

# UNIT I

## MAIN PARTS OF SHIPS

# HULL

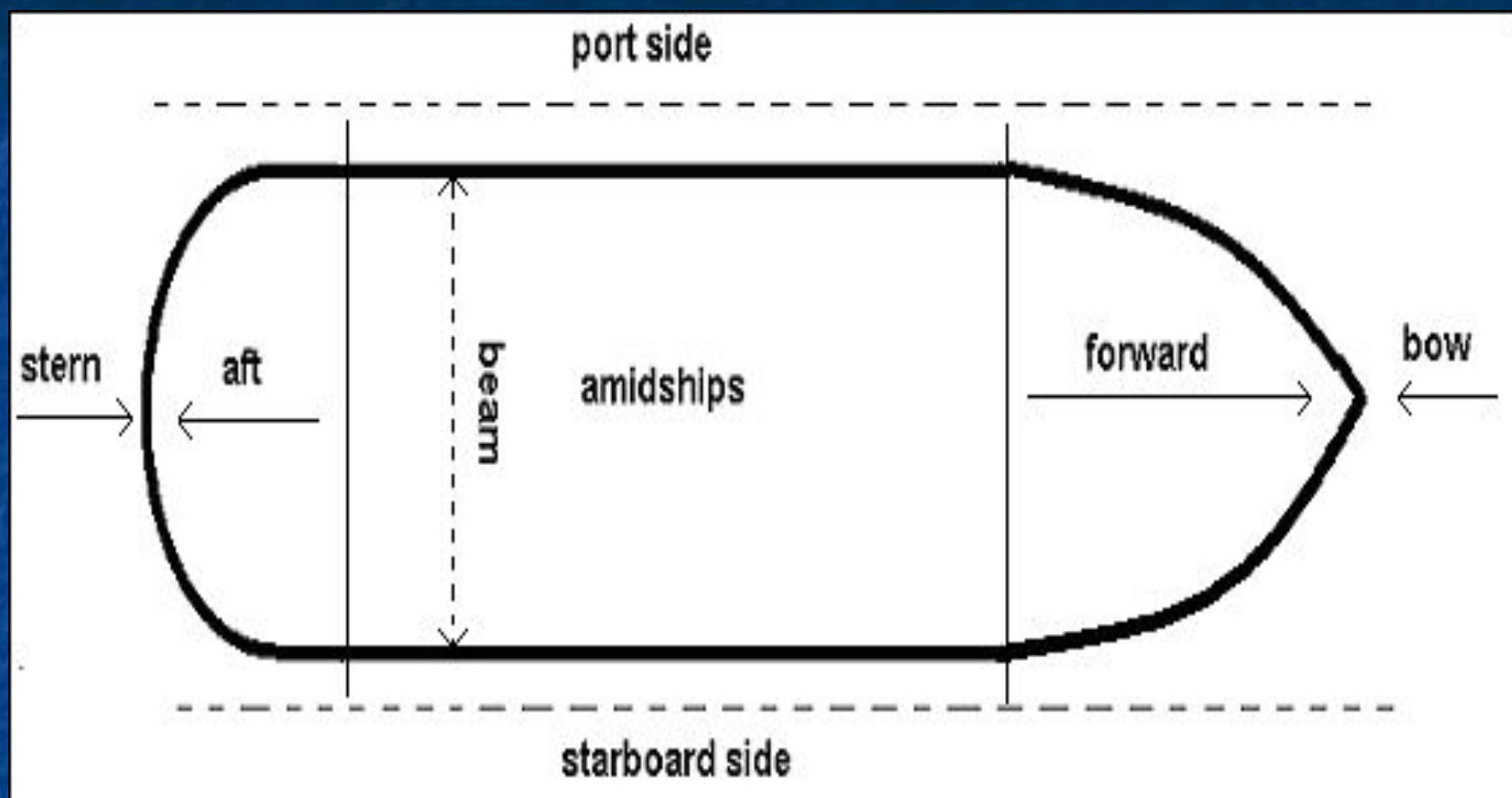
There are two main parts of a ship: the hull and the machinery. The main structure of a ship is hull.

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.

