



**COURSE OVERVIEW OE0415-4D**  
**Chemical Tankers**

**Course Title**  
Chemical Tankers

**Course Date/Venue**  
October 21-24, 2024/Al Aziziya Hall,  
The Proud Hotel Al Khobar, Al Khobar, KSA

**Course Reference**  
OE0415-4D

**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.***

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 “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 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.

### **Accommodation**

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

### **Course Fee**


**US\$ 6,750** per Delegate + **VAT**. This rate includes H-STK® (Howard Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

### 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.

**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 Sergey Kole**, is an **International Expert in Port Operations & Management** with over **25 years** of **onshore and offshore** experience within the **Oil & Gas, Petroleum and Refinery** industry. His expertise widely covers in the areas of **Tanker Vetting & Inspection, International Ship and Port Facility Security Code (ISPS) Code, Marine Vetting & Audit Criteria Manual for Tank Ships, Marine & Ship Vetting, Vetting Process & Marine Safety Criteria, Tanker Vetting for Terminals, Ship Vetting, Marine Terminal Operations & Management, Marine Hazards Prevention & Control, Marine Communication Systems, Marine Safety, Ship Management, Oil Terminal Planning, Vessels Operations, Terminal Management & Support Operations, Oil Spill Contingency & Emergency Response Plan, Qualitative & Quantitative Risk Assessments, Terminal Planning, Oil Tanker Storage Planning, Cargo Transfer Handling, Loading & Discharging, Ballasting, Tank Cleaning, Crude Oil Washing, Ship Handling, Radar Navigation, Navigational Aids, Meteorological Data Review, Sea & Weather Condition Monitoring, ERT Vessel Coordination and Transport & Distribution Carrier**. Further, he is well-versed in **Sea-going Personnel Human Resource Management, Survival Craft & Rescue Boats, Dynamic Positioning, Anti-Piracy Preparedness & Response, Shipping Maintenance System, Oil & Chemical Tanker, Liquefied Gas Tanker, Inert Gas System, Crude Oil Tanker & Gas Carrier, Offshore Logistics & Supply Management, Marine Fleet Management & Operations, International Maritime Conventions & Codes, Marine Radar, Port Traffic Control Systems & Instrumentation, H<sup>2</sup>S Hazard Awareness, Firefighting, Medical Care Onboard, Carriage of Dangerous & Hazardous Substances and Ballast Water & Sediment Management**.

During his career life, Captain Sergey has gained his technical and marine expertise through various challenging key positions such as being the **Captain, Operations Director, Project Manager, Port Supervisor, Master of General Cargo Ship, Master of Container Ship, Chief Officer, Marine Operations Specialist, Marine Coordinator, On-call Duty Officer, Crewing Consultant, 2<sup>nd</sup> Officer, Ship Chandler and Senior Instructor/Trainer** for several international companies such as **ZADCO, AMEC Foster Wheeler, Fircroft Engineering Services, Ltd., Rusalina Yacht Company, Van Oord Offshore, Exxon Neftegaz Ltd (ENL), Jr Shipping, Carisbrooke Shipping, Unicorn Petrol ve Kimya, Q Shipping BV, m/v Tradeport, Miedema Shipping CV, Rah Management BV, Petrobulk Maritime Inc., Empross Lines Ship Management, Melcard Ltd., Aquarian Shell Marine Inc., Mercy Baaba and Square Ltd.**

Captain Sergey has a **Bachelor's degree in Navigation in Nautical Studies** from the **Kiev State Academy of Water Transport, Ukraine** and holds a **Master Mariner (Unlimited) Certificates of Equivalent Competency** from the **MCA, UK and NSI, Netherlands**. Further, he is a **Certified Instructor/Trainer, a Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management (ILM)** and has delivered various trainings, courses, seminars, workshops 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: Monday, 21<sup>st</sup> of October 2024**

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	<b>PRE-TEST</b>
0830 – 0930	<b>Cargos in Chemical Tankers</b>
0930 – 0945	Break
0945 – 1100	<b>Physical Properties of Cargo Hydrocarbon Groups</b>
1100 – 1230	<b>Health Hazards, Hazards to the Environment &amp; Reactivity Hazards</b>
1230 – 1245	Break
1245 – 1330	<b>Flammability &amp; Explosivity Hazards</b>
1330 – 1420	<b>International &amp; National Codes &amp; Regulations</b>
1420 – 1430	<b>Recap</b>
1430	Lunch & End of Day One

