

Electrical Engineering Pocket Handbook

In two editions spanning more than a decade, The Electrical Engineering Handbook stands as the definitive reference to the multidisciplinary field of electrical engineering. Our knowledge continues to grow, and so does the Handbook. For the third edition, it has grown into a set of six books carefully focused on specialized areas or fields of study. Each one represents a concise yet definitive collection of key concepts, models, and equations in its respective domain, thoughtfully gathered for convenient access. Combined, they constitute the most comprehensive, authoritative resource available. Circuits, Signals, and Speech and Image Processing presents all of the basic information related to electric circuits and components, analysis of circuits, the use of the Laplace transform, as well as signal, speech, and image processing using filters and algorithms. It also examines emerging areas such as text to speech synthesis, real-time processing, and embedded signal processing. Electronics, Power Electronics, Optoelectronics, Microwaves, Electromagnetics, and Radar delves into the fields of electronics, integrated circuits, power electronics, optoelectronics, electromagnetics, light waves, and radar, supplying all of the basic information required for a deep understanding of each area. It also devotes a section to electrical effects and devices and explores the emerging fields of microlithography and power electronics. Sensors, Nanoscience, Biomedical Engineering, and Instruments provides thorough coverage of sensors, materials and nanoscience, instruments and measurements, and biomedical systems and devices, including all of the basic information required to thoroughly understand each area. It explores the emerging fields of sensors, nanotechnologies, and biological effects. Broadcasting and Optical

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Communication Technology explores communications, information theory, and devices, covering all of the basic information needed for a thorough understanding of these areas. It also examines the emerging areas of adaptive estimation and optical communication. Computers, Software Engineering, and Digital Devices examines digital and logical devices, displays, testing, software, and computers, presenting the fundamental concepts needed to ensure a thorough understanding of each field. It treats the emerging fields of programmable logic, hardware description languages, and parallel computing in detail. Systems, Controls, Embedded Systems, Energy, and Machines explores in detail the fields of energy devices, machines, and systems as well as control systems. It provides all of the fundamental concepts needed for thorough, in-depth understanding of each area and devotes special attention to the emerging area of embedded systems. Encompassing the work of the world's foremost experts in their respective specialties, The Electrical Engineering Handbook, Third Edition remains the most convenient, reliable source of information available. This edition features the latest developments, the broadest scope of coverage, and new material on nanotechnologies, fuel cells, embedded systems, and biometrics. The engineering community has relied on the Handbook for more than twelve years, and it will continue to be a platform to launch the next wave of advancements. The Handbook's latest incarnation features a protective slipcase, which helps you stay organized without overwhelming your bookshelf. It is an attractive addition to any collection, and will help keep each volume of the Handbook as fresh as your latest research.

Sources of clinical treatment information on nonhuman primates are generally scattered across journals, textbooks, conferences, personal conversations, and more. However, when a

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clinician on the treatment floor is faced with a patient requiring an immediate treatment decision, time spent on making an informed decision becomes a critical factor. An alternative to conducting a literature search in time-sensitive situations, the Pocket Handbook of Nonhuman Primate Clinical Medicine supplies guidance and initial direction on diagnosis and treatment, including working doses based on past case experience. It is the frank, to-the-point nature of the writing that makes readers feel as if they had just asked a colleague how to approach a clinical problem and obtained a quick, "what you need to know" answer. The chapter authors draw on personal experience to describe commonly encountered clinical conditions and how to treat these cases—including not only the "dos" but also the "don'ts." This format gives readers easy access to clinical signs, diagnostic criteria, and options for treatment. The Pocket Handbook of Nonhuman Primate Clinical Medicine is a convenient, concise, case-based handbook written by and for clinicians in charge of the diagnosis and treatment of nonhuman primate patients. Available in both print and electronic formats, this handbook saves readers from having to wade through pages of data and case studies to find answers when time is a factor on the clinic floor.

