
Jet Propulsion

Fundamentals of Chemical Engineering Thermodynamics, 5I Edition

A Concise Handbook of Mathematics, Physics, and Engineering Sciences takes a practical approach to the basic notions, formulas, equations, problems, theorems, and ideas that most frequently occur in scientific and engineering applications and university education. The authors pay special attention to issues that many engineers and students.

Alternative Energy and Shale Gas Encyclopedia

Fundamentals of Thermodynamics 7th Edition for UM ass Dartmouth with WPSA Set

Liquid-vapor Phase-Change Phenomena

Fundamentals of Manufacturing, Third Edition provides a structured review of the fundamentals of manufacturing for individuals planning to take SME’s Certified Manufacturing Technologist (CMfgT) or Certified Manufacturing Engineer (CMfgE) certification exams. This book has been updated according to the most recent Body of Knowledge adopted by the Certification Oversight and Appeals Committee of the Society of Manufacturing Engineers. While the objective of this book is to prepare for the certification process, it is a primary source of information for individuals interested in learning fundamental manufacturing concepts and practices. This book is a valuable resource for anyone with limited manufacturing experience, engineering, design, or production. It will help you prepare for the certification exams and provide you with a solid foundation in manufacturing fundamentals.

Energy Dynamics of Green Buildings

FUNDAMENTALS OF ENGINEERING THERMODYNAMICS, 6TH ED

A comprehensive, up-to-date, and practical treatment of the fundamentals of thermodynamics. This book is designed for undergraduate and graduate students in engineering disciplines.


As the chemical process industry is among the most energy demanding sectors, chemical engineers are endeavoring to contribute towards sustainable future. Due to the limitation of fossil fuels, the need for energy independence, as well as the environmental problem of the greenhouse gas effect, there is a large increasing interest in exploring new and innovative ideas and technologies that can help reduce the reliance on fossil fuels. This book provides a comprehensive introduction to thermodynamics, with a focus on applications in the chemical process industry.
Heat Pumps in Chemical Process Industry

Now in its third edition, Heat Pumps offers a self-contained introduction to the aerodynamic and thermodynamic design of modern civil and military jet engine design. Through a two-engine design project for a large passenger and a new fighter aircraft, the text explains modern engine design. Individual sections cover aircraft requirements, aerodynamics, principles of gas turbines and jet engines, elementary compressible fluid mechanics, bypass ratio selection, scaling and dimensional analysis, and off-design performance. The civil aircraft, which formed the core of Part I in the previous editions, has been in service for several years as the Airbus A380. A review in the aircraft industry has now shifted to two-engine aircraft with a greater emphasis on fuel burn, so the model created for Part I in this edition is now more efficient, a step aimed at high efficiency.


Fundamentals of Thermodynamics

A Concise Handbook of Mathematics, Physics, and Engineering Sciences

Fundamentals of Polymer Engineering, Third Edition

A brand new book, FUNDAMENTALS OF CHEMICAL ENGINEERING THERMODYNAMICS makes the abstract subject of chemical engineering thermodynamics more accessible to undergraduate students. The subject is presented through a problem-solving approach (from specific to general) learning approach, written in a conversational and approachable manner. Suitable for either a one-semester course or two-semester sequence in the subject, this book covers thermodynamics in a complete and mathematically rigorous manner, with an emphasis on solving practical engineering problems. The approach takes a problem-solving approach, and draws from best practice engineering teaching strategies. FUNDAMENTALS OF CHEMICAL ENGINEERING THERMODYNAMICS was compiled to frame the importance of the material. Each topic begins with a motivational example that is investigated in context to that topic. This framing of the material is helpful to all readers, particularly to students who require big picture insights, and hands-on learners who struggle with abstractions. Each worked example is fully annotated with sketches and comments on the thought process behind the solved problem. Common errors are presented and explained. Extensive margin notes add to the book accessibility as well as presenting opportunities for investigation.

Fundamentals of Engineering Thermodynamics ECE with Eng Thermodynamics 7th Edition and WY LETXC Set


Fundamentals of Thermodynamics 7th Edition CUE for C ALI

K unzählige Geschichten, didaktisch überzeugend sowie fachlich umfassend und hochkompetent: Diese Qualitäten verbinden die beiden Bände des Abhoy/e/xes schon seit Jahren an vielen Universitäten und in der Industrie zu den Standardwerken der Werkstoffkunde. Die Autoren sind Professor an der ETH Zürich, der Université de Stellenbosch, der Delft University of Technology und der Technische Universität Berlin. Ihre gemeinsame Leidenschaft ist es, die Anwendungen der Werkstoffkunde in der Praxis zu verdeutlichen.


This textbook comprehensively presents the fundamentals and advanced concepts of thermodynamics in a single volume. It provides a detailed discussion of advanced concepts that include energy efficiency, energy sustainability, energy security, organic Rankine cycle, combined cycle power plants, combined cycle power plant integrated with organic Rankine cycle and absorption refrigeration system, integrated coal gasification combined cycle power plants, energy conservation in domestic refrigerators, and non-renewable energy sources. The textbook includes a comprehensive treatment of the subject matter, with an emphasis on the practical application of the concepts to real-world problems. It covers a wide range of topics, from basic thermodynamic principles to advanced applications in engineering and energy systems. The textbook is designed for use in undergraduate and graduate courses in thermodynamics, and it provides a solid foundation for further studies in the field.


