



Purpose:

The e-learning module is designed for theoretical training of ratings as able seafarer deck in the part concerning of *ship classification*.

The ELM is included in the "*Able seaman*" 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:

- Types of ships depending on their purpose
- Theoretical basis of ship's design
- Load line
- Ship's draught, list and trim
- Bulkheads, decks, plating
- Superstructures, classification of ship's spaces, their purpose
- Ship's operational performance
- Ship's seaworthiness. Buoyancy, stability and unsinkability
- Spars and rigging

Target groups

Deck - Support

Ship types


Generic



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Section 1. Types of ships depending on their purpose

Cargo ships can also be subdivided according to the type of their operation: into liner ships that run between ports on a schedule, and ships of irregular navigation (tramps), which make voyages depending on the accumulation of a cargo consignment.



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Section 4. Ship's draught, list and trim

Longitudinal and transverse frames.
Concept of strength and framing systems.

The ship's hull is a complex engineering structure subject to the action of many forces, of which the most important are gravity and support forces. Under the action of these forces, the hull as a whole and its individual elements are deformed.

The forces of gravity and support forces are unevenly distributed along the length of the ship. The uneven distribution of the support forces increases sharply when the ship is on a rough surface and can take different positions with respect to the wave.



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Section 6. Ship's seaworthiness. Buoyancy, stability and unramkability

Leewardliness.

The deviation of the vessel in the wind is called leewardliness. Like yawing, this property is a deficiency of the ship, it has to be always taken into account when performing various maneuvers, especially in constrained waters.



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Section 6. Ship's seaworthiness. Buoyancy, stability and unramkability

Speed gradation.

The operating conditions of the ship main engine is set from the navigation bridge using the telegraph.

Dead slow ahead

minimum stable rpm, at which the engine does not stall (= 25% of the full speed ahead).

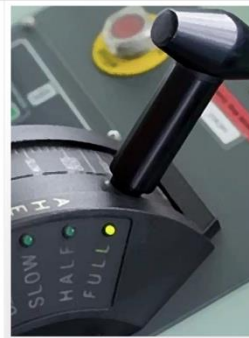
Slow ahead

Half ahead

Full manoeuvring ahead

Full ahead for sea

Emergency full ahead or Full ahead overall



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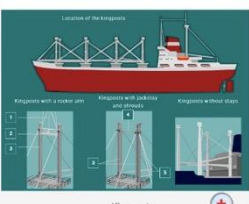
Section 9. Spars and rigging

The masts and kingposts are fastened with shrouds and stays, which in almost all cases are made of steel wires.

They are attached at one end to the mast (cross-tree) or to the kingpost with strong eye bolts (shroud eye-bolts), and at the other end - to the bases of the shrouds (shroud cleats) in the immediate vicinity of the bulwark.

Shrouds or stays with butts are attached to the mast or shroud cleats with the help of steepings; at the presence of plug rope locks, steepings are not required.

Between the shrouds or stays and shroud cleats are tightening screws to tighten ropes.



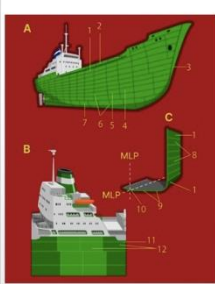
Kingposts

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Test tasks



Test of question:

What part of the structure of the ship's shell plating is shown in figure "a" under number 1?

Choose the correct answer:

Sheet stern post.

Sheet strake.

Bulwark.

Sheerstrake.

Attempts: 1

COMMENT

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