

Book Basic Marine Engineering By Jk Dhar

This book provides a comprehensive coverage of the basic theoretical work required by marine engineering officers and electrotechnical officers (ETOs), putting into place key fundamental building blocks and topics in electrotechnology before progressing to more complex topics and electromagnetic systems. Revisions will include important new material on emergent technology such as image intensifiers, the increased maritime use of LEDs, examples of ship systems including power distribution systems, and references to modern ship systems, eg. GPS, ECDIS, Radar, AIS, Comms outfits, etc. This essential text offers a truly rigorous approach to the key topic of electrotechnology. As a method of joining with economic, performance-related and environmental advantages over traditional welding in some applications, adhesive bonding of joints in the marine environment is increasingly gaining popularity. Adhesives in marine engineering provides an invaluable overview of the design and use of adhesively-bonded joints in this challenging environment. After an introduction to the use of adhesives in marine and offshore engineering, part one focuses on adhesive solution design and analysis. The process of selecting adhesives for marine environments is explored, followed by chapters discussing the specific design of adhesively-bonded joints for ship applications and wind turbines. Predicting the failure of bonded structural joints in marine engineering is also considered. Part two reviews testing the mechanical, thermal and chemical properties of adhesives for marine environments together with the moisture resistance and durability of adhesives for marine environments. With its distinguished editor and international

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team of expert contributors, Adhesives in marine engineering is an essential guide for all those involved in the design, production and maintenance of bonded structures in the marine environment, as well as proving a key source for academic researchers in the field. Provides an invaluable overview of the design and use of adhesively-bonded joints in marine environments Discusses the use of adhesives in marine and offshore engineering, adhesive solution design and analysis, and the design of adhesively-bonded joints for ship applications and wind turbines, among other topics Reviews testing the mechanical, thermal and chemical properties of adhesives for marine environments, together with the moisture resistance and durability of these adhesives The Book has been thoroughly revised, keeping in mind the rapid technological advances in this mammoth industry and also the feedback received from various quarters. Relevant extracts from current SOLAS, IACS, Lloyd's Register, DNV and ABS Rules, have been included with permission. However, these must be used only for academic purposes. Relevant current documents onboard ships must be referred to, for the purpose of complying with Classification Societies' and other Statutory Requirements. Bestselling title within the Reeds Marine Engineering series, essential for all marine engineers, and now in a revised new edition.

This exciting new edition covers the core subject areas of arithmetic, algebra, mensuration in 2D and 3D, trigonometry and geometry, graphs, calculus and statistics and probability for Marine Engineering students. Initial examples have been designed purely to practise mathematical technique and, once these skills have been mastered, further examples focus on engineering situations where the appropriate skills may be utilised. The practical questions are primarily from a marine engineering background but questions from other disciplines,

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such as electrical engineering, will also be covered, and reference made to the use of advanced calculators where relevant.

A fully revised and updated edition of this classic textbook covering the principal topics in electrotechnology for marine engineers. This book provides comprehensive coverage of the basic theoretical work required by Marine Engineering Officers and Electrotechnical Officers (ETOs), putting into place key fundamental building blocks and topics in electrotechnology before progressing to more complex topics and electromagnetic systems. Volume 6 covers essential basic electrotechnology principles for the 21st century, including the fundamentals of electron theory, AC and DC current, circuits, electromagnetism and electrochemistry. It provides a firm foundation for complementary Volume 7 in the Marine Engineering Series to discuss emergent technology such as image intensifiers, the transistor, increased maritime use of LEDs, and references to modern ship systems such as GPS, ECDIS, Radar and AIS. This new edition has been thoroughly updated in line with guidelines, best practice and the many technological developments that have taken place over the past 5 years since the previous edition published, as well as improvements and updates to the technical diagrams. Developed to complement Reeds Vol 12 (Motor Engineering for Marine Engineers), this textbook is key for all marine engineering officer cadets. Accessibly written and clearly illustrated, General Engineering Knowledge for Marine Engineers takes into account the varying needs of students studying 'general' marine engineering, recognising recent changes to the Merchant Navy syllabus and current pathways to a sea-going engineering career. It includes the latest equipment, practices and trends in marine engineering, as well as incorporating the 2010 Manila Amendments, particularly relating to management. It is an essential buy for

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any marine engineering student. This new edition reflects all developments within the discipline and includes updates and additions on, amongst other things: · Corrosion, water treatments and tests · Refrigeration and air conditioning · Fuels, such as LNG and LPG · Insulation · Low sulphur fuels · Fire and safety Plus updates to many of the technical engineering drawings.

