FEATURES OF TANKER'S OPERATIONS

Target groups

Deck - Management
Deck - Operational

Ship types

Generic

Purpose:

The e-learning module (ELM) is designed for theoretical training of navigators in accordance with Chapter II of the STCW Convention in the part concerning of features of tanker's operations.

The ELM is included in the *"Shiphandling basics"* library.

What is an e-learning module?

E-learning module is the electronic textbook on one or more sections. Theoretical materials can be accompanied by drawings, diagrams, photos, animations and videos. There is a test for assessment of knowledge gained at the end of each section.

Contents:

- Classes of Tankers
- Design features of the tanker hull
- Oil tanker cargo gear
- Tanker mooring operations
- Cargo and ballast operations
- Fire safety of oil tankers
- Features of sea transportation of liquefied gases
- Features of sea transportation of liquid chemicals
- Preparation of a tanker for a inspection

Regulations

Table A-II/2 STCW Code

Competence:	Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes
Knowledge, understanding and proficiency:	General knowledge of tankers and tanker operations.

E-learning module

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Section 1. Classes of Tankers

Depending on the type of cargo carried, tankers are divided into:

1. Crude Oil Tankers
2. Liquefied Gas tankers
3. Chemical tankers

Chemical tankers are tankers designed for transportation of liquid chemicals, the cargo system and tanks are made of special stainless steel or are coated with special acid-resistant materials.

Depending on the type of cargo carried, tankers are divided into:

Crude Oil Tankers | Chemical tankers | Liquefied Gas Tankers

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Section 3. Oil tanker cargo gear

Pipelines.

For loading and unloading liquid cargo on oil tankers, a special cargo system is installed, consisting of receiving and discharge lines.

Deck pipeline

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Section 4. Tanker mooring operations

Mooring and cargo operations in the open seas or Ship-to-ship (STS) operations, due to the vulnerability of ships to the impact of waves, wind and currents, are especially difficult in maritime practice (see Fig.). Under the terms of mooring operations, ships are considered as a shuttle vessel. Mother vessels are floating mobile berths to which other vessels moor.

Shuttle vessels carry out all main maneuvers to approach and moor to and depart from the mother vessels.

As a rule, a vessel of smaller displacement is moored. The larger vessel should keep a steady course and go at speed of about 5 knots.

Mooring in the open seas

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Section 6. Fire safety of oil tankers

Fire safety of oil tankers.

It must always be remembered that it is not the combustible liquids themselves that ignite, burn and explode, but their vapors; the rate of evaporation depends on the temperature of the liquid, so heating the liquid increases the risk of fire.

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Section 7. Features of sea transportation of liquefied gases

Features of sea transportation of liquefied gases.

A gas tanker is a highly automated tanker. Maritime transportation of liquefied gases on gas tankers refers to industries with harmful working conditions. The duration of the ship's voyage is limited: after 3-3.5 months of continuous work at sea, the crews are replaced.

Under normal operating conditions, the cargo on board is sealed, the serviceability of the process equipment guarantees the impossibility of formation of hazardous gas-air mixtures with strict observance of the equipment technical operation rules and safety rules.

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Test tasks

Test of question

What is the name of the element of the tanker hull, indicated in the illustration by number 5?

Choose the correct answer

- Vertical keel.
- Web-Frame.
- Web beam.
- Underdeck knee.

Attempt: 1

COMMENT

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