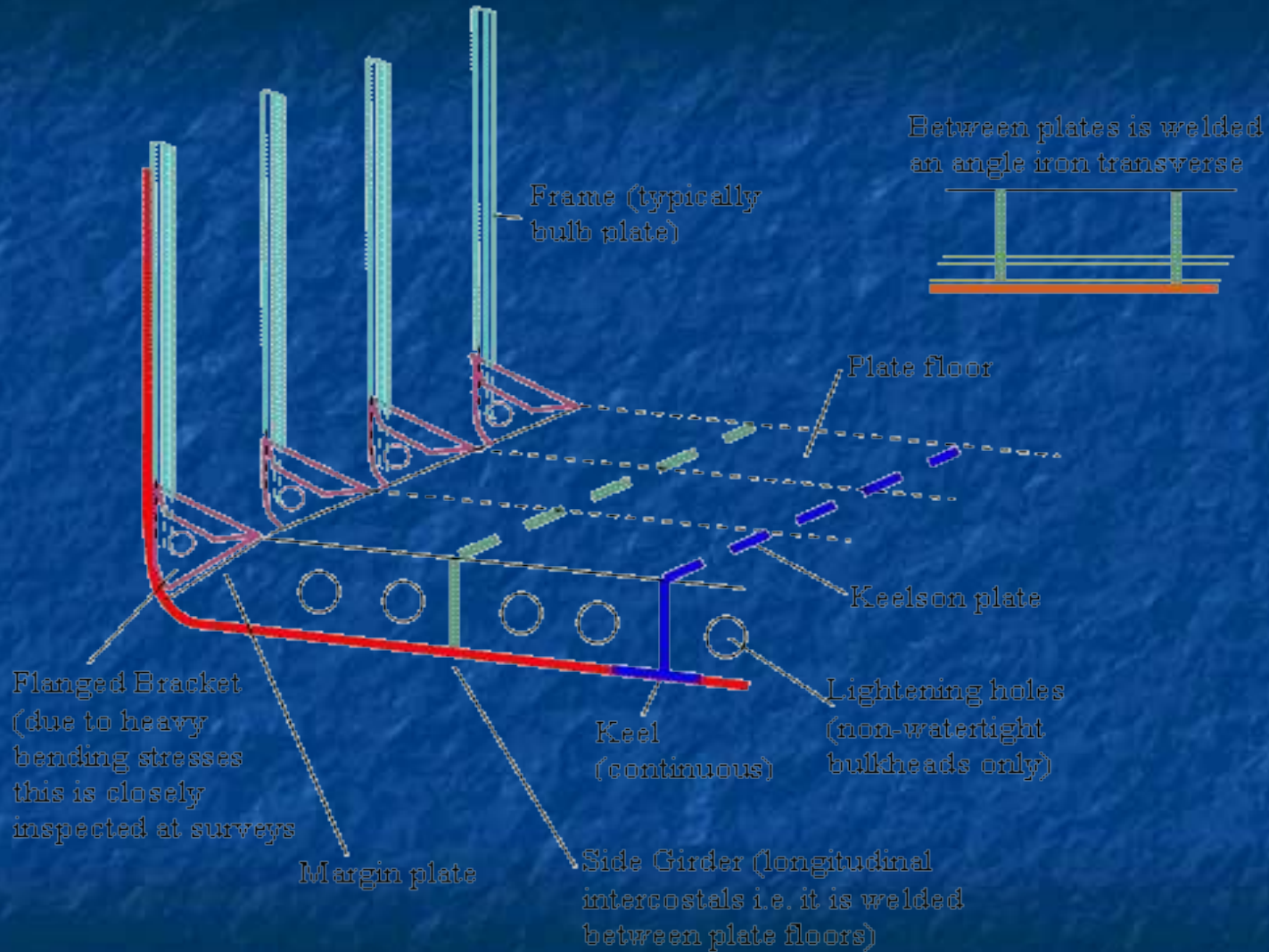
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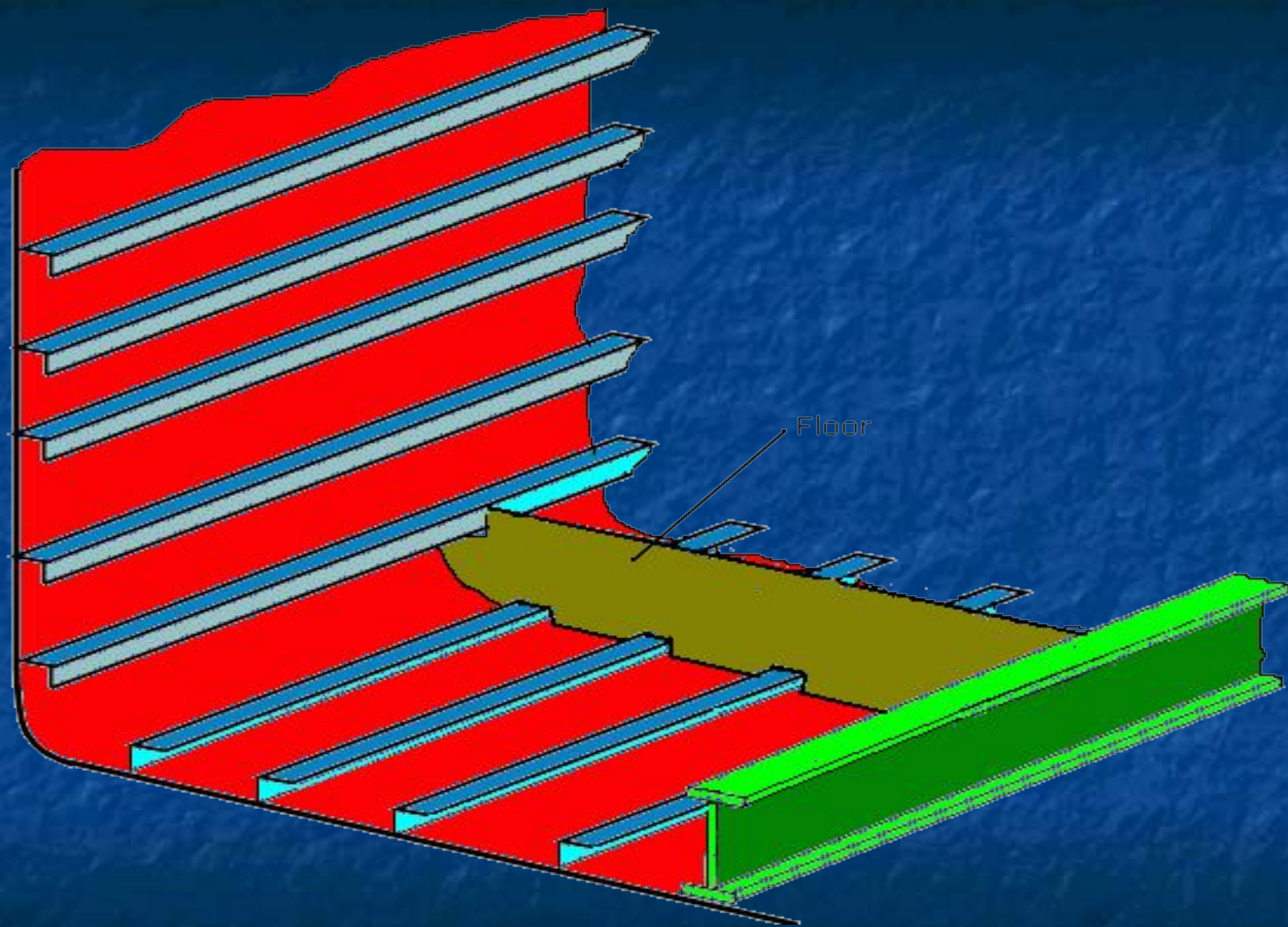




