

# SPECIALIZED TRAINING IN OPERATIONAL AND SAFETY ASPECTS RELATIVE TO OIL AND CHEMICAL TANKER CARGO OPERATIONS



## TARGET GROUP

This is specialized training course in oil and chemical tanker cargo operations for personnel with immediate responsibility for loading, discharging and care in transit or handling of specific types of cargo. It comprises a specialized training program appropriate to their duties, including chemical tanker specific cargo safety aspects, protective measures, pollution prevention, operational practice and obligations under applicable laws and regulations.



## OBJECTIVES OF THE COURSE

A trainee successfully completing this course will be able to:

- Follow procedures in oil/chemical tanker loading and unloading operations,
- Demonstrate all safety aspects of loading/unloading and carriage of different chemical cargoes,
- Apply precautions for handling specific chemical cargoes with different properties,
- Properly use and operate cargo handling equipment,
- Show knowledge of safety precautions on completion of cargo operations.
- Use of gas detection equipment to monitor atmosphere for different chemical cargoes.
- Safely perform tank cleaning and gas freeing operations keeping in mind properties of the cargo.
- Perform Inerting and Padding operations with attention to properties of Nitrogen



## COURSE CONTENTS

The training course covers the following topics:

- Physical and chemical properties of dangerous liquid substances
- Chemical tanker construction, systems and equipment
- General safety precautions, safety systems, ESD system
- Hazards associated with chemical tanker operations. Hazard control.
- Safety culture and safety management on tankers
- Personal safety on chemical tankers and safe working practice
- Characteristics and properties of transferred cargoes.
- Material Safety Data Sheet (MSDS);
- IBC code 2020
- Safe loading and unloading of specific chemical cargoes
- Emergency procedures
- Prevention of sea pollution
- Safe operation of cargo transfer, handling and ballast systems.
- Gas measuring instruments. Operating principles, accuracy and limitations

## INCOME REQUIREMENTS:



To be assigned on the training course, participant should present:

- national passport

## COURSE LIMITATIONS



The maximum number of participants - 5 persons.

## DURATION OF THE TRAINING COURSE



The duration of the training course is 3 working days.



## THE COURSE PROGRAM

### DAY 1

- Familiarization with simulator
  - Type of ship (chemical)
  - Type of tanks
  - Tank arrangement (general)
  - Pipeline arrangement
  - Pipe system control valves
  - Pumps
  - Instrumentation
  - Controls
  - Basic operations and procedures
- Personal safety on chemical tankers. Safe working practice
  - Safety culture and safety management on tankers
  - Repairs and maintenance
  - Control measures for hot and cold work
- Inerting, Padding, Purging Operations and Procedures. Hazard control
  - Inert gas composition
  - General safety precautions, safety systems, safe working practices
  - Tank atmosphere evaluation
  - Use of inert gas/nitrogen
  - Hazards or Nitrogen.
  - Oxygen measuring instruments. Operating principles, accuracy and limitations
  - Personal protective clothing and equipment
- Physical and chemical properties of dangerous liquid substances
  - Chemical cargoes categories
  - Chemical groups and industrial application
  - IBC code 2020, MSDS
- Hazards associated with chemical tanker operations. Hazard control
  - Fire and explosion hazards
  - Electrostatic hazard
  - Chemical reaction hazard. Polymerization
  - Corrosivity hazard.
  - Toxicity hazard
  - Health hazards

### DAY 2

- Cargo Loading
  - General safety precautions, safety systems, safe working practice
  - General provisions (cargo planning, cargo and slop discharge program)
  - Loading cargoes
  - Cargo handling
  - Personal protective clothing and equipment
  - Emergency operations and actions in case of cargo systems and equipment damage
  - Deballasting
  - Prevention of sea pollution
- Discharging cargoes
  - General safety precautions, safety systems, safe working practice
  - Pre-wash operations in port
  - Arrangements and procedures for efficient stripping
  - Personal protective clothing and equipment
  - Emergency operations and actions in case of cargo systems and equipment damage
  - Ballasting
  - Prevention of sea pollution

### DAY 3

- Tank cleaning and gas freeing operations and procedures
  - General safety precautions, safety systems, safe working practice
  - Emergency operations and actions in case of cargo systems and equipment damage
  - Cleaning of cargo tanks depending on next cargo types, compatibility.
  - Use of washing machines
  - Gas freeing
  - Tank cleaning in various atmospheres
  - Tank cleaning with chemicals
  - Gas measuring instruments. Operating principles, accuracy and limitations
  - Personal protective clothing and equipment
- Enclosed space entry.
  - General safety precautions, safety systems, safe working practice
  - Control measures for enclosed space safe entry. Breathing apparatus
  - Personal protective clothing and equipment
  - Gas measuring instruments. Operating principles, accuracy and limitations

**Note:** during training course theoretical lessons are given using PowerPoint presentations  
practical tasks are conducted on SAFE Cargo - Chemical Tanker Model - L3-DPA Simulations Group.