

UNIT I

MAIN PARTS OF SHIPS

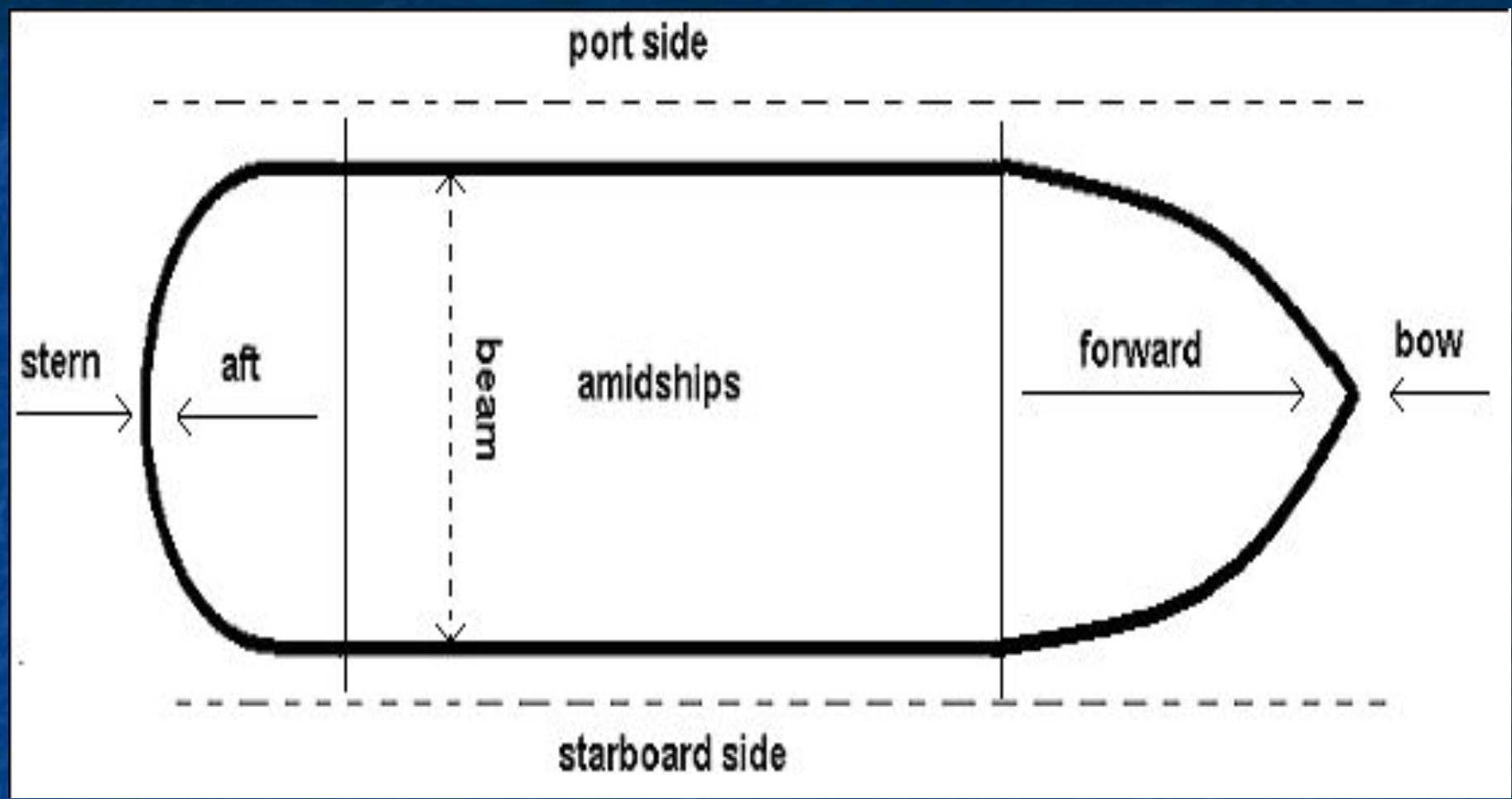
HULL

There are two main parts of a ship: the hull and the machinery. The main structure of a ship is **hull.**

The keel is the backbone of the hull

- The hull is divided into three areas: fore end, after end and amidships.

- The fore end is bow, the after end is stern. The right side of ship is called the starboard and the other side is port



