

General Engineering Knowledge For Marine Engineers

This volume is a companion to Volume 8 of the same series (General Engineering Knowledge) and is written as a specific examination guide based on the syllabuses of Motor Engineering Knowledge for the Second and First Class Marine Engineers Motor Certificates and Motor Endorsements. In particular, the illustrations are simple diagrammatic line sketches which the student should find easy to follow. Subjects covered include: Basic cycles, indicator diagrams, starting and reversing systems, cylinders, pistons, crankshafts and deflections, medium speed diesel engines, governors, control, waste heat systems, crankcase explosions. Book jacket.

This book, "Military Engineering", is a collection of reviewed and relevant research chapters, offering a comprehensive overview of the recent developments in the field of military engineering. The book comprises single chapters authored by various researchers and edited by an expert active in the physical sciences, engineering and technology research area. All chapters are complete in themselves but united under a common research study topic. This publication aims at providing a thorough overview of the latest research efforts by international authors on military engineering, and opening new possible research paths for further novel developments.

Developed to complement Reeds Vol. 12 (Motor Engineering for Marine Engineers), this textbook is key for all marine engineering officer cadets. This new edition has been extensively updated to include the latest equipment, practices and trends in marine engineering, as well as incorporating the 2010 Manila Amendments, particularly relating to Management.

Accessibly written and clearly illustrated, this book is the core guide focusing on the knowledge needed for passing the engineering certificate of Competency (CoC) examinations.

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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 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.

Mammoths and the Environment

The World Book Encyclopedia

For Marine Engineers

A Guide to Ship Design, Construction and Operation

Reeds Vol 4: Naval Architecture

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.

This book is a companion to Volume 8 - General Engineering Knowledge" in the "Reed's Marine Engineering Series", and is based on the DoT syllabus of Engineering Knowledge for the Class 2 and Class 1 Engineers Steam Certificates and Steam Endorsements. It includes a selection of questions of the type set in the exams for Class 2 and Class 1 Engineers."

Marine Boilers, Third Edition provides practical information about boilers and other relevant equipment used at sea on steam and motor vessels. The coverage of the book includes auxiliary boilers, water tube boilers, and boiler mountings. The text also covers stresses in boiler shells; combustion of fuel in boilers; and boiler operation. The book will be of great use to marine engineers, mechanics, and technicians who primarily deals with marine-related machineries.

The Command Companion of Seamanship Techniques is the latest work from the well-respected marine

author, D J House. It contains all the information needed for command posts at sea. · All aspects of shipboard management are discussed, with special emphasis placed on health and safety. · Guidelines on how to respond to accidents and emergencies at sea · Contains the most recent SOLAS revisions and a discussion of marine law to keep you up to date with the latest rules and regulations. In order to aid learning, the book includes a number of worked examples in the text along with questions and answers at the end of chapters. The author tells you how to respond to accidents and emergencies at sea, in the event, for example of cargo contamination, collision, loss of stability due to cargo shift and damage due to flooding, fire plus loss of life/crew. In addition, the SOLAS revisions and a discussion of marine law is included to keep you up to date with all the latest rules and regulations. In order to aid learning, this book will include a number of worked examples in the text along with questions and answers at the end of chapters. D J House is senior lecturer in Nautical studies at the Nautical college, Fleetwood. His sea-going experience includes general cargo, reefer, bulk cargo, passenger and liner trades, underwater operations, and roll-on/roll-off ferries. He is a well-known marine author and has written Seamanship Techniques Volumes 1 and 2 (combined) and he has revised Cargo Work in the Kemp & Young series.

Reeds Vol 3: Applied Thermodynamics for Marine Engineers

Reeds Vol 13: Ship Stability, Powering and Resistance

Reeds Vol 14: Stealth Warship Technology

Military Engineering

Introduction to Marine Engineering

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 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

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

Developed to complement Reeds Vol. 12 (Motor Engineering for Marine Engineers), this textbook is key for all marine engineering officer cadets. This new edition has been extensively updated to include the latest equipment, practices and trends in marine engineering, as well as incorporating the 2010 Manila Amendments, particularly relating to Management. Accessibly written and clearly illustrated, this book is the core guide focusing on the knowledge needed to pass the engineering certificate of Competency (CoC) examinations. This key textbook takes into account the varying needs of students studying motor engineering, 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. An essential buy for any marine engineering student.

