

Oil Gas And Petrochemical Advanced Process Control The

Thermal Insulation Handbook for the Oil and Gas Industries addresses relative design, materials, procedures, and standard installation necessities for various oil and gas infrastructure such as pipelines, subsea equipment, vessels, and tanks. With the continued increase in available natural gas ready to export — especially LNG — and the definition of “deepwater” changing every year, an understanding of thermal insulation is more critical than ever. This one-of-a-kind handbook helps oil and gas engineers ensure that their products are exporting safely and that the equipment’s integrity is protected. Topics include: Design considerations and component selection, including newer materials such as cellular glass Method to properly install the insulation material and reliable inspection and safety considerations in accordance with applicable US and international standards, specifically designed for the oil and gas industry Calculations to make sure that every scenario is considered and requirements for size, composition, and packaging are met effectively Understand all appropriate, new and existing, insulation material properties as well as installation requirements Gain practical knowledge on factors affecting insulation efficiency, rules of thumb, and links to real-world case studies Maximize flow assurance safely and economically with critical calculations provided

Advanced Petrochemical Technologies in the Petroleum Industry gives engineers a critical resource to help them understand the machine learning that will solve specific engineering challenges. The reference begins with fundamentals, covering preprocessing of data, types of intelligent models, and training and optimization algorithms. The book moves on to methodically address artificial intelligence technology and applications by the upstream sector, covering exploration, drilling, reservoir and production engineering. Final sections cover current gaps and future challenges. Teaches how to apply machine learning algorithms that work best in exploration, drilling, reservoir or production engineering Helps readers increase their existing knowledge on intelligent data modeling, machine learning and artificial intelligence, with foundational chapters covering the preprocessing of data and training on algorithms Provides tactics on how to cover complex projects such as shale gas, tight oils, and other types of unconventional reservoirs with more advanced model input

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 CO2 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.

Technical Guidance for Petroleum Exploration and Production Plans

Emerging Research and Opportunities

This Month’s Question -with Winter’s First Blasts Already Down Upon Us Or on Their Way, the Idea of Greens Protection Comes to Mind, So this Month’s Question Asks what Measures are Taken in this Direction by Golf Course Superintendents?.

Petrochemistry

Oil, Gas and Petrochemical: Processing, Production and Management

Sustainable Materials for Transitional and Alternative Energy, a new release in the Advanced Materials and Sensors for the Oil and Gas Industry series, comprises a list of processes across the energy industry coupled with the latest research involving advanced nanomaterials. Topics include green-based nanomaterials towards carbon capture, the importance of coal gasification in terms of fossil fuels and advanced materials utilized for fuel cells. Supplied from contributing experts in both academic and corporate backgrounds, the reference contains a precise balance on the developments, applications, advantages and challenges remaining. The book addresses real solutions as energy companies continue to deliver energy needs while lowering emissions. The oil and gas industry are shifting and implementing innovative ways to produce energy in an environmentally friendly way. One approach involves solutions developed using advanced materials and nanotechnology. Nanomaterials are delivering new alternatives for engineers making this a timely product for today’s market. Teaches readers about developments, workflows and protocols in advanced materials for today’s oil and gas sectors Helps readers gain insights from an experienced list of editors and contributors from both academia and corporate backgrounds Addresses environmental challenges in oil and gas through technological solutions in nanotechnology

Petroleum refining and the petrochemical industry play an important role in the current world economy. They provide the platform to convert basic raw materials into many essential products, ranging from transportation fuels (such as gasoline, jet fuel, diesel, and gas oil) to basic and intermediate materials for petrochemical industries and many other valuable chemical products. Advanced Catalysis Processes in Petrochemicals and Petroleum Refining: Emerging Research and Opportunities is an essential comprehensive research publication that provides knowledge on refining processes that could be integrated by the petrochemical industry and discusses how to integrate refining products with petrochemical industries through the use of new technologies. Featuring a range of topics such as biofuel production, environmental sustainability, and biorefineries, this book is ideal for engineers, chemists, industry professionals, policymakers, researchers, academicians, and petrochemical companies.

