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"This book tells the story of an unusual group of American soldiers in World War II, second-generation Japanese Americans (Nisei) who served as interpreters and translators in the Military Intelligence Service."--Preface. The Handbook of Labor Statistics is recognized as an authoritative resource on the U.S. labor force. It continues and enhances the Bureau of Labor Statistics's (BLS) discontinued publication, Labor Statistics. The 15th Edition allows the user to understand recent developments as well as to compare today's economy with past history. The Handbook is a comprehensive reference providing an abundance of data on a variety of topics including: employment and unemployment earnings prices productivity consumer expenditures occupational safety and health union membership international labor comparisons and much more! Features of the publication In addition to over 200 tables that present practical data, the Handbook provides: introductory material for each chapter that contains highlights of salient data and figures that call attention to noteworthy trends in the data notes and definitions, which contain concise descriptions of the data sources, concepts, definitions, and methodology from which the data are derived references to more comprehensive reports which provide additional data and more extensive descriptions of estimation methods, sampling, and reliability measures New in the 15th Edition: This handbook is organized under three major parts. The first part of this handbook deals with multimedia security for emerging applications. The chapters include basic concepts of multimedia tools and applications, biological and behavioral biometrics, effective multimedia encryption and secure watermarking techniques for emerging applications, an adaptive face identification approach for android mobile devices, and multimedia using chaotic and perceptual hashing function. The second part of this handbook focuses on multimedia processing for various potential applications. The chapter includes a detail survey of image processing based automated glaucoma detection techniques and role of de-noising, recent study of dictionary learning based image reconstruction techniques for analyzing the big medical data, brief introduction of quantum image processing and its applications, a segmentation-less efficient Alzheimer detection approach, object recognition, image enhancements and de-noising techniques for emerging applications, improved performance of image compression approach, and automated detection of eye related diseases using digital image processing. The third part of this handbook introduces multimedia applications. The chapter includes the extensive survey on the role of multimedia in medicine and multimedia forensics classification, a finger based authentication system for e-health

security, analysis of recently developed deep learning techniques for emotion and activity recognition. Further, the book introduces a case study on change of ECG according to time for user identification, role of multimedia in big data, cloud computing, the Internet of things (IoT) and blockchain environment in detail for real life applications. This handbook targets researchers, policy makers, programmers and industry professionals in creating new knowledge for developing efficient techniques/framework for multimedia applications. Advanced level students studying computer science, specifically security and multimedia will find this book useful as a reference. Set includes revised editions of some issues. A radical anthropologist studies the global justice movement. The petroleum and chemical industries contain a wide variety of corrosive environments, many of which are unique to these industries. Oil and gas production operations consume a tremendous amount of iron and steel pipe, tubing, pumps, valves, and sucker rods. Metallic corrosion is costly. However, the cost of corrosion is not just financial. Beyond the huge direct outlay of funds to repair or replace corroded structures are the indirect costs – natural resources, potential hazards, and lost opportunity. Wasting natural resources is a direct contradiction to the growing need for sustainable development. By selecting the correct material and applying proper corrosion protection methods, these costs can be reduced, or even eliminated. This book provides a minimum design requirement for consideration when designing systems in order to prevent or control corrosion damage safely and economically, and addresses:

- Corrosion problems in petroleum and chemical industries
- Requirements for corrosion control
- Chemical control of corrosive environments
- Corrosion inhibitors in refineries and petrochemical plants
- Materials selection and service life of materials
- Surface preparation, protection and maintainability
- Corrosion monitoring - plant inspection techniques and laboratory corrosion testing techniques

Intended for engineers and industry personnel working in the petroleum and chemical industries, this book is also a valuable resource for research and development teams, safety engineers, corrosion specialists and researchers in chemical engineering, engineering and materials science. Using ergonomics in forensics can help prevent the recurrence of system failures through engineering or administrative controls. It can also raise the level of concern among professionals and the public regarding product, workplace, and service safety due to perceived exposure to liability. Even with such a potentially important and broad impact, f