Ugly's Electrical References, 2020 Edition is the gold standard on-the-job reference tool of choice for electrical industry professionals. Offering the most pertinent, up-to-date information used by electricians, including: updated NEC code and table change information, mathematical formulas, NEMA wiring configurations, conduit bending guide, ampacity and conduit fill information, transformer and control circuit wiring diagrams, and conversion tables. New Features of this Edition: • Updated to reflect changes to the 2020 National Electrical Code (NEC) • Expanded coverage of the following topics: o Junction Box size calculations o

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Selecting, testing, and using multimeters to measure voltage, resistance, and current o
Selecting, testing, and using a clamp-on ammeter to measure current o
Selecting, testing, and using a non-contact voltage tester

This handbook has been designed for the aspirants of IES, GATE, PSUs and other competitive examinations. This specialized book for Electrical Engineering has been divided into 14 units each containing detailed theoretical content. Key terms in each unit have been given with their definitions. Every topic is taken up separately along with Key Points and notes. All the formulae used have been well illustrated and diagrams have been given for theoretical analysis. This book covers almost 100% syllabus of Electrical Engineering making it the only book for multipurpose quick revision and ensuring success in IES, GATE, PSUs and other competitive examinations. Appendix has been given at the end of the book.

Electrical Engineering Pocket Handbook
Electrical Engineering Pocket Handbook
Electrical Engineering Pocket Handbook
Pocket Book of Electrical Engineering Formulas
CRC Press
The Newnes Mechanical Engineer's Pocket Book is a comprehensive collection of data for mechanical engineers and students of mechanical engineering. Bringing together the data and information that is required to-hand when designing, making or repairing mechanical devices and systems, it has been revised to keep pace with changes in technology and standards. The Pocket Book emphasises current engineering practice and is supported by clear accounts of the fundamental principles of mechanical engineering. Key features include the latest BSI engineering data; focus on engineering design issues; enhanced coverage of roller chain drives, pneumatic and hydraulic systems; and expanded and more accessible detail on statics, dynamics and mathematics. * Over 300 pages of new material, including the latest standards

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information from BSI * Exhaustive collection of data for mechanical engineers and students of mechanical engineering * Unique emphasis on engineering design, theory, materials and properties

"This easy-to-use pocket book contains a wealth of up-to-date, useful, practical and hard-to-find information. With 160 matt laminated, greaseproof pages you'll enjoy glare-free reading and durability. Includes: data sheets, formulae, reference tables and equivalent charts. New content in the 3rd edition includes; Reamer and Drill Bit Types, Taper Pins, T-slot sizing, Counterboring/Sinking, Extended Angles Conversions for Cutting Tapers, Keyways and Keyseats, Woodruff Keys, Retaining Rings, O-Rings, Flange Sizing, Common Workshop Metals, Adhesives, GD&T, Graph and Design Paper included at the back of the book. Engineers Black Book contains a wealth of up-to-date, useful, information within over 160 matt laminated grease proof pages. It is ideal for engineers, trades people, apprentices, machine shops, tool rooms and technical colleges." -- publisher website.

There is arguably no field in greater need of a comprehensive handbook than computer engineering. The unparalleled rate of technological advancement, the explosion of computer applications, and the now-in-progress migration to a wireless world have made it difficult for engineers to keep up with all the developments in specialties outside their own

The second edition of this popular engineering reference book, previously titles Newnes Electrical Engineer's Handbook, provides a basic understanding of the

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underlying theory and operation of the major classes of electrical equipment. With coverage including the key principles of electrical engineering and the design and operation of electrical equipment, the book uses clear descriptions and logical presentation of data to explain electrical power and its applications. Each chapter is written by leading professionals and academics, and many sections conclude with a summary of key standards. The new edition is updated in line with recent advances in EMC, power quality and the structure and operation of power systems, making Newnes Electrical Power Engineer's Handbook an invaluable guide for today's electrical power engineer. · A unique, concise reference book with contributions from eminent professionals in the field · Provides straightforward and practical explanations, plus key information needed by engineers on a day-to-day basis · Includes a summary of key standards at the end of each chapter

Standard-setting, groundbreaking, authoritative, comprehensive—these often overused words perfectly describe The Circuits and Filters Handbook, Third Edition. This standard-setting resource has documented the momentous changes that have occurred in the field of electrical engineering, providing the most comprehensive coverage available. More than 150 contributing experts offer in-depth insights and enlightened perspectives into standard practices and effective