The oil and gas industry is one of the largest and most advanced sectors of the world economy. This book on the oil and gas industry discusses topics related to well logging, reservoir engineering and drilling. Recent developments in the field of oil and gas engineering or petroleum engineering are related to technologies concerning oil and gas recovery and extraction as well as improved computational methods for fluid dynamics. This book discusses the fundamentals as well as modern approaches of this field. This book elucidates the concepts and innovative models around prospective developments with respect to the oil and gas sector. This text presents researches and studies performed by experts across the globe. This book, which is informed by the latest techniques that are available in oil and gas exploration and extraction, will be of great help to researchers in the fields of petroleum engineering, fluid dynamics and geology. The extensive content of this book on oil and gas industry provides the readers with a thorough understanding of the subject.

Dictionary of Oil, Gas, and Petrochemical Processing

Oil and Gas Taxation

Advanced Reservoir Management and Engineering

Petroleum Industry Wastewater

The Super Speaks Out

Unravels fundamental engineering for the treatment, recovery, and disposal of solid waste, sludge and wastewater in the petroleum, chemical, and unconventional oil and gas processing industries This new edition unravels essential requirements for the process design and engineering of the equipment and facilities pertaining to waste management for gas refineries, chemical plants, oil terminals, and petrochemical plants. Updated throughout, Waste Management in the Chemical and Petroleum Industries, Second Edition offers chapters on wastewater treatment; physical unit operations; chemical treatment; biological treatment; and wastewater treatment in unconventional oil and gas industries. It also covers wastewater sewer systems; sewage treatment; and solid waste treatment and disposal. New topics include: water pollution terminals the design procedure for effluent water pollution control spill prevention and control groundwater pollution control wastewater pollution control in crude oil terminals Information on the source of polymeric plants examination of water and wastewater radioactivity soil pollution pipeline leak consequence evaluation Waste Management in the Chemical and Petroleum Industries, Second Edition is an ideal text for researchers and advanced students in chemical, petroleum, and environmental fields, as well as for those in civil engineering.

Written by an engineer for engineers, this book is both training manual and on-going reference, bringing together all the different facets of the complex processes that must be in place to minimize the risk to people, plant and the environment from fires, explosions, vapour releases and oil spills. Fully compliant with international regulatory requirements, relatively compact but comprehensive in its coverage, engineers, safety professionals and concerned company management will buy this book to capitalize on the author’s life-long expertise. This is the only book focusing specifically on oil and gas and related chemical facilities. This new edition includes updates on management practices, lessons learned from recent incidents, and new material on chemical processes, hazards and risk reviews (e.g. CHAZOP). Latest technology on fireproofing, fire and gas detection systems and applications is also covered. An introductory chapter on the philosophy of protection principles along with fundamental background material on the properties of the chemicals concerned and their behaviours under industrial conditions, combined with a detailed section on modern risk analysis techniques makes this book essential reading for students and professionals following Industrial Safety, Chemical Process Safety and Fire Protection Engineering courses. A practical, results-oriented manual for practicing engineers, bringing protection principles and chemistry together with modern risk analysis techniques Specific focus on oil and gas and related chemical facilities, making it comprehensive and compact Includes the latest best practice guidance, as well as lessons learned from recent incidents

Phase I results of a CO2-assisted oil recovery demonstration project in selected Cypress Sandstone reservoirs at Mattoon Field, Illinois are reported. The design and scope of this project included CO2 injectivity testing in the Pinnell and Sawyer units, well stimulation treatments with CO2 in the Strong unit and infill well drilling, completion and oil production. The field activities were supported by extensive CO2-oil-water coreflood experiments, CO2 oil-phase interaction experiments, and integrated geologic modeling and reservoir simulations. The progress of the project was made public through presentations at an industry meeting and a DOE’s contractors symposium, through quarterly reports and one-to-one consultations with interested operators. Phase II of this project was not implemented. It would have been a water-alternating-gas (WAG) project of longer duration.

