

AMSB04 BASIC SHIP THEORY

1. Lines Plan: Views of lines plan, stem and stern profiles, procedure of lines drawing, drawing tools, fairing process, table of offsets; section shapes; girth.

Practical: Linesplan drawing and generation of final offset table.

2. Integration rules: Trapezoidal rules; Simpson's rules (1-4-1, 1-3-3-1 and 5,8,-1 rules), 6 ordinate rule; Tchebycheff's rule; Areas, volumes, moments and moment of inertia.

3. Bonjeans calculation and curves, sectional area curve.

Practical: Bonjeans calculation and drawing.

4. Hydrostatics calculations and curves.

Practical : Hydrostatics calculation and drawing.

5. Watertight subdivision of ships : Bilging, floodable length calculation and subdivision. Software overview. (not for External Examination)

Practical : Hull modeling, Bonjeans and Hydrostatics using Software.

Reference Books:

1. Adrian Biran, —Ship Hydrostatics and Stability, Elsevier. 2011.
2. V. Semyonov-Tyan-Shansky, —Statics and Dynamics of the Ship, Peace publishers, Moscow., 2004.
3. Kemp & Young, —Ship Stability, notes and examples, Butterworth-Heinemann., 2000.
4. J. Klinkert, H. W. White, —Nautical Calculations Explained, Routledge & Kegan Paul, London., 1969.