

COURSE OVERVIEW PE0239(KJ1)
Product Storage, Loading and Transport (Crude Oil)

Course Title

Product Storage, Loading and Transport (Crude Oil)

Course Date/Venue

Session 1: February 17-21, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE
 Session 2: September 14-18, 2025/ Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE



Course Reference

PE239(KJ1)



Course Duration/Credits

Five days/3.0 CEUs/30 PDHs

Course Description



This practical and highly-interactive course includes practical case studies where participants will be engaged in a series of interactive small groups and class workshops.

Crude Oil Product Storage, Loading, and Transport in the Oil and Gas Industry are critical operations that ensure the safe and efficient movement of crude oil from production facilities to refineries and end-users.



Storage facilities, including fixed-roof, floating-roof, and pressurized tanks are designed to handle large volumes of crude while preventing vapor losses, contamination and environmental hazards. Loading operations involve transferring crude oil into tankers, pipelines, railcars, or trucks using advanced flow control systems to regulate pressure, temperature, and volume for safe handling. Transporting crude oil relies on an extensive infrastructure, including marine tankers, long-distance pipelines and rail networks, all adhering to strict safety, environmental, and regulatory compliance standards.



Advanced monitoring systems, leak detection technologies, and emergency response measures are essential to mitigate risks of spills, leaks, and fire hazards, ensuring seamless operations and maintaining the integrity of crude oil throughout the supply chain.

During this interactive course, participants will learn the loading system and terminals as well as tank farm, piping system and fluid flow; collecting and analyzing data and controlling pump and operation parameters; the instrumentation and ESD devices and line-up, start-up and shutdown procedure; the crude oil metering system and radio communications, reports, forms, permits, etc; the daily check-up, operation follow-up, birth status, ocean tankers, sea condition, etc; and the safety aspects and measures.

Course Objectives

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

- Apply and gain an in-depth knowledge on crude oil loading system
- Discuss loading system and terminals as well as tank farm, piping system and fluid flow
- Collect and analyze data and control pump and operation parameters
- Recognize instrumentation and ESD devices as well as follow line-up, start-up and shutdown procedure
- Use crude oil metering system and radio communications, reports, forms, permits, etc
- Perform daily check-up, operation follow-up and explain birth status, ocean tankers, sea condition, etc
- Troubleshoot in a professional manner and explain safety aspects and measures

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 crude oil loading system for crude oil operators.

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 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\$ 5,500 per Delegate + **VAT**. 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 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. Mervyn Frampton (Mervyn Geoffrey Frampton), BSc, PMI-PMP, CSSBB, is a **Senior Process Engineer** with over **40 years** of industrial experience within the **Oil & Gas, Refinery, Petrochemical** and **Utilities** industries. His expertise lies extensively in the areas of **Process Unit Operations & Maintenance, Operations Asset Integrity, Flare, Blowdown & Pressure Relief Systems** Operation, Maintenance & Troubleshooting, Dynamics of the **Petrochemicals Industry**, Understanding the **Global Petrochemical Industry, Petrochemicals Analysis, Naphtha & Condensate** in **Petrochemicals, Feedstock Handling & Storage, Natural Gas Liquids & Petrochemical Industry and Markets, Refinery & Process Industry, Refinery Optimization, Refinery Operations Troubleshooting, Refinery Production Operations, Refinery Process Safety, Process Safety Design, Petroleum Refinery Process, Asset Operational Integrity, Refinery Induction, Crude Distillation, Crude Oil Properties, Distillation Column Operation & Control, Oil Movement Storage & Troubleshooting, Root Cause Analysis (RCA)** for **Process & Equipment Failures, Process Equipment Design, Applied Process Engineering Elements, Process Plant Optimization, Revamping & Debottlenecking, Process Plant Troubleshooting & Engineering Problem Solving, Process Plant Monitoring, Catalyst Selection & Production Optimization, Operations Abnormalities & Plant Upset, Process Plant Start-up & Commissioning, Clean Fuel Technology & Standards, Oil & Gas Field Commissioning Techniques, Pressure Vessel Operation, Gas Processing, Chemical Engineering, Process Reactors Start-Up & Shutdown, Gasoline Blending** for Refineries, **Urea Manufacturing** Process Technology, Continuous Catalytic Reformer (**CCR**), **De-Sulfurization** Technology, Advanced Operational & Troubleshooting Skills, Principles of Operations Planning, **Rotating Equipment Maintenance & Troubleshooting, Hazardous Waste Management & Pollution Prevention, Heat Exchangers & Fired Heaters** Operation & Troubleshooting, **Energy Conservation Skills, Catalyst Technology, Chemical Analysis, Process Plant, Commissioning & Start-Up, Alkylation, Hydrogenation, Dehydrogenation, Isomerization, Hydrocracking & De-Alkylation, Fluidized Catalytic Cracking, Catalytic Hydrodesulphuriser, Kerosene Hydrotreater, Thermal Cracker, Catalytic Reforming, Polymerization, Polyethylene, Polypropylene, Pilot Water Treatment Plant, Gas Cooling, Cooling Water Systems, Effluent Systems, Material Handling Systems, Gasifier, Gasification, Coal Feeder System, Sulphur Extraction Plant, Acid Plant Revamp and Crude Pumping.** Further, he is also well-versed in HSE Leadership, Project and Programme Management, Project Coordination, Project Cost & Schedule Monitoring, Control & Analysis, Team Building, Relationship Management, Quality Management, Performance Reporting, Project Change Control, Commercial Awareness and Risk Management.