Petrochemical Processing, Hydrocarbon Technology and Green Engineering

Introduction to Petroleum Engineering

Advanced in the Price of Petroleum Products

Advanced Petroleum Reservoir Simulation

Mattoon Oil Field, Illinois. [Quarterly Report], January--March 1994

Capitalist governments around the world, however strongly they profess free market principles, have become deeply involved in the international market for petroleum. What success have they had as oil entrepreneurs, and what do their achievements and failures tell us about the nature of the state? In The Sovereign Entrepreneur, Merrie Gilbert Klapp develops a compelling comparative logic of state oil entrepreneurship. Drawing upon dozens of interviews with policymakers and company executives in Norway, Britain, Indonesia, and Malaysia, Klapp addresses a little understood determinant of policy—the pivotal bargaining power that domestic and international interests wield in different countries. Advanced capitalist countries, she finds, have generally not achieved their goals in the oil sector; they have been constrained by powerful, well-organized domestic interests. Less developed countries, by contrast, have faced little opposition at home, but the international banks and the multinationals have severely limited their attempts to expand into the global petroleum market. Klapp argues that bureaucratic and domestic politics, not just economics, underlie the varying success of different countries in the marketplace.

Presents key concepts and terminology for a multidisciplinary range of topics in petroleum engineering Places oil and gas production in the global energy context Introduces all of the key concepts that are needed to understand oil and gas production from exploration through abandonment Reviews fundamental terminology and concepts from geology, geophysics, petrophysics, drilling, production and reservoir engineering Includes many worked practical examples within each chapter and exercises at the end of each chapter and highlights and reinforce material in the chapter Includes a solutions manual for academic managers

A thorough introduction to environmental monitoring in the Oil and Gas Industry Analytical Techniques in the Oil and Gas Industry for Environmental Monitoring examines the analytical side of the oil and gas industry as it also provides an overall introduction to the industry. You’ll discover how oil and natural gas are sourced, refined, and processed. You can learn about what’s produced from oil and natural gas, and why evaluating these sourced resources is important. The book discusses the conventional analyses for oil and natural gas feeds, along with their limitations. It offers detailed descriptions of advanced analytical techniques that are commercially available, plus explanations of gas and oil industry equipment and instrumentation. You’ll find technique descriptions supplemented with a list of references as well as with real-life application examples. With this book as a reference, you can prepare to apply specific analytical methods in your organization’s lab environment. Analytical Techniques can also serve as your comprehensive resource on key techniques in the characterization of oil and gas samples, within both refinery and environmental contexts. Understand of the scope of oil and gas industry techniques available Consider the benefits and limitations of each available process Prepare for applying analytical techniques in your lab See real examples and a list of references for each technique Read descriptions of off-line analytics, as well as on-line and process applications As a chemist, engineer, instructor, or student, this book will also expand your awareness of the role these techniques have in environmental monitoring and environmental impact assessments.

For Practitioners in the Oil, Gas and Petrochemical Industry

The Sovereign Entrepreneur

Oil Policies in Advanced and Less Developed Capitalist Countries

Production and Transmission

Advanced Oil and Gas Accounting

Different approaches, evaluations, techniques and advanced studies on processing and production of oil, gas and petrochemicals have been included in this book. Diverse range of topics such as uses of petrochemicals, their production and refinement, natural gas, etc. have been covered in this text in a comprehensive manner. With state-of-the-art inputs by acclaimed experts of this field, this book targets students and professionals alike. It will help new researchers by foregrounding their knowledge in this branch.

Handbook of Fire and Explosion Protection Engineering Principles for the Oil, Gas, Chemical, and Related Facilities, Fourth Edition discusses high-level risk analysis and advanced technical considerations, such as process control, emergency shut-downs, and evaluation procedures. As more engineers and managers are adopting risk-based approaches to minimize risk, maximize profits, and keep operations running smoothly, this reference encompasses all the critical equipment and standards necessary for the process industries, including oil and gas. Updated with new human factors, this book delivers the equipment standards needed to protect today’s petrochemical assets and facilities. Provides tactics on how to revise and upgrade company policies to support safer designs and equipment Helps readers understand the latest in fire suppression and explosion risks for a process plant in a single source Updates on how to evaluate concerns, thus helping engineers and managers process operating requests and estimate practical cost/benefit factors

