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Simpson's Rules; Volumes of Ship Shapes and Similar Figures; Appendages and Intermediate Ordinates; Areas and Volumes Having an Awkward Number of Ordinates; Centroids and Centers of Gravity; Summary; Chapter 8 - Quadrature - Simpson's Rules for Moments of Inertia; The Theorem of Parallel Axes; Summary; Chapter 9 - Quadrature - Simpson's Rules for Centers of Pressure on Transverse Bulkheads
Centers of Pressure by Simpson's Rules Summary; Chapter 10 - KB, BM, and KM Calculations and Graphics on Metacentric Diagrams; To Find KB; To Find Transverse BM; Metacentric Diagrams; Chapter 11 - Final KG Plus 20 Reasons for Rise in KG; Twenty Reasons for a Rise in G; Chapter 12 - Angle of List Considerations - Text, Calculations, and Graphics; Summary; Chapter 13 - Angle of Heel - Effects of Suspended Weights; Conclusions; Summary; Chapter 14 - Angle of List Due to Bilging of Side Compartments; Summary; Chapter 15 - Heel Due to Turning; Chapter 16 - Angle of Loll
To Calculate the Angle of Loll Angle of List; Angle of Loll; Chapter 17 - Moments of Statical Stability; The Moment of Statical Stability at a Small Angle of Heel; The Moment of Statical Stability at a Large Angle of Heel; Chapter 18 - Aspects of Trim - The Main Factors Involved; The Moment to Change Trim 1 cm (MCT 1 cm or MCTC); To Find the Change of Draft Forward and Aft Due to Change of Trim; The Effect of Shifting Weights Already on Board; Chapter 19 - Trim Calculations - Changing Conditions of Loading; The Effect of Loading, Discharging, and Moving Weights
Using Trim to Find the Position of the Center of Flotation

Sommario/riassunto

Understanding ship stability - the ability of a ship to return to an initial state after disturbing forces and moments - is critical for all maritime students and professionals studying for a deck or engineering certificate of competency, or seeking promotion to a higher rank within marine or naval companies or institutions. The seventh edition of this classic text provides a comprehensive introduction to all aspects of ship stability and ship strength, squat, interaction and trim, materials stresses and forces, with numerous worked examples to assist masters, mates and engineering office