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 any marine engineering student. This new edition reflects 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 fuel · Fire and safety Plus updates to many of the technical engineering drawings.

Applied Radiological Anatomy

Reeds Vol 12 Motor Engineering Knowledge for Marine Engineers

Pounder's Marine Diesel Engines

and Gas Turbines

General Engineering Knowledge

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

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.

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. 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.

The study of fossilised remains of herbivorous animals, particularly those rare findings with well-preserved gastrointestinal tracts filled with plant remains, is crucial to our understanding of the environment in which they lived. Summarising thirty years of research, Ukraintseva presents evidence on plants once eaten by Siberia's major herbivorous mammals. The collection of pollen and plant spores from food remains sheds light on the vegetation of these ancient habitats, enabling researchers to reconstruct local floras of the time. This also promotes further insight into the

causes of the extinction of various species due to changing environmental conditions and food availability. Providing a history of the research undertaken, the book also includes specific chapters on the Cherski horse and bison, along with the vegetation and climate of Siberia in the late Anthropogene period, making it a lasting reference tool for graduate students and researchers in the field.

Reeds Vol 15: Electronics, Navigational Aids and Radio Theory for Electrotechnical Officers

The Maritime Engineering Reference Book

Reed's Motor Engineering Knowledge for Marine Engineers

Command Companion of Seamanship Techniques

Volume four of Reed's Marine Engineering Series" is based on the Naval Architecture syllabuses for the Certificate of Competency for Class 2 and Class 1 Marine Engineer Officers, administered on behalf of the UK Department of Transport and SCOTVEC. Explanatory diagrams and worked examples should assist the student to assimilate the principles, and typical exam questions should test knowledge."

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 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.

An encyclopedia designed especially to meet the needs of elementary, junior high, and senior high school students.

Caters for marine engineer candidates for Department of Transport Certification as Marine Engineer Class One and Class Two. It covers the various items of ships' electrical equipment and explains operating principles. David McGeorge is a former lecturer in Marine Engineering at the College of Maritime Studies, Warsash, Southampton. He is the author of General Engineering Knowledge.

Reed's Steam Engineering Knowledge for Marine Engineers

Reeds Vol 2: Applied Mechanics for Marine Engineers

Practical Marine Electrical Knowledge

The Marine Engineer

Reeds Vol 6: Basic Electrotechnology for Marine Engineers

Divided into three sections, the book covers the complete syllabus for Electrotechnology Officers as specified by the Association of Marine Electronic and Radio Colleges (AMERC), with a series of worked examples and self-study questions to assist in student

understanding. The book introduces basic electronics, the theory of how a range of navigational aids works, and radio communications including GMDSS. Fault find to component and sub system level is also included. Importantly, this is the first textbook to be aimed primarily at ETOs, covering the changes to the STCW 2010. An essential buy.

Ship Construction for Marine Students covers the majority of the descriptive work in the Syllabus for Naval Architecture in Part B of the Department of Transport exams for Class 1 and Class 2 Engineers, together with the ship construction content of the General Engineering Knowledge papers. It is also useful for those studying for Mate and Master examinations. This book gives an indication of typical methods of construction in a concise manner with plenty of illustrations, and also includes typical examination questions to aid revision.

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.

First book to give an insight into a growing area of interest - stealth warship technology - which is crucial for future developments in warship construction. It demonstrates the importance of materials used in warship construction and how this influences all of a naval platform's design parameters. Stealth technology is now considered a critical component within warship design, with interest in the concept of stealth increasing around the globe as naval forces adapt to new challenges. Many new developing nations are now implementing their first generation of stealth technology military hardware. This exciting book explores the full extent of threats to warships and thus the transformational change in naval architecture to incorporate these modern stealth technologies. Discussing the history of stealth technology, with references to well-known aircraft, ships and events in military history, the book also provides readers with a unique opportunity to develop an understanding of the specialist skills required in this naval sector. This is an essential read for anyone interested in stealth design and the issues involved in this evolving technology.

