

Oil And Gas Engineering Guide

Unconventional Oil and Gas Resources Handbook: Evaluation and Development is a must-have, helpful handbook that brings a wealth of information to engineers and geoscientists. Bridging between subsurface and production, the handbook provides engineers and geoscientists with effective methodology to better define resources and reservoirs. Better reservoir knowledge and innovative technologies are making unconventional resources economically possible, and multidisciplinary approaches in evaluating these resources are critical to successful development. *Unconventional Oil and Gas Resources Handbook* takes this approach, covering a wide range of topics for developing these resources including exploration, evaluation, drilling, completion, and production. Topics include theory, methodology, and case histories and will help to improve the understanding, integrated evaluation, and effective development of unconventional resources. Presents methods for a full development cycle of unconventional resources, from exploration through production Explores multidisciplinary integrations for evaluation and development of unconventional resources and covers a broad range of reservoir characterization methods and development scenarios Delivers balanced information with multiple contributors from both academia and industry Provides case histories involving geological analysis, geomechanical analysis, reservoir modeling, hydraulic fracturing treatment, microseismic monitoring, well performance and refracturing for development of unconventional reservoirs

The *Gas Turbine Engineering Handbook* has been the standard for engineers involved in the design, selection, and operation of gas turbines. This revision includes new case histories, the latest techniques, and new designs to comply with recently passed legislation. By keeping the book up to date with new, emerging topics, Boyce ensures that this book will remain the standard and most widely used book in this field. The new *Third Edition of the Gas Turbine Engineering Hand Book* updates the book to cover the new generation of Advanced gas Turbines. It examines the benefit and some of the major problems that have been encountered by these new turbines. The book keeps abreast of the environmental changes and the industries answer to these new regulations. A new chapter on case histories has been added to enable the engineer in the field to keep abreast of problems that are being encountered and the solutions that have resulted in solving them. Comprehensive treatment of Gas Turbines from Design to Operation and Maintenance. In depth treatment of Compressors with emphasis on surge, rotating stall, and choke; Combustors with emphasis on Dry Low NOx Combustors; and Turbines with emphasis on Metallurgy and new cooling schemes. An excellent introductory book for the student and field engineers A special maintenance section dealing with the advanced gas turbines, and special diagnostic charts have been provided that will enable the reader to troubleshoot problems he encounters in the field The third edition consists of many Case Histories of Gas Turbine problems. This should enable the field engineer to avoid some of these same generic problems

Aligned directly to the NEBOSH syllabus, this book covers the breadth and depth of oil and gas operational safety. This book guides the reader through the principles of how to manage operational risks, carefully conveying a technical subject in a clear, concise manner that readers will find comfortable to read and understand. Written in full colour by a highly experienced team who have many years' experience within the field, this book is undoubtedly an essential tool to enhance your understanding of operational safety within the oil and gas industry.

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, *enginee Handbook of Oil and Gas Piping*

Dictionary of Oil, Gas, and Petrochemical Processing

Risk Management in the Oil and Gas Industry

Project Management in the Oil and Gas Industry

For Practitioners in the Oil, Gas and Petrochemical Industry

Petroleum engineering now has its own true classic handbook that reflects the profession's status as a mature major engineering discipline. Formerly titled the *Practical Petroleum Engineer's Handbook*, by Joseph Zaba and W.T. Doherty (editors), this new, completely updated two-volume set is expanded and revised to give petroleum engineers a comprehensive source of industry standards and engineering practices. It is packed with the key, practical information and data that petroleum engineers rely upon daily. The result of a fifteen-year effort, this handbook covers the gamut of oil and gas engineering topics to provide a reliable source of engineering and reference information for analyzing and solving problems. It also reflects the growing role of natural gas in industrial development by integrating natural gas topics throughout both volumes. More than a dozen leading industry experts—academia and industry—contributed to this two-volume set to provide the best, most comprehensive source of petroleum engineering information available.