During his career life, Mr. Frampton held significant positions as the **Site Engineering Manager, Senior Project Manager, Project Engineering Manager, Construction Manager, Site Manager, Area Manager, Procurement Manager, Factory Manager, Technical Services Manager, Senior Project Engineer, Project Engineer, Assistant Project Manager, Handover Coordinator and Engineering Coordinator** from various international companies such as the **Fluor Daniel, KBR South Africa, ESKOM, MEGAWATT PARK, CHEMEPIC, PDPS, CAKASA, Worley Parsons, Lurgi South Africa, Sasol, Foster Wheeler, Bosch & Associates, BCG Engineering Contractors, Fina Refinery, Sapref Refinery, Secunda Engine Refinery** just to name a few.

Mr. Frampton has a **Bachelor's** degree in **Industrial Chemistry** from **The City University** in **London**. Further, he is a **Certified Project Management Professional (PMI-PMP)**, a **Certified Six Sigma Black Belt (CSSBB)** from **The International Six Sigma Institute**, a **Certified Internal Verifier/Trainer/Assessor** by the **Institute of Leadership & Management (ILM)**, a **Certified Instructor/Trainer** and has delivered numerous trainings, courses, workshops, conferences and seminars 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

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|-------------|---|
| 0730 – 0800 | <i>Registration & Coffee</i> |
| 0800 – 0815 | <i>Welcome & Introduction</i> |
| 0815 – 0830 | PRE-TEST |
| 0830 – 0930 | Loading System & Terminals |
| 0930 – 0945 | <i>Break</i> |
| 0945 – 1200 | Loading System & Terminals (cont'd) |
| 1200 – 1300 | <i>Lunch</i> |
| 1300 – 1400 | Tank Farm & Piping System & Fluid Flow |
| 1400 – 1415 | <i>Break</i> |
| 1415 – 1520 | Data Collection and Analysis |
| 1520 – 1530 | Recap |
| 1530 | <i>End of Day One</i> |

Day 2

| | |
|-------------|---|
| 0730 – 0930 | Pump Control System & Operation Parameters |
| 0930 – 0945 | <i>Break</i> |
| 0945 – 1200 | Instrumentation & ESD Devices |
| 1200 – 1300 | <i>Lunch</i> |
| 1300 – 1400 | Line -Up, Star-Up & Shutdown Procedure |
| 1400 – 1415 | <i>Break</i> |
| 1415 – 1520 | Line -Up, Star-Up & Shutdown Procedure |
| 1520 – 1530 | Recap |
| 1530 | <i>End of Day Two</i> |

Day 3

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|-------------|--|
| 0730 – 0930 | Crude Oil Metering System |
| 0930 – 0945 | <i>Break</i> |
| 0945 – 1200 | Crude Oil Metering System (cont'd) |
| 1200 – 1300 | <i>Lunch</i> |
| 1300 – 1400 | Radio Communications, Reports, Forms, Permits, Etc |
| 1400 – 1415 | <i>Break</i> |
| 1415 – 1520 | Radio Communications, Reports, Forms, Permits, Etc (cont'd) |
| 1520 – 1530 | Recap |
| 1530 | <i>End of Day Three</i> |

Day 4

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|-------------|--|
| 0730 – 0930 | Daily Checking & Operation Follow-Up |
| 0930 – 0945 | <i>Break</i> |
| 0945 – 1200 | Daily Checking & Operation Follow-Up (cont'd) |
| 1200 – 1300 | <i>Lunch</i> |
| 1300 – 1400 | Birth Status, Oceans Tankers, Sea Condition, Etc |
| 1400 – 1415 | <i>Break</i> |
| 1415 – 1520 | Birth Status, Oceans Tankers, Sea Condition, Etc (cont'd) |
| 1520 – 1530 | Recap |
| 1530 | <i>End of Day Four</i> |



Day 5

| | |
|-------------|---|
| 0730 - 0930 | Trouble Shooting & Case Study |
| 0930 - 0945 | <i>Break</i> |
| 0945 - 1200 | Trouble Shooting & Case Study (cont'd) |
| 1200 - 1300 | <i>Lunch</i> |
| 1300 - 1400 | Safety Aspects & Measures |
| 1400 - 1415 | <i>Break</i> |
| 1415 - 1445 | Safety Aspects & Measures (cont'd) |
| 1445 - 1500 | Course Conclusion |
| 1500 - 1515 | POST-TEST |
| 1515 - 1530 | <i>Presentation of Course Certificates</i> |
| 1530 | <i>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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