Gpsa Engineering Data Book 13th Edition

Clathrate Hydrates of Natural Gases
Chemical Engineering Practice
A Guide for Engineers
Analysis, Synthesis and Design of Chemical Processes
An Engineering Data Book
Working Guide to Process Equipment, Third Edition
Handbook of Liquefied Natural Gas
Working Guide to Petroleum and Natural Gas Production Engineering
Gas Purification
Rules of Thumb for Chemical Engineers
Practical Onshore Gas Field Engineering
Rules of Thumb for Mechanical Engineers
Thermodynamic Models for Industrial Applications
Principles and Practices
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Industrial Chemical Process Design, 2nd Edition
Acid Gas Extraction for Disposal and Related Topics
Gas-Liquid And Liquid-Liquid Separators
Reservoir Engineering Handbook
Advanced Natural Gas Engineering
Fundamentals of Natural Gas Processing
Handbook of Natural Gas Transmission and Processing
Fundamentals of Natural Gas Processing
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A Guide for Engineers
Plant Processing of Natural Gas

A Grimm City Novel
A World System Approach
Common Operating Problems and Practical Solutions
Credit Engineering for Bankers

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Clathrate Hydrates of Natural Gases John Wiley & Sons

More efficient credit portfolio engineering can increase the decision-making power of bankers and boost the market value of their banks. By implementing robust risk management procedures, bankers can develop comprehensive views of obligors by integrating fundamental and market data into a portfolio framework that treats all instruments similarly. Banks that can implement strategies for uncovering credit risk investments with the highest return per unit of risk can confidently build their businesses. Through chapters on fundamental analysis and credit administration, authors Morton Glantz and Johnathan Mun teach readers how to improve their credit skills and develop logical decision-making processes. As readers acquire new abilities to calculate risks and evaluate portfolios, they learn how credit risk strategies and policies can affect and be affected

by credit ratings and global exposure tracking systems. The result is a book that facilitates the discipline of market-oriented portfolio management in the face of unending changes in the financial industry. Concentrates on the practical implementation of credit engineering strategies and tools Demonstrates how bankers can use portfolio analytics to increase their insights about different groups of obligors Investigates ways to improve a portfolio's return on risk while minimizing probability of insolvency

Chemical Engineering Practice McGraw Hill Professional

An Engineering Data Book Third edition Edited by JR Calvert and R A Farrar This indispensable companion is a ready reference for commonly required formulae and data, for use in coursework and examinations (where permitted) and in professional practice. CONTENTS Symbols and Units Physical Constants Analysis Analysis of Experimental Data Mechanics Properties and Mechanics of Solids Properties of Materials Earth and the Environment Thermodynamics and Fluid Mechanics Automatic Control Electricity and Magnetism Soil Mechanics Structures Symbols Index Keyword Index

A Guide for Engineers CRC Press

Fluids -- Heat transfer -- Thermodynamics -- Mechanical seals -- Pumps and compressors --

Drivers -- Gears -- Bearings -- Piping and pressure vessels -- Tribology -- Vibration -- Materials -- Stress and strain -- Fatigue -- Instrumentation -- Engineering economics.
Analysis, Synthesis and Design of Chemical Processes Gulf Professional Publishing
Rules of Thumb for Chemical EngineersA Manual of Quick, Accurate Solutions to Everyday Process Engineering ProblemsGulf Professional Publishing
An Engineering Data Book Elsevier
Natural gas is playing an increasing role in meeting world energy demands because of its abundance, versatility, and its clean burning nature. As a result, lots of new gas exploration, field development and production activities are under way, especially in places where natural gas until recently was labeled as “stranded . Because a significant portion of natural gas reserves worldwide are located across bodies of water, gas transportation in the form of LNG or CNG becomes an issue as well. Finally natural gas is viewed in comparison to the recently touted alternatives. Therefore, there is a need to have a book covering all the unique aspects and challenges related to natural gas from the upstream to midstream and downstream. All these new issues have not been addressed in depth in any existing book. To bridge the gap, Xiuli Wang and Michael Economides have written a new book called Advanced Natural

