



**DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA**  
**MERCHANT SHIPPING SECRETARIAT**  
**MINISTRY OF PORTS AND SHIPPING**

1<sup>st</sup> Floor, Bristol Building, 43-89, York Street, Colombo 01, Sri Lanka.

Telephone: +94(0)112435127, Fax: +94(0)112435160, E-mail: [dmsmos@slt.net.lk](mailto:dmsmos@slt.net.lk)

## **Mandatory Minimum Requirements for the Training and Qualifications of Masters, Officers and Ratings on Oil and Chemical Tankers**

Effective Date 1st January 2018

### **Introduction**

1. Officers and ratings assigned specific duties and responsibilities related to cargo or cargo equipment on oil or chemical tankers shall hold a certificate in basic training for oil and chemical tanker cargo operations.
2. Every candidate for a certificate in basic training for oil and chemical tanker cargo operations shall have completed basic training in accordance with provisions of section A-VI/1 of the STCW Code and shall have completed at least three months of approved seagoing service on oil or chemical tankers and meet the standard of competence specified in section A-V/1-1, paragraph 1 of the STCW Code; or an approved basic training for oil and chemical tanker cargo operations and meet the standard of competence specified in section A-V/1-1, paragraph 1 of the STCW Code.
3. Masters, chief engineer officers, chief mates, second engineer officers and any person with immediate responsibility for loading, discharging, care in transit, handling of cargo, tank cleaning or other cargo-related operations on oil tankers shall hold a certificate in **advanced training for oil tanker** cargo operations.
4. Every candidate for a certificate in advanced training for oil tanker cargo operations shall meet the requirements for certification in basic training for oil and chemical tanker cargo operations and while qualified for certification in basic training for oil and chemical tanker cargo operations shall have at least three months of approved seagoing service on oil tankers, or at least one month of approved onboard training on oil tankers in a supernumerary capacity, which includes at least three loading and three unloading operations and is documented in an approved training record book taking into account guidance in section B-V/1 and have completed approved advanced training for oil tanker cargo operations and meet the standard of competence specified in section A-V/1-1, paragraph 2 of the STCW Code.
5. Masters, chief engineer officers, chief mates, second engineer officers and any person with immediate responsibility for loading, discharging, care in transit, handling of cargo, tank cleaning or other cargo-

related operations on chemical tankers shall hold a certificate in **advanced training for chemical tanker** cargo operations.

6. Every candidate for a certificate in advanced training for chemical tanker cargo operations shall meet the requirements for certification in basic training for oil and chemical tanker cargo operations and while qualified for certification in basic training for oil and chemical tanker cargo operations shall have at least three months of approved seagoing service on chemical tankers, or at least one month of approved onboard training on chemical tankers, in a supernumerary capacity, which includes at least three loading and three unloading operations and is documented in an approved training record book taking into account guidance in section B-V/1 and have completed approved advanced training for chemical tanker cargo operations and meet the standard of competence specified in section A-V/1-1, paragraph 3 of the STCW Code.

All training institutes should adhere to applicable regulations and required to make assessments of any potential risks to the health and safety of staff and trainees that may be associated with their activities. They are also required to identify, implement, monitor and review effective measures for minimizing and controlling them. In addition, institutes will be required to make effective arrangements for dealing with any emergency, incident or accident that may occur during the course of training.

### **Standard of competence**

1. Every candidate for certification in basic training for oil and chemical tanker cargo operations shall be required to demonstrate the competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-V/1-1-1 and provide evidence of having achieved the minimum knowledge, understanding and proficiency listed in column 2 of table A-V/1-1-1 and the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-V/1-1-1.
2. Every candidate for certification in advanced training for oil tanker cargo operations shall be required to demonstrate the competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-V/1-1-2 and provide evidence of having achieved the minimum knowledge, understanding and proficiency listed in column 2 of table A-V/1-1-2, and the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-V/1-1-2.
3. Every candidate for certification in advanced training for chemical tanker cargo operations shall be required to demonstrate the competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-V/1-1-3 and provide evidence of having achieved the minimum knowledge, understanding and proficiency listed in column 2 of table A-V/1-1-3 and the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-V/1-1-3.

### **Course approval and Conducting Procedure**

1. Entry criteria for the respective courses given in the code of practice.
2. Core syllabus will be given by the Director General of Merchant shipping (DGMS).
3. Detailed syllabus, lesson plan lecture notes and student hand out should be prepared according to the core syllabus by the requested institute.

4. Relevant table of the STCW code should be complied and IMO model course to be used for your assistance (if available).
5. The teaching methods, required practical and way of transferring the appropriate knowledge to the students should be demonstrated by attending officer of the training institute at the time course approval.
- 6.
- 7.
8. The training institutes must get the individual course approval from Director General of Merchant Shipping and if there are any later changes (e.g. in facilities, equipment, staff) should notify to DGMS immediately if that affect the conduct of the training and/or assessment.
9. The Director General of Merchant shipping must be kept informed of the dates, timing and venue of training programmes so that the examiners can monitor the training at their convenience.
10. Certificates shall be issued only to those trainees who successfully complete the training programme and meet other requirements for the issue of the certificate.
11. Full records of all certificates issued to trainees must be up load to the website and records to be retained by the institute in such a way that authenticity or confirmation of issue of a certificate can be verified at a later stage if necessary.
12. 100% attendance is required for successful completion of the course and if anyone goes below should be notified.
13. Minimum time duration for each course given in the core syllabus.
14. Assessment to be carried out at the end of the course.

