Oilfield Processing of Petroleum - Francis Manning 1995-01-01 Covers process descriptions, design method, operating procedures, and troubleshooting in great detail. This text is the definitive source on its topic and contains numerous diagrams and appendices, as well as case histories and review questions with numerical problems.

Petroleum and Gas Field Processing - Hussein K. Abdel-Aal 2015-09-18 Many oil production processes present a significant challenge to the oil and gas field processing facilities and equipment design. The optimization of the sequential operation of the oil field processing facility can be a major factor in increasing oil and gas production rates and reducing operating costs. Petroleum and Gas Field Processing provides an all-inclusive guide to surface petroleum operations and solves these and other problems encountered in the field processing of oil and gas. Fully revised and updated to reflect major changes over the past decade or so, this second edition builds on the success attained in the first edition. It delivers an expanded and updated treatment that covers the principles and procedures related to the processing of reservoir fluids for the separation, handling, treatment, and production of quality petroleum oil and gas products. With five new chapters, this second edition covers additional subjects, in particular natural gas, economics and profitability, oil field chemicals, and piling and pumps. The book also contains worked-out examples and case studies from a variety of oil field operations.

Handbook of Natural Gas Transmission and Processing - Saied Mokhatab 2015-02-14 Written by an internationally-recognized author team of natural gas industry experts, the third edition of Handbook of Natural Gas Transmission and Processing is a unique, well-documented, and comprehensive work on the major aspects of natural gas transmission and processing. Two new chapters have been added to the new edition: a chapter on nitrogen rejection to address today’s high nitrogen gases and a chapter on gas processing plant operation with optimizing their plant operations. In addition, overall updates to Handbook of Natural Gas Transmission and Processing provide a fresh look at new technologies and opportunities for solving current gas processing problems on plant design and operation and on greenhouse gases emissions. It also does an excellent job of highlighting the key considerations that must be taken into account for any natural gas project in development. Covers all technical and operational aspects of natural gas transmission and processing in detail. Provides pivotal updates on the latest technologies, applications and solutions. Offers practical advice on design and operation based on engineering principles and operating experiences.

Designing Solutions-Based Ubiquitous and Pervasive Computing: New Issues and Trends - Neto, Francisco Milton Mendes 2010-04-30 "This book provides a general overview about research on ubiquitous and pervasive computing and its applications, discussing the recent progress in this area and pointing out to scholars what they should do (best practices) and should not do (bad practices)"—Provided by publisher.

Interfacial Catalysis - Alexander G. Volkov 2002-12-12 A comprehensive volume on interfacial catalysis, this book includes contributions from an international group of specialists in chemistry, environmental science, informatics, physiology, nuclear energy, and physics. The editor has organized the material into the main topics of fundamental characteristics, phase transfer catalysis, reversed micelles and water and energy for sustainable development in both technological as well as modeling aspects.

Petroleum and Gas Field Processing - H.K. Abdel-Aal 2003-07-03 The immensely popular extract from oil and gas wells consists of mixtures of oil, gas, and water that is difficult to transport, requiring a certain amount of field processing. This reference analyzes principles and procedures related to the processing of reservoir fluids for the separation, handling, treatment, and production of quality petroleum oil and gas products. It details strategies in equipment selection and system design, field development and operation, and process simulation and control to increase plant productivity and safety and avoid losses during purification, treatment, storage, and export. Providing guidelines for developing efficient and economical treatment systems, the book features solved design examples that demonstrate the application of developed design equations as well as review problems and exercises of key engineering concepts in petroleum field development and operation.

Biosurfactants - Naim Kosaric 2014-11-03 Stresses the Potential Applications of Biosurfactants in Various Industries Environmental concerns and a demand for sustainable chemical production have become important issues in recent years. As a result, microbial biosurfactant-producing systems are gaining momentum as potential replacements for chemical surfactants. Biosurfactants: Production and Utilization—Processes, Technologies, and Economics explores the production, utilization, and industrial/economic use of biosurfactants in modern biotechnology. This book represents comprehensive material developed by contemporary experts in the field. Focusing on research and developments within the last 20 years, it highlights relevant changes in the industry. It provides a detailed account of the current applications of biosurfactants, considers the potential for further environmental, biological, and industrial applications, and concentrates on surfactants and organisms with possibilities for future use. Emphasizes Process Scale-Up and Commercialization Factoring in the industrial application of biosurfactant production based on renewable resources, the book determines how biosurfactants can enhance or replace the properties of chemically synthesized surface-active agents. It discusses moving beyond the laboratory scale of research and development and on to the industrial scale of commercial interest. The book consists of 17 chapters and features expert authors discussing topics that include: Understanding the regulatory processes controlling the production of biosurfactants Strategies for feasible commercial biosurfactant production Examples of cost analysis based on published information The viability of industrial applications in food, cosmetics, and pharmaceuticals Patents for future trends Biosurfactants: Production and Utilization—Processes, Technologies, and Economics contains special sections devoted to the overview and evaluation of specific patents relating to biosurfactants, and methods for production of biosurfactants on a laboratory and industrial/commercial scale. It also presents novel and proven applications for biosurfactants from a number of biotechnology laboratories and research facilities around the world. In addition, it introduces the reader to a variety of real-world industry techniques readily applicable for practical use.

