Drilling & Completion Technology, Directional Drilling, Horizontal & Sidetracking, Drilling Operation Management, Drilling & Production Equipment, ERD Drilling & Stuck Pipe Prevention, Natural & Artificial Flow Well Completion, Well Testing Procedures & Evaluation, Well Performance, Coiled Tubing Technology, Oil Recovery Methods Enhancement, Well Integrity Management, Well Casing & Cementing, Acid Gas Removal, Heavy Oil Production & Treatment Techniques, Crude Oil Testing & Water Analysis, Crude Oil & Water Sampling Procedures, Equipment Handling Procedures, Crude & Vacuum Process Technology, Gas Conditioning & Processing, Cooling Towers Operation & Troubleshooting, Sucker Rod Pumping, ESP & Gas Lift, PCP & Jet Pump, Pigging Operations, Electric Submersible Pumps (ESP), Progressive Cavity Pumps (PCP), Water Flooding, Water Lift Pumps Troubleshooting, Water System Design & Installation, Water Networks Design Procedures, Water Pumping Process, Pipelines, Pumps, Turbines, Heat Exchangers, Separators, Heaters, Compressors, Storage Tanks, Valves Selection, Compressors, Tank & Tank Farms Operations & Performance, Oil & Gas Transportation, Oil & Gas Production Strategies, Artificial Lift Methods, Piping & Pumping Operations, Oil & Water Source Wells Restoration, Pump Performance Monitoring, Rotor Bearing Modelling, Hydraulic Repairs & Cylinders, Root Cause Analysis, Vibration & Condition Monitoring, Piping Stress Analysis, Amine Gas Sweetening & Sulfur Recovery, Heat & Mass Transfer and Fluid Mechanics.

During his career life, Dr. Hesham held significant positions and dedication as the **General Manager, Petroleum Engineering Assistant General Manager, Workover Assistant General Manager, Workover Department Manager, Artificial Section Head, Oil & Gas Production Engineer and Senior Instructor/Lecturer** from various companies and universities such as the Cairo University, Helwan University, British University in Egypt, Banha University and Agiba Petroleum Company.

Dr. Hesham has a **PhD and Master** degree in **Mechanical Power Engineering** and a **Bachelor** degree in **Petroleum Engineering**. Further, he is a **Certified Instructor/Trainer** and a **Peer Reviewer**. Dr. Hesham is a member of Egyptian Engineering Syndicate and the Society of Petroleum Engineering. Moreover, he has published technical papers and journals and has delivered numerous trainings, workshops, courses, seminars 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

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Introduction to Well Control Barriers • Risk Management • Causes of Kicks
0930 – 0945	Break
0945 – 1100	Kick Warning Signs & Kick Indicators Well Control Management • Influx Characteristics & Behaviour • Barriers • Shut-in Procedures
1100 – 1230	Well Control Equipment's/BOP/Diverters Blowout Preventer (BOP) Equipment • Metallic Material for Sour Service • Pipe Rams • Casing Rams
1230 – 1245	Break
1245 – 1420	Well Control Equipment's/BOP/Diverters (cont'd) Ram • Locking Devices (Hand Wheels) • Double Drilling/Studding • Flange-and Clamp-Type Connections • Redundant BOP Equipment
1420 – 1430	Recap
1430	End of Day One

Day 2

0730 – 0930	Casing Bowls Sliplock • Threaded • Welded • Casing Bowl Flange • Outlet(s) and Valve(s) • Pressure Rating • Drill-Through Components • Stabbing Valve and Inside BOP • Lower Kelly Cock Valve • Stripping Operations • Drill-Through Equipment
0930 – 0945	Break
0945 – 1100	Bleed-Off System Class I Wells • Diverter Line • Well Classes II–VI and Critical Sour Wells • Bleed-off Line(s) • Choke Manifold • Remote Drill Pipe Pressure Gauge Assembly at Choke Control
1100 – 1230	Bleed-Off System (cont'd) Mud-Gas Separator(s) (Degasser) • Primary Degasser • Secondary Degasser (Critical Sour Wells) • Degasser Inlet • Degasser Vent Line • Flare Line(s)
1230 – 1245	Break
1245 – 1420	Flare Pits
1420 – 1430	Recap
1430	End of Day Two



Day 3

0730 – 0930	Flare Tanks
0930 – 0945	Break
0945 – 1100	Kill System Well Classes II–IV and Critical Sour Wells • Well Classes V and VI and Critical Sour Wells
1100 – 1230	Flexible Hoses Bleed-off • Kill or Diverter Line(s)• Flare and Emergency Flare Line(s)• Degasser Inlet Line(s)• Degasser Vent Line
1230 – 1245	Break
1245 – 1420	Winterizing Winterizing BOP • Accumulator • Bleed-off • Kill Systems
1420 – 1430	Recap
1430	End of Day Three

Day 4

0730 – 0930	BOP Control Systems Accumulator System • Additional BOP Equipment
0930 – 0945	Break
0945 – 1100	Backup Nitrogen (N2) System Additional BOP Equipment
1100 – 1230	BOP Controls Floor Controls • Remote Controls • Master Hydraulic Control Manifold Location
1230 – 1245	Break
1245 – 1420	BOP Function Test Procedure • Daily and Weekly • Recording
1420 – 1430	Recap
1430	End of Day Four

Day 5

0730 – 0930	Accumulator Sizing Calculations System Specifications • Determining Precharge Pressure• Determining Usable Accumulator Hydraulic Fluid Volume at a Minimum Pressure of 8400 kPa • Method 1
0930 – 0945	Break
0945 – 1100	Accumulator Sizing Calculations (cont'd) Determining BOP Component Hydraulic Fluid Requirements • Completing the Sizing Calculation
1100 – 1200	Backup Nitrogen Sizing Calculations System Specifications • Determining Usable Backup N2 Fluid Volume at a Minimum Pressure of 8400 kPa • Method 1
1230 – 1245	Break
1245 – 1345	Backup Nitrogen Sizing Calculations (cont'd) Determining BOP Component Backup N2 Requirements • Completing the Sizing Calculation
1345 – 1400	Course Conclusion
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	End of Course



Practical Sessions

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



Course Coordinator

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