

# AMMV18 SHIP CONSTRUCTION

## UNIT-1 SHIP TERMS

- 1.1 Various terms used in ship construction with reference to ship's parameter e.g. L.B.P.
- 1.2 Moulded Depth - Moulded draught etc.
- 1.3 General classification of ships.
- 1.4 Stresses in Ship's structure: Hogging- Sagging
- 1.5 Racking- Pounding- Panting etc., and Strength members to counteract the same.
- 1.6 Sections and Materials Use: Type of sections like angles
- 1.7 Bulb plates flanged beams used in ship construction- Process of welding.
- 1.8 Riveting & Welding testing of welds
- 1.9 Fabricated components.

## UNIT-2 BOTTOM & SIDE FRAMING

- 2.1 Double bottoms, watertight floors solid and bracket floors
- 2.2 Longitudinal framing keels – side framing like tank side brackets- Beam knee- Web frame etc.,
- 2.3 Shell & Decks: Plating systems for shells
- 2.4 Deck plating & Deck Girders- discontinuities like hatches and other openings- supporting & closing arrangements- mid-ship section of ships.
- 2.5 Bulk Heads & Deep Tanks: water tight bulkheads
- 2.6 Arrangement of plating and stiffeners – water tight sliding doors
- 2.7 Water tight openings through bulkheads for electric cables pipes and shafting
- 2.8 Deep tank for oil fuel or oil cargo corrugated bulk heads.

## UNIT-3 FORE & AFT END ARRANGEMENTS

- 3.1 Fore end arrangement, arrangements to resist pounding bulbous bow
- 3.2 Types of sterns stern frame and rudder
- 3.3 Types of rudder- Supporting of rudder- Locking pintle- Bearing pintle
- 3.4 Pallister , bearing shaft tunnel- Tunnel bearings

## UNIT-4 FREE BOARD AND TONNAGE

- 4.1 Significance and details of markings various international Regulations.
- 4.2 Plimsol Line Ship yard Practice layout of a shipyard-Mould loft- Optical marking
- 4.3 Automatic plate cutting, Fabrication and assembly etc.,
- 4.4 Ship Types -Tankers, Ventilation arrangements for pump rooms, holds and oil fuel tanks.
- 4.5 Bulk Carriers, Arrangement for the carriage of dangerous goods in bulk- Container ships – L.N.G., L.P.G., and Chemical carriers- Lash ships- Passenger ships- Dredgers- Tugs etc.,
- 4.6 Constructional details and requirements.

## UNIT-5 OFFSHORE TECHNOLOGY

- 5.1 Drilling ships and Platforms
- 5.2 Supply vessels- firefighting arrangement
- 5.3 Pipe laying ships – special auxiliary service ships.

5.4 Ship Surveys: Survey rules- Functions of ship classification

5.5 Societies – Surveys during construction

5.6 Periodical surveys for retention of class.

**References Books:**

1. A.J. Young, “Ship Construction Sketch & Notes”, 1st Edition, Butter worth – Heinemann, London,1980.
2. H.J. Pursey, “Merchant Ship Construction”, 7th Edition, Brown Son & Ferguson Ltd. GlasGow Great Britain, 1994.
3. Larrie D. Ferreiro, “ Ships and Science”, 1st Ed. SNAME, 2006.