BOW



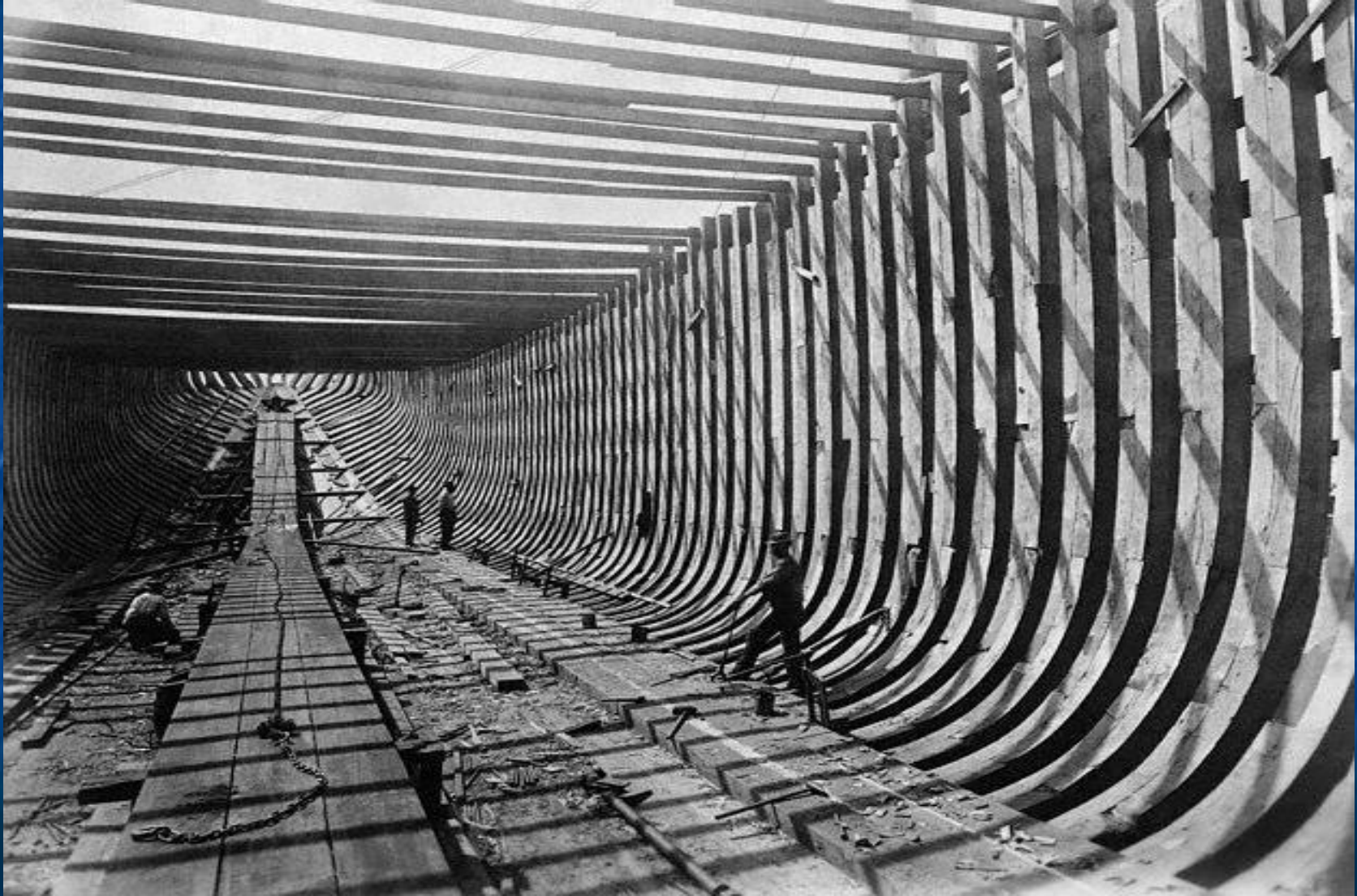
KEEL



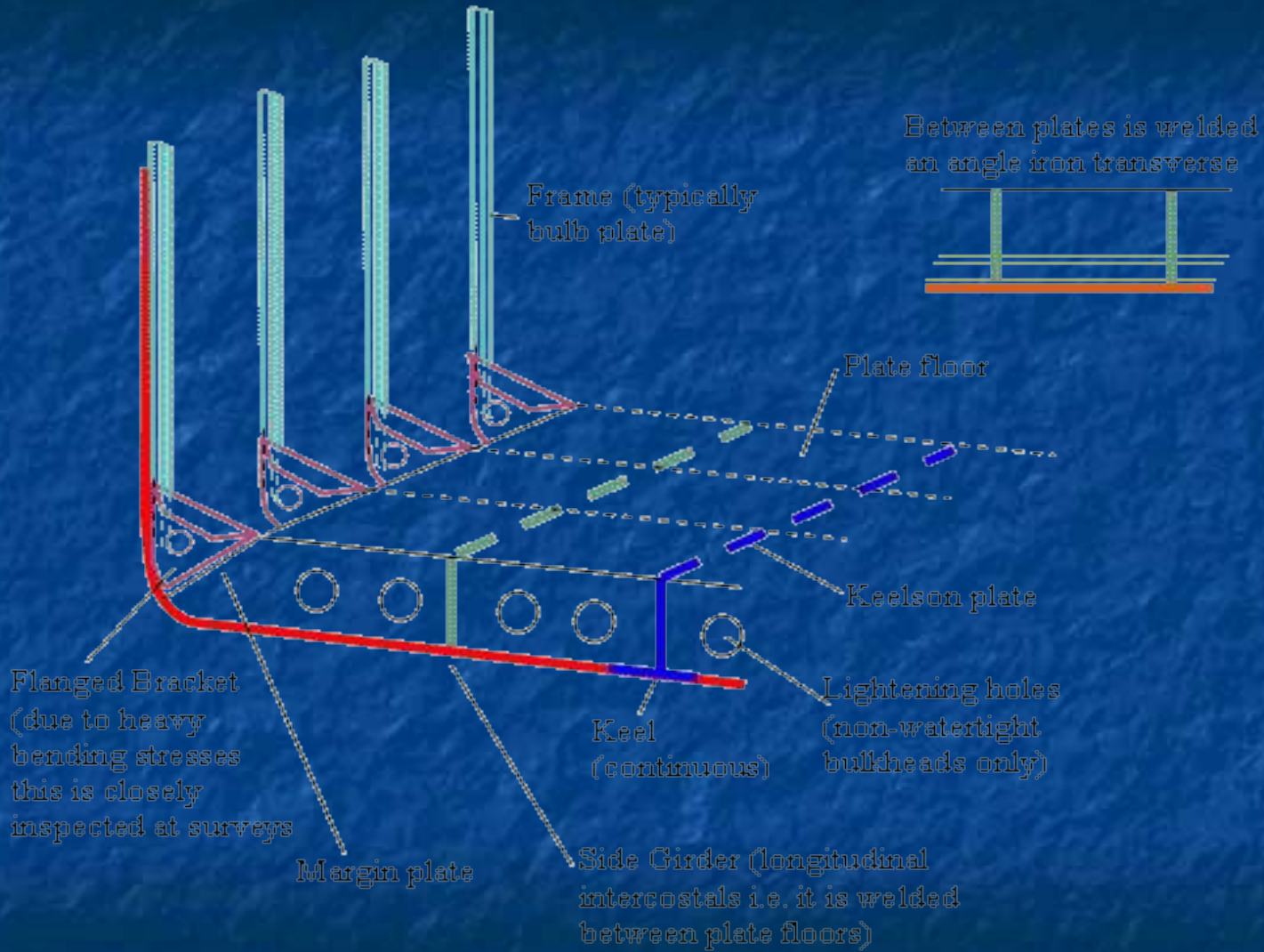
The depth of ship's bottom or keel below the waterline is draught. The beam of the ship is the distance between the two sides.