This textbook covers the theoretical, fundamental aspects of naval architecture for students preparing for the Class 2 and Class 1 Marine Engineer Officer exams. It introduces the basic foundation themes within naval architecture, (hydrostatics, stability, resistance and powering), using worked examples to show how solutions should be presented for an exam. The topics are ordered in a manner of a typical taught module, to aid the use of the book by lecturers as a compliment to a course. Importantly, this updated edition contains updated text and figures in line with modern practice, including an update of many of the figures to three-dimensional diagrams, and a new section on computer software for naval architecture. The book also includes sample examination questions with worked examples answers to aid students in their learning.

This indispensable guide to ship stability covers topics such as flotation and buoyancy, small angle, large angle and longitudinal stability, water density effects, bilging, ship resistance, and advanced hydrostatics. Each chapter has a comprehensive list of aims and objectives at the start of the topic, followed by a check-list at the end of the topic for students to ensure that they have developed all the relevant skills before moving onto the next topic area. The book features over 170 worked examples

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with fully explained solutions, enabling students to work through the examples to build up their knowledge and develop the necessary key skills. The worked examples, which range in difficulty from very simple one-step solutions to SQA standard exam questions and above, are predominantly based on a hypothetical ship, with the reader supplied with extracts from a typical data book for the ship which replicates those found on real ships, enabling the reader to develop and practise real-life skills.

This book offers a comprehensive and timely overview of internal combustion engines for use in marine environments. It reviews the development of modern four-stroke marine engines, gas and gas–diesel engines and low-speed two-stroke crosshead engines, describing their application areas and providing readers with a useful snapshot of their technical features, e.g. their dimensions, weights, cylinder arrangements, cylinder capabilities, rotation speeds, and exhaust gas temperatures. For each marine engine, information is provided on the manufacturer, historical background, development and technical characteristics of the manufacturer's most popular models, and detailed drawings of the engine, depicting its main design features. This book offers a unique, self-contained reference guide for engineers and professionals involved in shipbuilding. At the same time, it is intended to support students

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at maritime academies and university students in naval architecture/marine engineering with their design projects at both master and graduate levels, thus filling an important gap in the literature. Since its first appearance in 1950, Pounder's Marine Diesel Engines has served seagoing engineers, students of the Certificates of Competency examinations and the marine engineering industry throughout the world. Each new edition has noted the changes in engine design and the influence of new technology and economic needs on the marine diesel engine. This eighth edition retains the directness of approach and attention to essential detail that characterized its predecessors. There are new chapters on monitoring control systems and governor systems, gas turbines and safety aspects of engine operation. Important developments such as the latest diesel-electric LNG carriers that will soon be in operation. After experience as a seagoing engineer with the British India Steam Navigation Company, Doug Woodyard held editorial positions with the Institution of Mechanical Engineers and the Institute of Marine Engineers. He subsequently edited The Motor Ship journal for eight years before becoming a freelance editor specializing in shipping, shipbuilding and marine engineering. He is currently technical editor of Seatrade, a contributing editor to Speed at Sea, Shipping World and Shipbuilder and a technical press consultant to Rolls-Royce

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Commercial Marine. * Designed to reflect the recent changes to SQA/Marine and Coastguard Agency Certificate of Competency exams. Careful organisation of the new edition enables readers to access the information they require * Brand new chapters focus on monitoring control systems and governor systems, gas turbines and safety aspects of engine operation * High quality, clearly labelled illustrations and figures

Essential text for all marine engineers and ETO officers, covering advanced electrotechnology theory.

Introduction to Marine Engineering Elsevier

Marine Auxiliary Machine: Sixth Edition explains the correct operation and maintenance of marine auxiliary machinery. The book discusses topics such as the arrangements of the engine and boiler room; pipes and fittings and pumps; compressors and separators; and heat exchangers - its types, control of temperature, and maintenance. The book also talks about other machineries such as diesel engines, steam turbines, propellers, and gears; refrigeration and air conditioning systems; deck machinery; and safety equipment. The text is recommended for engineers in ships who would like to know more about the auxiliary machines onboard ships, how they are operated, and the principles behind them.