### **Finalized minimum requirement of equipment's and teaching aids for oil and chemical tankers**

#### Teaching aids

- 01 number potable resuscitator
- BA complete set- 01 number for instructor
  - 01 number for group of 04 students
- 01 O2 meter- potable for 20 students for demonstration purpose only. in operational condition  
Original certification to be available.
- 01 number combustible gas detector-including type specific with certificate, manufacturers certificate, initial calibration certificate
- Calibration kit-for expansion gas
- 01 number of portable tank scope/ multi point flammable gas ( infra red gas analyzer)- type specific with certificate
- Toxic gas tubes- used tubes for demonstration purpose. One type new set to be available for viewing purpose only. with testing and pumping equipments
- 01 number potable multi gas detector
- Tank evacuation equipment-01 number tripod-with hoisting ability (rope, block)
  - 01 EEBD complete set
  - 01 flash light
  - 01 stretchers
- Communication equipments- locations to be demonstrated using power point presentations.

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- DCP system-semi potable trolley
- A small computer based program to be used for demonstration.
- Minimum 1L of medium expansion foam to be used per course
- Semi potable DCP skid

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Each student to have hands on experience with extinguishing fires using all 4 types

- 1 number of 9L water extinguisher can be used by 03 students
- 1 number of 9L foam extinguisher can be used by 03 students
- 1 number of CO2 extinguisher can be used by 05 students
- 1 number of dry powder extinguisher can be used by 05 students

#### IMO references (R)

- R1 SOLAS 1974, International Convention for the Safety of Life at Sea, 1974, Consolidated Edition 2009 (IMO-IIOE) latest editions to be available
- R2 STCW 78 as amended, including 2010 Manila amendments, International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 2010 (IMO-938E) latest editions to be available
- R3 MARPOL, International Convention for the Prevention of Pollution from Ships, Consolidated Edition 2011 (IMO-520E) latest editions to be available
- R4 Inert Gas Systems (IG systems) (IMO-860E) latest editions to be available
- R5 Crude Oil Washing Systems(COW systems) (IMO 617E) latest editions to be available
- R6 MFAG with Chemical supplement, Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (IMDG Code Supplement- IMO-210E) latest editions to be available
- R7 International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (BCH Code), as amended (IMO-774E) latest editions to be available
- R8 International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code), as amended (IMO-IOOE) latest editions to be available
- R9 Guidelines for the Development of Shipboard Pollution Emergency Plans (SOPEP) (IMO-586E) latest editions to be available
- R10 International Safety Management Code (ISM Code) (IMO-117E) latest editions to be available

- R11 IMO Model Course 2.06 - Oil Tanker Cargo & Ballast Handling Simulator
- R12 IMO Model Course 1.37 - Chemical Tanker Cargo & Ballast Handling Simulator
- R13 IMO Model Course 1.20 - Fire Prevention and Fire Fighting latest editions to be available
- R14 IMO Resolution A.1050(27) - Revised Recommendations for Entering Enclosed Spaces Aboard Ships latest editions to be available

} for simulator  
 } based training

**Textbooks (T)**

**T1** Safety in Oil Tankers, International Chamber of Shipping. (International Chamber of Shipping, latest editions to be available

**T2** Safety in Chemical Tankers, International Chamber of Shipping (International Chamber of Shipping,) latest editions to be available

- **A textbook covering general overhauling and repairing of valves gate valve to be used and taught**

**Bibliography (B)**

**B1** International Safety Guide for Oil Tankers and Terminals. 5th ed. London, Witherby and Co. Ltd,

**B2** Tanker Safety Guide (Chemicals), International Chamber of Shipping, 3rd ed. London, Witherby and Co. Ltd, 2002 (ISBN 0-948691-50-6)

**B4** Basic Safe Tanker Handbook for Oil, Chemicals, LPG and LNG, 2011. Capt. KSD Mistree, MAREX Publication,

**B5** Ship to Ship Transfer Guide (Petroleum), International Chamber of Shipping/Oil Companies International Marine Forum, 4th ed. London, Witherby and Co. Ltd., 2005 (ISBN 1-85609-097-3)

**B8** Tank Cleaning Guide, 6th ed. Rotterdam, B.V. Chemical Laboratory "Dr. A. Verwey", 1998

**B10** Measures to Prevent Accidental Pollution, INTERTANKO. 1990

**B11** Code of Safe Working Practices,

**B12** Tanker Management Self-Assessment, Witherby and Co. Ltd,

**Videos - DVDs, CDs, CBTs (V)**

**V01** Portable gas detection equipment calibration procedures Available from: KARCO Website:

**V02** Tanker safety depends on you

Available from: NATIONAL AUDIOVISUAL CENTRE National Technical Information Service

