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Tchebycheff's Rules; Gauss Rules; Relative Accuracy of Rules; Polar Coordinates; Spreadsheets; Summary; 4 Flotation; Introduction; Equilibrium; Equilibrium of a Body Floating in Still Water; Underwater Volume; Reserve of Buoyancy; The Metacentre; The Transverse Metacentre for Simple Geometric Forms; Vessel of Rectangular Cross Section; Vessel of Constant Triangular Section; Vessel of Circular Cross Section; Metacentric Diagrams; Trim Moment to Change Trim; Hydrostatic Curves; Tonnes per Unit Immersion; Problems in Trim; Determination of Displacement from Observed Draughts; Longitudinal Position of the Centre of Gravity; Direct Determination of Displacement and Position of G; Transverse Weight Movements; Summary; 5 Stability; Introduction; The Approach; Stability at Small Angles; Transverse Stability and the Transverse Metacentre; Longitudinal Stability; Stability of a Fully Submerged Body; Special Cases in Stability; Wall-Sided Ship; Influence on Stability of a Freely Hanging Weight; Effect of Liquid Free Surfaces The Inclining Experiment; Stability at Large Angles; Atwood's Formula; Angle of Loll; Metacentric Height in the Loll Condition; Statical Stability (GZ) Curves; Cross Curves of Stability; Deriving Curves of Statical Stability from the Cross Curves; Features of the Statical Stability Curve; Weight Movements; Transverse Movement of Weight; Bulk Cargoes; Dynamical Stability; External Influences; Wind; A Simple Wave Allowance; Turning; Icing; Stability Standards for the Intact Ship; IMO Criteria; Some Special Cases; Warship Intact Stability; Allowance for Icing; Stability in a Beam Wind; Stability with Icing and Wind

Sommario/riassunto

Written by an award-winning naval architecture author and former vice-president of the Royal Institution of Naval Architects (RINA), the fifth edition of Introduction to Naval Architecture has been fully updated to take in advances in the field and is ideal both for those approaching the subject for the first time and those looking to update or refresh their knowledge on areas outside of their direct expertise. This book provides a broad appreciation of the science and art of naval architecture, explaining the subject in physical rather than in mathematical terms. While coveri