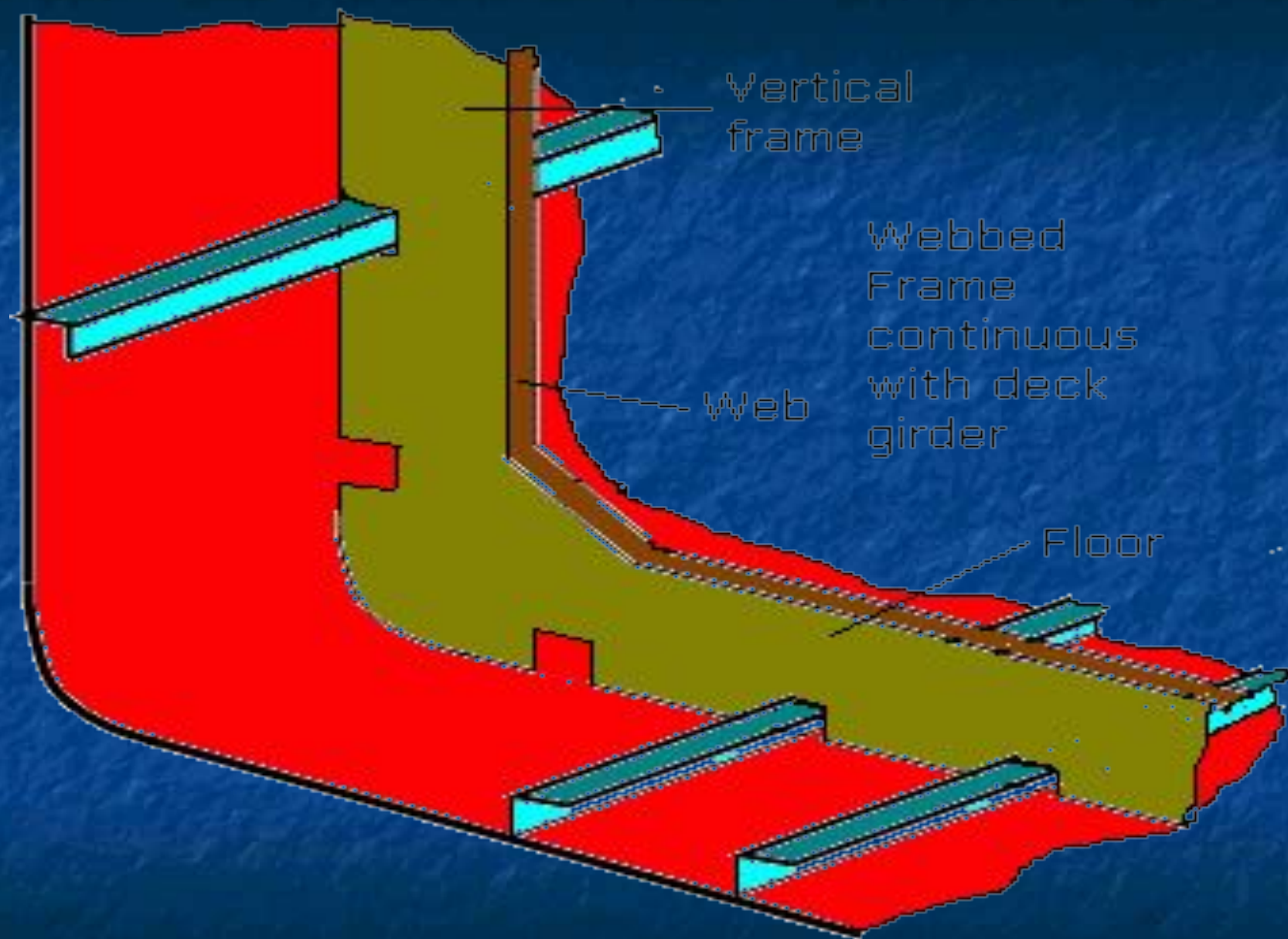






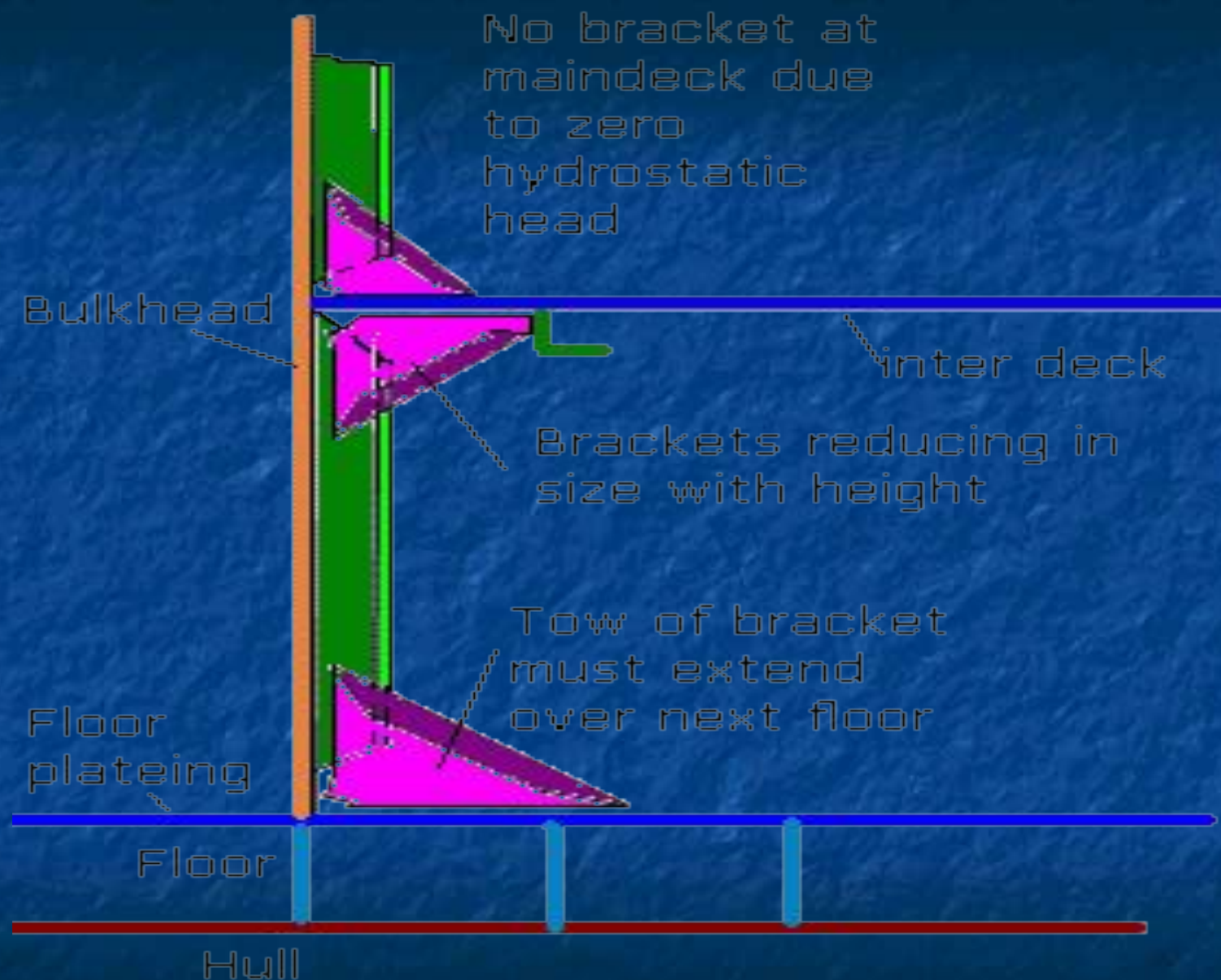