This book covers the fundamentals of practical mechanics of materials for aerospace students and engineers. It focuses on practical techniques that are used daily by aerospace structures professionals. It addresses aerospace structures nomenclature & methods of structural analysis with a focus towards the analysis of lightweight aerospace vehicles. Its companion book, Volume II, provides a number of more advanced techniques to ensure that folks who master both texts will be well-armed for effective structural analysis in any setting. This book is also intended as the primary text for a first undergraduate course in aerospace structures, and its content has been honed by its use at California State Polytechnic University Pomona over the last five years. The author is an experienced structural analyst and FAA Structures DER with three decades of experience in aircraft and rocket structural analysis enhanced by eight years of subsequent teaching at the university level. The movement of sediment and associated pollutants over the landscape and into water bodies is of increasing concern with respect to pollution control, prevention of muddy floods and environmental protection. In addition, the loss of soil on site has implications for declining agricultural productivity, loss of biodiversity and decreased amenity and landscape value. The fate of sediment and the conservation of soil are important issues for land managers and decision-makers. In developing appropriate policies and solutions, managers and researchers are making greater use of erosion models to characterise the processes of erosion and their interaction with the landscape. A study of erosion requires one to think in terms of microseconds to understand the mechanics of impact of a single raindrop on a soil surface, while landscapes form over periods of thousands of years. These processes operate on scales of millimetres for single raindrops to mega-metres for continents. Erosion modelling thus covers quite a lot of ground. This book introduces the conceptual and mathematical frameworks used to formulate models of soil erosion and uses case studies to show how models are applied to a variety of purposes at a range of spatial and temporal scales. The aim is to provide land managers and others with the tools required to select a model appropriate to the type and scale of erosion problem, to show what users can expect in terms of accuracy of model predictions and to provide an appreciation of both the advantages and limitations of models. Problems covered include those arising from agriculture, the construction industry, pollution and climatic change and range in scale from farms to small and large catchments. The book will also be useful to students and research scientists as an up-to-date review of the state-of-art of erosion modelling and, through a knowledge of how models are used in practice, in highlighting the gaps in knowledge that need to be filled in order to develop even better models. Intro / prep handbook on basics of the quality field / its philosophies for ASQ's CQIA (Certified Quality Improvement Associate) certification exam. The classic industrial engineering resource—fully updated for the latest advances Brought fully up to date by expert Bopaya M. Bidanda, this go-to handbook contains exhaustive, application-driven coverage of Industrial Engineering (IE) principles, practices, materials, and systems. Featuring contributions from scores of international professionals in the field, Maynard's Industrial Engineering Handbook, Sixth Edition provides a holistic view of exactly what an Industrial Engineer in