This textbook provides readers with an

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understanding of the basics of ship stability as it has been enacted in international law. The assessment of ship stability has evolved considerably since the first SOLAS convention after the sinking of the RMS Titanic, and this book enables readers to familiarise themselves with the most up-to-date modern day methodology, as well as looking ahead to the effects on ship design over the next fifty years. The author not only explains the methodology of probabilistic ship damage as required by the International Maritime Organisation (IMO), but also details the new requirements to assess certain sizes and classes of ships to the seven second-generation ship stability requirements. Many textbooks that are currently used by undergraduates focus on the geometric-centric deterministic approach to the assessment of ship stability, whereas this book also includes material on the classes of ships that are now required to have probabilistic ship damage assessment, as has only recently been agreed by the IMO. Basic Naval Architecture: Ship Stability contains up-to-date information, making it ideal for university students studying ocean or marine engineering, as well as being of interest to students on naval architecture and ship science courses. Highly illustrated and including chapter studies for ease of learning, the book is an ideal one-volume textbook for students.

Covering the broad field of marine and offshore

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technology, sections of the volume address ocean environments, offshore structures, naval architecture, submersibles and diving, marine risers and pipelines, marine engineering, marine control systems, mooring and dynamic positioning, marine salvage, corrosion, marine safety, electronic navigations and radar, and maritime law. Annotation copyrighted by Book News, Inc., Portland, OR This work has been selected by scholars as being culturally important and is part of the knowledge base of civilization as we know it. This work is in the public domain in the United States of America, and possibly other nations. Within the United States, you may freely copy and distribute this work, as no entity (individual or corporate) has a copyright on the body of the work. Scholars believe, and we concur, that this work is important enough to be preserved, reproduced, and made generally available to the public. To ensure a quality reading experience, this work has been proofread and republished using a format that seamlessly blends the original graphical elements with text in an easy-to-read typeface. We appreciate your support of the preservation process, and thank you for being an important part of keeping this knowledge alive and relevant.

This book covers the principal topics in thermodynamics for officer cadets studying Merchant Navy Marine Engineering Certificates of Competency (CoC) as well as the core syllabi in

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thermodynamics for undergraduate students in marine engineering, naval architecture and other marine technology related programmes. The book provides a firm foundation in the principals of thermodynamics, decoding the fundamental science and physics applied to marine technology, covering examples of modern machines and practice to reflect current legislation and syllabi. The new edition will provide worked examples and test exam questions, corresponding to current Merchant Navy Qualifications as well as university-style examinations. Where relevant, reference will be made to self-study computer exercises for undertaking multiple calculations in common software, e.g. MS Excel. This key textbook takes into account the varying needs of marine students, recognising recent changes to the Merchant Navy syllabus and current pathways to a sea-going engineering career, including National Diplomas, Higher National Diploma and degree courses. This book covers the general engineering knowledge required by candidates for the Department of Transport's Certificates of Competency in Marine Engineering, Class One and Class Two. The text is updated throughout in this third edition, and new chapters have been added on production of fresh water and on noise and vibration. Reference is also provided to up-to-date papers and official publications on specialized topics. These updates

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ensure that this little volume will continue to be a useful pre-examination and revision text. - Marine Engineers Review, January 1992

This book addresses various aspects of ship construction, from ship types and construction materials, to welding technologies and accuracy control. The contents of the book are logically organized and divided into twenty-one chapters. The book covers structural arrangement with longitudinal and transverse framing systems based on the service load, and explains basic structural elements like hatch side girders, hatch end beams, stringers, etc. along with structural subassemblies like floors, bulkheads, inner bottom, decks and shells. It presents in detail double bottom construction, wing tanks & duct keels, fore & aft end structures, etc., together with necessary illustrations. The midship sections of various ship types are introduced, together with structural continuity and alignment in ship structures. With regard to construction materials, the book discusses steel, aluminum alloys and fiber reinforced composites. Various methods of steel material preparation are discussed, and plate cutting and forming of plates and sections are explained. The concept of line heating for plate bending is introduced. Welding power source characteristics, metal transfer mechanisms, welding parameters and their effects on the fusion zone, weld deposit, and weld bead profile are discussed in

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detail. Various fusion welding methods, MMAW, GMAW, SAW, Electroslag welding and Electrogas welding and single side welding are explained in detail. Friction stir welding as one of the key methods of solid state welding as applied to aluminum alloys is also addressed. The mechanisms of residual stress formation and distortion are explained in connection with stiffened panel fabrication, with an emphasis on weld induced buckling of thin panels. Further, the basic principles of distortion prevention, in-process distortion control and mitigation techniques like heat sinking, thermo-mechanical tensioning etc. are dealt with in detail. In its final section, the book describes in detail various types of weld defects that are likely to occur, together with their causes and remedial measures. The nondestructive testing methods that are most relevant to ship construction are explained. Lastly, a chapter on accuracy control based on statistical principles is included, addressing the need for a suitable mechanism to gauge the ranges of variations so that one can quantitatively target the end product accuracy.