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Investigation of Simon & Coles Manganese Deposit Bedford County, Wavelet Active Media Technology and Information Processing - Pa-W. H. Korns 1952

Fundamentals of Petroleum Refining presents the fundamentals of thermodynamics and kinetics, and it explains the scientific background essential for understanding refinery operations. The text also provides a detailed introduction to refinery engineering topics, ranging from the basic principles and unit operations to overall refinery economics. The book covers important topics, such as clean fuels, gasification, biofuels, and environmental impact of refining, which are not commonly discussed in most refinery textbooks. Throughout the source, problem sets and examples are given to help the reader practice and apply the fundamental principles of refining. Chapters 1-10 can be used as core materials for teaching undergraduate courses. The first two chapters present an introduction to the petroleum refining industry and then focus on feedstocks and products. Thermophysical properties of crude oils and petroleum fractions, including processes of atmospheric and vacuum distillations, are discussed in Chapters 3 and 4. Conversion processes, product blending, and alkylation are covered in chapters 5-10. The remaining chapters discuss hydrogen production, clean fuel production, refining economics and safety, acid gas treatment and removal, and methods for environmental and effluent treatments. This source can serve both professionals and students (undergraduate and graduate levels) of Chemical and Petroleum Engineering, Chemistry, and Chemical Technology. Beginners in the engineering field, specifically in the oil and gas industry, may also find this book invaluable. Provide a mathematical approach to process calculations of Chapter 9.

Characterization and Properties of Petroleum Fractions - M. R. Riazi 2005
The last two chapters of this book deal with application methods presented in previous chapters to estimate various thermodynamic, physical, and transport properties of petroleum fractions. In this chapter, various methods for prediction of physical and thermodynamic properties of pure hydrocarbons and their mixtures, petroleum fractions, crude oils, natural gases, and reservoir fluids are presented. As it was discussed in Chapters 5 and 6, properties of gases may be estimated more accurately than properties of liquids. Theoretical methods of Chapters 5 and 6 for estimation of thermophysical properties generally can be applied to both liquids and gases; however, more accurate properties can be predicted through empirical correlations particularly developed for liquids. When these correlations are developed with some theoretical basis, they are more accurate and have wider range of applications. In this chapter some of the sme theoretical correlations are presented. Methods presented in Chapters 5 and 6 can be used to estimate properties such as density, enthalpy, heat capacity, heat of vaporization, and vapor pressure. Characterization methods of Chapters 2-4 are used to determine the input parameters needed for various predictive methods. One important part of this chapter is prediction of vapor pressure that is needed for vapor-liquid equilibrium calculations of Chapter 9.

Modern Petroleum Technology, 2 Volume Set - Institute of Petroleum (IP) 2000-09-13
Reflecting the many changes in the technology of the oil and gas industry since its last publication in 1984, this new edition of Modern Petroleum Technology is the most authoritative and thoroughly up-to-date review of technical expertise employed across the whole of the international oil and gas industry. Written by leading international experts from industry and academia, all entries have been updated and many new entries have been added for this 6th edition. The work is divided into two volumes: Upstream and Downstream. Upstream examines the different stages of the exploration and production processes involved in the location and extraction of raw materials, including the latest applications employed in modern seismic technology and the production of heavy oils. Downstream covers the process of refining the raw material, and producing and supplying the end product, from refineries to service stations. Both volumes deal with all aspects of their area of petroleum technology, from the innovations in technology to the environmental issues surrounding its practical application. Modern Petroleum Technology considers the current challenges and opportunities presented by new technology, enabling everyone in the industry, from the busy chief executive to the petroleum engineer, to stay in touch with developments outside their own area of expertise. Modern Petroleum Technology’s concise and comprehensive overview will also be of special value to analysts, strategists, lecturers and students, oil and gas consultants, and legal and financial service providers.