Risk Management in the Oil and Gas Industry: Offshore and Onshore Concepts and Case Studies delivers the concepts, strategies and good practices of offshore and onshore safety engineering that are applicable to petroleum engineering and immediately surrounding industries. Guided by the strategic risk management line, this reference organizes steps in order of importance and priority that should be given to the themes in the practical exercise of risk management activities, from the conceptual and design phase to operational and crisis management situations. Each chapter is packed with practical case studies, lessons learned, exercises, and review questions. The reference also touches on the newest techniques, including liquefied natural gas (cryogenics) operations and computer simulations that contemplate the influence of human behavior. Critical for both the new and experienced engineer, this book gives the best didactic tool to perform operations safely and effectively. Helps readers by presenting practical case studies and exercises that are included in every chapter Presents an understanding on how to approach and apply best practices specific to the oil and gas industry, both offshore and onshore Provides the knowledge needed to gain new techniques in computer simulation and human factors to apply to various sectors of the industry, including subsea and refineries

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, Shel Drake'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.

Every oil and gas refinery or petrochemical plant requires sufficient utilities support in order to maintain a successful operation. A comprehensive utilities complex 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/plant 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

Nontechnical Guide to Petroleum Geology, Exploration, Drilling, and Production

Standard Handbook of Petroleum and Natural Gas Engineering:

Introduction to Petroleum Exploration and Engineering

Gas and Oil Reliability Engineering

A Practical Guide to Piping and Valves for the Oil and Gas Industry

Reservoir Engineering Handbook

Each engineering task is described and illustrated with a sample document taken from a real project. --

Machine Learning Guide for Oil and Gas Using Python: A Step-by-Step Breakdown with Data, Algorithms, Codes, and Applications delivers a critical training and resource tool to help engineers understand machine learning theory and practice, specifically referencing use cases in oil and gas. The reference moves from explaining how Python works to step-by-step examples of utilization in various oil and gas scenarios, such as well testing, shale reservoirs and production optimization. Petroleum engineers are quickly applying machine learning techniques to their data challenges, but there is a lack of references beyond the math or heavy theory of machine learning. *Machine Learning Guide for Oil and Gas Using Python* details the open-source tool Python by explaining how it works at an introductory level then bridging into how to apply the algorithms into different oil and gas scenarios. While similar resources are often too mathematical, this book balances theory with applications, including use cases that help solve different oil and gas data challenges. Helps readers understand how open-source Python can be utilized in practical oil and gas challenges Covers the most commonly used algorithms for both supervised and unsupervised learning Presents a balanced approach of both theory and practicality while progressing from introductory to advanced analytical techniques

Liquefied natural gas (LNG) is a commercially attractive phase of the commodity that facilitates the efficient handling and transportation of natural gas around the world. The LNG industry, using technologies proven over decades of development, continues to expand its markets, diversify its supply chains and increase its share of the global natural gas trade. The *Handbook of Liquefied Natural Gas* is a timely book as the industry is currently developing new large sources of supply and the technologies have evolved in recent years to enable offshore infrastructure to develop and handle resources in more remote and harsher environments. It is the only book of its kind, covering the many aspects of the LNG supply chain from liquefaction to regasification by addressing the LNG industries' fundamentals and markets, as well as detailed engineering and design principles. A unique, well-documented, and forward-thinking work, this reference book provides an ideal platform for scientists, engineers, and other professionals involved in the LNG industry to gain a better understanding of the key basic and advanced topics relevant to LNG projects in operation and/or in planning and development. Highlights the developments in the natural gas liquefaction industries and the challenges in meeting environmental regulations Provides guidelines in utilizing the full potential of LNG assets Offers advice on LNG plant design and operation based on proven practices and design experience Emphasizes technology selection and innovation with focus on a fit-for-purpose design Updates code and regulation, safety, and security requirements for LNG applications

This book discusses various aspects of percolation mechanics. It starts with the driving forces and driving modes and then examines in detail the steady state percolation of single-phase incompressible fluids, percolation law of natural gas and percolation of non-Newtonian fluids. Progressing from simple to complex concepts, it also analyzes Darcy's law, providing a basis for the study of reservoir engineering, oil recovery engineering and reservoir numerical simulation. It serves as a textbook for undergraduate students majoring in petroleum engineering, petroleum geology and groundwater engineering, and offers a valuable reference guide for graduate students, researchers and technical engineers engaged in oil and gas exploration and development.