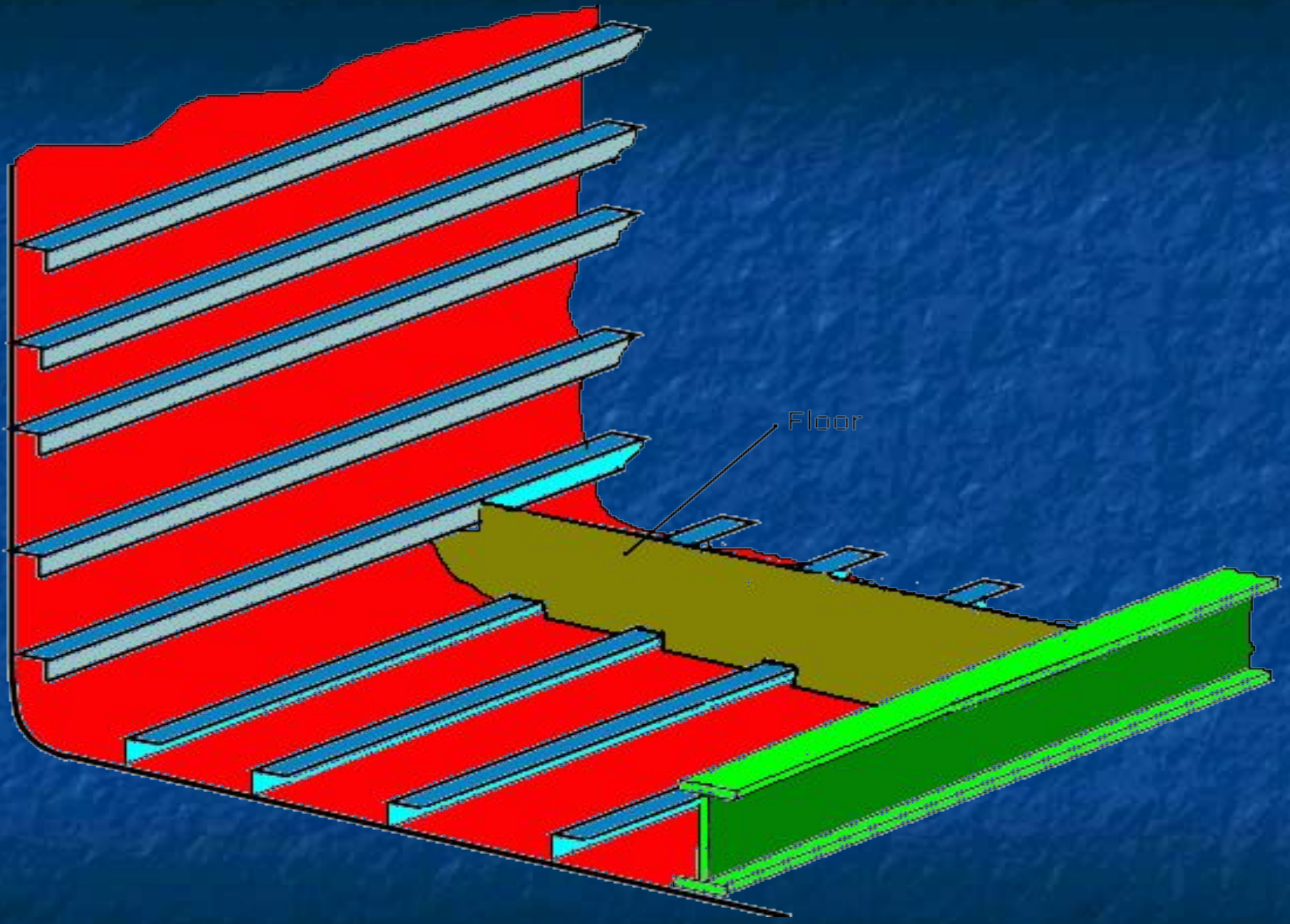
- The frames, bulkheads, floors and beams complete the skeleton of hull.
- The frames which are ribs of the ship are covered by plating.