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techniques that will make this set the first—and most likely the only—tool you select to help you with problem solving. In its third edition, this groundbreaking bestseller surveys accomplishments in the field, providing researchers and designers with the comprehensive detail they need to optimize research and design. All five volumes include valuable information on the emerging fields of circuits and filters, both analog and digital. Coverage includes key mathematical formulas, concepts, definitions, and derivatives that must be mastered to perform cutting-edge research and design. The handbook avoids extensively detailed theory and instead concentrates on professional applications, with numerous examples provided throughout. The set includes more than 2500 illustrations and hundreds of references. Available as a comprehensive five-volume set, each of the subject-specific volumes can also be purchased separately.

Since the first edition of this comprehensive handbook was published ten years ago, many changes have taken place in engineering and related technologies. Now, this best-selling reference has been updated for the 21st century, providing complete coverage of classic engineering issues as well as groundbreaking new subject areas. The second edition of The CRC Handbook of Mechanical Engineering covers every important aspect of the subject in a single volume. It continues the mission of the first edition in providing the practicing engineer in

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industry, government, and academia with relevant background and up-to-date information on the most important topics of modern mechanical engineering. Coverage of traditional topics has been updated, including sections on thermodynamics, solid and fluid mechanics, heat and mass transfer, materials, controls, energy conversion, manufacturing and design, robotics, environmental engineering, economics and project management, patent law, and transportation. Updates to these sections include new references and information on computer technology related to the topics. This edition also includes coverage of new topics such as nanotechnology, MEMS, electronic packaging, global climate change, electric and hybrid vehicles, and bioengineering.

Concise, problem-oriented, and accessibly designed, the Pocket Handbook focuses on the essentials of medicine and surgery of the dog and cat. The book helps start the process of case management and resolution. It includes tips and hints on interpretation of physical signs, diagnostic tests, and management of common presenting conditions. The book

Newnes Electrical Pocket Book is the ideal daily reference source for electrical engineers, electricians and students. First published in 1932 this classic has been fully updated in line with the latest technical developments, regulations and industry best practice. Providing both in-depth knowledge and a broad overview

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of the field this pocket book is an invaluable tool of the trade. A handy source of essential information and data on the practice and principles of electrical engineering and installation. The 23rd edition has been updated by engineering author and consultant electrical engineer, Martin Heathcote. Major revisions have been made to the sections on semiconductors, power generation, transformers, building automation systems, electric vehicles, electrical equipment for use in hazardous areas, and electrical installation (reflecting the changes introduced to the IEE Wiring Regulations BS7671: 2001).

Pocket Book of Electrical Engineering Formulas provides key formulas used in practically all areas of electrical engineering and applied mathematics. This handy, pocket-sized guide has been organized by topic field to make finding information quick and easy. The book features an extensive index and is an excellent quick reference for electrical engineers, educators, and students. Updated to reflect the 2017 National Electrical Code (NEC), this essential pocket guide uses new full-color diagrams, calculations, and quick explanations to provide the most commonly required information on the design, installation, application, and maintenance of motors and controls.

In 1993, the first edition of The Electrical Engineering Handbook set a new standard for breadth and depth of coverage in an engineering reference work. Now, this classic has been substantially revised and updated to include the latest information on all the important topics in

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electrical engineering today. Every electrical engineer should have an opportunity to expand his expertise with this definitive guide. In a single volume, this handbook provides a complete reference to answer the questions encountered by practicing engineers in industry, government, or academia. This well-organized book is divided into 12 major sections that encompass the entire field of electrical engineering, including circuits, signal processing, electronics, electromagnetics, electrical effects and devices, and energy, and the emerging trends in the fields of communications, digital devices, computer engineering, systems, and biomedical engineering. A compendium of physical, chemical, material, and mathematical data completes this comprehensive resource. Every major topic is thoroughly covered and every important concept is defined, described, and illustrated. Conceptually challenging but carefully explained articles are equally valuable to the practicing engineer, researchers, and students. A distinguished advisory board and contributors including many of the leading authors, professors, and researchers in the field today assist noted author and professor Richard Dorf in offering complete coverage of this rapidly expanding field. No other single volume available today offers this combination of broad coverage and depth of exploration of the topics. The Electrical Engineering Handbook will be an invaluable resource for electrical engineers for years to come.