today's world needs to succeed. All-new chapters and sections cover logistics, probability and statistics, supply chains, quality, product design, systems engineering, and engineering management. Coverage includes: Productivity Engineering economics Human factors, ergonomics, and safety Compensation management Facility logistics Planning and scheduling Operations research Statistics and probability Supply chains and quality Product design Manufacturing models and analysis Systems engineering Engineering management The global Industrial Engineer IE application environments Effective communication is vital to science, engineering and business management. This thoroughly updated second edition with a new chapter on the use of computers and word-processors gives clear, practical advice illustrated with real-life examples on how to select, organize and present information in reports, papers and other documents. The early years of film were dominated by competition between inventors in America and France, especially Thomas Edison and the Lumière brothers . But while these have generally been considered the foremost pioneers of film, they were not the only crucial figures in its inception. Telling the story of the white-hot years of filmmaking in the 1890s, Robert Paul and the Origins of British Cinema seeks to restore Robert Paul, Britain's most important early innovator in film, to his rightful place. From improving upon Edison's Kinetoscope to cocreating the first movie camera in Britain to building England's first film studio and launching the country's motion-picture industry, Paul played a key part in the history of cinema worldwide. It's not only Paul's story, however, that historian Ian Christie tells here. Robert Paul and the Origins of British Cinema also details the race among inventors to develop lucrative technologies and the jumbled culture of patent-snatching, showmanship, and music halls that prevailed in the last decade of the nineteenth century. Both an in-depth biography and a magnificent look at early cinema and fin-de-siècle Britain, Robert Paul and the Origins of British Cinema is a first-rate cultural history of a fascinating era of global invention, and the revelation of one of its undervalued contributors. This major new edition of a popular undergraduate text covers topics of interest to chemical engineers taking courses on fluid flow. These topics include non-Newtonian flow, gas-liquid two-phase flow, pumping and mixing. It expands on the explanations of principles given in the first edition and is more self-contained. Two strong features of the first edition were the extensive derivation of equations and worked examples to illustrate calculation procedures. These have been retained. A new extended introductory chapter has been provided to give the student a thorough basis to understand the methods covered in subsequent chapters. Modern optimization approaches have attracted an increasing number of scientists, decision makers, and researchers. As new issues in this field emerge, different optimization methodologies must be developed and implemented. The Handbook of Research on Emergent Applications of Optimization Algorithms is an authoritative reference source for the latest scholarly research on modern optimization techniques for solving complex problems of global optimization and their applications in economics and engineering. Featuring coverage on a broad range of topics and perspectives such as hybrid systems, non-cooperative games, and cryptography, this publication is ideally designed for students, researchers, and engineers interested in emerging developments in optimization algorithms. An encyclopedia of information on the methods, materials, and equipment employed in modern metalworking Preface. Dedication. List of Figures. List of Tables. List of Contributors. Basic Behavior and Site Characterization. 1. Introduction; R.K. Rowe. 2. Basic Soil Mechanics; P.V. Lade. 3. Engineering Properties of Soils and Typical Correlations; P.V. Lade. 4. Site Characterization; D.E. Becker. 5. Unsaturated Soil Mechanics and Property Assessment; D.G. Fredlund, et al. 6. Basic Rocks Mechanics and Testing; K.Y. Lo, A.M. Hefny. 7. Geosynthetics: Characteristics and Testing; R.M. Koerner, Y.G. Hsuan. 8. Seepage, Drainage and Dewatering; R.W. Loughney. Foundations and Pavements. 9. Shallo. Many factors affect the amount of temperature-induced movement that occurs in a building and the extent to which this movement can occur before serious damage develops or extensive maintenance is required. In some cases joints are being omitted where they are needed, creating a risk of structural failures or causing unnecessary operations and maintenance costs. In other cases, expansion joints are being used where they are not required, increasing the initial cost of construction and creating space utilization problems. As of 1974, there were no nationally acceptable procedures for precise determination of the size and the location of expansion joints in buildings. Most designers and federal construction agencies individually adopted and developed guidelines based on experience and rough calculations leading to significant differences in the various guidelines used for locating and sizing expansion joints. In response to this complex problem, Expansion Joints in Buildings: Technical Report No. 65 provides federal agencies with practical procedures for evaluating the need for through-building expansion joints in structural framing systems. The report offers guidelines and criteria to standardize the practice of expansion joints in buildings and decrease problems associated with the misuse of expansions joints. Expansions Joints in Buildings: Technical Report No. 65 also makes notable recommendations concerning expansion, isolation, joints, and the manner in which they permit separate segments of the structural frame to expand and to contract in response to temperature fluctuations without adversely affecting the buildings structural integrity or serviceability. This Handbook is focused on structural resilience in the event of fire. It serves as a single point of reference for practicing structural and fire protection engineers on the topic of structural fire safety. It is also stands as a key point of reference for university students engaged with structural fire