**Day 2: Tuesday, 22<sup>nd</sup> of October 2024**

0730 – 0930	<b>Bulk Chemical Codes &amp; Annex II of Marpol 73/78</b>
0930 – 0945	Break
0945 – 1100	<b>Ship Design, Construction &amp; Equipment Requirements</b>
1100 – 1230	<b>Cargo Containment, Ship Types &amp; Survival Capability</b>
1230 – 1245	Break
1245 – 1330	<b>Cargo Handling System</b> Tank Piping & Valves • Tank Materials & Coatings • Cargo Tanks Ventilation Systems
1330 – 1420	<b>Pumps &amp; Unloading System &amp; Cargo Heating Systems</b>
1420 – 1430	<b>Recap</b>
1430	Lunch & End of Day Two

**Day 3: Wednesday, 23<sup>rd</sup> of October 2024**

0730 – 0930	<b>Inert Gas Systems &amp; Instrumentation</b>
0930 – 0945	Break
0945 – 1100	<b>Fire Prevention &amp; Equipment</b>
1100 – 1230	<b>Pollution Prevention, Protection &amp; Safety Equipment</b>
1230 – 1245	Break
1245 – 1330	<b>Cargo Handling &amp; Ballast Operations</b> Cargo Planning • Procedures & Preparations for Loading
1330 – 1420	<b>Cargo Measurement &amp; Calculations</b>
1420 – 1430	<b>Recap</b>
1430	Lunch & End of Day Three

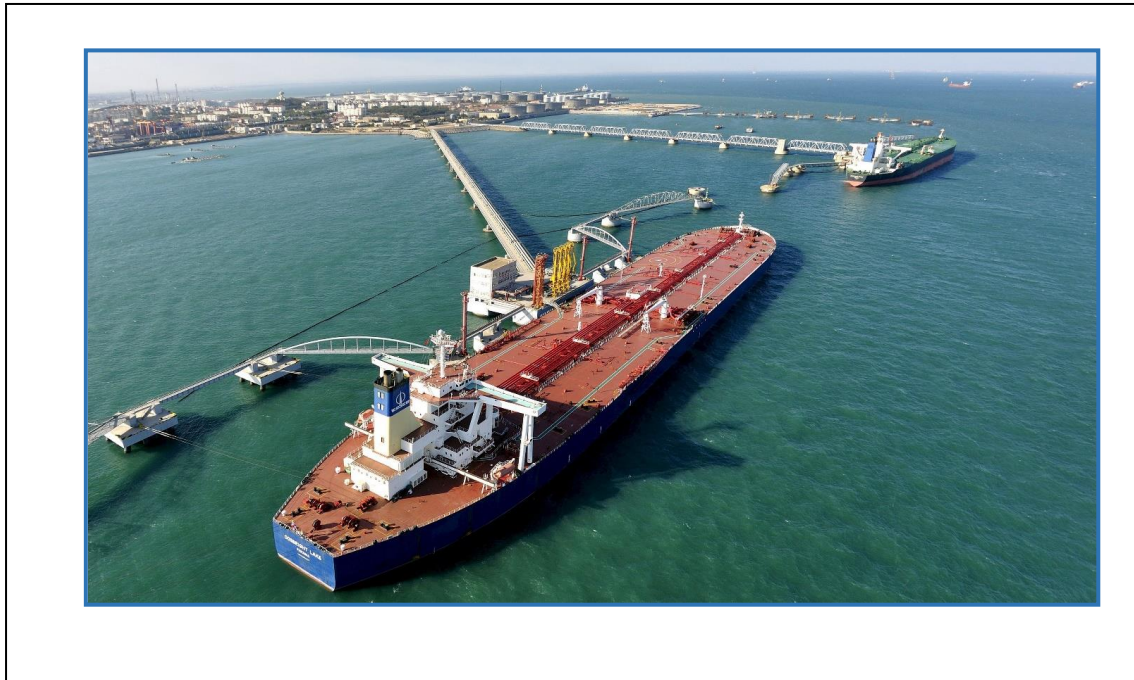


**Day 4: Thursday, 24<sup>th</sup> of October 2024**

0730 – 0930	<i>Tank Cleaning Operations</i>
0930 - 0945	<i>Break</i>
0945 – 1100	<i>Tank Cleaning Operations (cont'd)</i>
1100 – 1215	<i>Ship-Shore Interface</i>
1215 – 1230	<i>Break</i>
1230 - 1345	<i>Emergency Operations</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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