The Oil and Gas Engineering Guide

Working Guide to Petroleum and Natural Gas Production Engineering

Oil Field Chemicals

Gas Turbine Engineering Handbook

Drilling Engineering Problems and Solutions

The Engineer's Guide to Plant Layout and Piping Design for the Oil and Gas Industries

The Engineer's Guide to Plant Layout and Piping Design for the Oil and Gas Industries gives pipeline engineers and plant managers a critical real-world reference to design, manage, and implement safe and effective plants and piping systems for today's operations. This book fills a training void with complete and practical understanding of the requirements and procedures for producing a safe, economical, operable and maintainable process facility. Easy to understand for the novice, this guide includes critical standards, newer designs, practical checklists and rules of thumb. Due to a lack of structured training in academic and technical institutions, engineers and pipe designers today may understand various computer software programs but lack the fundamental understanding and implementation of how to lay out process plants and run piping correctly in the oil and gas industry. Starting with basic terms, codes and basis for selection, the book focuses on each piece of equipment, such as pumps, towers, underground piping, pipe sizes and supports, then goes on to cover piping stress analysis and the daily needed calculations to use on the job. Delivers a practical guide to pipe supports, structures and hangers available in one go-to source Includes information on stress analysis basics, quick checks, pipe sizing and pressure drop Ensures compliance with the latest piping and plant layout codes and complies with worldwide risk management legislation and HSE Focuses on each piece of equipment, such as pumps, towers, underground piping, pipe sizes and supports Covers piping stress analysis and the daily needed calculations to use on the job

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

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 with substantially less uncertainty.

Handbook of Offshore Oil and Gas Operations is an authoritative source providing extensive up-to-date coverage of the technology used in the exploration, drilling, production, and operations in an offshore setting. Offshore oil and gas activity is growing at an expansive rate and this must-have training guide covers the full spectrum including geology, types of platforms, exploration methods, production and enhanced recovery methods, pipelines, and environmental management and impact, specifically worldwide advances in study, control, and prevention of the industry's impact on the marine environment and its living resources. In addition, this book provides a go-to glossary for quick reference. *Handbook of Offshore Oil and Gas Operations* empowers oil and gas engineers and managers to understand and capture on one of the fastest growing markets in the energy sector today. Quickly become familiar with the oil and gas offshore industry, including deepwater operations Understand the full spectrum of the business, including environmental impacts and future challenges Gain knowledge and exposure on critical standards and real-world case studies