Thermal Energy Storage

Fluid Mechanics: An Intermediate Approach addresses the problems facing engineers today by taking a practical, rather than theoretical, approach. Instead of following an approach that focuses on the theoretical aspects of fluid flow, this book allows you to develop an intuitive physical understanding of various fluid flows, including internal compressible flows with simultaneous area change, friction, heat transfer, and rotation. Drawing on over 40 years of industry and teaching experience, the author emphasizes the practical aspects of fluid mechanics that are needed in the real world. The book covers topics such as compressible flows, nozzles and diffusers, boundary layers, and separation. It also includes a comprehensive chapter on the Navier-Stokes equations and numerical solution methods. The textbook is designed for use in undergraduate and graduate courses in fluid mechanics and is suitable for students in a wide range of fields, including engineering, physics, and applied sciences.
Fundaamentals of Engineering Thermodynamics

Since publication of the first edition of Fundamentals of Engineering Thermodynamics, the need to maintain energy security in an energy-hungry world, the desire to move towards zero-emission vehicles and power plants, and the mitigation of climate change by lowering CO2 emissions has led to a recent resurgence in the use of fuel cell technology. These trends are not only driven by the desire to reduce CO2 emissions but also by the need for reliable, high-efficiency, and cost-effective power generation. Conventional and alternative power generation methods, including those based on nuclear, fossil fuels, and renewable energy sources, are being re-evaluated in light of their environmental impact.

The updated edition of Conventional and Alternative Power Generation: Thermodynamics, Mitigation and Sustainability is divided into 8 chapters that comprehensively cover thermodynamic systems; vapor power cycles, gas power cycles, combustion; control of particulates; carbon capture and storage; air pollution dispersal; and renewable energy and power plants. Features an abundance of worked examples and case studies to demonstrate the working principles of thermodynamic systems. Conventional and Alternative Power Generation: Thermodynamics, Mitigation and Sustainability is divided into 8 chapters that comprehensively cover thermodynamic systems; vapor power cycles, gas power cycles, combustion; control of particulates; carbon capture and storage; air pollution dispersal; and renewable energy and power plants. Features an abundance of worked examples and case studies to demonstrate the working principles of thermodynamic systems.

The new third edition includes significant new coverage of microchannels and nanostructures, and numerous other updates. More worked examples and numerous new problems have been added, and a complete solution manual and electronic figures for classroom projection will be available for qualified adopters.

Conventional and Alternative Power Generation

Conventional and Alternative Power Generation: Thermodynamics, Mitigation and Sustainability is an ideal text for courses on mechanical, chemical, and electrical engineering. Includes all of the latest information, technology, theories, and principles on power generation Conventional and Alternative Power Generation: Thermodynamics, Mitigation and Sustainability is divided into 8 chapters that comprehensively cover thermodynamic systems; vapor power cycles, gas power cycles, combustion; control of particulates; carbon capture and storage; air pollution dispersal; and renewable energy and power plants. Features an abundance of worked examples and case studies to demonstrate the working principles of thermodynamic systems.

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Fuel Cell Systems Explained

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Fundamentals of Mechanical Sciences: Engineering Thermodynamics and Fluid Mechanics (For W but)

Fundamentals of Mechanical Sciences: Engineering Thermodynamics and Fluid Mechanics (For W but)

Numerical study of coupled THM/C processes related to geo-energy production

The fundamental principles of heat and mass transfer in geothermal systems are reviewed, including the derivation of the governing equations and boundary conditions. The analysis is then extended to include the effects of fluid flow and chemical reactions, which are important in many practical applications. The results are used to design and optimize geothermal systems for power generation and heating applications.


Phase-change Phenomena

Since the second edition of Liquid-Vapor Phase-Change Phenomena was written, research has substantially enhanced the understanding of the effects of microchannel and nanochannel geometries, and effects of extreme wetting on liquid-vapor phase-change processes. To cover advances in these areas, the new third edition includes significant new coverage of microchannels and nanochannels, and numerous new updates. More worked examples and numerous new problems have been added, and a complete solution manual and electronic figures for classroom projection will be available for qualified adopters.

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Fundamentals of Chemical Engineering Thermodynamics

Fundamentals of Chemical Engineering Thermodynamics

The ability of thermal energy storage (TES) systems to facilitate energy savings, renewable energy use and reduce environmental impact has led to a recent resurgence in their interest. The second edition of this book offers up-to-date coverage of recent energy efficient and sustainable technological methods and solutions, covering analysis, design and performance improvement as well as life-cycle costing and assessment. As well as having significantly revised the book for use as a graduate text, the authors address real-life technical and operational problems, enabling the reader to gain an understanding of the fundamental principles and practical applications of thermal energy storage technology. Beginning with a general summary of thermodynamics, fluid mechanics and heat transfer, this book goes on to discuss practical applications with chapters that include TES systems, environmental impact, energy savings, energy and energy analyses, numerical modeling and simulation, case studies and new techniques and performance assessment methods.

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