This book presents detailed explanations of how to formulate field development plans for oil and gas discovery. The data and case studies provided here, obtained from the authors’ field experience in the oil and gas industry around the globe, offer a real-world context for the theories and procedures discussed. The book covers all aspects of field development plan processes, from reserve estimations to economic analyses. It shows readers in both the oil and gas industry and in academia how to prepare field development plans in a straightforward way, and w

Applications of Artificial Intelligence Techniques in the Petroleum Industry

Handbook of Fire and Explosion Protection Engineering Principles

Oil and Gas Production Handbook: An Introduction to Oil and Gas Production

Letter from the Federal Trade Commission Transmitting Report in Response to House Resolution No. 501, Directing the Commission to Make Immediate Inquiry Into the Cause of the Recent Advance in the Prices of All Petroleum Products.

In industry, miscommunication can cause frustration, create downtime, and even trigger equipment failure. By providing a common ground for more effective discourse, the Dictionary of Oil, Gas, and Petrochemical Processing can help eliminate costly miscommunication. An essential resource for oil, gas, and petrochemical industry professionals, engineer

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

Petroleum Industry Wastewater: Advanced and Sustainable Treatment Methods discusses the status of different approaches and advanced processes involved in the treatment of petrochemical and petroleum industry wastewater. The book focuses on advanced, sustainable, and environmentally friendly technologies for removing toxic pollutants from contaminated waters. The book also explores the environmental aspects and impacts of the petroleum industry discharge wastewater, their effect on aquatic life, and possible ways to deal with these effects. Keeping the global water crisis and fast depletion of natural fresh water in mind, more immediate knowledge, information, implication, and effective utilization of available resources are required than we anticipated. The book brings a wide range of methodologies and perspectives under one roof in a comprehensive manner. Describes advanced strategies and methods involved in petroleum industry water treatment Deals with ways to treat discharged water through cutting-edge technologies Presents an overview of pollutant degradation in industrial wastewater Highlights advanced and technological know-how for a variety of applications

Applications of Advanced Petroleum Production Technology and Water Alternating Gas Injection for Enhanced Oil Recovery - Mattoon Oil Field, Illinois. Final Report

Intelligent Digital Oil and Gas Fields

Handbook of Electrical Engineering

Oil and Gas Industry: Advanced Technologies

Advanced Planning Strategies in Oil and Gas Taxation

A practical, fast-paced approach to teaching the concepts and problems common in petroleum engineering that will appeal to a wide range of disciplines Petrophysics is the study of rock properties and their interactions with fluids, including gases, liquid hydrocarbons, and aqueous solutions. This three-volume series from distinguished University of Texas professor Dr. Ekwere J. Peters provides a basic understanding of the physical properties of permeable geologic rocks and the interactions of the various fluids with their interstitial surfaces, with special focus on the transport properties of rocks for single-phase and multiphase flow. Based on Dr. Peter’s graduate course that has been taught internationally in corporations and classrooms, the series covers core topics and includes full-color CT and NMR images, graphs, and figures to illustrate practical application of the material. Topics addressed in volume 2 (chapters 5-8) include Dispersion in porous media Interfacial phenomena and wettability Capillary pressure Relative permeability Advanced Petrophysics features over 140 exercises designed to strengthen learning and extend concepts into practice. Additional information in the appendices covers dimensional analysis and a series of real-world projects that enable the student to apply the principles presented in the text to build a petrophysical model using well logs and core data from a major petroleum-producing province.