frames

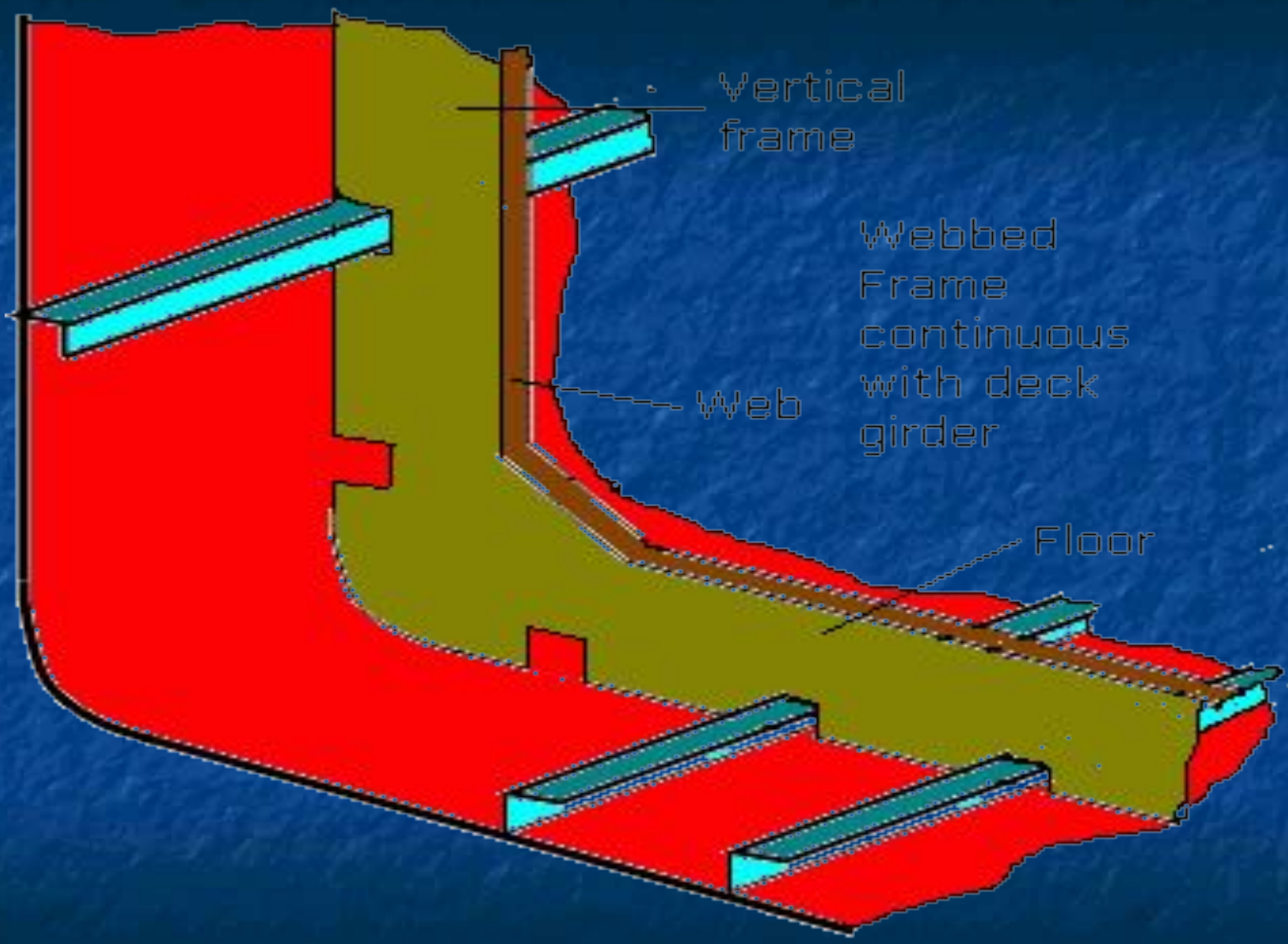








Floor



Vertical
frame

Webbed
Frame
continuous
with deck
girder

Web

Floor

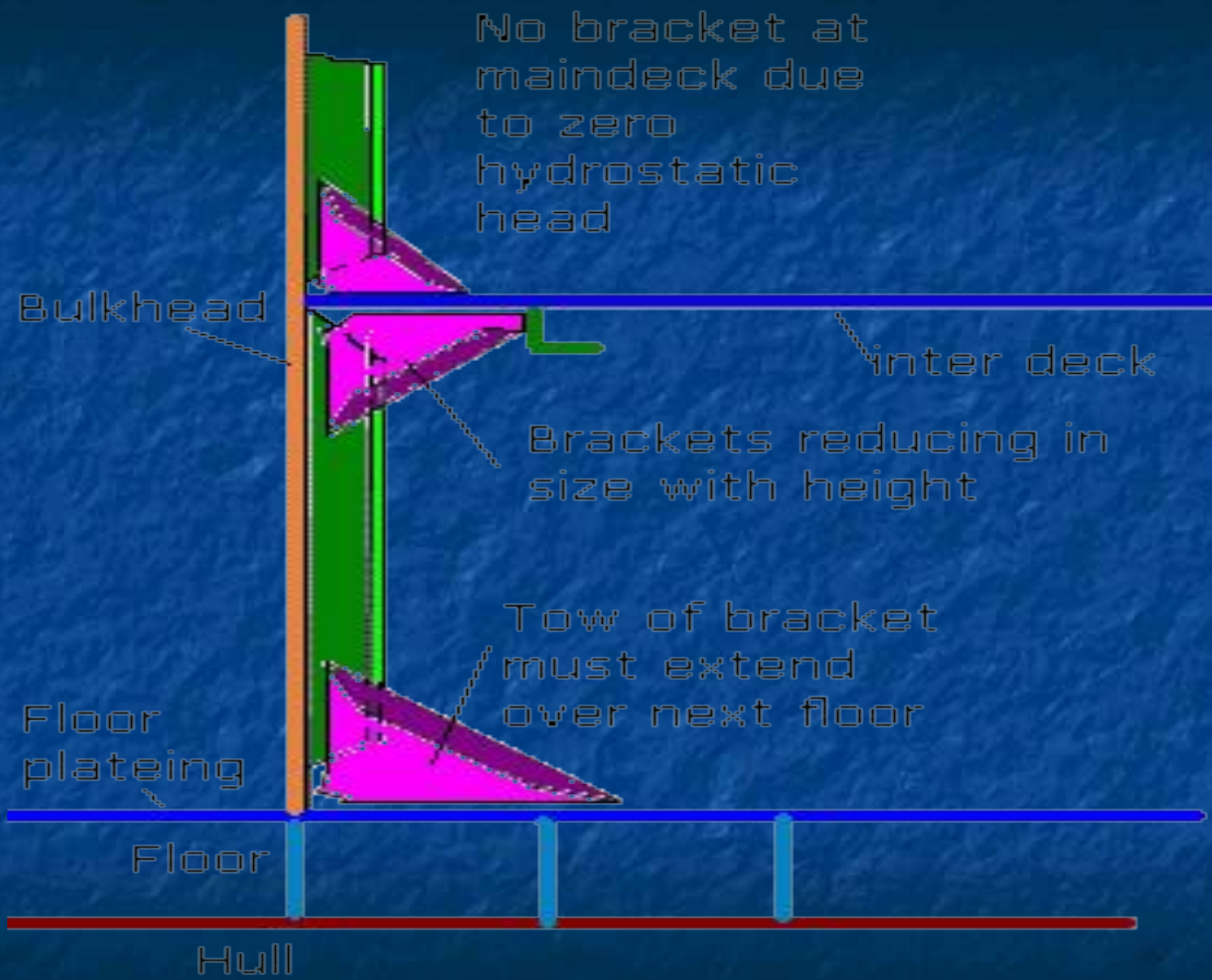


Frame

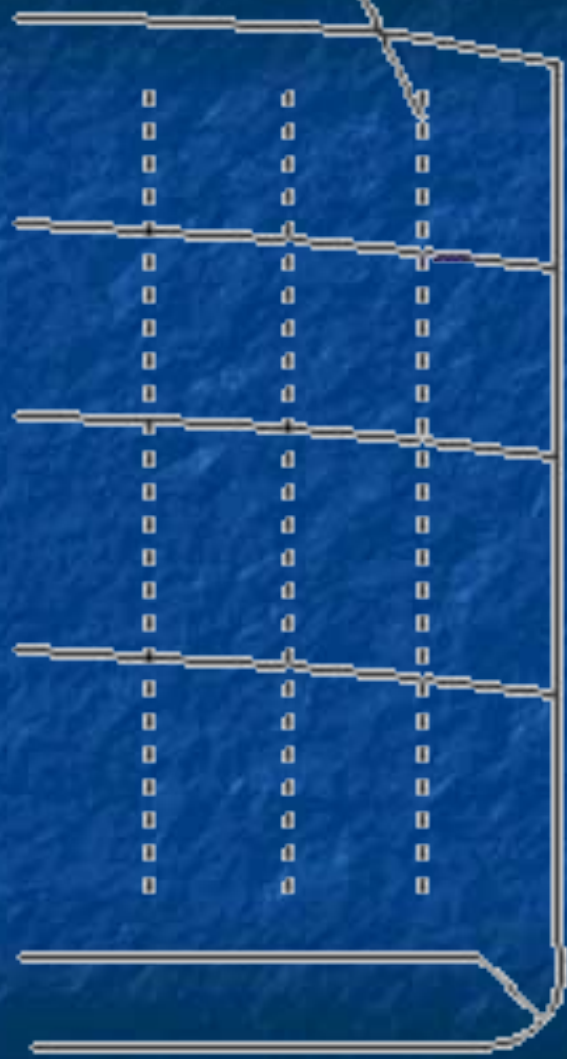
Bracket

Plate floor

Keelson



Bulb plate stiffeners



Top deck



DECK

- The upper deck covers the holds or tanks.
- Deck equipment includes: cargo handling, steering, anchoring and mooring arrangements.

- The cargo is loaded or unloaded through hatches by cranes or by derricks.

- The derricks are fitted to the masts on deck and are operated by winches.

HOLD



CARGO HOLD



HATCHES



Despite the success of open-top ships, APL still chose to configure the C11 with hatchcovers to suit its worldwide terminal operations.