Gas Engineering. This book will serve as a reference for all engineers and professionals in the energy business. It can also be a textbook for students in petroleum and chemical engineering curricula and in training departments for a large group of companies.
Working Guide to Process Equipment, Third Edition McGraw Hill Professional
Offering indispensable insight from experts in the field, Fundamentals of Natural Gas Processing, Second Edition provides an introduction to the gas industry and the processes required to convert wellhead gas into valuable natural gas and hydrocarbon liquids products. The authors compile information from the literature, meeting proceedings, and the Handbook of Liquefied Natural Gas John Wiley & Sons
Completions are the conduit between hydrocarbon reservoirs and surface facilities. They are a fundamental part of any hydrocarbon field development project. The have to be designed for safely maximising the hydrocarbon recovery from the well and may have to last for many years under ever changing conditions. Issues include: connection with the reservoir rock, avoiding sand production, selecting the correct interval, pumps and other forms of artificial lift, safety and integrity, equipment selection and installation and future well interventions. * Course book based on course well completion design by TRACS International * Unique in

its field: Coverage of offshore, subsea, and landbased completions in all of the major hydrocarbon basins of the world. * Full colour

Working Guide to Petroleum and Natural Gas Production Engineering Springer Science & Business Media

Aircraft Propulsion and Gas Turbine Engines, Second Edition builds upon the success of the book's first edition, with the addition of three major topic areas: Piston Engines with integrated propeller coverage; Pump Technologies; and Rocket Propulsion. The rocket propulsion section extends the text's coverage so that both Aerospace and Aeronautical topics can be studied and compared. Numerous updates have been made to reflect the latest advances in turbine engines, fuels, and combustion. The text is now divided into three parts, the first two devoted to air breathing engines, and the third covering non-air breathing or rocket engines.

Gas Purification Gulf Professional Publishing

This is the fifth volume in a series of books focusing on natural gas engineering, focusing on the extraction and disposal of acid gas. This volume includes information for both upstream and downstream operations, including chapters on modeling, carbon capture, chemical and thermodynamic models, and much more. Written by some of the most well-known and respected chemical and process engineers working with

natural gas today, the chapters in this important volume represent the most cutting-edge and state-of-the-art processes and operations being used in the field. Not available anywhere else, this volume is a must-have for any chemical engineer, chemist, or process engineer working with natural gas. There are updates of new technologies in other related areas of natural gas, in addition to the extraction and disposal of acid gas, including testing, reservoir simulations, acid gas injection, and natural gas hydrate formations. Advances in Natural Gas Engineering is an ongoing series of books meant to form the basis for the working library of any engineer working in natural gas today. Every volume is a must-have for any engineer or library.

Rules of Thumb for Chemical Engineers

Gulf Professional Publishing

The Leading Integrated Chemical Process Design Guide: Now with New Problems, New Projects, and More More than ever, effective design is the focal point of sound chemical engineering. Analysis, Synthesis, and Design of Chemical Processes, Third Edition, presents design as a creative process that integrates both the big picture and the small details–and knows which to stress when, and why. Realistic from start to finish, this book moves readers beyond classroom exercises into open-ended, real-world process problem solving. The authors introduce

integrated techniques for every facet of the discipline, from finance to operations, new plant design to existing process optimization. This fully updated Third Edition presents entirely new problems at the end of every chapter. It also adds extensive coverage of batch process design, including realistic examples of equipment sizing for batch sequencing; batch scheduling for multi-product plants; improving production via intermediate storage and parallel equipment; and new optimization techniques specifically for batch processes. Coverage includes Conceptualizing and analyzing chemical processes: flow diagrams, tracing, process conditions, and more Chemical process economics: analyzing capital and manufacturing costs, and predicting or assessing profitability Synthesizing and optimizing chemical processing: experience-based principles, BFD/PFD, simulations, and more Analyzing process performance via I/O models, performance curves, and other tools Process troubleshooting and “debottlenecking” Chemical engineering design and society: ethics, professionalism, health, safety, and new “green engineering” techniques Participating successfully in chemical engineering design teams Analysis, Synthesis, and Design of Chemical Processes, Third Edition, draws on nearly 35 years of innovative chemical engineering instruction at West