Developed to complement Reeds Vol 8 (General Engineering for Marine Engineers), this indispensable textbook comprehensively covers the motor engineering syllabus for marine engineering officer cadets. Starting with the theoretical and practical thermodynamic operating cycles, the book

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is structured to give a description of the engines and components used to extract energy from fossil fuels and achieve high levels of efficiency. Accessibly written and clearly illustrated, this book is the only guide available for marine engineering students focusing on the knowledge needed for passing the motor engineering certificate of Competency (CoC) examinations. This new edition reflects all developments within the discipline and includes updates and additions on, amongst other things: · Engine emissions and control engineering · Fuel injection · Starting and reversing · Ancillary supply systems · Safety and the environment Plus updates to many of the technical engineering drawings.

Muckle's Naval Architecture, Second Edition is concerned with problems related to resistance, propulsion, and vibration in naval architecture. Topics include ship calculations, stability and trim, ship motions, and structural strength. This book also gives a brief reference to ship design. This text is comprised of 13 chapters; the first of which provides an overview of the function of the ship, its layout, and various types. The next chapter explains definitions, principal dimensions, and form coefficients, along with classification societies and governmental authorities that regulate ship design, construction, and safety. Various calculations that are performed to determine the form of a ship are the subject of the next chapter. Attention then turns

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to buoyancy, stability, and trim, along with sea and ship motions, the problem of structural strength, vibration, and resistance. The influence of rudders and control on ship movement is also discussed. Finally, this book describes the methods for determining the amount of power required to propel a ship. This book is intended primarily for practicing naval architects, marine engineers, deck officers, and all students of naval architecture.

The early development of the screw propeller. Propeller geometry. The propeller environment. The ship wake field, propeller performance characteristics.

The book covers the principal topics in applied mechanics for professional trainees studying Merchant Navy Marine Engineering Certificates of Competency (CoC) as well as the core syllabi in applied mechanics for undergraduates studying for BSc, BEng and MEng degrees in marine engineering, naval architecture and other marine technology related programmes. The revised version takes into account the need of these students, recognising recent changes to the Merchant Navy syllabus and current pathways to a sea-going engineering career, including National diplomas, Higher National Diploma and degree courses. Basic principles are dealt with, beginning at a fairly elemental stage, with this new edition applying the underlying principles to a shipping environment.

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Each chapter has fully worked examples interwoven into the text, with test examples set at the end of each chapter. Other revisions include examples reflecting modern machines and practice, current legislation and current syllabi.

A new title in the highly respected Reeds Marine Engineering Series, in response to the increasing reliance on electrical power systems in the marine and offshore industry. Large passenger ships now carry as many electrical officers as marine engineers, electrical propulsion is now in common use by LNG carriers, small parcel tankers, oil tankers, ferries, offshore support, the navy, fleet auxiliary, cable layers and cruise ships, and a number of shipping companies now award the Chief Electro Technical Officer the equivalent rank to the ship's master and Chief Engineer. These developments have resulted in the establishment of a Foundation Degree programme for Electro Technical Officers and the current development of full degree programmes. As such, a targeted textbook for students on the subject is required. As with all titles in the Reeds Marine Engineering Series, this book will be written in clear, accessible language, so as to be of use to all students and particularly those for whom English isn't their first language. Technical drawings and diagrams will be used throughout and each chapter will be accompanied by example examination questions.

This is a fully revised, new edition on the topic of instrumentation and control systems and their application to marine engineering for professional trainees studying Merchant Navy Marine Engineering Certificates of Competency (CoC) as well as Electrical/Marine Engineering undergraduate students. Providing generic technical and practical descriptions of the operation of instrumentation and control devices and systems, this volume also contains

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mathematic analysis where appropriate. Addressing this subject area, the domain of Instrumentation Engineers/Technicians as well as Control Engineers, and covering established processes and protocols and extensive developing technology, this textbook is written with the marine engineer in mind, particularly those studying Engineering Knowledge. The content ranges from simple measurement devices, through signal conditioning and digitisation to highly sophisticated automated control and instrumentation systems. It also includes a brand new section on electrical equipment in hazardous areas detailing hazards, gas groups, temperature classifications and types of protection including increased and intrinsic safety and encapsulation, and up-to-date material on the new generation of Liquefied Natural Gas carriers, SMART sensors and protocols, as well as computer based systems.

