

1. Record Nr.	UNINA9910826588503321
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Titolo	Introduction to naval architecture // Eric C. Tupper, BSc, CEng, RCNC, FRINA, WhSch
Pubbl/distr/stampa	Amsterdam ; ; Boston, : Elsevier, Butterworth Heinemann, 2013 Oxford : , : Butterworth-Heinemann, , 2013
ISBN	1-283-95044-8 0-08-098272-7
Edizione	[Fifth edition.]
Descrizione fisica	1 online resource (xiii, 476 pages) : illustrations (some color)
Collana	Gale eBooks
Disciplina	623.81
Soggetti	Naval architecture
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front Cover; Introduction to Naval Architecture; Copyright Page; Contents; Preface to the Fifth Edition; General; Arrangement of the Book; Acknowledgements; 1 Introduction; General; Naval Architecture and the Naval Architect; The Ship; Fit for Purpose; Variety; Safety; The Impact of Technology and Computers; In Design; In Production; In Operation; Summary; 2 Definition and Regulation; Introduction; Definition; Defining the Hull Form; The Geometry of the Hull; Representing the Hull Form; Hull Characteristics; Displacement and Tonnage; Displacement; Deadweight; Tonnage; FREEBOARD AND LOAD LINES Safety of Life at Sea; International and National Regulatory Bodies; General; International Law; The International Maritime Organisation; General; Structure of IMO; The Maritime Safety Committee; The Marine Environment Protection Committee; Conventions; Enforcing Regulations; Flag States; Port State Control (PSC); The Maritime Coastguard Agency, UK; Classification Societies; The International Association of Classification Societies; Unified Requirements; Common Rules; Unified Interpretations; Standards; Precision; Impact of Rules and Regulations on Design; Summary; 3 Ship Form Calculations Introduction; Approximate Integration; Trapezoidal Rule; Simpson's First Rule; Application to Waterplane Calculations; Other Simpson's Rules; 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

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#### 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.

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