HATCH



MAST



CRANE



DERRICKS

(c) Leon van Duivendijk



ANCHOR



ANCHOR

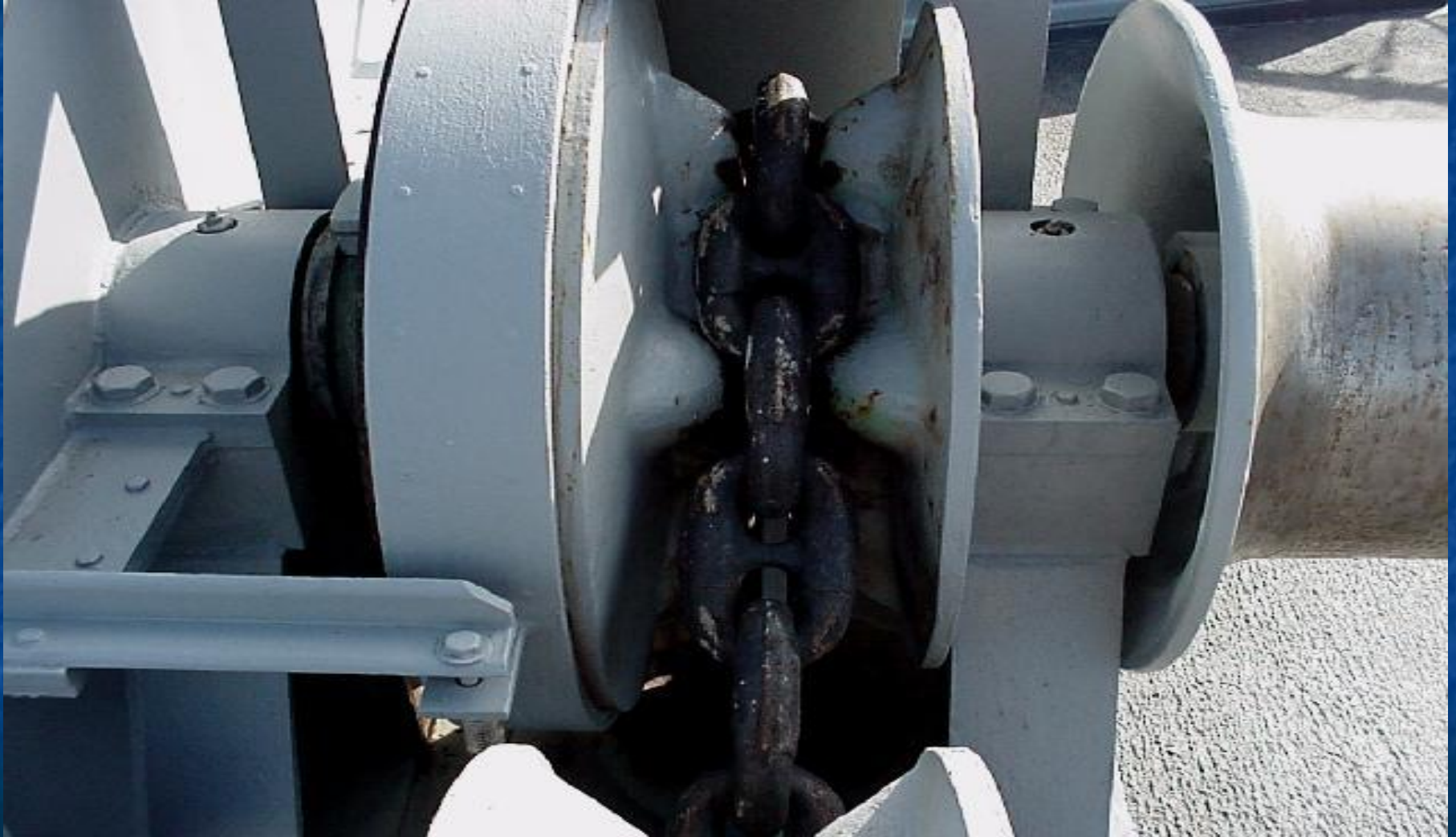


MOORING



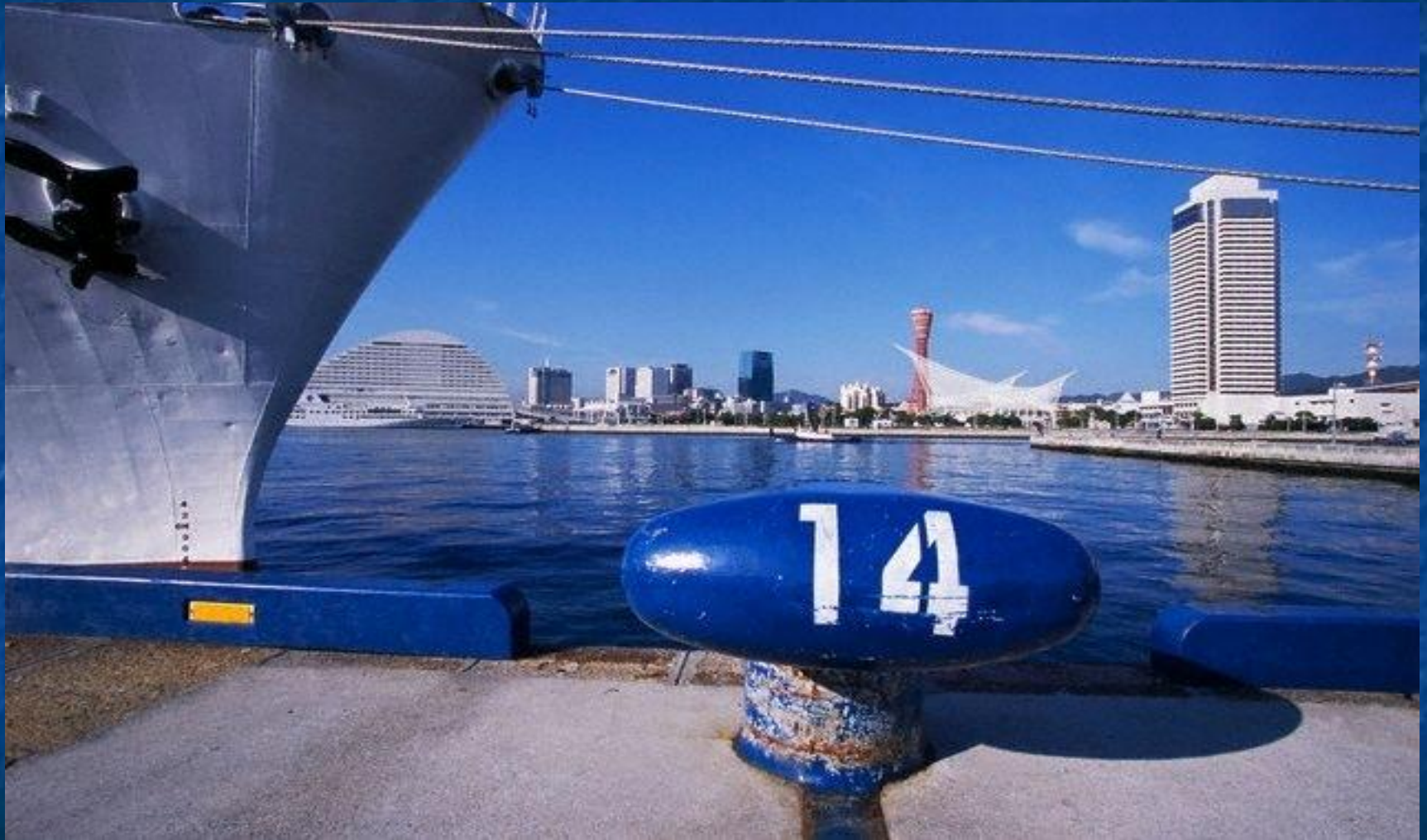
- The anchoring arrangement is the windlass used for lowering and raising the anchor and anchor chain. The mooring arrangement consists of a winch, bitts and fairleads .

WINDLASS





BOLLARD



BITTS



www.dieselduck.net

FAIRLEAD



PADEYE



CLEAT



SHACKLE



ANCHOR CHAIN



ROPE





- Lifeboats are arranged on the port and starboard side. They are carried in davits and are used for life-saving purposes.