Advanced Petroleum Reservoir Simulation Add precision and ease to the process of reservoir simulation. Until simulation software and other methods of reservoir characterization were developed, engineers had to drill numerous wells to find the best way to extract crude oil and natural gas. Today, even with highly sophisticated reservoir simulations software available, reservoir simulation still involves a great deal of guesswork. Advanced Petroleum Reservoir Simulation provides an advanced approach to petroleum reservoir simulation, taking the guesswork out of the process and relying more thoroughly on science and what is known about the individual reservoir. This state of the art publication in petroleum simulation: Describes solution techniques that allow multiple solutions to the complete equations, without linearization. Solves the most difficult reservoir engineering problems such as viscous fingering. Highlights the importance of non-linear solvers on decision tree with scientific argument. Discusses solution schemes in relation to other disciplines and revolutionizes risk analysis and decision making. Includes companion software with 3-D, 3-phase multipurpose simulator code available for download from www.scriverpublishing.com. By providing a valuable tool to support reservoir simulation predictions with real science, this book is an essential reference for engineers, scientists and geologists.

With the oil and gas industry facing new challenges—deeper offshore installations, more unconventional oil and gas transporting through pipelines, and refinery equipment processing these opportunity feedstocks--new corrosion challenges are appearing, and the oil and gas industry ’ s infrastructure is only as good as the quality of protection provided and maintained. Essentials of Coating, Painting, and Linings for the Oil, Gas, and Petrochemical Industries is the first guide of its kind to directly deliver the necessary information to prevent and control corrosion for the components on the offshore rig, pipelines underground and petrochemical equipment. Written as a companion to Cathodic Corrosion Protection Systems, this must-have training tool supplies the oil and gas engineer, inspector and manager with the full picture of corrosion prevention methods specifically catered for oil and gas services. Packed with real world case studies, critical qualifications, inspection criteria, suggested procedure tests, and application methods, Essentials of Coating, Painting, and Linings for the Oil, Gas and Petrochemical Industries is a required straightforward reference for any oil and gas engineer and manager. Understand how to select, prime and apply the right coating system for various oil and gas equipment and pipelines – both upstream and downstream Train personnel with listed requirements, evaluation material and preparation guides, including important environmental compliance considerations Improve the quality of your equipment, refinery and pipeline with information on repair and rejection principles

Essentials of Coating, Painting, and Lining for the Oil, Gas and Petrochemical Industries

Advanced Petrophysics

Applications of Advanced Petroleum Production Technology and Water Alternating Gas Injection for Enhanced Oil Recovery

for Oil, Gas, Chemical and Related Facilities

Waste Management in the Chemical and Petroleum Industries

This book focuses on doing businesses successfully with China oil, gas and chemicals companies with real business cases on business management and contract negotiations all under one theme. Drawing on the author’s extensive experiences and knowledge of the China oil, gas and chemicals industries, the book presents a comprehensive and practical guide to the China oil industry structure and major Chinese oil companies. It analyses China’s oil, gas and chemicals markets and its growth into the largest oil consumption market in the world. It also examines energy security concerns and mitigation strategies to diversify crude import sources. The book also analyses the key domestic and international players in China including the largest state, multinational and national oil companies. It looks at the largest China oil, gas and chemical companies and analyses their profile, business, strategies, leaders with relevant case studies. It then examines successful engagement, negotiation and management with the China giants. The book illustrates with business case studies on successfully negotiating and managing business relations to foster trust and promote cooperation, as well as, the risks and rewards. Business leaders, universities, business schools and government agencies will appreciate the book with its in-depth knowledge and analysis of the China oil, gas and chemical industries together with relevant business cases.

The objectives of this project are to continue reservoir characterization of the Cypress Sandstone; to identify and map facies-defined waterflood units (FDWS); and to design and implement water-alternating-gas (WAG) oil recovery utilizing carbon dioxide (CO2). The producibility problems are permeability variation and poor sweep efficiency. Phase 1 of the project focuses on the development of computer-generated geological and reservoir simulation models that will be used to select sites for the demonstration and implementation of CO2 displacement programs in Phase 2.

Includes in Phase 1 the design and drilling of an infill well, coreing of the Cypress interval and injectivity testing to update the reservoir simulation model. Phase 2 involves field implementation of WAG. Technology Transfer includes outreach activity such as seminars, workshops, and field trips. Accomplishments for the past quarter are described.