Natural Gas Measurement and Control

Petroleum Engineer's Guide to Oil Field Chemicals and Fluids

Project Execution of Mega-Projects for the Oil and Gas Industries

Technical Guidance for Petroleum Exploration and Production Plans

Practical Engineering Management of Offshore Oil and Gas Platforms

A Guide for Operators and Engineers

Oil & Gas Engineering Guide (The) - 2nd EDEditions TECHNIP

Petroleum Engineer's Guide to Oil Field Chemicals and Fluids is a comprehensive manual that provides end users with information about oil field chemicals, such as drilling muds, corrosion and scale inhibitors, gelling agents and bacterial control. This book is an extension and update of Oil Field Chemicals published in 2003, and it presents a compilation of materials from literature and patents, arranged according to applications and the way a typical job is practiced. The text is composed of 23 chapters that cover oil field chemicals arranged according to their use. Each chapter follows a uniform template, starting with a brief overview of the chemical followed by reviews, monomers, polymerization, and fabrication. The different aspects of application, including safety and environmental impacts, for each chemical are also discussed throughout the chapters. The text also includes handy indices for trade names, acronyms and chemicals. Petroleum, production, drilling, completion, and operations engineers and managers will find this book invaluable for project management and production. Non-experts and students in petroleum engineering will also find this reference useful. Chemicals are ordered by use including drilling muds, corrosion inhibitors, and bacteria control Includes cutting edge chemicals and polymers such as water soluble polymers and viscosity control Handy index of chemical substances as well as a general chemical index

This book covers execution of mega industrial projects especially in oil and gas industries covering engineering, procurement, construction, commissioning and performance testing. It enumerates various tasks and deliverables under each discipline and sub-disciplines to define the detailed scope of work, supplies and services, as per level III of Prima Vera Schedule developed from the contract-based schedule. It gives an overall idea of how a project rolls out from commencement date to initial acceptance and executed practically with total contractor's scope of work broken down into tasks/activities at level III platform, while highlighting that support for fool proof project execution.

A Practical Guide to Piping and Valves for the Oil and Gas Industry covers how to select, test and maintain the right oil and gas valve. Each chapter focuses on a specific type of valve with a built-in structured table on valve selection. Covering both onshore and offshore projects, the book also gives an introduction to the most common types of corrosion in the oil and gas industry, including CO2, H2S, pitting, crevice, and more. A model to evaluate CO2 corrosion rate on carbon steel piping is introduced, along with discussions on bulk piping components, including fittings, gaskets, piping and flanges. Rounding out with chapters devoted to valve preservation to protect against harmful environments and factory acceptance testing, this book gives engineers and managers a much-needed tool to better understand today's valve technology. Presents oil and gas examples and challenges relating to valves, including many illustrations from valves in different stages of projects Helps readers understand valve materials, testing, actuation, packing and preservation, also including a new model to evaluate CO2 corrosion rates on carbon steel piping Presents structured valve selection tables in each chapter to help readers pick the right valve for the right project

A Field Guide for Engineers and Students

Modeling and Analysis

Handbook of Electrical Engineering

Handbook of Fire and Explosion Protection Engineering Principles

Introduction to Oil and Gas Operational Safety

Handbook of Offshore Oil and Gas Operations

The job of any reservoir engineer is to maximize production from a field to obtain the best economic return. To do this, the engineer must study the behavior and characteristics of a petroleum reservoir to determine the course of future development and production that will maximize the profit. Fluid flow, rock properties, water and gas coning, and relative permeability are only a few of the concepts that a reservoir engineer must understand to do the job right, and some of the tools of the trade are water influx calculations, lab tests of reservoir fluids, and oil and gas performance calculations.Two new chapters have been added to the first edition to make this book a complete resource for students and professionals in the petroleum industry: Principles of Waterflooding, Vapor-Liquid Phase Equilibria.

The demand for energy consumption is increasing rapidly. To avoid the impending energy crunch, more producers are switching from oil to natural gas. While natural gas engineering is well documented through many sources, the computer applications that provide a crucial role in engineering design and analysis are not well published, and emerging technologies, such as shale gas drilling, are generating more advanced applications for engineers to utilize on the job. To keep producers updated, Boyun Guo and Ali Ghalambor have enhanced their best-selling manual, Natural Gas Engineering Handbook, to continue to provide upcoming and practicing engineers the full scope of natural gas engineering with a computer-assisted approach. This must-have handbook includes: A focus on real-world essentials rather than theory Illustrative examples throughout the text Working spreadsheet programs for all the engineering calculations on a free and easy to use companion site Exercise problems at the end of every chapter, including newly added questions utilizing the spreadsheet programs Expanded sections covering today's technologies, such as multi-fractured horizontal wells and shale gas wells