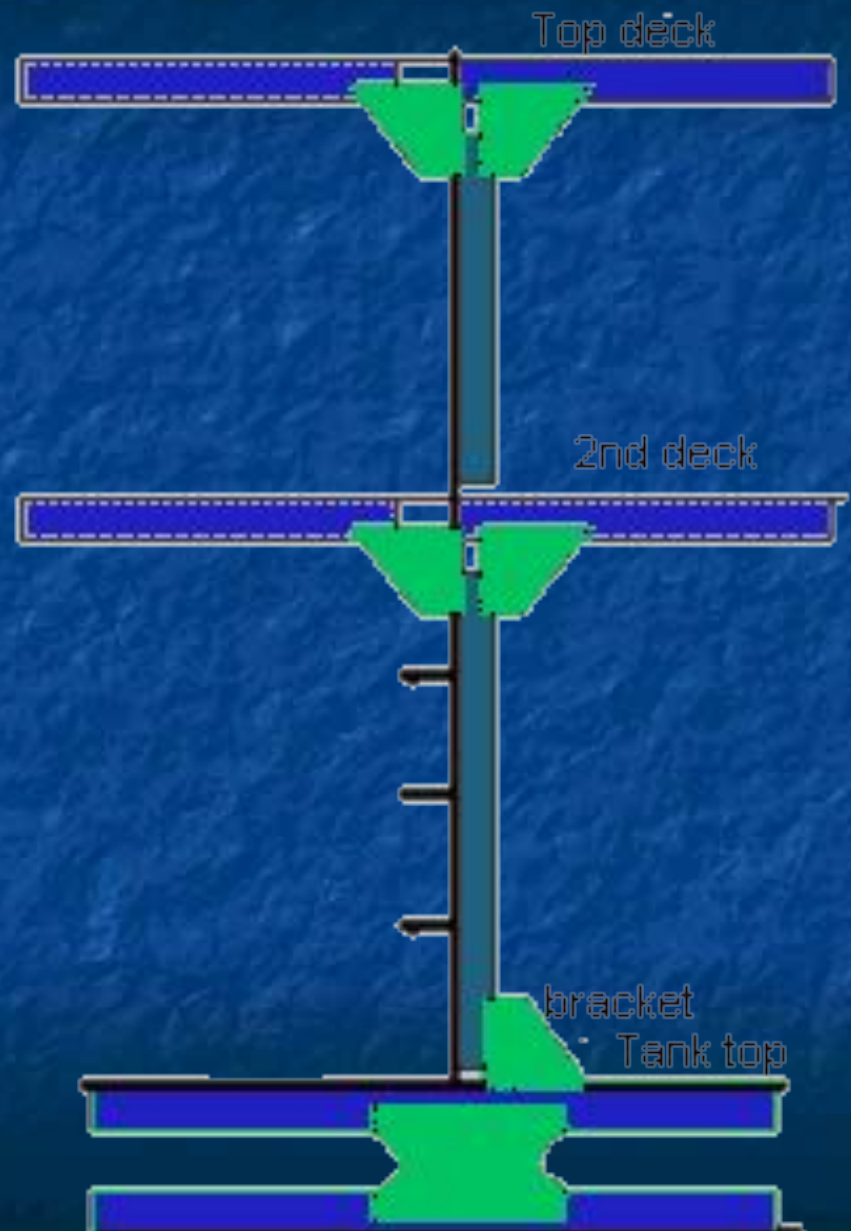
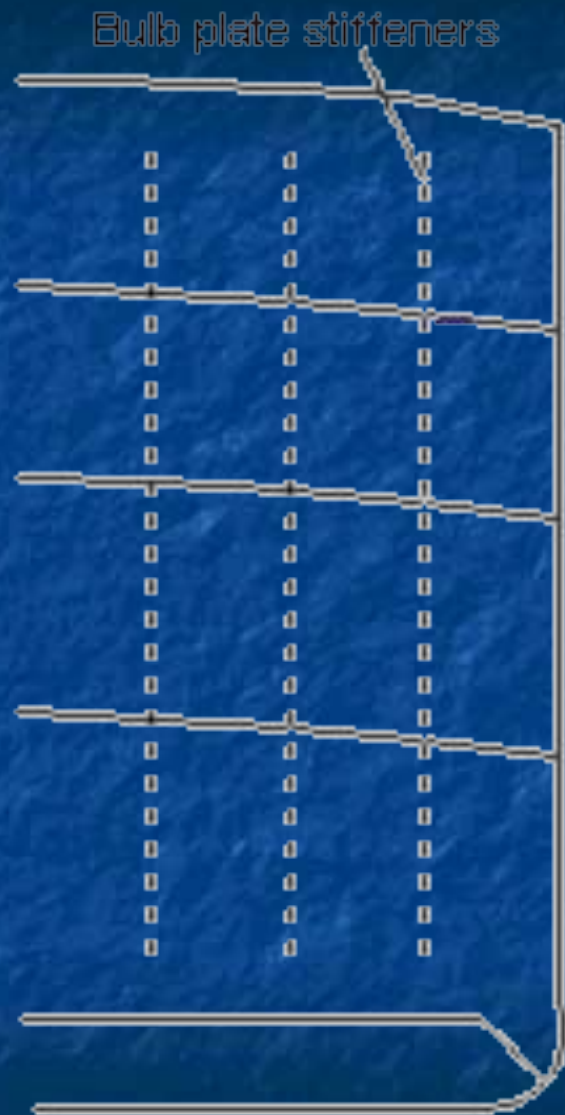












