

**COURSE OVERVIEW PE0169-4D**  
**Supervision of Gas Plant Operation**

**Course Title**

Supervision of Gas Plant Operation

**Course Reference**

PE0169

**Course Duration/Credits**

Five days/3.0 CEUs/30 PDHs

**Course Date/Venue**



Session(s)	Date	Venue
1	August 26-29, 2024	Al Aziziya Hall, The Proud Hotel Al Khobar, Al Khobar, KSA
2	September 23-26, 2024	Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE
3	December 09-12, 2024	Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

**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 an overview of Supervision of Gas Plant Operation. It covers the importance and the basic operations of a gas plant including the roles and responsibilities of a supervisor; the basic safety procedures and identification of gas common plant equipment in a gas plant; the types of gases processed and their uses; the plant layout and flow diagrams and advanced safety procedures; identifying, assessing, and mitigating risks in a gas plant; developing effective emergency response plans; and handling and storing hazardous materials safely.



Further, the course will also discuss the personal protective equipment (PPE) and fire safety and prevention; the gas processing cycle and gas processing techniques including separation, compression, dehydration and sweetening; monitoring and controlling the quality of gas produced; managing and disposing waste products; using meters and other measurement devices in the plant; the techniques for improving the performance and efficiency of a gas plant; and the routine maintenance procedures, troubleshooting and major maintenance and overhaul.

During this interactive course, participants will learn the legal and environmental compliance, permit to work systems and proper documentation and record-keeping; the leadership skills, communication and teamwork; the techniques for resolving conflicts among team members; training and developing staff; and the Lean and Six Sigma for continual improvement.

### Course Objectives

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

- Apply and gain an in-depth knowledge on gas plant operation supervision
- Discuss the importance and the basic operations of a gas plant including the roles and responsibilities of a supervisor in gas plant operations
- Apply basic safety procedures and identification of common gas plant equipment in a gas plant
- Recognize the types of gases processed and their uses and illustrate plant layout and flow diagrams
- Carryout advanced safety procedures and identify, assess, and mitigate risks in a gas plant
- Develop effective emergency response plans and handle and store hazardous materials safely
- Use personal protective equipment (PPE) and implement fire safety and prevention
- Illustrate gas processing cycle and gas processing techniques including separation, compression, dehydration and sweetening
- Monitor and control the quality of gas produced as well as manage and dispose waste products safely and effectively
- Use meters and other measurement devices in the plant and techniques for improving the performance and efficiency of a gas plant
- Employ routine maintenance procedures, troubleshooting and major maintenance and overhaul
- Review legal and environmental compliance, permit to work systems and proper documentation and record-keeping
- Apply leadership skills, communication and teamwork and techniques for resolving conflicts among team members
- Train and develop staff as well as carryout Lean and Six Sigma for continual improvement

### 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 supervision of gas plant operation for process engineers, gas plant supervisors, process operators and technical staff of all levels.

### 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 **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.

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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 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. Yasser Almasood** is a **Senior Process & Petroleum Engineer** with almost **20 years** of industrial experience within the, **Oil & Gas, Refinery** and **Petrochemical** industries. His wide expertise covers in the areas of **Gas Processing Calculation, Process Reactor Operation & Troubleshooting, Catalytic Reactors, Heat Exchanger, Distillation Columns, Pumps, Distributed Control System (DCS), Catalytic Reformer Unit, Polymerization, Dehydrogenation, Gas Processing Plant Operations & Control, Gas Processing Monitoring & Troubleshooting, Process Plant Start-up Commissioning & Troubleshooting, Process Plant Optimization & Energy Conservation, Process Equipment Design & Troubleshooting, Advanced Operation Skills, Refinery Process Yield Optimization, Oil & Gas Processing, Troubleshooting Oil & Gas Processing Facilities, Polymers & Polymerization, Applied Process Engineering, Process Plant Troubleshooting & Engineering Problem Solving, Process Plant Performance & Efficiency, Flare Blowdown & Pressure Relief Systems, Polypropylene Manufacturing, Polyethylene & Process Troubleshooting, Ammonia, Ethylene, Solvents, Gas Feed, EDC, VCM, PP, PVC, Chlorine, Fluidized Bed Reactor, Oil Movement & Storage, Power Plant Chemistry, Catalyst Manufacturing Techniques, Fuel Systems Management, Process Design & Optimization, Desalination Processes, Reverse Osmosis and Molecular Sieves**. Further, he is also well-versed in **HAZOP, Advanced Process Hazard Analysis, Safety Management, Environmental Safety Management, LOPA & SIL, Process Safety Management (PSM), Incident investigation & Root Cause Analysis, Emergency & Crisis Management, Safety Audit & Site, Inspection, Inspection of Fire Equipment & Tools, Fire Protection & Prevention, Worker Protection from Radiation Work Permits, IGC International General Certificate in Occupational Safety & Health, Risk Assessment, Risk Associated with Low Level Radiation Exposure, Hydrogen Sulfide (H<sub>2</sub>S) Safety, Personal Protective Equipment, Lock-Out & Tag-Out, OSHA Occupational Safety & Health, Radiation & Contamination, Scientific Notation, Exposure Rate & Shielding Calculations, Excavations & Trenching, Permit-to-Work, Aspentech, Aspen HYSYS, Pro II, exSILentia, OLGA, Flare System Analyzer, Aspen PIMS, DYN SIM, RiskWISE, MS Office and IBM Maximo**.