**V03** Operation and maintenance of inert gas systems

**V04** The ship/shore interface - petroleum tankers

- Video containing tanker safety

**V05** Tanker practice

**V06** Permit to work

**V07** Enclose space entry

**V08** Personal safety on tankers

**VC3** Static electricity on board tankers

**VC5** Explosion on board a laden chemical tanker

**VC6** Chemical tank cleaning & inspection

## **Finalized minimum requirement of equipment's and teaching aids for advanced training oil tankers**

### **Teaching aids**

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- Resuscitator
- Breathing apparatus
- Portable oxygen meter
- Portable combustible-gas detector
- Portable tankscope / Multi point flammable gas (infra- red gas analyzer)
- Portable toxic-gas detector & chemical absorption tubes
- Portable multigas detector
- Personal multigas detector
- Tank evacuation equipment
- Overhead projector for power point presentations
- Oil Tanker Cargo & Ballast Water Handling Simulator
- Portable Foam and Fixed Foam and Dry Chemical Powder Firefighting System

### **IMO references**

- SOLAS 1974, International Convention for the Safety of Life at Sea

- STCW 78 as amended, including 2010 Manila amendments, International Convention on Standards of Training, Certification and Watch keeping for Seafarers
- MARPOL 73/78, International Convention for the Prevention of Pollution from Ships 1973/1978(MARPOL 73/78)
- IG Systems, Inert Gas Systems
- Medical First aid guide for use in accidents involving dangerous good (MFAG)
- ISM Code, International Safety Management Code (ISM Code)
- International Code for Fire Safety Systems, 2007 Edition, including Supplement 2012

### **Text Book**

- Safety in Oil Tankers, International Chamber of Shipping

### **Bibliography**

- International Safety Guide for Oil Tankers and Terminals
- Safe Oil Tanker operations
- Ship to Ship Transfer Guide (Petroleum) 4th ed. International Chamber of Shipping/Oil Companies International Marine Forum
- Drager-Tube Handbook
- Measures to Prevent Accidental Pollution, 1990 INTERTANKO
- Code of Safe Working Practices
- Tanker Management - Self Assessment

### **Videos - DVDs, CD ROMs or CBT's**

- Portable gas detection equipment calibration procedures
- Tanker safety depends on you
- Operation and maintenance of inert gas systems
- The ship/shore interface petroleum tankers
- Tanker practices series- cargo
- Permit to work
- Entry into enclosed spaces
- Personal safety on tankers
- FRAMO cargo pumping system
- Static electricity on board tankers
- Vapour emission control

Note: - Other equivalent videos, CD-

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## **Finalized minimum requirement of equipment's and teaching aids for advanced training chemical tanker**

- Instructor's Manual
- Resuscitator
- Breathing apparatus
- Portable oxygen meter
- Portable combustible-gas detector
- Portable tankscope / Multi point flammable gas (infra-red gas analyzer)
- Portable toxic-gas detector & chemical absorption tubes
- Portable multigas detector
- Personal multigas detector
- Tank evacuation equipment
- Overhead projector for power point presentations
- Chemical Tanker Cargo & Ballast Water Handling Simulator

### **IMO references (New/Current Editions)**

- SOLAS 1974, International Convention for the Safety of Life at Sea
- STCW 78 as amended, including 2010 Manila amendments, International Convention on Standards of Training, Certification and Watch keeping for Seafarers
- MARPOL as amended, International Convention for the Prevention of Pollution from Ships, 1973/1978 (MARPOL as amended)
- Inert Gas Systems
- Medical First aid guide for use in accidents involving dangerous goods (MFAG)
- ISM Code, International Safety Management Code (ISM Code)
- International Code for Fire Safety Systems, 2007 Edition, including Supplement 2012
- IBC Code

### **Text Book**

- Safety in Chemical Tankers, International Chamber of Shipping, Safety in Chemical Tankers (International Chamber of Shipping)

### **Bibliography**



- International Safety Guide for Chemical Tankers and Terminals. 5th ed.
- Basic Safe Tanker Handbook for Oil, Chemicals, LPG and LNG, Edition 2013
- Ship to Ship Transfer Guide (Chemical), International Chamber of Shipping
- Drager-Tube Handbook
- Measures to Prevent Accidental Pollution, INTERTANKO
- Code of Safe Working Practices
- Tanker Management Self-Assessment

#### **Videos - DVDs, CD ROMs or CBT's**

- Portable gas detection equipment calibration procedures
- Tanker safety depends on you
- Operation and maintenance of inert gas systems
- The ship/shore interface
- Tanker practices series cargo
- Permit to work Code
- Entry into enclosed spaces
- Personal safety on tankers
- Static electricity on board tankers
- Vapour emission control Code
- Chemical Fire Hazard Management