# DECK

- 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

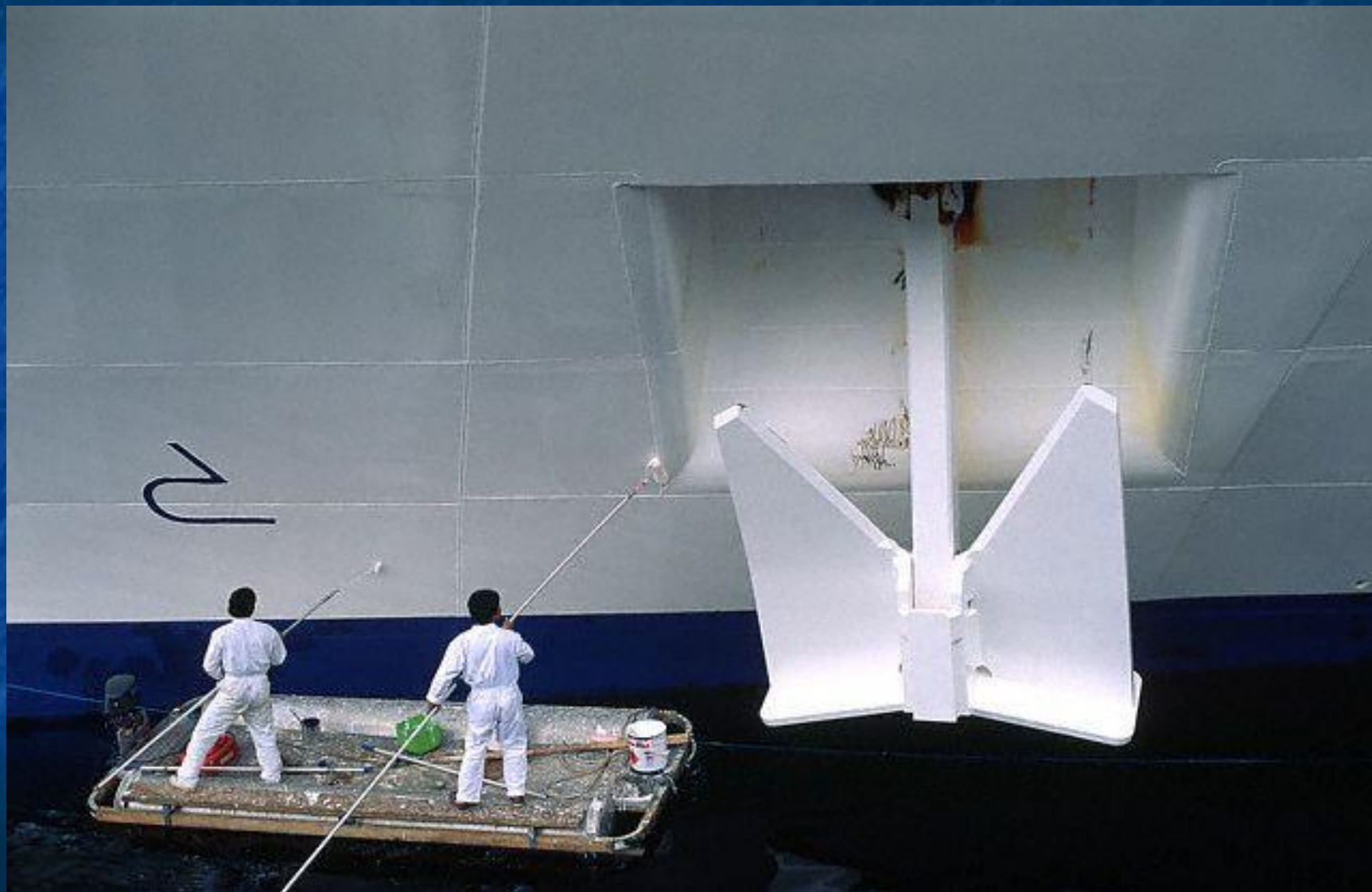


# ANCHOR





# ANCHOR





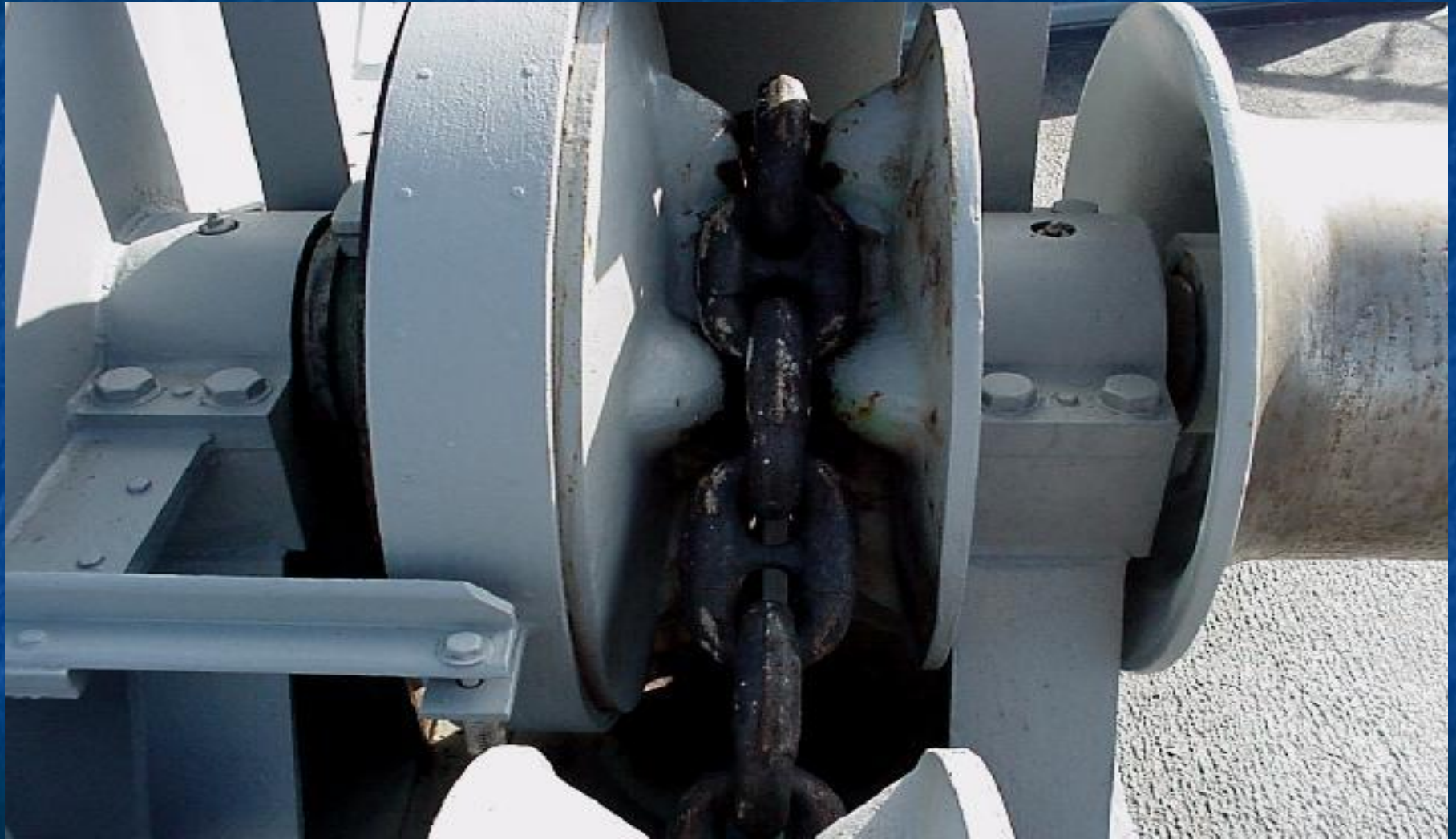
# MOORING



- 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 .



