Marine Engineering Handbook

The role of an engineer onboard a modern vessel is multifaceted and requires knowledge and application of multiple engineering disciplines. Also, almost every piece of equipment is either controlled by or fed with electrical power. This book caters to the structured syllabi for Marine Engineering Pre-sea Students, Marine Engineers of all post-sea competency levels and Electro Technical Officers of the Merchant Navy. It can also be used as a reference book in libraries ashore and onboard ships. Comprising of 26 chapters in simple English, it explains not only the fundamentals but also the constructional features, operating principles, maintenance procedures and rules that govern the safe operation of all important electrical systems onboard a commercial ship. Extracts from SOLAS Regulations, IACS Guidelines, Lloyd's Register, Det Norske Veritas and American Bureau of Shipping Rules, have been included with permission. Many world-class organisations and manufacturers have extended their invaluable support and enriched the content too. The Teaching Guide at the beginning of this book suggests a standard teaching methodology. The question bank, with a total of over 1000 questions, covers all topics that have been explained. This edition also contains more than 500 relevant figures, including photographs that have been contributed by leading equipment manufacturers across the world. About the Author Elstan A. Fernandez, who is a specialist in Marine Control Systems, has also authored the book on Marine Electrical Technology. Having shared his experienced with The Great Eastern Institute of Maritime Studies, Lonavla, as Electrical and Laboratory Superintendent, also a Faculty in Electrical Engineering. Further he was also affiliated to Tolani Maritime Institute as senior lecturer, he was also a foreign expert to Shanghai Maritime University, China. He has the honor of being the first Indian as Resident Faculty at Merchant Marine College, SMU.

Excerpt from The Blue Book of Facts of Marine Engineering: Including New Questions and Problems With Answers, on Engines, Boilers, Turbines, Safety-Valves, Electricity and Oil, That Are Required for All Grades of Marine Steam and Gas Engine License A. Find the true water level, see that the water glass is in working order, take notice of the steam pressure, see that fires are all right and that the bilges are not full of water. About the Publisher Forgotten Books publishes hundreds of thousands of rare and classic books. Find more at www.forgottenbooks.com This book is a reproduction of an important historical work. Forgotten Books uses state-of-the-art technology to digitally reconstruct the work, preserving the original format whilst repairing imperfections present in the aged copy. In rare cases, an imperfection in the original, such as a blemish or missing page, may be replicated in our edition. We do, however, repair the vast majority of imperfections successfully; any imperfections that remain are intentionally left to preserve the state of such historical works.

Excerpt from A Pocket Book of Marine Engineering Rules and Tables: For the Use of Marine Engineers, Naval Architects, Designers, Draughtsmen, Superintendents, and All Engaged in the Design and Construction of Marine Machinery, Naval Merchantile In conclusion, we trust that the book may be received favour ably, and found of use by practical men, and that any sh ort comings may be overlooked on the score that it is the production, of the spare moments of busy men, rather than of those having ample leisure. About the Publisher Forgotten Books publishes hundreds of thousands of rare and classic books. Find more at www.forgottenbooks.com This book is a reproduction of an important historical work. Forgotten Books uses state-of-the-art technology to digitally reconstruct the work, preserving the original format whilst repairing imperfections present in the aged copy. In rare cases, an imperfection in the original, such as a blemish or missing page, may be replicated in our edition. We do, however, repair the vast majority of imperfections successfully; any imperfections that remain are intentionally left to preserve the state of such historical works.

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This expanded and updated edition Thomas Ask's Handbook of Marine Surveying will be welcomed by students of marine surveying, professional marine surveyors, boatyard operators and technically-minded boat owners. It covers the latest marine surveying technology, including analysis of the mechanical behavior of materials, failure analysis, stress concentration, fatigue and fracture, corrosion, wood-damaging organisms, polymer chemistry, and the composition and characteristics of common plastics, metal, alloys and composite materials. There is also a useful survey checklist that provides practical techniques and hints for conducting a survey.

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Bestselling title within the Reeds Marine Engineering series, essential for all marine engineers, and now in a revised new edition.