Oil field chemicals are gaining increasing importance, as the resources of crude oil are decreasing. An increasing demand of more sophisticated methods in the exploitation of the natural resources emerges for this reason. This book reviews the progress in the area of oil field chemicals and additives of the last decade from a rather chemical view. The material presented is a compilation from the literature by screening critically approximately 20,000 references. The text is ordered according to applications, just in the way how the jobs are emerging in practice. It starts with drilling, goes to productions and ends with oil spill. Several chemicals are used in multiple disciplines, and to those separate chapters are devoted. Two index registers are available, an index of chemical substances and a general index. * Gives an introduction to the chemically orientated petroleum engineer. * Provides the petroleum engineer involved with research and development with a quick reference tool. * Covers interdisciplinary matter, i.e. connects petroleum recovery and handling with chemical aspects.

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

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

The Oil & Gas Engineering Guide

Essentials of Oil and Gas Utilities

Machine Learning Guide for Oil and Gas Using Python

Natural Gas Engineering Handbook

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

This book covers "how oil & gas is formed ; how to find commercial quantities ; how to drill, evaluate, and complete a well ; all the way through production and improved oil recovery." - back cover.

Practical Engineering Management of Offshore Oil and Gas Platforms delivers the first must-have content to the multiple engineering managers and clients devoted to the design, equipment, and operations of offshore oil and gas platforms. Concepts explaining how to interact with the various task forces, getting through bid proposals, and how to maintain project control are all covered in the necessary training reference. Relevant equipment and rule of thumb techniques to calculate critical features on the design of the platform are also covered, including tank capacities and motor power, along with how to consistently change water, oil, and gas production profiles over the course of a project. The book helps offshore oil and gas operators and engineers gain practical understanding of the multiple disciplines involved in offshore oil and gas projects using experience-based approaches and lessons learned. Delivers the first ever must-have content to the multiple engineering managers and clients devoted to the design, equipment, and operations of offshore oil and gas platforms Contains rules of thumb techniques to calculate critical features on the design of the platform Includes practical checklists for project estimates and cost evaluation for effective project execution in budgeting and scheduling Helps offshore oil and gas operators and engineers gain practical understanding of the multiple disciplines involved in offshore oil and gas projects using experience-based approaches and lessons learned

Working Guide to Reservoir Engineering provides an introduction to the fundamental concepts of reservoir engineering. The book begins by discussing basic concepts such as types of reservoir fluids, the properties of fluid containing rocks, and the properties of rocks containing multiple fluids. It then describes formation evaluation methods, including coring and core analysis, drill stem tests, logging, and initial estimation of reserves. The book explains the enhanced oil recovery process, which includes methods such as chemical flooding, gas injection, thermal recovery, technical screening, and laboratory design for enhanced recovery. Also included is a discussion of fluid movement in waterflooded reservoirs. Predict local variations within the reservoir Explain past reservoir performance Predict future reservoir performance of field Analyze economic optimization of each property Formulate a plan for the development of the field throughout its life Convert data from one discipline to another Extrapolate data from a few discrete points to the entire reservoir

This book provides the reader with: • a comprehensive description of engineering activities carried out on oil & gas projects, • a description of the work of each engineering discipline, including illustrations of all common documents, • an overall view of the plant design sequence and schedule, • practical tools to manage and control engineering activities. This book is designed to serve as a map to anyone involved with engineering activities. It enables the reader to get immediately oriented in any engineering development, to know which are the critical areas to monitor and the proven methods to apply. It will fulfill the needs of anyone wishing to improve engineering and project execution. Table des matières : 1. Project Engineering. 2. The Design Basis. 3. Process. 4. Equipment/Mechanical. 5. Plant Layout. 6. Safety & Environment. 7. Civil Engineering. 8. Materials & Corrosion. 9. Piping. 10. Plant Model. 11. Instrumentation and Control. 12. Electrical. 13. Off-Shore. 14. The Overall Work Process. 15. BASIC, FEED and Detail Design. 16. Matching the Project Schedule. 17. Engineering Management. 18. Methods & Tools. 19. Field Engineering. 20. Revamping.