engineering. The sterile insect technique (SIT) is an environment-friendly method of pest control that integrates well into area-wide integrated pest management (AW-IPM) programmes. This book takes a generic, thematic, comprehensive, and global approach in describing the principles and practice of the SIT. The strengths and weaknesses, and successes and failures, of the SIT are evaluated openly and fairly from a scientific perspective. The SIT is applicable to some major pests of plant-, animal-, and human-health importance, and criteria are provided to guide in the selection of pests appropriate for the SIT. In the second edition, all aspects of the SIT have been updated and the content considerably expanded. A great variety of subjects is covered, from the history of the SIT to improved prospects for its future application. The major chapters discuss the principles and technical components of applying sterile insects. The four main strategic options in using the SIT — suppression, containment, prevention, and eradication — with examples of each option are described in detail. Other chapters deal with supportive technologies, economic, environmental, and management considerations, and the socio-economic impact of AW-IPM programmes that integrate the SIT. In addition, this second edition includes six new chapters covering the latest developments in the technology: managing pathogens in insect mass-rearing, using symbionts and modern molecular technologies in support of the SIT, applying post-factory nutritional, hormonal, and semiochemical treatments, applying the SIT to eradicate outbreaks of invasive pests, and using the SIT against mosquito vectors of disease. This book will be useful reading for students in animal-, human-, and plant-health courses. The in-depth reviews of all aspects of the SIT and its integration into AW-IPM programmes, complete with extensive lists of scientific references, will be of great value to researchers, teachers, animal-, human-, and plant-health practitioners, and policy makers. This book serves as an invaluable reference to Power Electronics Design, covering the application of high-power semiconductor technology to large motor drives, power supplies, power conversion equipment, electric utility auxiliaries and numerous other applications. Design engineers, design drafters and technicians in the power electronics industry, as well as students studying power electronics in various contexts, will benefit from Keith Sueker's decades of experience in the industry. With this experience, the author has put the overall power electronics design process in the context of primary electronic components and the many associated components required for a system. The seeming complexity of power electronics design is made transparent with Keith Sueker's simple, direct language and a minimum reliance on mathematics. Readers will come away with a wealth of practical design information that has hundreds of explanatory diagrams to support it, having also seen many examples of potential pitfalls in the design process. * A down-to-earth approach, free of complex jargon and esoteric information. * Over 200 illustrations to clarify discussion points. * Examples of costly design goofs will provide invaluable cautionary advice. The introduction of contaminants, due to rapid urbanization and anthropogenic activities into the environment, causes distress to the physio-chemical systems including living organisms, which possibly is threatening the dynamics of nature as well as the soil biology by producing certain xenobiotics. Hence, there is an immediate global demand for the diminution of such contaminants and xenobiotics that can otherwise adversely affect the living organisms. Some toxic xenobiotics include synthetic organochlorides such as PAHs and some fractions of crude oil and coal. Over time, microbial remediation processes have been accelerated to produce better, more eco-friendly, and more biodegradable solutions for complete dissemination of these xenobiotic compounds. The advancements in microbiology and biotechnology led to the launch of microbial biotechnology as a separate area of research and contributed dramatically to the development of areas like agriculture, environment, biopharmaceutics, fermented foods, and more. The Handbook of Research on Microbial Remediation and Microbial Biotechnology for Sustainable Soil provides a detailed comprehensive account for microbial treatment technologies, bioremediation strategies, biotechnology, and the important microbial species involved in remediation. The chapters focus on recent developments in microbial biotechnology in the areas of agriculture and environment and the physiology, biochemistry, and the mechanisms of remediation along with a future outlook. This book is ideal for scientists, biologists, academicians, students, and researchers in the fields of life sciences, microbiology, environmental science, environmental engineering, biotechnology, agriculture, and health sciences. This legendary, still-relevant reference text on aircraft stress analysis discusses basic structural theory and the application of the elementary principles of mechanics to the analysis of aircraft structures. 1950 edition. Energy efficiency is a major cost issue for commerce and industry. This text examines building energy management systems which are used to monitor temperature inside and outside buildings and control the boilers and coolers. The Handbook of U.S. Labor Statistics is recognized as an authoritative resource on the U.S. labor force. It continues and enhances the Bureau of Labor Statistics's (BLS) discontinued publication, Labor Statistics. The 16th Edition allows the user to understand recent developments as well as to compare today's economy with past history. The Handbook is a comprehensive reference providing an abundance of data on a variety of topics including: employment and unemployment earnings prices productivity consumer expenditures occupational safety and health union membership international labor comparisons and much more! Features of the publication In addition to over 200 tables that present practical data, the Handbook provides: introductory material for each chapter that contains highlights of salient data