The ultimate reference for contractors, builders, do-it-yourselfers, hardware specialists, and tradesmen. Seven hundred sixty-eight pages of info on carpentry, roofing, rope, pipes, pumps, bolts, lumber, welding, tools, electrical, conversion factors, and much more!

This is a superb source of quickly accessible information on the whole area of electrical engineering and electronics. It serves as a concise and quick reference, with self-contained

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chapters comprising all important expressions, formulas, rules and theorems, as well as many examples and applications.

The use of electric power substations in generation, transmission, and distribution remains one of the most challenging and exciting areas of electric power engineering. Recent technological developments have had a tremendous impact on all aspects of substation design and operation. With 80% of its chapters completely revised and two brand-new chapters on energy storage and Smart Grids, *Electric Power Substations Engineering, Third Edition* provides an extensive updated overview of substations, serving as a reference and guide for both industry and academia. Contributors have written each chapter with detailed design information for electric power engineering professionals and other engineering professionals (e.g., mechanical, civil) who want an overview or specific information on this challenging and important area. This book: Emphasizes the practical application of the technology Includes extensive use of graphics and photographs to visually convey the book's concepts Provides applicable IEEE industry standards in each chapter Is written by industry experts who have an average of 25 to 30 years of industry experience Presents a new chapter addressing the key role of the substation in Smart Grids Editor John McDonald and this very impressive group of contributors cover all aspects of substations, from the initial concept through design, automation, and operation. The book's chapters—which delve into physical and cyber-security, commissioning, and energy storage—are written as tutorials and provide references for further reading and study. As with the other volumes in the *Electric Power Engineering Handbook* series, this book supplies a high level of detail and, more importantly, a tutorial style of writing and use of photographs and graphics to help the reader understand the material. Several

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chapter authors are members of the IEEE Power & Energy Society (PES) Substations Committee and are the actual experts who are developing the standards that govern all aspects of substations. As a result, this book contains the most recent technological developments in industry practice and standards. Watch John D. McDonald talk about his book A volume in the Electric Power Engineering Handbook, Third Edition. Other volumes in the set: K12642 Electric Power Generation, Transmission, and Distribution, Third Edition (ISBN: 9781439856284) K12648 Power Systems, Third Edition (ISBN: 9781439856338) K13917 Power System Stability and Control, Third Edition (ISBN: 9781439883204) K12643 Electric Power Transformer Engineering, Third Edition (ISBN: 9781439856291)

Back in print for the first time in years, the Watts Pocket Handbook renews its commitment to share industry knowledge by providing technical and legal information across a comprehensive spread of property and construction topics. Compiled by the Watts Technical Director, the Handbook provides specialist information and guidance on a vast selection of construction related subjects including: Contracts and procurement Insurance Materials and defects Environmental and sustainability issues Watts Pocket Handbook remains the must-have reference book for professionals and students engaged in construction, building surveying, service engineering, property development and much more.

Ugly's Electrical Desk Reference is the perfect resource for electricians, engineers, contractors, designers, maintenance workers, and instructors wanting fast access to essential information.

If you are not already in a management position, chances are you soon will be.

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According to the Bureau of Statistics, the fastest growing areas of employment for engineers are in engineering/science management. With over 200 contributing authors, The Technology Management Handbook informs and assists the more than 1.5 million engineering managers in the practice of technical management. Written from the technical manager's perspective and written for technologists who are managers, The Technology Management Handbook presents in-depth information on the science and practice of management. Its comprehensive coverage encompasses the field of technology management, offering information on: Entrepreneurship Innovations Economics Marketing Product Development Manufacturing Finance Accounting Project Management Human Resources International Business

The first edition of this title proved the most successful of the Portable Handbook series launched in 1999. Aimed at electrical engineers and technicians working in building power systems, the relentlessly practical Handbook succeeded as an in the field working tool. This new edition is necessitated by the new 2002 version of the National Electrical Code (NEC). This code changes render much of the existing material obsolete, so over half the chapters require heavy rewrites to stay current.