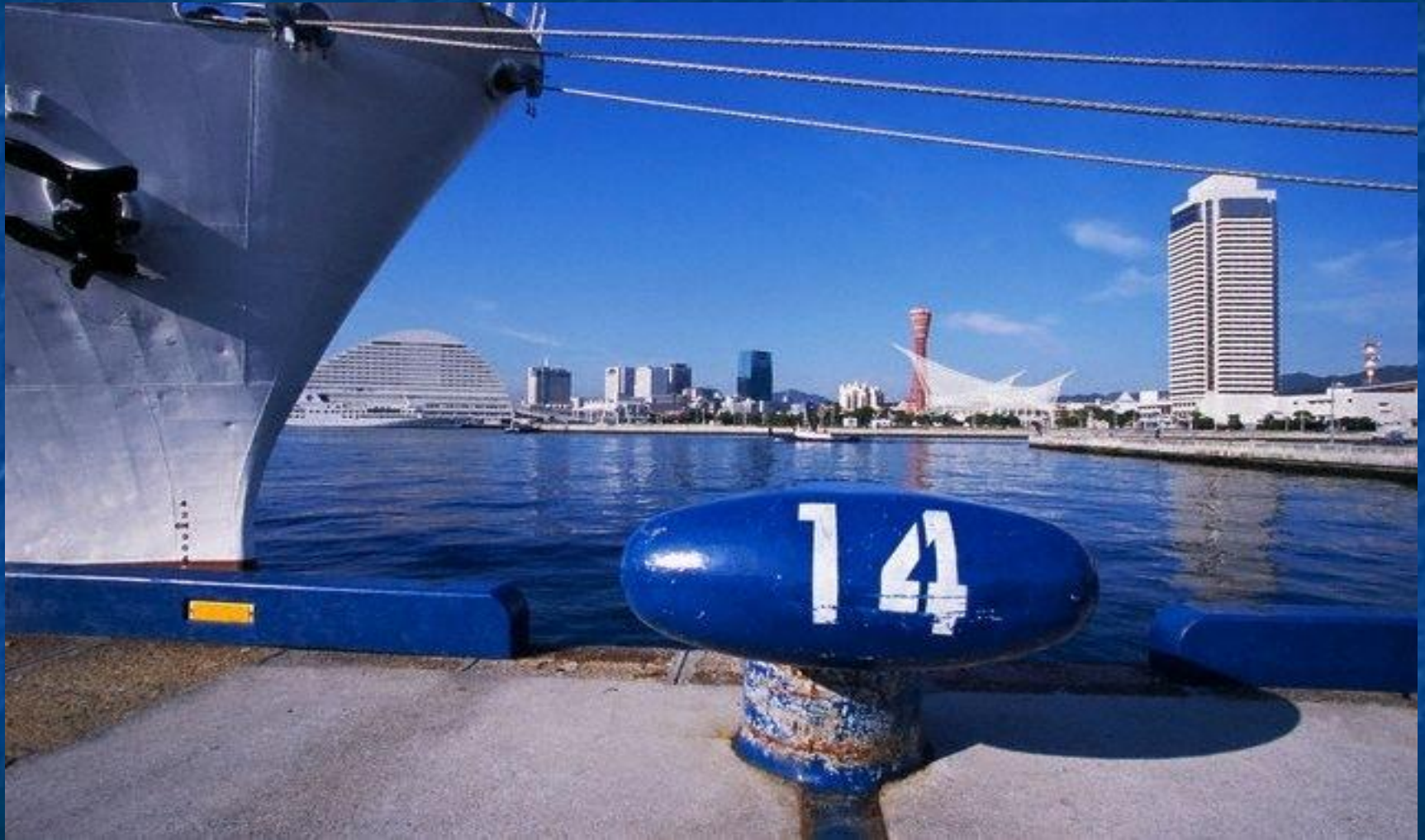
# WINDLASS







# BOLLARD





# BITTS





# 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.



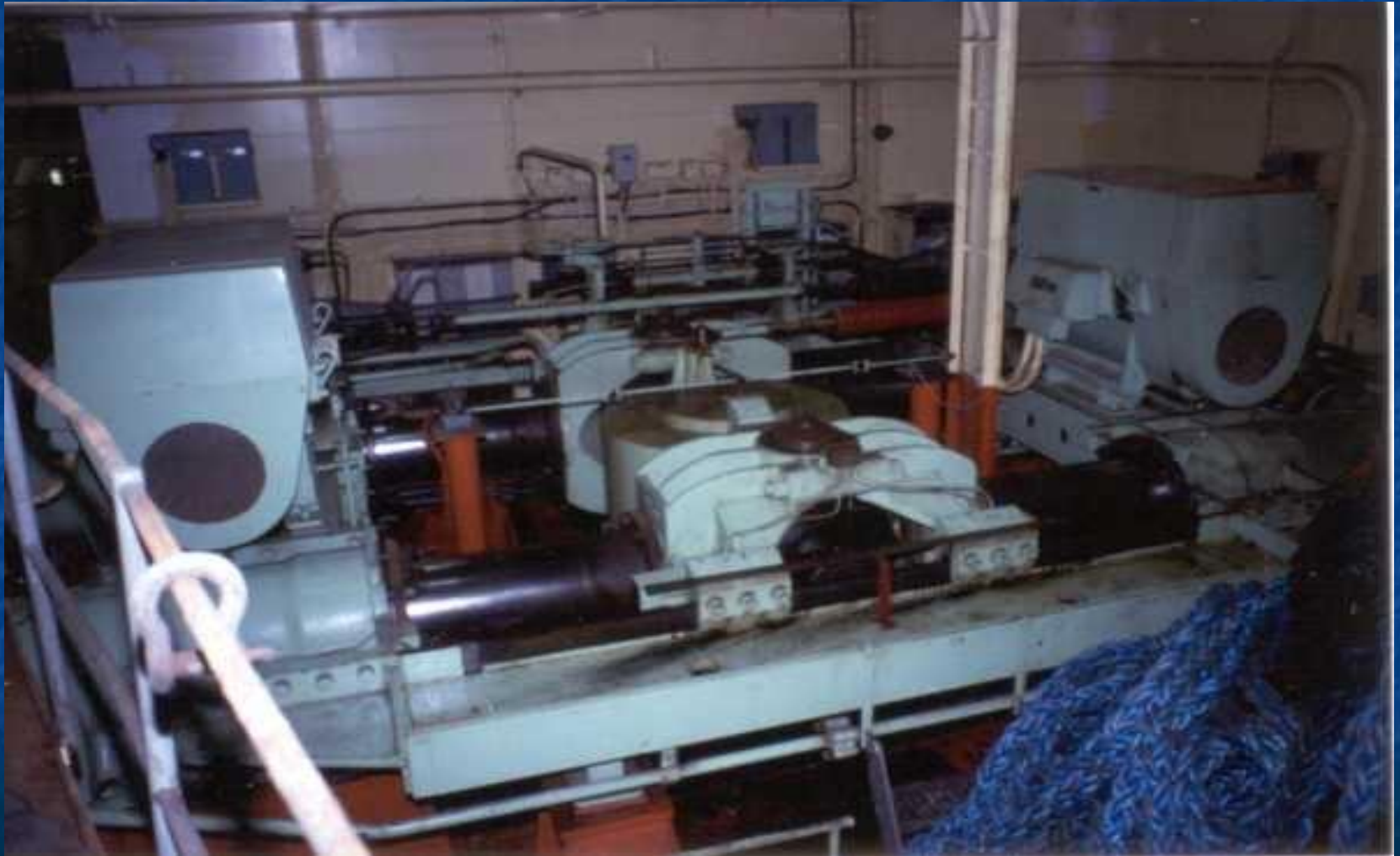
- The rudder is turned by steering engine which is located in the steering gear compartment.