Virginia University. It includes suggested curricula for both single-semester and year-long design courses; case studies and design projects with practical applications; and appendixes with current equipment cost data and preliminary design information for eleven chemical processes–including seven brand new to this edition. *Practical Onshore Gas Field Engineering* Gulf Professional Publishing The most complete guide of its kind, this is the standard handbook for chemical and process engineers. All new material on fluid flow, long pipe, fractionators, separators and accumulators, cooling towers, gas treating, blending, troubleshooting field cases, gas solubility, and density of irregular solids. This substantial addition of material will also include conversion tables and a new appendix, “Shortcut Equipment Design Methods.”This convenient volume helps solve field engineering problems with its hundreds of common sense techniques, shortcuts, and calculations. Here, in a compact, easy-to-use format, are practical tips, handy formulas, correlations, curves, charts, tables, and shortcut methods that will save engineers valuable time and effort. Hundreds of common sense techniques and calculations help users quickly and accurately solve day-to-day design, operations, and equipment problems. *Rules of Thumb for*

Mechanical Engineers John Wiley & Sons Project management for oil and gas projects comes with a unique set of challenges that include the management of science, technology, and engineering aspects. Underlining the specific issues involved in projects in this field, Project Management for the Oil and Gas Industry: A World System Approach presents step-by-step application of project management techniques. Using the Project Management Body of Knowledge (PMBOK®) framework from the Project Management Institute (PMI) as the platform, the book provides an integrated approach that covers the concepts, tools, and techniques for managing oil and gas projects. The authors discuss specialized tools such as plan, do, check, act (PDCA); define, measure, analyze, improve, control (DMAIC); suppliers, inputs, process, outputs, customers (SIPOC); design, evaluate, justify, integrate (DEJI); quality function deployment (QFD); affinity diagrams; flowcharts; Pareto charts; and histograms. They also discuss the major activities in oil and gas risk assessment, such as feasibility studies, design, transportation, utility, survey works, construction, permanent structure works, mechanical and electrical installations, and maintenance. Strongly advocating a world systems approach to managing oil and gas projects and programs, the book covers

quantitative and qualitative techniques. It addresses technical and managerial aspects of projects and illustrates the concepts with case examples of applications of project management tools and techniques to real-life project scenarios that can serve as lessons learned for best practices. An in-depth examination of project management for oil and gas projects, the book is a handbook for professionals in the field, a guidebook for technical consultants, and a resource for students.

Thermodynamic Models for Industrial Applications
Gulf Professional Publishing
Using an applications perspective Thermodynamic Models for Industrial Applications provides a unified framework for the development of various thermodynamic models, ranging from the classical models to some of the most advanced ones. Among these are the Cubic Plus Association Equation of State (CPA EoS) and the Perturbed Chain Statistical Association Fluid Theory (PC-SAFT). These two advanced models are already in widespread use in industry and academia, especially within the oil and gas, chemical and polymer industries. Presenting both classical models such as the Cubic Equations of State and more advanced models such as the CPA, this book provides the critical starting point for choosing the most appropriate calculation method for accurate process simulations. Written by two of the developers of

these models, Thermodynamic Models for Industrial Applications emphasizes model selection and model development and includes a useful “which model for which application” guide. It also covers industrial requirements as well as discusses the challenges of thermodynamics in the 21st Century.

Principles and Practices

CRC Press

Diagnose and Troubleshoot Problems in Chemical Process Equipment with This Updated Classic! Chemical engineers and plant operators can rely on the Third Edition of A Working Guide to Process Equipment for the latest diagnostic tips, practical examples, and detailed illustrations for pinpointing trouble and correcting problems in chemical process equipment. This updated classic contains new chapters on Control Valves, Cooling Towers, Waste Heat Boilers, Catalytic Effects, Fundamental Concepts of Process Equipment, and Process Safety. Filled with worked-out calculations, the book examines everything from trays, reboilers, instruments, air coolers, and steam turbines...to fired heaters, refrigeration systems, centrifugal pumps, separators, and compressors. The authors simplify complex issues and explain the technical issues needed to solve all kinds of equipment problems. Comprehensive and clear, the Third Edition of A Working Guide to Process Equipment features: Guidance on diagnosing