Ullmann’s Energy - Wiley-VCH 2017-06-01
This three-volume handbook contains a wealth of information on energy sources, energy generation and storage, fossil and renewable fuels as well as the associated processing technology. Fossil as well as renewable fuels, nuclear technology, power generation and storage technologies are treated side by side, providing a unique overview of the entire global energy industry. The result is an in-depth survey of industrial-scale energy technology. Your personal ULLMANN’S: A carefully selected “best of” compilation of topical articles brings the vast knowledge of the Ullmann’s encyclopedia to the desks of energy and process engineers Chemical and physical characteristics, production processes and production figures, main applications, toxicology and safety information are all found here in one single resource. New or updated articles include classical topics such as coal technologies, oil and gas as well as cutting-edge technologies like biogas, thermoeloelectricity and solar technology 3 Volumes

Waste Minimizaton in the Oil Field-DIANE Publishing Company 1996-07
This report will increase environmental protection by significantly reducing the potential for pollution of the State of Texas’ land, water, & air in the exploration & production of oil & gas. Provides oil & gas operators with training & technical assistance on source reduction & recycling, also known as waste minimization. Includes: waste management plans, & a list of hazardous & nonhazardous oil & gas wastes. Provides success stories in drilling operations, oil field production operations, gas field production & gas plant operations. Glossary.

Surfactants in Upstream E&P - Theis Solling 2021-06-19
This edited book explores the use of surfactants in upstream exploration and production (E&P). It provides a molecular, mechanistic and application-based approach to the topic, utilising contributions from the leading researchers in the field of organic surfactant chemistry and surfactant chemistry for upstream E&P. The book covers a wide range of problems in enhanced oil recovery and surfactant chemistry which have a large importance in drilling, fracking, hydrate inhibition and conformance. It begins by discussing the fundamentals of surfactants and their synthesis. It then moves on to present their applicability to a variety of situations such as gas injections, shale swelling inhibition, and acid stimulation. This book presents research in an evolving field, making it interesting to academics, postgraduate students, and experts within the field of oil and gas.

Fossil Energy Update - 1985

Report of Investigations - 1953

Energy Research Abstracts - 1994-11

Processing of Heavy Crude Oils - Ramasamy Marappa Gounder 2019-12-18

Surface Production Operations - Ken Arnold 2008 The latest edition of this best-selling title is updated and expanded for easier use by engineers. New to this edition is a section on the fundamentals of surface production
operations taking up topics from the oilfield as originally planned by the authors in the first edition. This information is necessary and endemic to production and process engineers. Now, the book offers a truly complete picture of surface production operations, from the production stage to the process stage with applications to process and production engineers. New in-depth coverage of hydrocarbon characteristics, the different kinds of reservoirs, and impurities in crude. Practical suggestions help readers understand the art and science of handling produced liquids. Numerous, easy-to-read figures, charts, tables, and photos clearly explain how to design, specify, and operate oilfield surface production facilities.

The Science and Technology of Unconventional Oils-M. Ramírez-Corredores 2017-05-18 This book, The Science and Technology of Unconventional Oils: Finding Refining Opportunities, intends to report the collective physical and chemical knowledge of unconventional oils (heavy, extra-heavy, sour/acid, and shale oil) and the issues associated with their refining for the production of transportation fuels. It will focus on the discussion of the scientific results and technology activities of the refining of unconventional oils. The presence of reactive and refractory compounds and components that negatively impact refining processing (the "bad actors") are discussed and analyzed. The commercially available technologies, with their reported improvements and emerging ideas, concepts, and technologies, are described. This comprehensive overview constitutes the basis for establishing technology gaps, and in return sets the science and technology needs to be addressed in the future. In summary, this book incorporates the relevant knowledge of processing unconventional crude oils and of the "Bottom-of-the-Barrel" fraction, describing the related commercially available and emerging technologies to contribute to the identification of existing gaps. Relates physicochemical properties and phenomenological behavior of unconventional oils to refining challenges. Describes commercially available technologies and the problems they solve. Lists recent improvements in various processes and identifies technology gaps. Explains emerging new refining technologies and the problems they solve. Discusses future needs and challenges, and suggests further research and development needs.


Oil and Gas Production Handbook: An Introduction to Oil and Gas Production-Havard Devold 2013*

Fundamentals of Oil & Gas Industry for Beginners-Samir Dalvi 2015-11-03 A prominent linchpin in world politics and in security policies world over, oil and gas have tremendous value in both, the political and economical sectors of global relations, business establishments and policy. Regardless of whether one is a novice to a given field, or a well accomplished veteran in the field, there is a need for the continued engagement with the basics that underlie the core subjects. With that in mind, the Fundamentals of Oil and Gas is a perfect primer for the first-timer in the field, while also a copious text to help a seasoned veteran stay abreast with the nuances of the world of Oil and Gas.

