Hybrid Energy Systems: Strategy for Industrial Decarbonization demonstrates how hybrid energy and processes can decarbonize energy industry needs for power and heating and cooling. It describes the role of hybrid energy and processes in nine major industry sectors and discusses how hybrid energy can offer sustainable solutions in each. Introduces the basics and examples of hybrid energy systems Examines hybrid energy and processes in coal, oil and gas, nuclear, building, vehicle, manufacturing and industrial processes, computing and portable electronic, district heating and cooling, and water sectors Shows that hybrid processes can improve efficiency and that hybrid energy can effectively insert renewable fuels in the energy industry Serves as a companion text to the author's book Hybrid Power: Generation, Storage, and Grids Written for advanced students, researchers, and industry professionals involved in energy-related processes and plants, this book offers latest research and practical strategies for application of the innovative field of hybrid energy. 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

Risk analysis and prevention. Oil properties oil physiscal properties. Oil composition and properties. Oil analysis. oil behavior. Modeling. oil spill on land. Effects of oil. Natural dispersion. Cold region spills. Case studies.

The predicted "ICT revolution" has gained increasing attention in the oil industry the last few years. It is enabled by the use of ubiquitous real time data, collaborative techniques, and multiple expertises across disciplines, organizations and geographical locations. Integrated Operations in the Oil and Gas Industry: Sustainability and Capability Development covers the capability approach to integrated operations that documents research and development in the oil industry. By 'capability', we refer to the combined capacity and ability to plan and execute in accordance with business objectives through a designed combination of human skills, work processes, organizational change, and technology. This book will serve as a knowledge base for those who are interested in learning about, and those involved in, Integrated Operations in the Oil and Gas Industry.

Oil, Democracy, and Development in Africa presents an optimistic analysis of the continent's oil-producing states. With attention to the complex histories, the interactions of key industry actors and policy makers, and the goals of diverse groups in society, this contribution fills a gap in the

literature on resource-abundant countries. John R. Heilbrunn presents a positive assessment of circumstances in contemporary African oil exporters. The book demonstrates that even those leaders who are among the least accountable use oil revenues to improve their citizens' living standards, if only a little bit. As a consequence, African oil producers are growing economically and their people are living under increasingly democratic polities. Heilbrunn thus calls for a long-overdue reassessment of the impact of hydrocarbons on developing economies.

A totally understandable view of pipeline inception, planning, construction, start-up, and operation.

This book evaluates and compares risk regulation and safety management for offshore oil and gas operations in the United States, United Kingdom, Norway, and Australia. It provides an interdisciplinary approach with legal, technological, and sociological perspectives on their efforts to assess and prevent major accidents and improve safety performance offshore. Presented in three parts, the volume begins with a review of the technical, legal, behavioral, and sociological factors involved in designing, implementing, and enforcing a regulatory regime for industrial safety. It then evaluates the four regulatory regimes that encompass the cultural, legal, and other contextual factors that influence their design and implementation, along with their reliance on industrial expertise and standards and the use of performance indicators. The final section presents an assessment of the resilience of the Norwegian regime and its capacity to keep pace with new technologies and emerging risks, respond to near miss incidents, encourage safety culture, incorporate vested rights of labor, and perform inspection and self-audit functions. This book is highly relevant for those in government, business, academia, and elsewhere in civil society who are involved in offshore safety issues, including regulatory authorities and industrial safety professionals. How should we strike a balance between the benefits of centralized and local governance, and how important is context to selecting the right policy tools? This uniquely broad overview of the field illuminates our understanding of environmental federalism and informs our policy-making future. Professor Kalyani Robbins has brought together an impressive team of leading environmental federalism scholars to provide a collection of chapters, each focused on a different regime. This review of many varied approaches, including substantial theoretical material, culminates in a comparative analysis of environmental federalism and consideration of what each system might learn from the others. The Law and Policy of Environmental Federalism includes clear descriptive portions that make it a valuable teaching resource, as well as original theory and a depth of policy analysis that will benefit scholars of federalism or environmental and natural resources law. The value of its analysis for real-world decision-making will make it a compelling read for practitioners in environmental law or fields concerned with federalism issues, including those in government or NGOs, as well as lobbyists.

The Asper Review of International Business and Trade Law provides reviews and articles on current developments from the Asper Chair.

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.