Reservoir management is concerned with the geoscience and reservoir/production engineering required to plan and optimize the development of discovered or producing oil and gas assets. One of the only books to cover both management and engineering issues, Advanced Reservoir Management and Engineering is redesigned to be the only book you need throughout your career. Written by two of the industry’s best-known and well respected reservoir engineers and managers, this new edition offers readers a complete guide for formulating work-flow solutions on a day to day basis. Authoritative in its approach, the book begins with the theory and practice of transient flow analysis and offers a brief but thorough hands-on guide to gas and oil well testing. Chapter two documents water influx models and their practical applications in conducting comprehensive field studies, widely used throughout the industry. Essential topics such as Type-Curve Analysis, unconventional gas reservoirs, and gas hydrates are also covered. The book moves on to provide a clear exposition of key economic and financial management methods for evaluation criteria and cash flow analysis, analysis of fixed capital investments and advanced evaluation approaches. This is followed by a frank discussion of advanced evaluation approaches such as integration of decision analysis and professional ethics. Readers will find the website a valuable guide for enhancing their understanding of different techniques used for predicting reservoir performance and cost. The website will also include information such as properties, tables and simple calculations. This combination book and website arrangement will prove particularly useful to new professionals interested in increasing their skills or more experienced professional wishing to increase their knowledge of current industry best practices. The 2nd Edition of the book includes 3 new management chapters, representing a 30% increase over the previous edition. The new subjects include step by step approach to cash flow analysis, analysis of fixed capital investments, cash flow consequences, maintenance as well as a detailed approach to managing working capital. This is followed by a clear exposition of advanced evaluation approaches such as integration of decision analysis and economic evaluation and professional ethics. Maximize cash flow, subject to capital and operating budget Deliver new high-quality investment opportunities to management Effectively manage the development of oil and gas assets Maximize the benefit to the legitimate stakeholders

Concepts, Collaboration, and Right-Time Decisions

Advanced Catalysis Processes in Petrochemicals and Petroleum Refining: Emerging Research and Opportunities

Thermal Insulation Handbook for the Oil, Gas, and Petrochemical Industries

Advanced and Sustainable Treatment Methods

ADVANCED TECHNOLOGY BITS PERFORMANCE SPEAKS FOR ITSELF

Intelligent Digital Oil and Gas Fields: Concepts, Collaboration, and Right-time Decisions delivers to the reader a roadmap through the fast-paced changes in the digital oil field landscape of technology in the form of new sensors, well mechanics such as downhole valves, data analytics and models for dealing with a barrage of data, and changes in the way professionals collaborate on decisions. The book introduces the new age of digital oil and gas technology and process components and provides a backdrop to the value and experience industry has achieved from these in the last few years. The book then takes the reader on a journey first at a well level through instrumentation and measurement for real-time data acquisition, and then provides practical information on analytics on the real-time data. Artificial intelligence techniques provide insights from the data. The road then travels to the “integrated asset” by detailing how companies utilize Integrated Asset Models to manage assets (reservoirs) within DOF context. From model to practice, new ways to operate smart wells enable optimizing the asset. Intelligent Digital Oil and Gas Fields is packed with examples and lessons learned from various case studies and provides extensive references for further reading and a final chapter on the “next generation digital oil field,” e.g., cloud computing, big data analytics and advances in nanotechnology. This book is a reference that can help managers, engineers, operations, and IT experts understand specifics on how to filter data to create useful information, address analytics, and link workflows across the production value chain enabling teams to make better decisions with a higher degree of certainty and reduced risk. Covers multiple examples and lessons learned from a variety of reservoirs from around the world and production situations Includes techniques on change management and collaboration Delivers real and readily applicable knowledge on technical equipment, workflows and data challenges such as acquisition and quality control that make up the digital oil and gas field solutions of today Describes collaborative systems and ways of working and how companies are transitioning work force to use the technology and making more optimal decisions