The Maritime Engineering Reference Book is a one-stop source for engineers involved in marine engineering and naval architecture. In this essential reference, Anthony F. Molland has brought together the work of a number of the world's leading writers in the field to create an inclusive volume for a wide audience of marine engineers, naval architects and those involved in marine operations, insurance and other related fields. Coverage ranges from the basics to more advanced topics in ship design, construction and operation. All the key areas are covered, including ship flotation and stability, ship structures, propulsion, seakeeping and maneuvering. The marine environment and maritime safety are explored as well as new technologies, such as computer aided ship design and remotely operated vehicles (ROVs). Facts, figures and data from world-leading experts makes this an invaluable ready-reference for those involved in the field of maritime engineering. Professor A.F. Molland, BSc, MSc, PhD, CEng, FRINA, is Emeritus Professor of Ship

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Design at the University of Southampton, UK. He has lectured ship design and operation for many years. He has carried out extensive research and published widely on ship design and various aspects of ship hydrodynamics. * A comprehensive overview from best-selling authors including Bryan Barrass, Rawson and Tupper, and David Eyres * Covers basic and advanced material on marine engineering and Naval Architecture topics * Have key facts, figures and data to hand in one complete reference book

This textbook covers ship construction techniques and methods for all classes of Merchant Navy marine deck and engineering Certificates of Competency (CoC) as well as Undergraduate students studying Naval Architecture and Marine Engineering. It is complementary to Volume 4 (Naval Architecture) and Volume 8 (General Engineering Knowledge). Importantly, this new edition contains up-to-date information on modern shipyards, dry-docking procedures and methods of construction. Extensively illustrated, the book also includes sample examination questions with worked examples answers to aid students in their learning.

Practical Ship Hydrodynamics provides a comprehensive overview of hydrodynamic experimental and numerical methods for ship resistance and propulsion, maneuvering, seakeeping and vibration. Beginning with an overview of problems and approaches, including the basics of modeling and full scale testing, expert author Volker Bertram introduces the marine applications of computational fluid dynamics and boundary element methods. Expanded and updated, this new edition includes: Otherwise disparate information on the factors affecting ship hydrodynamics, combined to provide one practical, go-to resource. Full coverage of new developments in computational methods and model testing techniques relating to marine design and development. New chapters on hydrodynamic aspects of ship vibrations and

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hydrodynamic options for fuel efficiency, and increased coverage of simple design estimates of hydrodynamic quantities such as resistance and wake fraction. With a strong focus on essential background for real-life modeling, this book is an ideal reference for practicing naval architects and graduate students.

Introduction to Marine Engineering explains the operation of all the ship's machinery, with emphasis on correct, safe operating procedures and practices at all times. Organized into 17 chapters, this book begins with an overall look at the ship. Subsequent chapters describe the various ship machineries, including diesel engines, steam turbines, boilers, feed systems, pumps, auxiliaries, deck machinery, hull equipment, shafting, propellers, steering gear, and electrical equipment. Other aspects of marine engineering, particularly, fuel oils, lubricating oils, refrigeration, air conditioning, ventilation, firefighting and safety, watchkeeping, and equipment operation, are also described. This book will be useful to anyone with an interest in ships' machinery or a professional involvement in the shipping business.

A marine engineer will need to have a broad background of knowledge within several aspects of marine design and operations. These aspects relate to the design of facilities for offshore applications and evaluation of operational conditions for marine installation and modification/maintenance works. Such needs arise in the marine industries, in the offshore oil and gas industry as well as in the offshore renewable industry. Developed from knowledge gained throughout the author's engineering career, this book covers several of the themes where engineers need knowledge and also serves as a teaser for those who will go into more depth on the different thematic aspects discussed. Details of qualitative risk analysis, which is considered an excellent tool to identify risks