CTEDN

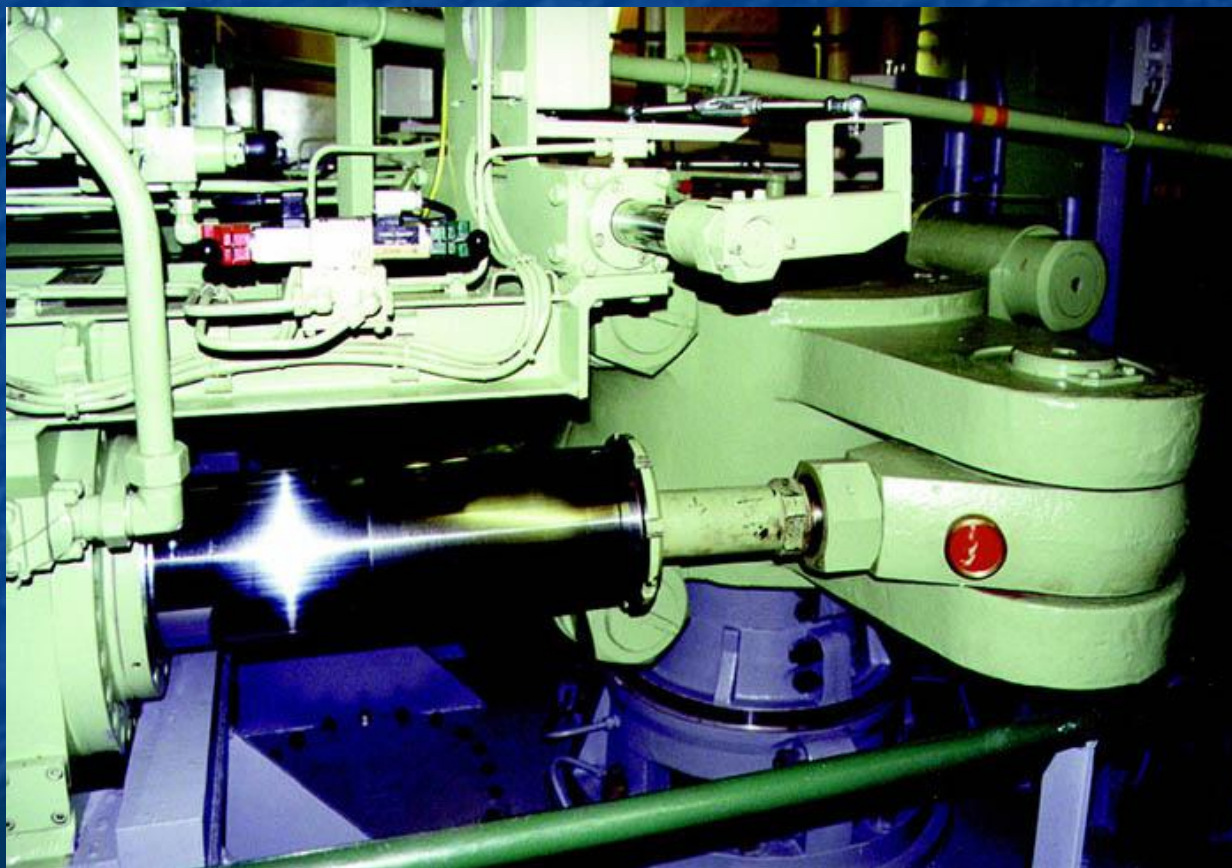




# STEERING GEAR COMPARTMENT



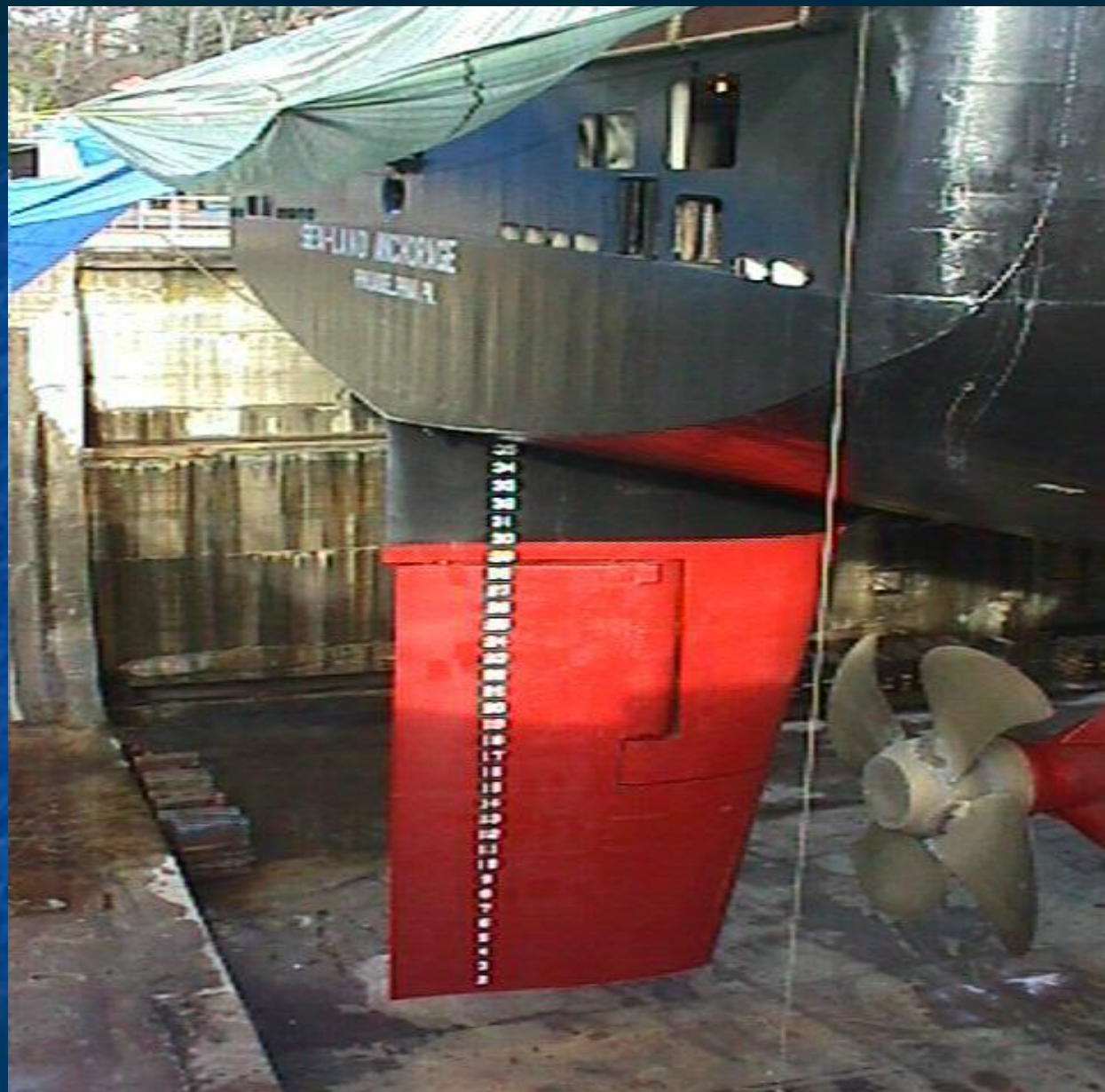
# STEERING GEAR





# RUDDER



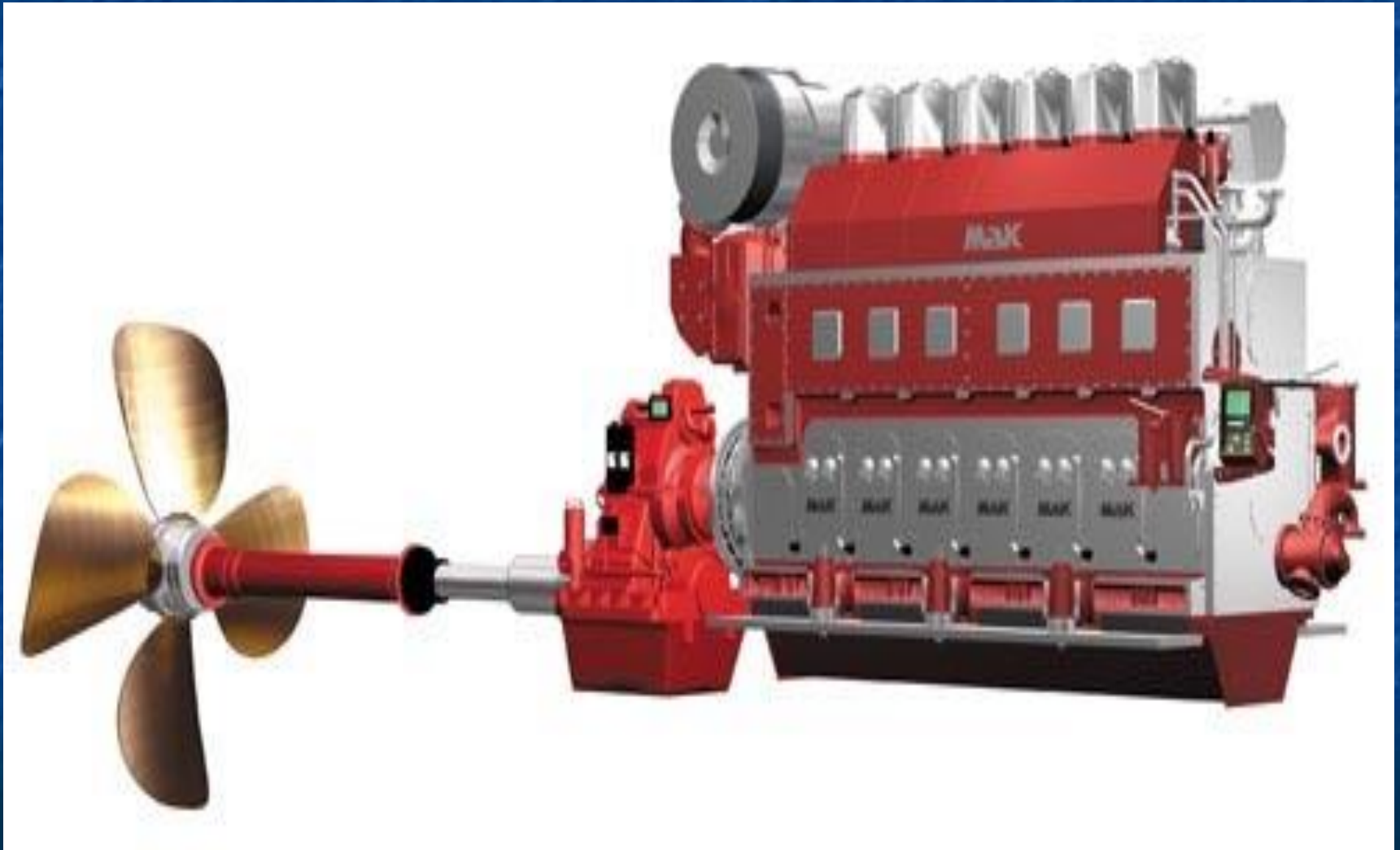




