



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 shiphandling at anchoring 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:

- Anchor gear components
- Anchor handling operations
- Safe anchoring operational guidance
- The choice of anchorage
- Anchorage calculation
- Watchkeeping Officer duties when approaching an anchorage
- Preparing for anchorage and dropping the anchor
- Methods of anchoring the vessel to one and two anchors
- Buoy mooring
- Watchkeeping at anchor
- Weighing anchor and buoy unmooring

Target groups

Deck - Management
Deck - Operational

Ship types

Generic



Regulations

Table A-II/1 STCW Code

Competence:	Manoeuvre the ship
Knowledge, understanding and proficiency:	<i>Ship manoeuvring and handling</i> Knowledge of: .5 proper procedures for anchoring and mooring

Table A-II/2 STCW Code

Competence:	Manoeuvre and handle a ship in all conditions
Knowledge, understanding and proficiency:	Manoeuvring and handling a ship in all conditions, including: .9 choice of anchorage; anchoring with one or two anchors in limited anchorages and factors involved in determining the length of anchor cable to be used.

Table A-II/3 STCW Code

Competence:	Manoeuvre the ship and operate small ship power
Knowledge, understanding and proficiency:	<i>Ship manoeuvring and handling</i> Proper procedures for anchoring and mooring.



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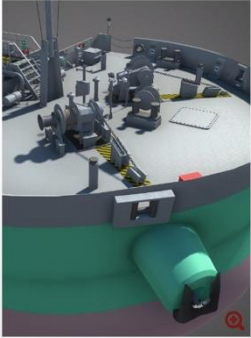
Section 1. Anchor gear components

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Anchor gear

An anchor gear must:

- ensure reliable anchorage of the vessel on the roads and on the open sea;
- hold a vessel that is both at anchor(s) and at mooring lines;
- serve as one of the means of getting the ship off the ground;
- facilitate vessel's handling in confined waters.



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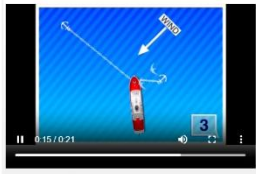
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Section 10. Watchkeeping at anchor

Yawing reduction

If the ship lying at one anchor is caught by an unexpected storm wind, then as a result of increased pitching and yawing, the dynamic loads on the anchor and anchor chain will increase. At significant yawing, an additionally lowered anchor chain may not be enough, and the second anchor should be dropped to prevent drift. There are two ways to reduce yawing. One of them is that in the middle stage of the yaw, the second anchor is dropped and kept on a short cable.

The resistance of the anchor as it drags along the ground reduces the deviation of the ship from its center position. In another method, the second anchor is given when the bow of the vessel reaches its greatest deflection, then both cables are lowered and the ship lies at two anchors. Sometimes it is more advantageous to drop the anchor with the ropes spread at an angle of 20 – 30° as described below.



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Section 10. Watchkeeping at anchor

What is prohibited?

When the vessel is at anchorage, it should be remembered that the most favorable anchorage may become dangerous, and it will be necessary to immediately heaving up anchor.

Therefore, the following is prohibited at anchorage:

- to carry out work in the engine room related to decommissioning of the main engine, steering gear and anchor gear;
- the main engine shall be in standby mode set by the Master of the ship depending on the specific conditions.




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Section 1. Anchor gear components

To fulfill the main purpose, the ship's anchor must have good holding power, must bite quickly, and also dig in the ground again; maintain the consistency of the holding power when the anchor chain changes direction; must separate from the ground easily when weighing up, be compact, durable, easy to manufacture and cheap.



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Section 8. Methods of anchoring the vessel to one and two anchors

Anchorage of the vessel to the spring

During cargo operations in open roads, the spring anchorage method is used. A spring anchorage ship is less prone to yaw and covers the watercrafts located at the lee side from the wind and waves. A strong steel rope is used that is given through the stern hawse from the outside of the ship's side and attached to one of the chain links. The bitter end of the cable is fixed to the stern bollards. The rigging should be performed at the anchor dropped.

To do this, the cable is heaved in such a way as not to raise the anchor above the ground, the spring is rigged and the cable is lowered again. It should be borne in mind that a ship quarter moored has greater resistance to wind and current, and therefore the horizontal traction force applied to the anchor is greater than during normal anchoring.




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Test tasks



COMMENT

Test of question:

After what period shall anchor chains be submitted for inspection by the classification society?

Choose the correct answer:

In five years.

In four years.

In three years.

In two years.

Attempts: 1

Miss

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