Trends in Oil and Gas Corrosion Research and Technologies: Production and Transmission delivers the most up-to-date and highly multidisciplinary reference available to identify emerging developments, fundamental mechanisms and the technologies necessary in one unified source. Starting with a brief explanation on corrosion management that also addresses today’s most challenging issues for oil and gas production and transmission operations, the book dives into the latest advances in microbiology-influenced corrosion and other corrosion threats, such as stress corrosion cracking and hydrogen damage just to name a few. In addition, it covers testing and monitoring techniques, such as molecular microbiology and online monitoring for surface and subsurface facilities, mitigation tools, including coatings, nano-packaged biocides, modeling and prediction, cathodic protection and new steels and non-metals. Rounding out with an extensive glossary and list of abbreviations, the book equips upstream and midstream corrosion professionals in the oil and gas industry with the most advanced collection of topics and solutions to responsibly help solve today’s oil and gas corrosion challenges. Covers the latest in corrosion mitigation techniques, such as corrosion inhibitors, biocides, non-metals, coatings, and modeling and prediction Solves knowledge gaps with the most current technology and discoveries on specific corrosion mechanisms, highlighting where future research and industry efforts should be concentrated Achieves practical and balanced understanding with a full spectrum of subjects presented from multiple academic and world-renowned contributors in the industry

A comprehensive textbook on petrochemical conversion processes for petroleum and natural gas fractions as produced by refinery operations This innovative textbook provides essential links between the chemical sciences and chemical technology, between petrochemistry and hydrocarbon technology. The book brings alive key concepts forming the basis of chemical technology and presents a solid background for innovative process development. In all chapters, the processes described are accompanied by simplified flow schemes, encouraging students to think in terms of conceptual process designs. Petrochemistry: Petrochemical Processing, Hydrocarbon Technology and Green Engineering introduces students to a variety of topics related to the petrochemical industry, hydrocarbon processing, fossil fuel resources, as well as fuels and chemicals conversion. The first chapter covers the fundamentals and principals for designing several of the processes in the book, including discussions on thermodynamics, chemical kinetics, reactor calculations, and industrial catalysts. The following chapters address recent advances in hydrocarbon technology, energy technology, and sources of hydrocarbons. The book then goes on to discuss the petrochemical industry based on four basic pillars, all derived from petroleum and natural gas: Production of lower alkenes; other sources of lower alkenes; petrochemicals from C2-C3 alkenes Production of BTX aromatics; chemicals from BTX aromatics C1 technology Diversification of petrochemicals The growing importance of sustainable technology, process intensification and addressing greenhouse gas emissions is reflected throughout the book. Written for advanced students working in the areas of petrochemistry, hydrocarbon technology, natural gas, energy materials and technologies, alternative fuels, and recycling technologies the book is also a valuable reference for industrial practitioners in the oil and gas industry.

Sustainable Materials for Transitional and Alternative Energy

Principles and Practices

The Role of Oil and Gas Companies in the Energy Transition

Trends in Oil and Gas Corrosion Research and Technologies

Handbook of Natural Gas Transmission and Processing

Advanced Reservoir Engineering offers the practicing engineer and engineering student a full description, with worked examples, of all of the kinds of reservoir engineering topics that the engineer will use in day-to-day activities. In an industry where there is often a lack of information, this timely volume gives a comprehensive account of the physics of reservoir engineering, a thorough knowledge of which is essential in the petroleum industry for the efficient recovery of hydrocarbons. Chapter one deals exclusively with the theory and practice of transient flow analysis and offers a brief but thorough hands-on guide to gas and oil well testing. Chapter two documents water influx models and their practical applications in conducting comprehensive field studies, widely used throughout the industry. Later chapters include unconventional gas reservoirs and the classical adaptations of the material balance equation. * An essential tool for the petroleum and reservoir engineer, offering information not available anywhere else * Introduces the reader to cutting-edge new developments in Type-Curve Analysis, unconventional gas reservoirs, and gas hydrates * Written by two of the industry’s best-known and respected reservoir engineers

Handbook of Fire and Explosion Protection Engineering Principles for Oil, Gas, Chemical, and Related Facilities

Advanced Reservoir Engineering

Iran Economic News

Analytical Techniques in the Oil and Gas Industry for Environmental Monitoring