# PROPULSION

- 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)



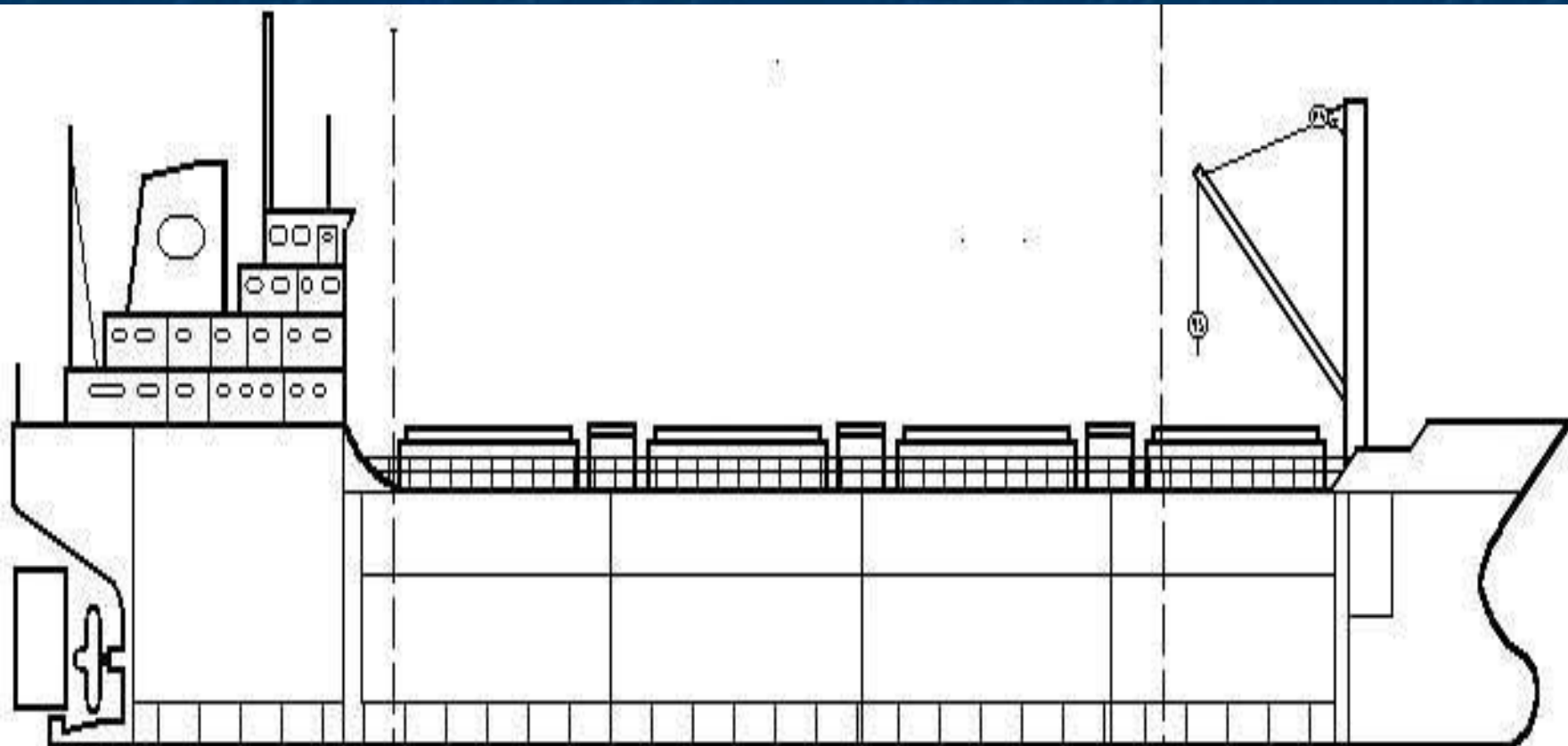
# GALLEY





# 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