The Photovoltaic Engineering Handbook is the first book to look closely at the

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practical problems involved in evaluating and setting up a photovoltaic (PV) power system. The author's comprehensive knowledge of the subject provides a wealth of theoretical and practical insight into the different procedures and decisions that designers need to make. Unique in its coverage, the book presents technical information in a concise and simple way to enable engineers from a wide range of backgrounds to initiate, assess, analyze, and design a PV system. It is beneficial for energy planners making decisions on the most appropriate system for specific needs, PV applications engineers, and anyone confronting the practical difficulties of setting up a PV power system.

The Tunnel Engineering Handbook, Second Edition provides, in a single convenient volume, comprehensive coverage of the state of the art in the design, construction, and rehabilitation of tunnels. It brings together essential information on all the principal classifications of tunnels, including soft ground, hard rock, immersed tube and cut-and-cover, with comparisons of their relative advantages and suitability. The broad coverage found in the Tunnel Engineering Handbook enables engineers to address such critical questions as how tunnels are planned and laid out, how the design of tunnels depends on site and ground conditions, and which types of tunnels and construction methods are best suited to different conditions. Written by the leading engineers in the fields, this second edition

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features major revisions from the first, including: * Complete updating of all chapters from the first edition * Seven completely new chapters covering tunnel stabilization and lining, difficult ground, deep shafts, water conveyance tunnels, small diameter tunnels, fire life safety, tunnel rehabilitation and tunnel construction contracting *New coverage of the modern philosophy and techniques of tunnel design and tunnel construction contracting The comprehensive coverage of the Tunnel Engineering Handbook makes it an essential resource for all practicing engineers engaged in the design of tunnels and underground construction. In addition, the book contains a wealth of information that government administrators and planners and transportation officials will use in the planning and management of tunnels.

The third edition of the Toxicologist's Pocket Handbook, like the first two editions, is a scaled-down version of the best-selling Handbook of Toxicology. It provides the most frequently used toxicology reference information in a convenient pocket-sized book. The format remains the same as the earlier editions to allow basic reference information to be located quickly, with the information placed in sections specific to subspecialties of toxicology. A detailed table of contents lists all tables and figures contained in the book by section. This expanded edition contains a number of tables not found in the second edition

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added to sections on lab animals, general toxicology, dermal and ocular toxicology, genetic toxicology/carcinogenesis, neurotoxicology, immunotoxicology, reproductive/developmental toxicology, industrial chemical, and pharmaceutical toxicology. New information is presented for additional laboratory animals such as swine and primates, infusion recommendations, newer methods such as the local lymph node assay, and reference safety pharmacology values for standard species. Additional information on typical genetic toxicology and immunotoxicology assays as well as in vitro assays for eye irritation are provided. Some tables from the second edition have been updated to include new information that has arisen since the earlier edition went to press. Information from the second edition, such as regulatory requirements that are no longer applicable, has been deleted.

In two editions spanning more than a decade, The Electrical Engineering Handbook stands as the definitive reference to the multidisciplinary field of electrical engineering. Our knowledge continues to grow, and so does the Handbook. For the third edition, it has expanded into a set of six books carefully focused on a specialized area or field of study. Each book represents a concise yet definitive collection of key concepts, models, and equations in its respective domain, thoughtfully gathered for convenient access. Computers, Software

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Engineering, and Digital Devices examines digital and logical devices, displays, testing, software, and computers, presenting the fundamental concepts needed to ensure a thorough understanding of each field. It treats the emerging fields of programmable logic, hardware description languages, and parallel computing in detail. Each article includes defining terms, references, and sources of further information. Encompassing the work of the world's foremost experts in their respective specialties, Computers, Software Engineering, and Digital Devices features the latest developments, the broadest scope of coverage, and new material on secure electronic commerce and parallel computing.