and figures that call attention to noteworthy trends in the data notes and definitions, which contain concise descriptions of the data sources, concepts, definitions, and methodology from which the data are derived references to more comprehensive reports which provide additional data and more extensive descriptions of estimation methods, sampling, and reliability measures The 16th edition includes several new features including: A new chapter titled Green Jobs, Technologies, and Practices. This chapter includes data on companies that use environmentally friendly practices and on establishments that produce green goods and services. Chapter 1 includes a section on the employment situation of veterans for the first time since the 2009 edition. In addition, more tables on employee tenure have been added. Tables on eldercare have been added in Chapter 12: American Time Use Survey. Chapter 6 includes a table on workplaces that provide “quality of life” benefits including childcare, subsidized commuting, and flexible workplaces. New figures on a variety of topics including the labor force, employee compensation, consumer expenditures, and international labor comparisons have been added throughout the book. The Handbook of Clean Energy Systems brings together an international team of experts to present a comprehensive overview of the latest research, developments and practical applications throughout all areas of clean energy systems. Consolidating information which is currently scattered across a wide variety of literature sources, the handbook covers a broad range of topics in this interdisciplinary research field including both fossil and renewable energy systems. The development of intelligent energy systems for efficient energy processes and mitigation technologies for the reduction of environmental pollutants is explored in depth, and environmental, social and economic impacts are also addressed. Topics covered include: Volume 1 - Renewable Energy: Biomass resources and biofuel production; Bioenergy Utilization; Solar Energy; Wind Energy; Geothermal Energy; Tidal Energy. Volume 2 - Clean Energy Conversion Technologies: Steam/Vapor Power Generation; Gas Turbines Power Generation; Reciprocating Engines; Fuel Cells; Cogeneration and Polygeneration. Volume 3 - Mitigation Technologies: Carbon Capture; Negative Emissions System; Carbon Transportation; Carbon Storage; Emission Mitigation Technologies; Efficiency Improvements and Waste Management; Waste to Energy. Volume 4 - Intelligent Energy Systems: Future Electricity Markets; Diagnostic and Control of Energy Systems; New Electric Transmission Systems; Smart Grid and Modern Electrical Systems; Energy Efficiency of Municipal Energy Systems; Energy Efficiency of Industrial Energy Systems; Consumer Behaviors; Load Control and Management; Electric Car and Hybrid Car; Energy Efficiency Improvement. Volume 5 - Energy Storage: Thermal Energy Storage; Chemical Storage; Mechanical Storage; Electrochemical Storage; Integrated Storage Systems. Volume 6 - Sustainability of Energy Systems: Sustainability Indicators, Evaluation Criteria, and Reporting; Regulation and Policy; Finance and Investment; Emission Trading; Modeling and Analysis of Energy Systems; Energy vs. Development; Low Carbon Economy; Energy Efficiencies and Emission Reduction. Key features: Comprising over 3,500 pages in 6 volumes, HCES presents a comprehensive overview of the latest research, developments and practical applications throughout all areas of clean energy systems, consolidating a wealth of information which is currently scattered across a wide variety of literature sources. In addition to renewable energy systems, HCES also covers processes for the efficient and clean conversion of traditional fuels such as coal, oil and gas, energy storage systems, mitigation technologies for the reduction of environmental pollutants, and the development of intelligent energy systems. Environmental, social and economic impacts of energy systems are also addressed in depth. Published in full colour throughout. Fully indexed with cross referencing within and between all six volumes. Edited by leading researchers from academia and industry who are internationally renowned and active in their respective fields. Published in print and online. The online version is a single publication (i.e. no updates), available for one-time purchase or through annual subscription. The Routledge International Handbook of Innovation Education is the international reference work on innovation education and potentially opens an entirely new direction in education. The overall goal of the handbook is to address the question of how to develop innovators in general and how to develop the innovative potential of today’s young people with exceptional talents in science, technology, engineering, and maths (STEM) disciplines in particular. Today many governments around the world are interested in the development of STEM innovators. This handbook provides the first and most comprehensive account available of what should be done in order to develop innovators and how to do it successfully. It includes chapters by leading specialists from around the world responsible for much of the current research in the fields of innovation, gifted education, scientific talent, science education, and high ability studies. Based on the latest research findings and expert opinion, this book goes beyond mere anecdotes to consider what science can tell us about the development of innovators. By enlisting chapters from innovation experts, educators, psychologists, policy makers, and researchers in the field of management The Routledge International Handbook of Innovation Education will allow all of these scholars to speak to each other about how to develop innovators via innovation education, including such issues as: the nature of innovation education, its basis, main components and content, its criteria and specificity in various domains and contexts, societal demands placed upon it. This ground-breaking and potentially field defining work will thus serve as the first authoritative resource on all aspects of theory, research, and practice of innovation education. Materials covered include carbon, alloy and stainless steels; alloy cast

irons; high-alloy cast steels; superalloys; titanium and titanium alloys; refractory metals and alloys; nickel-chromium and nickel-thoria alloys; structural intermetallics; structural ceramics, cermets, and cemented carbides; and carbon-composites. Just a few meters below the Earth's surface lie features of great importance, from geological faults which can produce devastating earthquakes, to lost archaeological treasures! This refreshing, up-to-date book explores the foundations of interpretation theory and the latest developments in near-surface techniques, used to complement traditional geophysical methods for deep-exploration targets. Clear but rigorous, the book explains theory and practice in simple physical terms, supported by intermediate-level mathematics. Techniques covered include magnetics, resistivity, seismic reflection and refraction, surface waves, induced polarization, self-potential, electromagnetic induction, ground-penetrating radar, magnetic resonance, interferometry, seismoelectric and more. Sections on data analysis and inverse theory are provided and chapters are illustrated by case studies, giving students and professionals the tools to plan, conduct and analyze a near-surface geophysical survey. This is an important textbook for advanced-undergraduate and graduate students in geophysics and a valuable reference for practising geophysicists, geologists, hydrologists, archaeologists, and civil and geotechnical engineers.

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