Essentials of Oil and Gas Utilities-Alireza Bahadori 2016-02-03 Every oil and gas refinery or petrochemical plant requires sufficient utilities support in order to maintain a successful operation. A comprehensive utilities system must exist to distribute feedstocks, discharge waste streams, and remains an integrated part of the refinery’s infrastructure. Essentials of Oil and Gas Utilities explains these support systems and provides essential information on their essential requirements and process design. This guide includes water treatment plants, condensate recovery plants, high pressure steam boilers, induced draft cooling towers, instrumentation/production/air compressors, and units for a refinery fuel gas and oil systems. In addition, the book offers recommendations for equipment and flow line protection against temperature fluctuations and the proper preparation and storage of strong and dilute caustic solutions. Essentials of Oil and Gas Utilities is a go-to resource for engineers and refinery personnel who must consider utility system design, parameters and associated processes for the successful operations of their plants. Discusses gaseous and liquid fuel systems used to provide heat for power generation, steam production and process requirements. Provides a design guide for compressed air systems used to provide air to the various points of application in sufficient quantity and quality and with adequate pressure for efficient operation of air tools or other pneumatic devices. Explains the water systems utilized in plant operations which include water treatment systems or raw water and plant water system; cooling water circuits for internal combustion engines, reciprocating compressors, inter-cooling and after-cooling facilities; and “Hot Oil” and “Tempered Water” systems.


Petroleum Engineering Handbook-Larry W. Lake 2006 Volume I, General Engineering, includes chapters on mathematics, fluid properties (fluid sampling techniques, properties and correlations of oil, gas, condensate, and water; hydrocarbon phase behavior and phase diagrams for hydrocarbon systems; the phase behavior of water/hydrocarbon systems; and the properties of waxes, asphaltene, and crude oil emulsions), rock properties (bulk rock properties, permeability, relative permeability, and capillary pressure), the economic and regulatory environment, and the role of fossil energy in the 21st century energy mix (from SPE Website).

Advances in Petrochemicals-Vivek Patel 2015-09-30 The petrochemical industry is an important area in our pursuits for economic growth, employment generation, and basic needs. It is a huge field that encompasses many commercial petrochemicals and polymer-enabled products. The book is designed to help the reader, particularly students and researchers of petroleum science and engineering, to understand synthesis, processing, mechanisms, and simulation of the petroleum processes. The selection of topics addressed and the examples, tables, and graphs used to illustrate them are governed, to a large extent, by the fact that this book is aimed primarily at petroleum science and engineering technologists. Undoubtedly, this book contains must read materials for students, engineers, and researchers working in the area of petrochemicals and petroleum and provides valuable insights into the related synthesis, processing, mechanisms, and simulation. This book is concise, self-explanatory, informative, and cost-effective.


Crude Oil Emulsions-Manar Abdel-Raouf 2012-03-02 Petroleum “black gold” is the most important nonrenewable source of energy. It is a complex mixture of different phases and components. Refining it provides a vast number of organic compounds, all of them of which are used to produce petroleum based products for numerous applications, from industry to medicine, from clothing to food industries. We can find petroleum based products all around us. This book deals with some important topics related to petroleum such as its chemical composition and stability. It is well-known that the chemical composition of crude oil differs according to the site of production, and its grade varies from waxy to asphaltic crude. Both of them are refined to produce different products. The stability of crude oil on aging and transportation is governed by several factors and these factors are included within this book. Some new technologies for petroleum characterization are also introduced. This book is aimed at researchers, chemical engineers and people working within the petroleum industry.

Troubleshooting Natural Gas Processing-Norman P. Lieberman 2008-08-01

Advances in Fluid Mechanics XII-S. Hernández 2018-10-30 Containing papers from the 12th International Conference on Advances in Fluid Mechanics, this book covers a wide range of topics including basic formulations and their computer modelling as well as the relationship between experimental and analytical results. The emphasis is on new applications and research currently in progress. The field of fluid mechanics is vast and has numerous and diverse applications. The contained research works discuss new studies in fluid mechanics and present the latest applications in the field. A wide range of topics are covered including, Computational methods; Boundary elements and other mesh reduction methods; Fluid structure interaction; Cooling of electronic devices; Environmental fluid dynamics; Industrial applications; Energy systems; Nano and micro fluids; Turbulent and complex flows; Jets; Droplet and spray dynamics; Bubble dynamics; Multiphase fluid flow; Pumping and fluid transportation; Experimental measurements; Rheology; Chemical reaction flow; Hydroelectromagnetic flow; High speed flow; Wave theory; Energy conversion systems.

Indian Journal of Petroleum Geology-1995