COURSE OVERVIEW OE0415
Chemical Tankers

Course Title
Chemical Tankers

Course Date/Venue
Session 1: January 26-30, 2025/Meeting Plus 8, City Centre Rotana Doha Hotel, Doha, Qatar
Session 2: July 06-10, 2025/Meeting Plus 8, City Centre Rotana Doha Hotel, Doha, Qatar

Course Reference
OE0415

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.

Chemical tankers often have a system for tank heating in order to maintain the viscosity of certain cargoes, typically by passing pressurized steam through stainless steel 'heating coils' in the cargo tanks, transferring heat into the cargo which circulates in the tank by convection. All modern chemical tankers feature double hull construction and most have one hydraulically driven, submerged cargo pump for each tank with independent piping, which means that each tank can load a separate cargo without any mixing.

Consequently, many oceangoing chemical tankers may carry numerous different grades of cargo on the same voyage, often loading and discharging these "parcels" at different ports or terminals. This means that the scheduling, stowage planning and operation of such ships requires a high level of coordination and specialist knowledge, both at sea and on shore.

Tank cleaning after discharging cargo is a very important aspect of chemical tanker operations, because tanks which are not properly cleaned of all cargo residue can adversely affect the purity of the next cargo loaded. Before tanks are cleaned, they must be properly ventilated and checked to be free of potentially explosive gases. Chemical tankers usually have transverse stiffeners on deck rather than inside the cargo tanks, in order to make the tank walls smooth and thus easier to clean using permanently fitted tank cleaning machines.

This course is designed to provide participants with a detailed and up-to-date overview on chemical tankers. It covers the cargos in chemical tanker, physical properties of cargo and hydrocarbon groups; the health hazards, hazards to the environment, reactivity hazards, flammability and explosivity hazards; the international and national codes and regulations; the bulk chemical codes and Annex II of Marpol 73/78; and the ship design, construction and equipment requirements, the cargo containment, ship types and survival capability.

At the end of the course, participants will be able to carryout cargo handling system, tank piping and valves, tank materials and coatings and cargo tanks ventilation systems; recognize pumps and unloading systems, cargo heating systems, inert gas systems and instrumentation; illustrate fire prevention and equipment, pollution prevention and protection and safety equipment; employ cargo handling, ballast operations, cargo planning and procedures and preparations for loading; measure and calculate cargo and apply tank cleaning operations; and implement ship-shore interface and emergency operations.

Course Objectives

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

- Apply and gain an in-depth knowledge on chemical tankers
- Discuss cargos in chemical tankers, physical properties of cargo and hydrocarbon groups
- Explain health hazards, hazards to the environment, reactivity hazards, flammability and explosivity hazards
- Implement the international and national codes and regulations and review bulk chemical codes and Annex II of Marpol 73/78
- Recognize ship design, construction and equipment requirements, cargo containment, ship types and survival capability
- Carryout cargo handling system, tank piping and valves, tank materials and coatings and cargo tanks ventilation systems
- Recognize pumps and unloading systems, cargo heating systems, inert gas systems and instrumentation
- Illustrate fire prevention and equipment, pollution prevention and protection and safety equipment
- Employ cargo handling, ballast operations, cargo planning and procedures and preparations for loading
- Measure and calculate cargo and apply tank cleaning operations
- Implement ship-shore interface and emergency operations

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 chemical tankers for cadets, crew and deck officers on board chemical tankers.

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

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.

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: -

- 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.

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:

Captain Mohamed Ghanem, MSc, BSc, is a **Senior Jack-up Barge Captain** with extensive experience in **Drilling Rigs**, **Jackup Barge Operations** and **MODU** within the **Oil & Gas** industry. His expertise widely covers in the areas of **Jack-up Barges**, **Rig Safety** Protocols, **Drilling Rigs & Jack-up Barges** Maintenance & Servicing, **Drilling Rig** Components, **Naval & Marine** Engineering, **Marine Planning & MODU Stability**, **Rig Move** Operation, UWILD, Stability Reports, Draft Surveys, **Rig Reactivation & Under Water Surveys**, Damage Survey & Cost Estimation, **Tanker Vetting** for Terminals, **Loading Master** Certification for Oil & Gas Terminals, **Marine Terminal** Operation, **Liquefied Gas Tankers & Jetty** Operation, Global Maritime Distress Safety System (**GMDSS**), **International Maritime Conventions & Codes**, International Ship and Port Facility Security Code (**ISPS**) **Code**, **Buoyage** System & International Code of Signals, **Oil & Gas Marine Terminals**, **Port Terminals** Crisis Management & Major Emergency Response, **Marine Hazards** Prevention & Control, Single Buoy Mooring System (**SBM**), **Emergency Response** Procedure, **Oil Spill** Management & Recovery, **Oil Spill** Prevention & Control, **Oil Spill** Combating Operations, **Oil & Gas Marine Terminals**, **Offshore Marine** Operation Management, **Vessel Hull & Machinery Survey**, Oil & Gas Fields Offshore Survey, **Oil & Gas Terminals** Loading & Discharging, **Terminal** Operations, **Seamanship**, **Shipping** Overview, **Marine Fire Fighting** Equipment, **Hull Damage** Control, **Vessel Rescue**, **Life Saving**, **Safety Process**, **Major Emergency** Management & Control, **Crisis** Management during **Oil Spill** and **Firefighting**. He is currently the **Jack Up Barge Captain & Marine Planner** wherein he oversees all the operations onboard the vessel including navigation, maintenance and compliance with local regulations.