Reed's General Engineering Knowledge for Marine Engineers

Reeds Vol 5: Ship Construction for Marine Engineers

Marine Boilers

Reeds Vol 7: Advanced Electrotechnology for Marine Engineers

Reeds Vol 8 General Engineering Knowledge for Marine Engineers

Within the marine and offshore industry, there is a clear and growing need for increased training and education on the use of electrical power systems. The number of electrical plant

and appliances now in service has grown at an alarming rate in recent years, as has the amount of electrical power generated and utilised on board. Large passenger ships now carry as many electrical officers as marine engineers, and 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. 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 expanded new, full colour edition of the classic Applied Radiological Anatomy is an exhaustive yet practical imaging resource of every organ system using all diagnostic modalities. Every illustration has been replaced, providing the most accurate and up-to-date radiographic scans available. Features of the second edition: • Completely new radiographic images throughout, giving the best possible anatomic examples currently available • Both normal anatomy and normal variants shown • Numerous colour line illustrations of key anatomy to aid interpretation of scans • Concise text and numerous bullet-lists enhance the images and enable quick assimilation of key anatomic features • Every imaging modality included Edited and written by a team of radiologists with a wealth of diagnostic experience and teaching expertise, and lavishly illustrated with over 1,000 completely new, state-of-the-art images, Applied Radiological Anatomy, second edition, is an essential purchase for radiologists at any stage of their career.

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 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 is a companion to Reeds Vol. 6: Basic Electrotechnology for Marine Engineers and covers aspects of theory beyond the scope of Volume 6. The book will cover the more advanced topics in electrotechnology for professional trainees studying Merchant Navy Marine Engineering Certificates of Competency (CoC) as well as the syllabi in electrotechnology for undergraduates studying for BSc, BEng and MEng degrees in marine engineering and electrical engineering. The new edition provides worked examples and test exam questions, corresponding to current Merchant Navy Qualifications. Other revisions will include new material on emerging technology areas such as image intensifiers (photoelectric effect, secondary emission), thermal imaging cameras, radar, increased maritime use of LEDs, various semiconductor physics devices including the laser, as well as discussions of binary or digital theory.

Marine Auxiliary Machinery

Reeds Vol 16: Electrical Power Systems for Marine Engineers

Marine Electrical Equipment and Practice

Questions and Answers

Reeds Vol 9: Steam Engineering Knowledge for Marine Engineers

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 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 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.

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 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.

Reeds Vol 8 General Engineering Knowledge for Marine Engineers Bloomsbury Publishing

Reeds Vol 1: Mathematics for Marine Engineers

Occupational Outlook Handbook

Engineering Knowledge (Motor) for Marine Engineers

Reeds Vol 4: Naval Architecture for Marine Engineers

Reeds Vol 5: Ship Construction

Introduction to Marine Engineering explains the operation of all the ship's machinery, with emphasis on correct, sa

procedures and practices at all times. Organized into 17 chapters, this book begins with an overall look at the ship. Chapters describe the various ship machineries, including diesel engines, steam turbines, boilers, feed systems, pump 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 ship machinery or a professional involvement in the shipping business.

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) and Electrical/Marine Engineering undergraduate students. Providing generic technical and practical descriptions of the instrumentation and control devices and systems, this volume also contains mathematic analysis where appropriate. In this subject area, the domain of Instrumentation Engineers/Technicians as well as Control Engineers, and covering 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 air conditioning and digitisation to highly sophisticated automated control and instrumentation systems. It also includes a 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 Natural Gas carriers, SMART sensors and protocols, as well as computer based systems.

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

Reeds Vol 10: Instrumentation and Control Systems