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in marine operations, are also included. The book is the author's attempt to develop a text for those in marine engineering science who like a practical and solid mathematical approach to marine engineering. It is the intention that the book can serve as an introductory textbook for master degree courses in marine sciences and be of inspiration for teachers who will extend the course into specialisation courses on stability of vessels, higher order wave analysis, nonlinear motions of vessels, arctic offshore engineering, etc. The book could also serve as a handbook for PhD students and researchers who need a handy introduction to solving marine technology related problems. Naval Architecture for Marine Engineers focuses on resistance, propulsion, and vibration aspects of ships. The book first discusses the functions, layouts, and types of ships and terms used. The text looks at classification societies and governmental authorities influential on the design, construction, and safety of ships. Lloyd's Register of Shipping; governmental authorities; and Inter-governmental Maritime Consultative Organization (IMCO) are noted. The book also highlights ship calculations, including trapezoidal rule, Simpson's rule, and other rules for calculation. The text discusses as well the buoyancy, stability, and trim. Conditions for equilibrium of body floating in still water; calculation of underwater volume; stability at large angle of inclination; and flooding and damaged stability are considered. The selection also underscores structural strength of ships. Static forces on a ship in still water; dynamic longitudinal strength problem; resistance of ship to buckling; and materials used in ships are noted. The text also looks at resistance, powering, vibration, and propulsion of ships. The book is a vital source of data for readers interested in naval architecture.

Volume II of the manual that has been absolutely

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indispensable to the ship's engineer for over forty years was completely updated by a team of practicing marine engineers in 1991. Chapters on obsolete equipment were deleted; those on systems that are still current were updated; and new chapters were written to cover the innovations in materials, machines, and operating practices that evolved recently.

This handbook is the definitive reference for the interdisciplinary field that is ocean engineering. It integrates the coverage of fundamental and applied material and encompasses a diverse spectrum of systems, concepts and operations in the maritime environment, as well as providing a comprehensive update on contemporary, leading-edge ocean technologies. Coverage includes an overview on the fundamentals of ocean science, ocean signals and instrumentation, coastal structures, developments in ocean energy technologies and ocean vehicles and automation. It aims at practitioners in a range of offshore industries and naval establishments as well as academic researchers and graduate students in ocean, coastal, offshore and marine engineering and naval architecture. The Springer Handbook of Ocean Engineering is organized in five parts: Part A: Fundamentals, Part B: Autonomous Ocean Vehicles, Subsystems and Control, Part C: Coastal Design, Part D: Offshore Technologies, Part E: Energy Conversion

Marine Auxiliary Machinery, Seventh Edition is a 16-chapter text that covers the significant advances in marine auxiliary machinery relevant to the certification of competency examinations. The introductory chapters

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deal with the basic components of marine machineries, such as propulsion system, heat exchanger, valves, and pipelines. The succeeding chapters describe the pumps and pumping system, specifically the tanker and gas carrier cargo pumps. Considerable chapters are devoted to the operation of machinery's major components, including the propeller shaft, steering gear, auxiliary power, bow thrusters, and stabilizers. Other chapters consider the refrigeration, heating, ventilation, and air conditioning systems. The final chapters tackle the safety system of marine auxiliary machinery, particularly the fire protection, safety, instrumentation, and control systems. This book will prove useful to marine and mechanical engineers.

A textbook that offers a unified treatment of the applications of hydrodynamics to marine problems. The applications of hydrodynamics to naval architecture and marine engineering expanded dramatically in the 1960s and 1970s. This classic textbook, originally published in 1977, filled the need for a single volume on the applications of hydrodynamics to marine problems. The book is solidly based on fundamentals, but it also guides the student to an understanding of engineering applications through its consideration of realistic configurations. The book takes a balanced approach between theory and empirics, providing the necessary theoretical background for an intelligent evaluation and application of empirical procedures. It also serves as an introduction to more specialized research methods. It unifies the seemingly diverse problems of marine hydrodynamics by examining them not as separate

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problems but as related applications of the general field of hydrodynamics. The book evolved from a first-year graduate course in MIT's Department of Ocean Engineering. A knowledge of advanced calculus is assumed. Students will find a previous introductory course in fluid dynamics helpful, but the book presents the necessary fundamentals in a self-contained manner. The 40th anniversary of this pioneering book offers a foreword by John Grue. Contents Model Testing • The Motion of a Viscous Fluid • The Motion of an Ideal Fluid • Lifting Surfaces • Waves and Wave Effects • Hydrodynamics of Slender Bodies

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