During his life career, Captain Mohamed has gained his practical and field experience through his various significant positions and dedication as the **Barge Engineer & Marine Planner Onboard**, **Trainee Barge Engineer Onboard**, **Assistant Barge Master II Onboard**, **Assistant Barge Master Onboard**, **Design Engineer**, **Ship Yard Site Engineer/QC Engineer**, **Marine Draft Surveyor**, **Ship Repair Engineer**, **Vessel Repairing Engineer**, **Metal Cutting & Welding Planner**, **Marine Engineer Onboard**, **Technical Manager**, **Maintenance Mechanical Engineer** and **Reserve Marine Officer** from the Shelf Drilling Co, Marine & Engineering Consulting, ADMARINE III (X-GSF 103) at ADES, Oceandro Large Yacht Builder, International Inspection Company, Synchrony-Lift Works and B-Tech Company.

Captain Mohamed has **Bachelor's** degree in **Naval Architecture & Marine Engineering** and currently enrolled in **Master's** degree in **Naval Architecture & Marine Engineering**. Further, he is a **Certified Instructor/Trainer**, a **Certified Trainer**, **Assessor** & **Internal Verifier** by the **Institute of Leadership of Management (ILM**) and holds a certificate in **Marine III Engineer** and OIM & Mobile Offshore Drilling Unit (**MODU**). He is an **active member** of The International Transport Workers' Federation (**ITF**), UK and has delivered numerous courses, workshops, trainings and conferences worldwide.

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	***Cargos in Chemical Tankers***
0930 – 0945	*Break*
0945 – 1100	***Cargos in Chemical Tankers (cont'd)***
1100 – 1230	***Physical Properties of Cargo Hydrocarbon Groups***
1230 – 1245	*Break*
1245 - 1420	***Health Hazards, Hazards to the Environment & Reactivity Hazards***
1420 - 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0900	***Flammability & Explosivity Hazards***
0900 – 0915	*Break*
0915 – 1100	***International & National Codes & Regulations***
1100 – 1230	***Bulk Chemical Codes & Annex II of Marpol 73/78***
1230 – 1245	*Break*
1245 – 1420	***Ship Design, Construction & Equipment Requirements***
1420 - 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Cargo Containment, Ship Types & Survival Capability***
0930 - 0945	*Break*
0945 – 1100	***Cargo Handling System*** *Tank Piping & Valves • Tank Materials & Coatings • Cargo Tanks Ventilation Systems*
1100 – 1215	***Pumps & Unloading System & Cargo Heating Systems***
1215 – 1230	*Break*
1230 - 1420	***Inert Gas Systems & Instrumentation***
1420 - 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

0730 – 0930	***Fire Prevention & Equipment***
0930 - 0945	*Break*
0945 – 1100	***Pollution Prevention, Protection & Safety Equipment***
1100 – 1215	***Cargo Handling & Ballast Operations*** *Cargo Planning • Procedures & Preparations for Loading*
1215 – 1230	*Break*
1230 - 1420	***Cargo Measurement & Calculations***
1420 - 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5

0730 – 0930	***Tank Cleaning Operations***
0930 - 0945	*Break*
0945 – 1100	***Tank Cleaning Operations (cont'd)***
1100 – 1215	***Ship-Shore Interface***
1215 – 1230	*Break*
1230 - 1345	***Emergency Operations***
1345 - 1400	***Course Conclusion***
1400 - 1415	***POST-TEST***
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

Reem Dergham, Tel: +974 4423 1327, Email: reem@haward.org