and troubleshooting process equipment problems Explanations of how theory applies to real-world equipment operations Many useful tips, examples, illustrations, and worked-out calculations New to this edition: Control Valves, Cooling Towers, Waste Heat Boilers, Catalytic Effects, and Process Safety Inside this Renowned Guide to Solving Process Equipment Problems • Trays • Tower Pressure • Distillation Towers • Reboilers • Instruments • Packed Towers • Steam and Condensate Systems • Bubble Point and Dew Point • Steam Strippers • Draw-Off Nozzle Hydraulics • Pumparounds and Tower Heat Flows • Condensers and Tower Pressure Control • Air Coolers • Deaerators and Steam Systems • Vacuum Systems • Steam Turbines • Surface Condensers • Shell-and-Tube Heat Exchangers • Fire Heaters • Refrigeration Systems • Centrifugal Pumps • Separators • Compressors • Safety • Corrosion • Fluid Flow • Computer Modeling and Control • Field Troubleshooting Process Problems

Engineering Data Book Fps Gulf Professional Publishing

"The most complete, up-to-date, problem-solving toolkit for chemical engineers and process designers. Industrial Chemical Process Design, Second Edition provides a step-by-step methodology and 25 downloadable, customizable, needs-specific software applications that offer quick, accurate solutions

to complex process design problems. These applications uniquely fill the gaps left by large, very expensive commercial process simulation software packages used to select, size, and design industrial chemical process equipment. Written by a hands-on industry consultant and featuring more than 200 illustrations, this book thoroughly details: Sizing and cost estimating of process unit operation equipment Design and rating of fractionation equipment and three-phase separation equipment Chemical optimization Commercial distillation Packaged plant cost analysis Estimating cost for modular packages Performing operations such as liquid-liquid extraction and gas liquid separation vessel sizing and rating Green engineering New to the Second Edition: Added focus on sustainability with new green engineering coverage: crude oil database; vegetable oils and plant greenhouse production for use in automobile fuels; gasoline and diesel fuel database; greenhouse fuels; water removal treatment in three-phase vessel design New focus on engineering economics Simplified shell/tube design method and improved shell/tube exchanger software improvements Fluid flow coverage includes both single- and two-phase flow and the very desirable addition of complete process engineering of NOx removal and catalytic SCR reactor processes

necessary in all electric generator power plants and refinery furnace systems (per mandatory EPA regulations) Coverage of the Fischer-Tropsch process converting natural methane gas to crude oil products, liquids, gasoline, diesel, and jet fuel - all sulfur-free! Includes a plan to decrease reliance on crude oil imports Contains a packaged cost analysis natural gas-to-liquids plant turn-key software program "--

Industrial Chemical Process Design, 2nd Edition CRC Press

Natural gas is considered the dominant worldwide bridge between fossil fuels of today and future resources of tomorrow. Thanks to the recent shale boom in North America, natural gas is in a surplus and quickly becoming a major international commodity. Stay current with conventional and now unconventional gas standards and procedures with Natural Gas Processing: Technology and Engineering Design. Covering the entire natural gas process, Bahadori's must-have handbook provides everything you need to know about natural gas, including: Fundamental background on natural gas properties and single/multiphase flow factors How to pinpoint equipment selection criteria, such as US and international standards, codes, and critical design considerations A step-by-step simplification of the major gas processing procedures, like sweetening, dehydration, and sulfur recovery

Detailed explanation on plant engineering and design steps for natural gas projects, helping managers and contractors understand how to schedule, plan, and manage a safe and efficient processing plant Covers both conventional and unconventional gas resources such as coal bed methane and shale gas Bridges natural gas processing with basic and advanced engineering design of natural gas projects including real world case studies Digs deeper with practical equipment sizing calculations for flare systems, safety relief valves, and control valves