LIFERAFT





2003-19-d-03

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LIFEBOAT



LIFERING



STERN

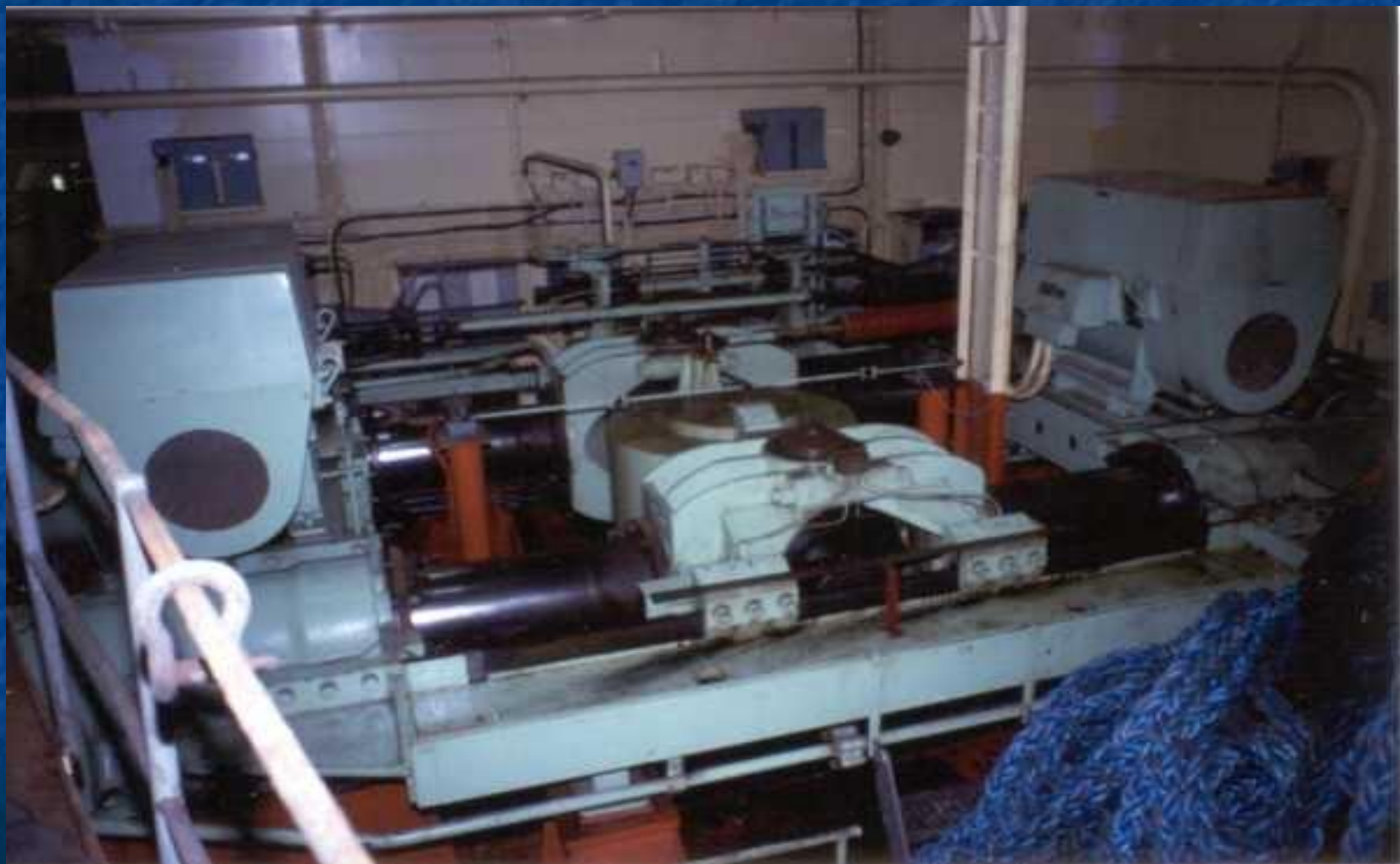
- The purpose of the steering gear is to keep the vessel on a steady course.
- A ship is steered by its rudder which is a flat plate at the ship's stern.

- The rudder is turned by steering engine which is located in the steering gear compartment.