Work safely and efficiently on motors and controls with Ugly's Electric Motors and Controls, 2020 Edition. Updated to reflect the 2020 National Electrical Code (NEC), this pocket guide is a quick, on-the-job reference specifically designed to provide the most commonly required information on the design, installation, application, and maintenance of motors and controls in an easy-to-read, easy-to-access format. An ideal tool for electricians, contractors, designers, engineers, instructors and students, this essential pocket guide uses new full-color diagrams, calculations, and quick explanations to ensure jobs are completed safely and correctly and in accordance to industry standards.

Now you can achieve optimum performance and efficiency in the design of electric

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systems for virtually any size or type of building or industrial facility utilizing the state-of-the-art methodologies detailed in this comprehensive handbook. Step-by-step guidelines take you through each phase of design, covering equipment selection, power distribution system analysis, conduit and conductor sizing, lighting system design, control systems, electronic instrumentation, protective relaying, energy management systems, power quality, variable speed drives, motor selection, and more. The latest codes (NEC 2008) as well as currently available equipment are referenced. Numerous examples and simulation exercises are included, along with detailed design examples. Fully illustrated with many useful diagrams and tables, this book is a practical guide for electrical engineers, plant and facility engineers, and other professionals responsible for implementing or overseeing the design of facility electrical systems.

Complete, compact and featuring formulas, tables, and diagrams in place of lengthy text descriptions, this handy reference delivers job-essential information in a quick look-up format. The new Second edition has been updated to include the 2005 National Electrical Code, new symbols for electrical drafting now being used in CAD drafting, additional coverage of co-axial cable in home wiring, and more on electric motors and controls.

THE MOST COMPLETE AND CURRENT GUIDE TO ELECTRICAL ENGINEERING
For more than a century, the Standard Handbook for Electrical Engineers has served as the definitive source for all the pertinent electrical engineering data essential to both

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engineering students and practicing engineers. It offers comprehensive information on the generation, transmission, distribution, control, operation, and application of electric power. Completely revised throughout to address the latest codes and standards, the 16th Edition of this renowned reference offers new coverage of green technologies such as smart grids, smart meters, renewable energy, and cogeneration plants. Modern computer applications and methods for securing computer network infrastructures that control power grids are also discussed. Featuring hundreds of detailed illustrations and contributions from more than 75 global experts, this state-of-the-art volume is an essential tool for every electrical engineer. Standard Handbook for Electrical Engineers, 16th Edition, covers: Units, symbols, constants, definitions, and conversion factors * Electric and magnetic circuits * Measurements and instruments * Properties of materials * Generation * Prime movers * Alternating-current generators * Direct-current generators * Hydroelectric power generation * Power system components * Alternate sources of power * Electric power system economics * Project economics * Transmission systems * High-voltage direct-current power transmission * Power system operations * Substations * Power distribution * Wiring design for commercial and industrial buildings * Motors and drives * Industrial and commercial applications of electric power * Power electronics * Power quality and reliability * Grounding systems * Computer applications in the electric power industry * Illumination * Lightning and overvoltage protection * Standards in electrotechnology, telecommunications, and

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information technology

A practical treatment of power system design within the oil, gas, petrochemical and offshore industries. These have significantly different characteristics to large-scale power generation and long distance public utility industries. Developed from a series of lectures on electrical power systems given to oil company staff and university students, Sheldrake's work provides a careful balance between sufficient mathematical theory and comprehensive practical application knowledge. Features of the text include:

Comprehensive handbook detailing the application of electrical engineering to the oil, gas and petrochemical industries
Practical guidance to the electrical systems equipment used on off-shore production platforms, drilling rigs, pipelines, refineries and chemical plants
Summaries of the necessary theories behind the design together with practical guidance on selecting the correct electrical equipment and systems required
Presents numerous 'rule of thumb' examples enabling quick and accurate estimates to be made
Provides worked examples to demonstrate the topic with practical parameters and data
Each chapter contains initial revision and reference sections prior to concentrating on the practical aspects of power engineering including the use of computer modelling
Offers numerous references to other texts, published papers and international standards for guidance and as sources of further reading material
Presents over 35 years of experience in one self-contained reference
Comprehensive appendices include lists of abbreviations in common use, relevant international

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standards and conversion factors for units of measure An essential reference for electrical engineering designers, operations and maintenance engineers and technicians.

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