During his career life, Mr. Yasser has gained his practical and field experience through his various significant positions and dedication as the **Senior Process Engineer, Process Engineer, Oil & Gas Process & Safety Instructor, On-Job Instructor, Process Senior Operator, Acting DCS Operator** and **Shift Controller** for various multi-national companies such as the **ADNOC Gas Processing (GASCO), Conoco Phillips Gas Plant** and **Syrian Gas Company (SGC)**.

Mr. Yasser has a **Bachelor's degree in Petroleum Engineering**. Further, he is a **Certified Instructor/Trainer** and has further delivered numerous training, courses, workshops, seminars and conferences worldwide.

### 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 Fee

**US\$ 4,500** 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 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>Introduction to Gas Plant Operations:</b> <i>Overview of the Gas Industry, its Importance &amp; the Basic Operations of a Gas Plant</i>
0930 – 0945	<i>Break</i>
0945 – 1030	<b>Roles &amp; Responsibilities of a Supervisor:</b> <i>Discussing what Supervisors do, their Role in Gas Plant Operations &amp; the Skills they Need to be Effective</i>
1030 – 1130	<b>Basic Safety Procedures:</b> <i>Covering the Safety Procedures Required in Gas Plant Operations</i>
1130 – 1230	<b>Identification of Gas Plant Equipment:</b> <i>Familiarizing Participants with Common Equipment Found in a Gas Plant</i>
1230 – 1245	<i>Break</i>
1245 – 1330	<b>Types of Gases Processed:</b> <i>Explanation of the Types of Gases Processed &amp; their Uses</i>
1330 – 1400	<b>Plant Layout &amp; Flow Diagrams:</b> <i>Understanding How Plants are Laid Out &amp; How to Read Flow Diagrams</i>
1400 – 1420	<b>Advanced Safety Procedures:</b> <i>Covering more Complex Safety Procedures &amp; Protocols</i>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day One</i>



**Day 2**

0730 – 0830	<b>Risk Management:</b> Understanding How to Identify, Assess & Mitigate Risks in a Gas Plant
0830 – 0930	<b>Emergency Response Plans:</b> Developing Effective Emergency Response Plans
0930 – 0945	Break
0945 – 1030	<b>Handling Hazardous Materials:</b> Training on How to Handle & Store Hazardous Materials Safely
1030 – 1130	<b>Personal Protective Equipment (PPE):</b> Importance, Usage & Maintenance of PPE
1130 – 1230	<b>Fire Safety &amp; Prevention:</b> Training on Fire Safety, Including Prevention Measures & what to do in Case of a Fire
1230 – 1245	Break
1245 – 1315	<b>Overview of Gas Processing:</b> Detailed Overview of the Gas Processing Cycle from Extraction to Distribution
1315 – 1345	<b>Gas Processing Techniques:</b> Review of Common Techniques Used in Gas Processing, Including Separation, Compression, Dehydration & Sweetening
1345 – 1420	<b>Quality Control:</b> Explanation of How to Monitor & Control the Quality of Gas Produced
1420 – 1430	<b>Recap</b>
1430	Lunch & End of Day Two

**Day 3**

0730 – 0830	<b>Waste Management:</b> Understanding How to Manage & Dispose of Waste Products Safely & Effectively
0830 – 0930	<b>Metering &amp; Measurements:</b> Learning How to use Meters & Other Measurement Devices in the Plant
0930 – 0945	Break
0945 – 1030	<b>Plant Performance Optimization:</b> Techniques for Improving the Performance & Efficiency of a Gas Plant
1030 – 1130	<b>Routine Maintenance Procedures:</b> Learning About the Regular Maintenance Activities Required in a Gas Plant
1130 – 1230	<b>Troubleshooting:</b> How to Identify & Resolve Common Problems in Gas Plant Operations
1230 – 1245	Break
1245 – 1330	<b>Major Maintenance &amp; Overhaul:</b> Planning & Executing Major Maintenance Tasks & Overhauls
1330 – 1400	<b>Legal &amp; Environmental Compliance:</b> Understanding the Laws & Regulations Governing Gas Plant Operations
1420 – 1430	<b>Recap</b>
1430	Lunch & End of Day Three

**Day 4**

0730 – 0830	<b>Permit to Work Systems:</b> Understanding the Importance & Implementation of Permit to Work Systems in a Gas Plant
0830 – 0930	<b>Record Keeping &amp; Documentation:</b> Importance of Proper Documentation & Record-Keeping in Legal Compliance
0930 – 0945	Break
0945 – 1030	<b>Leadership Skills for Supervisors:</b> Developing Leadership Skills Specific to Supervising a Gas Plant





1030 – 1130	<b>Communication &amp; Teamwork:</b> Improving Communication & Teamwork in a Gas Plant Setting
1130 – 1230	<b>Conflict Resolution:</b> Techniques for Resolving Conflicts Among Team Members
1230 – 1245	Break
1245 – 1330	<b>Training &amp; Developing Staff:</b> How to Train & Develop your Team Members for Improved Performance & Career Growth
1330 – 1345	<b>Continual Improvement:</b> Introduction to Methods Like Lean & Six Sigma for Continual Improvement
1345 – 1400	<b>Course Conclusion</b>
1400 – 1415	<b>POST-TEST</b>
1415 – 1430	Presentation of Course 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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