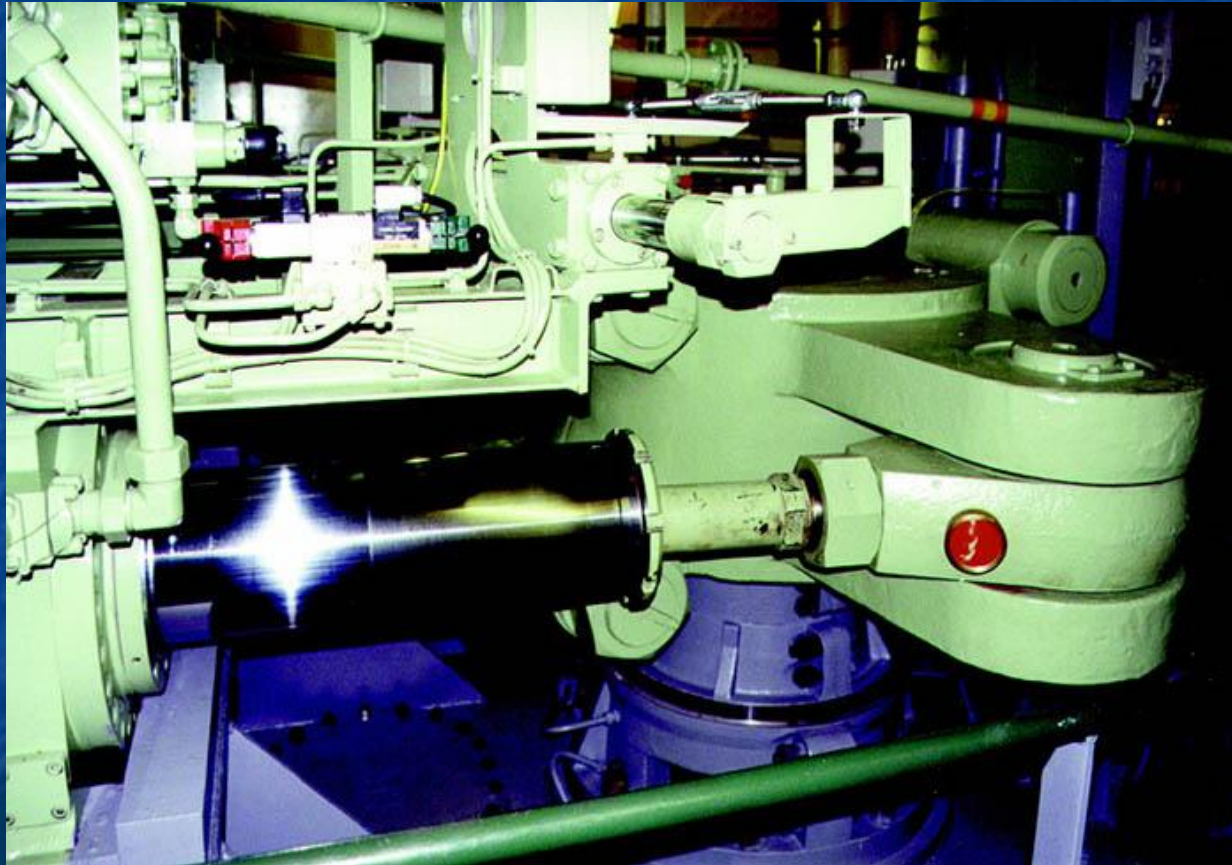
STEDN



STEERING GEAR COMPARTMENT

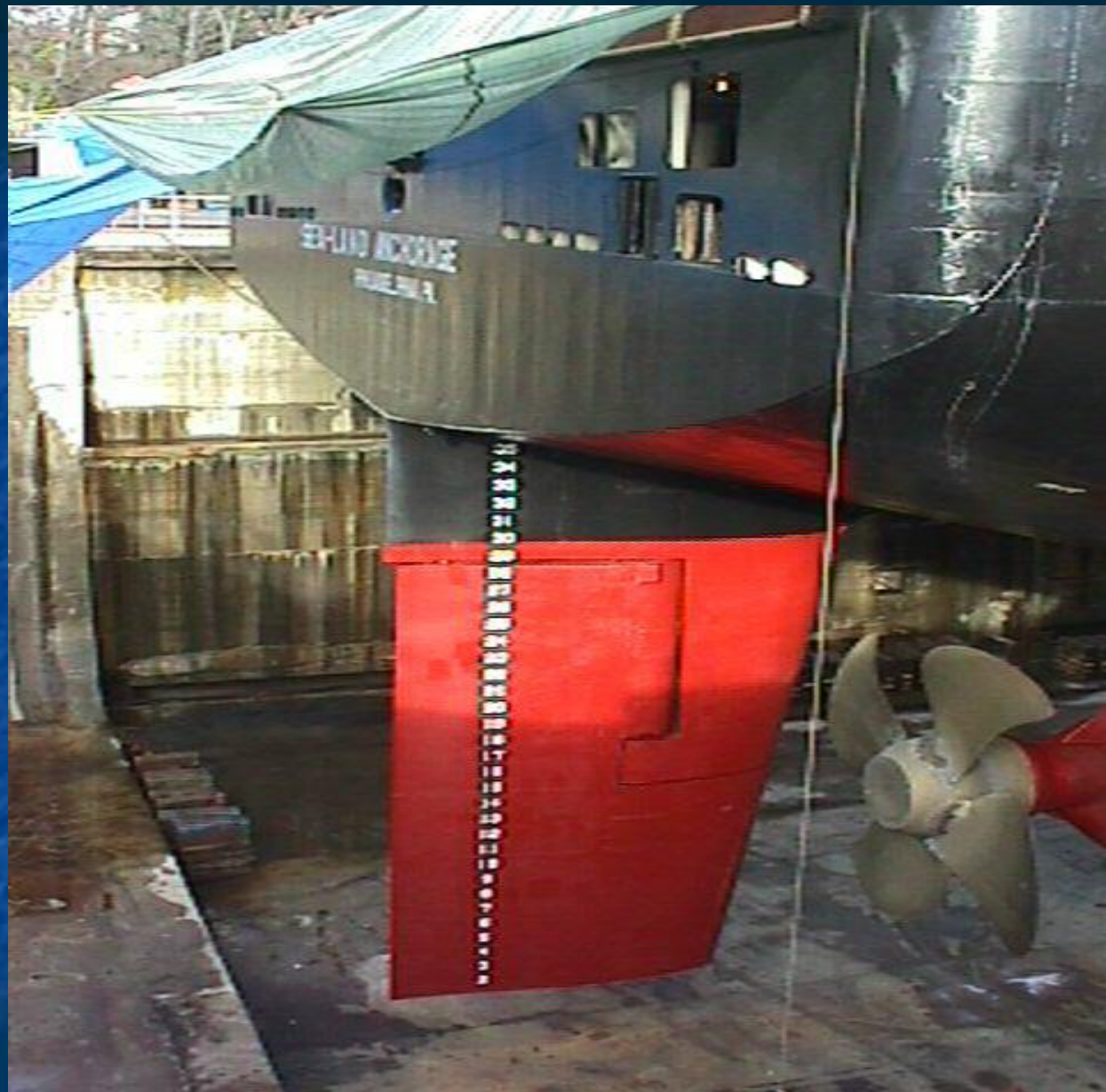


STEERING GEAR



RUDDER

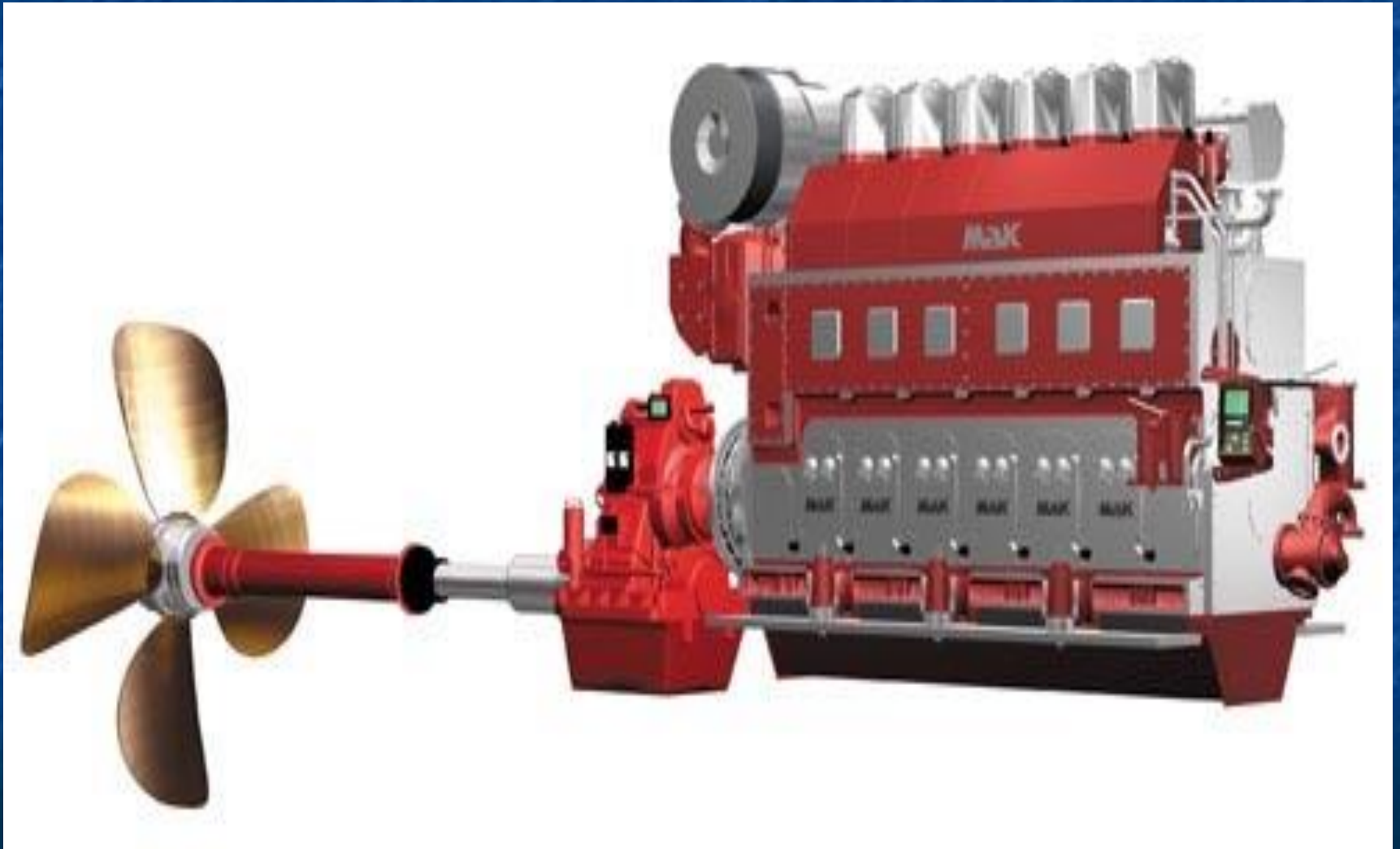




PROPULSION

- The ship is moved through the water by one or more propellers.
- Shafts transmit the rotary motion of a ship's engines to its propellers.
- The engine is fitted in the engine room .

PROPULSION SYSTEM



PROPELLER



BRIDGE

- The ship is controlled from the bridge by the captain or navigating officers.
- Near the bridge there is funnel.

BRIDGE





FUNNEL



- The captain, officers and the crew are accommodated in cabins.

- The meals are prepared in galleys and laundry is done in the laundry room.

- Officers usually eat in the officers' mess with waiter service.
- Crew members dine in the self-service or waiter service crew mess.

CABIN(STATEROOM)

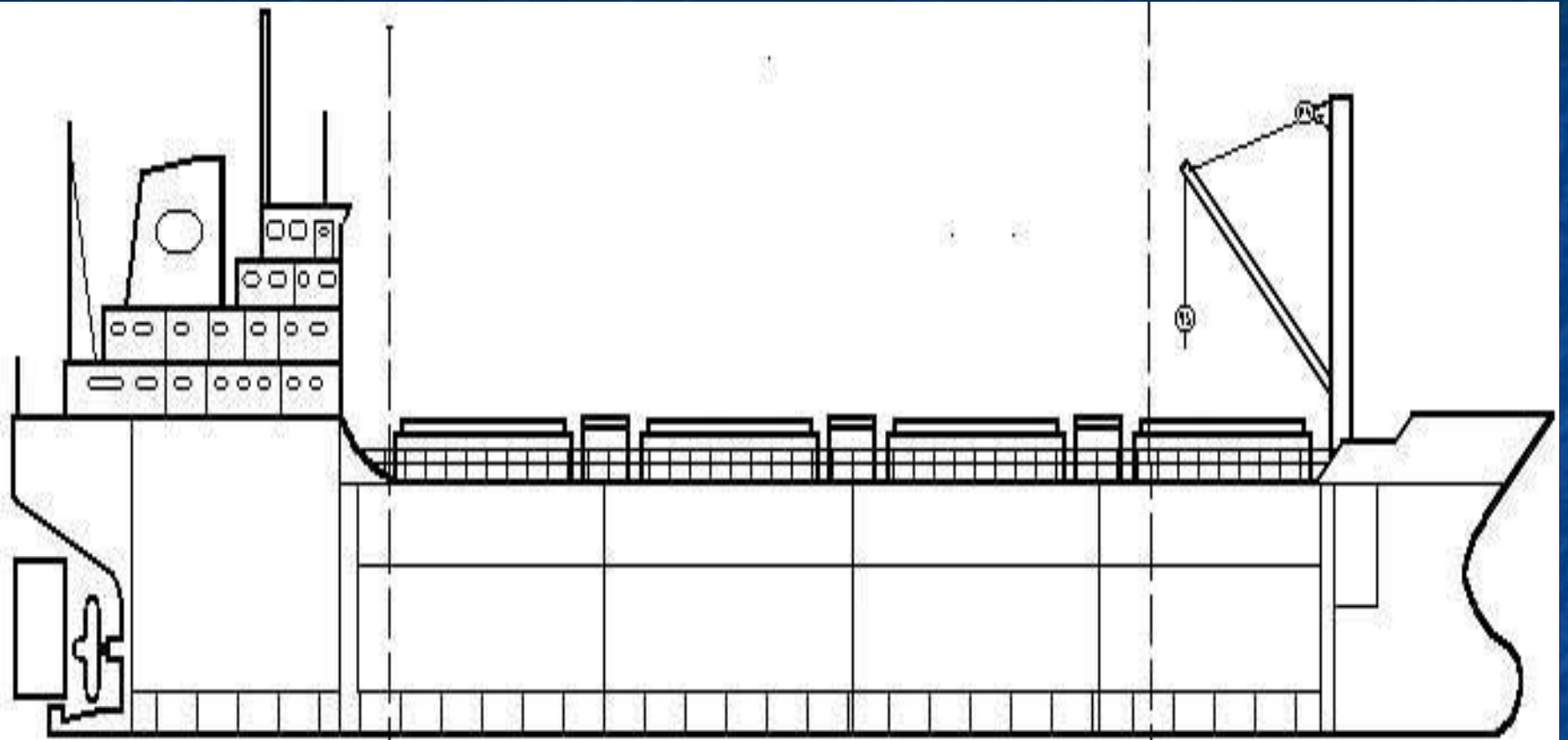


GALLEY



LAUNDRY





ANSWER THE QUESTIONS

1-What are mooring arrangements?

2-How is cargo loaded?

3-What is the rear part of the ship called?

4-Where is the laundry done?

5-What is a galley?

ETYMOLOGY

Deck < German, *decken*, to cover

Derrick < after Thomas Derrick, London hangman of the early 17th century, applied to a gallows

Galley < The galley is the kitchen of the ship. It is a corruption of "gallery". Ancient sailors cooked their meals on a brick or stone gallery laid amidships.

Mast < German *mast*, a pole < Latin *malus*,
mast < Irish *maide*, a stick

Anchor < Greek *ankyra*, hook

SOME TERMS

- Accommodate (v)- To provide a place to stay, live or work.
- Propel (v)- To drive and move forward.
- Rotary (adj.) - Moving in circles round a central point

'The depth of the ship's keel from waterline' is;

- a. freeboard**
- b. bottom**
- c. draught**
- d. water line**
- e. deck**

**'The depth of the ship's keel
from waterline' is;**

c. draught

Derricks are fitted to the ship's;

- a. bulwark
- b. bitts
- c. masts
- d. castles
- e. davits

**Derricks are fitted to the
ship's;**

c. masts

Which is not an enclosed space?

- a.** galley
- b.** engine room
- c.** steering gear compartment
- d.** hold
- e.** forecastle

Which is not an enclosed space?

e. forecastle