Mechanics of Oil and Gas Flow in Porous Media

Working Guide to Reservoir Engineering

Offshore and Onshore Concepts and Case Studies

for Oil, Gas, Chemical and Related Facilities

Handbook of Liquefied Natural Gas

Oil & Gas Engineering Guide (The) - 2nd ED

The objective of this practical oil and gas piping handbook is to facilitate project management teams of oil and gas piping related construction projects to understand the key requirements of the discipline and to equip them with the necessary knowledge and protocol. It provides a comprehensive coverage on all the practical aspects of piping related material sourcing, fabrication essentials, welding related items, NDT activities, erection of pipes, pre-commissioning, commissioning, post-commissioning, project management and importance of ISO Management systems in oil and gas piping projects. This handbook assists contractors in ensuring the right understanding and application of protocols in the project. One of the key assets of this handbook is that the technical information and the format provided are practically from real time oil and gas piping projects; hence, the application of this information is expected to enhance the credibility of the contractors in the eyes of the clients and to some extent, simplify the existing operations. Another important highlight is that it holistically covers the stages from the raw material to project completion to handover and beyond. This will help the oil and gas piping contractors to train their project management staff to follow the best practices in the oil and gas industry. Furthermore, this piping handbook provides an important indication of the important project-related factors (hard factors) and organizational-related factors (soft factors) to achieve the desired project performance dimensions, such as timely completion, cost control, acceptable quality, safe execution and financial performance. Lastly, the role of ISO management systems, such as ISO 9001, ISO 14001 and OHSAS 18001 in construction projects is widely known across the industry; however, oil and gas specific ISO quality management systems, such as ISO 29001, and project specific management systems, such as ISO 21500, are not widely known in the industry, which are explained in detail in this handbook for the benefit of the oil and gas construction organizations. Features: Covering the stages from the raw material to project completion, to handover and beyond Providing practical guidelines to oil and gas piping contractors for training purposes and best practices in the oil and gas industry Emphasizing project-related factors (hard factors) and organizational-related factors (soft factors) with a view to achieve the desired project performance Highlighting the roles of ISO management systems in oil and gas projects.

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.

Petroleum and natural gas still remain the single biggest resource for energy on earth. Even as alternative and renewable sources are developed, petroleum and natural gas continue to be, by far, the most used and, if engineered properly, the most cost-effective and efficient, source of energy on the planet. Drilling engineering is one of the most important links in the energy chain, being, after all, the science of getting the resources out of the ground for processing. Without drilling engineering, there would be no gasoline, jet fuel, and the myriad of other “have to have” products that people use all over the world every day. Following up on their previous books, also available from Wiley-Scrivener, the authors, two of the most well-respected, prolific, and progressive drilling engineers in the industry, offer this groundbreaking volume. They cover the basics tenets of drilling engineering, the most common problems that the drilling engineer faces day to day, and cutting-edge new technology and processes through their unique lens. Written to reflect the new, changing world that we live in, this fascinating new volume offers a treasure of knowledge for the veteran engineer, new hire, or student. This book is an excellent resource for petroleum engineering students, reservoir engineers, supervisors & managers, researchers and environmental engineers for planning every aspect of rig operations in the most sustainable, environmentally responsible manner, using the most up-to-date technological advancements in equipment and processes.