Marine Engineers' HandbookThe Maritime Engineering Reference BookA Guide to Ship Design, Construction and OperationButterworth

Heinemann
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 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 technical book presents in a concise and concentrated form all the essential aspects of operating a ship. These include the basics of buoyancy and propulsion technology, ship safety, occupational safety and environmental protection on board as well as important auxiliary equipment. These aspects are explained in more detail using numerous examples. The book is intended for ship's engineers at university, on board and in shipping companies as well as for design engineers in the shipyard. This book is a translation of the original German 1st edition Schiffsbetriebstechnik by Manfred Pfaff, published by Springer Fachmedien Wiesbaden GmbH, part of Springer Nature in 2018. The translation was done with the help of artificial intelligence (machine translation by the service DeepL.com). A subsequent human revision was done primarily in terms of content, so that the book will read stylistically differently from a conventional translation. Springer Nature works continuously to further the development of tools for the production of books and on the related technologies to support the authors.
Handbook of MARINE CRAFT HYDRODYNAMICS AND MOTION CONTROL The latest tools for analysis and design of advanced GNC systems Handbook of Marine Craft Hydrodynamics and Motion Control is an extensive study of the latest research in hydrodynamics, guidance, navigation, and control systems for marine craft. The text establishes how the implementation of mathematical models and modern control theory can be used for simulation and verification of control systems, decision-support systems, and situational awareness systems. Coverage includes hydrodynamic models for marine craft, models for wind, waves and ocean currents, dynamics and stability of marine craft, advanced guidance principles, sensor fusion, and inertial navigation. This important book includes the latest tools for analysis and design of advanced GNC systems and presents new material on unmanned underwater vehicles, surface craft, and autonomous vehicles. References and examples are included to enable engineers to analyze existing projects before making their own designs, as well as MATLAB scripts for hands-on software development and testing. Highlights of this Second Edition include: Topical case studies and worked examples demonstrating how you can apply modeling and control design techniques to your own designs A Github repository with MATLAB scripts (MSS toolbox) compatible with the latest software releases from Mathworks New content on mathematical modeling, including models for ships and underwater vehicles, hydrostatics, and control forces and moments New methods for guidance and navigation, including line-of-sight (LOS) guidance laws for path following, sensory systems, model-based navigation systems, and inertial navigation systems This fully revised Second Edition includes innovative research in hydrodynamics and GNC systems for marine craft, from ships to autonomous vehicles operating on the surface and under water. Handbook of Marine Craft Hydrodynamics and Motion Control is a must-have for students and engineers working with unmanned systems, field robots, autonomous vehicles, and ships. MSS toolbox: https://github.com/cybergalactic/mss Lecture notes: https://www.fossen.biz/wiley Author’s home page: https://www.fossen.biz
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.
The fundamental characteristics of a ship's design, and how they affect its behaviour at sea are of crucial importance to many people involved in the design, construction, operation, and maintenance of all marine vessels. Naval architects and those working in ship design need to understand these principles in depth. Marine engineers must likewise recognise the degree to which their activities are influenced and bounded by these principles. Finally, senior crew - both Ship's Engineers and Commanders - need an understanding of the principles of naval architecture in order to properly fulfil their duties. This book offers a clear and concise introduction to the subject and is of great value to both students and practising professionals in all of the above fields. * Covers introductory level courses in Naval Architecture and Marine Engineering * Updated to cover key developments including double-hulled tankers * Fully revised fourth edition accompanied by exercises and worked solutions for the first time
Designing and building structures that will withstand the unique challenges that exist in Subsea operations is no easy task. As deepwater wells are drilled to greater depths, engineers are confronted with a new set problems such as water depth, weather conditions, ocean currents, equipment reliability, and well accessibility, to name just a few. A definitive reference for engineers designing, analyzing and instilling offshore structures, Subsea Structural Engineering Handbook provides an expert guide to the key processes, technologies and equipment that comprise contemporary offshore structures. Written in a clear and easy to understand language, the book is based on the authors 30 years of experience in the design, analysis and instillation of offshore structures. This book answers the above mentioned crucial questions as well as covers the entire spectrum of subjects in the discipline, from route selection and planning to design, construction, installation, materials and corrosion, inspection, welding, repair, risk assessment, and applicable design solutions. It yields a roadmap not only for the subsea engineer but also the project managers, estimators and regulatory personnel hoping to gain an appreciation of the overall issues and directed approaches to subsea engineering design solutions. Up-to-date technical overview of deepwater riser engineering Easy to understand Coverage of design, analysis and, stallation Addresses issues concerning both fixed and floating platforms Covers techincal equipment such as Subsea Control Systems, Pressure Piping, Connectors and Equipment Layout as well as Remotely-operated vehicles

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