Acid Gas Extraction for Disposal and Related Topics McGraw Hill Professional

This is the most comprehensive dictionary of maintenance and reliability terms ever compiled, covering the process, manufacturing, and other related industries, every major area of engineering used in industry, and more. The over 15,000 entries are all alphabetically arranged and include special features to encourage usage and understanding. They are supplemented by hundreds of figures and tables that clearly demonstrate the principles & concepts behind important process control, instrumentation, reliability, machinery, asset management, lubrication, corrosion, and much much more. With contributions by leading researchers in the field: Zaki Yamani Bin Zakaria Department, Chemical Engineering, Faculty Universiti Teknologi

Malaysia, Malaysia Prof. Jelenka B. Savkovic-Stevanovic, Chemical Engineering Dept, University of Belgrade, Serbia Jim Drago, PE, Garlock an EnPro Industries family of companies, USA Robert Perez, President of Pumpcalcs, USA Luiz Alberto Verri, Independent Consultatnt, Verri Veritatis Consultoria, Brasil Matt Tones, Garlock an EnPro Industries family of companies, USA Dr. Reza Javaherdashti, formerly with Qatar University, Doha-Qatar Prof. Semra Bilgic, Faculty of Sciences, Department of Physical Chemistry, Ankara University, Turkey Dr. Mazura Jusoh , Chemical Engineering Department, Universiti Teknologi Malaysia Jayesh Ramesh Tekchandaney, Unique Mixers and Furnaces Pvt. Ltd. Dr. Henry Tan, Senior Lecturer in Safety & Reliability Engineering, and Subsea Engineering, School of Engineering, University of Aberdeen Fiddoson Fiddo, School of Engineering, University of Aberdeen Prof. Roy Johnsen, NTNU, Norway Prof. N. Sitaram , Thermal Turbomachines Laboratory, Department of Mechanical Engineering, IIT Madras, Chennai India Ghazaleh Mohammadali, IranOilGas Network Members' Services Greg Livelli, ABB Instrumentation, Warminster, Pennsylvania, USA Gas Processors Suppliers Association (GPSA)

Gas-Liquid And Liquid-Liquid Separators

Macmillan International Higher Education

Written by an internationally-recognized

team of natural gas industry experts, the fourth edition of Handbook of Natural Gas Transmission and Processing is a unique, well-researched, and comprehensive work on the design and operation aspects of natural gas transmission and processing. Six new chapters have been added to include detailed discussion of the thermodynamic and energy efficiency of relevant processes, and recent developments in treating super-rich gas, high CO_2 content gas, and high nitrogen content gas with other contaminants. The new material describes technologies for processing today's unconventional gases, providing a fresh approach in solving today's gas processing challenges including greenhouse gas emissions. The updated edition is an excellent platform for gas processors and educators to understand the basic principles and innovative designs necessary to meet today's environmental and sustainability requirement while delivering acceptable project economics. Covers all technical and operational aspects of natural gas transmission and processing. Provides pivotal updates on the latest technologies, applications, and solutions. Helps to understand today's natural gas resources, and the best gas processing technologies. Offers design optimization and advice on the design

and operation of gas plants.
Reservoir Engineering Handbook Macmillan
Here, in a compact, easy-to-use format, are practical tips, handy formulas, correlations, curves, charts, tables, and shortcut methods that will save engineers valuable time and effort. Hundreds of common sense techniques and calculations help users quickly and accurately solve day-to-day design, operations, and equipment problems.
Advanced Natural Gas Engineering John Wiley & Sons
Working Guide to Petroleum and Natural Gas Production Engineering provides an introduction to key concepts and processes in oil and gas production engineering. It begins by describing correlation and procedures for predicting the physical properties of natural gas and oil. These include compressibility factor and phase behavior, field sampling process and laboratory measurements, and prediction of a vapor-liquid mixture. The book discusses the basic parameters of multiphase fluid flow, various flow regimes, and multiphase flow models. It explains the natural flow performance of oil, gas, and the mixture. The final chapter covers the design, use, function, operation, and maintenance of oil and gas production facilities; the design and construction of separators; and oil and gas separation and treatment systems. Evaluate well inflow

performance Guide to properties of hydrocarbon mixtures Evaluate Gas production and processing facilities

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