Oil and gas projects have special characteristics that need a different technique in project management. The development of any country depends on the development of the energy reserve through investing in oil and gas projects through onshore and offshore exploration, drilling, and increasing facility capacities. Therefore, these projects need a sort of management match with their characteristics, and project management is the main tool to achieving a successful project. Written by a veteran project manager who has specialized in oil and gas projects for years, this book focuses on using practical tools and methods that are widely and successfully used in project management for oil and gas projects. Most engineers study all subjects, but focus on project management in housing projects, administration projects, and commercial buildings or other similar projects. However, oil and gas projects have their own requirements and characteristics in management from the owners, engineering offices, and contractors' side. Not only useful to graduating engineers, new hires, and students, this volume is also an invaluable addition to any veteran project manager's library as a reference or a helpful go-to guide. Also meant to be a refresher for practicing engineers, it covers all of the project management subjects from an industrial point of view specifically for petroleum projects, making it the perfect desktop manual. Not just for project managers and students, this book is helpful to any engineering discipline or staff in sharing or applying the work of a petroleum project and is a must-have for anyone working in this industry.

Evaluation and Development

Unconventional Oil and Gas Resources Handbook

for the NEBOSH International Technical Certificate in Oil and Gas Operational Safety

Fundamentals of Oil & Gas Industry for Beginners

Process Design, Equipment, and Operations

Advanced Reservoir Engineering

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

This book is an introduction to oil and gas designed to be both accessible to absolute beginners who know nothing about the subject, and at the same time interesting to people who work in one area (such as drilling or seismic exploration) and would like to know about other areas (such as production offshore, or how oil and gas were formed, or what can go wrong). It begins by discussing oil and gas in the broader context of human society, and goes on to examine what they consist of, how and where they were formed, how we find them, how we drill for them and how we measure them. It describes production onshore and offshore, and examines in detail some instructive mishaps, including some that are well known, such as Deepwater Horizon and Piper Alpha, and other lesser known incidents. It looks at recent developments, such as shale oil, and concludes with some speculation about the future. It includes many references for readers who would like to read further. Mathematical content is minimal.

Handbook of Natural Gas Transmission and Processing gives engineers and managers complete coverage of natural gas transmission and processing in the most rapidly growing sector to the petroleum industry. The authors provide a unique discussion of new technologies that are energy efficient and environmentally appealing at the same time. It is an invaluable reference on natural gas engineering and the latest techniques for all engineers and managers moving to natural gas processing as well as those currently working on natural gas projects. Provides practicing engineers critical information on all aspects of gas gathering, processing and transmission First book that treats multiphase flow transmission in great detail Examines natural gas energy costs and pricing with the aim of delivering on the goals of efficiency, quality and profit

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

Handbook of Natural Gas Transmission and Processing

SPE Petroleum Engineering Certification and PE License Exam Reference Guide

A Step-by-Step Breakdown with Data, Algorithms, Codes, and Applications

a Practical and Comprehensive Guide

Gas and Oil Reliability Engineering: Modeling and Analysis, Second Edition, provides the latest tactics and processes that can be used in oil and gas markets to improve reliability knowledge and reduce costs to stay competitive, especially while oil prices are low. Updated with relevant analysis and case studies covering equipment for both onshore and offshore operations, this reference provides the engineer and manager with more information on lifetime data analysis (LDA), safety integrity levels (SILs), and asset management. New chapters on safety, more coverage on the latest software, and techniques such as ReBi (Reliability-Based Inspection), ReGBI (Reliability Growth-Based Inspection), RCM (Reliability Centered Maintenance), and LDA (Lifetime Data Analysis), and asset integrity management, make the book a critical resource that will arm engineers and managers with the basic reliability principles and standard concepts that are necessary to explain their use for reliability assurance for the oil and gas industry. Provides the latest tactics and processes that can be used in oil and gas markets to improve reliability knowledge and reduce costs Presents practical knowledge with over 20 new internationally-based case studies covering BOPs, offshore platforms, pipelines, valves, and subsea equipment from various locations, such as Australia, the Middle East, and Asia Contains expanded explanations of reliability skills with a new chapter on asset integrity management, relevant software, and techniques training, such as THERP, ASEP, RBI, FMEA, and RAMS