Elements of Oil and Gas Well Tubular Design offers insight into the complexities of oil well casing and tubing design. The book's intent is to be sufficiently detailed on the tubular-oriented application of the principles of solid mechanics while at the same time providing readers with key equations pertintent to design. It addresses the fundamentals of tubular design theory, bridging the gap between theory and field operation. Filled with derivations and detailed solutions to well design examples, Elements of Oil and Gas Well Tubular Design provides the well designer with sound engineering principles applicable to today's oil and gas wells. Understand engineering mechanics for oil well casing and tubing design with emphasis on derivation, limiations, and application of fundamental equations Grasp well tubular design from one unified source with underlying concepts of stress, strain, and material constitution Quantify practice with detailed well design worked examples amenable to quality check with commercial software

This book evaluates and compares risk regulation and safety management for offshore oil and gas operations in the United States, United Kingdom, Norway and Australia. It provides an interdisciplinary approach with legal, technological and sociological perspectives on efforts to assess and prevent major accidents and improve safety performance. Presented in three parts, it begins with a review of the factors involved in designing, implementing and enforcing a regulatory regime for industrial safety. It then evaluates the four regimes exploring the contextual factors that influence their design and implementation, their reliance on industrial expertise and standards and the use of performance indicators. Finally the book assesses the resilience of the Norwegian regime, its capacity to keep pace with new technologies and emerging risks, respond to near miss incidents, encourage safety culture, incorporate vested rights of labor, and perform inspection and self-audit functions. This book is relevant for those in government, business and academia, and anyone involved in offshore safety issues. Oil and natural gas, which today account for over 60% of the world's energy supply. are often produced by offshore platforms. One third of all oil and gas comes from the offshore sector. However, offshore oil and gas installations are generally considered intrinsically vulnerable to deliberate attacks. The changing security landscape and concerns about the threats of terrorism and piracy to offshore oil and gas installations are major issues for energy companies and governments worldwide. But, how common are attacks on offshore oil and gas installations? Who attacks offshore installations? Why are they attacked? How are they attacked? How is their security regulated at the international level? How has the oil industry responded? This timely and first of its kind publication answers these questions and examines the protection and security of offshore oil and gas installations from a global, industry-wide and company-level perspective. Looking at attacks on offshore installations that occurred throughout history of the offshore petroleum industry, it examines the different types of security threats facing offshore installations, the factors that make offshore installations attractive targets, the nature of attacks and the potentially devastating impacts that can result from attacks on these important facilities. It then examines the international legal framework, state practice and international oil and gas industry responses that aim to address this vital problem. Crucially, the book includes a comprehensive dataset of

attacks and security incidents involving offshore oil and gas installations entitled the Offshore Installations Attack Dataset (OIAD). This is an indispensable reference work for oil and gas industry professionals, company security officers, policy makers, maritime lawyers and academics worldwide.

Applied Operational Excellence for the Oil, Gas, and Process Industries offers a straightforward practical guide for oil and gas companies to understand the comparisons and contrasts between various types of safety management processes, including the standardized structure and ongoing extended benefits that operational excellence can bring to an oil and gas company. The goal of achieving operational excellence is to reduce costs, improve productivity, and enhance efficiency—in other words, operational excellence contributes to the bottom line. Following along with prebuilt success in the process industries, many companies in the oil and gas industry appear to use a subset form of operational excellence, yet many are unsure or unaware of all the safety system components that will truly benefit the company holistically, and current literature is only applicable to the process and manufacturing industries. Packed with clear objectives and tools, structure guidelines specific to oil and gas, and guidance for how to imbed your existing safety program under the operational excellence umbrella known as "One-Step Merger," this book will help you establish an overall safety culture vision and challenge your organization to achieve higher levels of safety management and overall company value. Explores how to solidify a foundational operational excellence program applicable for your oil and gas company Clarifies the differences and benefits among various programs under operational excellence (OE), such as SHE (safety, health, and environment), PSM (process safety management), and SMS (safety management system) Explains how to audit and consistently assess how oil and gas OE systems are planned, implemented, and managed, with explanations on cost and time impacts as well as administrative protocols Includes a glossary, acronym appendix, and additional references for further reading Well Control for Completions and Interventions explores the standards that ensure safe and efficient production flow, well integrity and well control for oil rigs, focusing on the post-Macondo environment where tighter regulations and new standards are in place worldwide. Too many training facilities currently focus only on the drilling side of the well's cycle when teaching well control, hence the need for this informative guide on the topic. This long-awaited manual for engineers and managers involved in the well completion and intervention side of a well's life covers the fundamentals of design, equipment and completion fluids. In addition, the book covers more important and distinguishing components, such as well barriers and integrity envelopes, well kill methods specific to well completion, and other forms of operations that involve completion, like pumping and stimulation (including hydraulic fracturing and shale), coiled tubing, wireline, and subsea intervention. Provides a training guide focused on well completion and intervention Includes coverage of subsea and fracturing operations Presents proper well kill procedures Allows readers to quickly get up-to-speed on today's regulations post-Macondo for well integrity, barrier management and other critical operation components

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 envinronmental managment 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

During the last decade there have been increasing societal concerns over sustainable developments focusing on the conservation of the environment, the welfare and safety of the individual and at the same time the optimal allocation of available natural and financial resources. As a consequence the methods of risk and reliability analysis are becomi

Oil and Gas in Trinidad and Tobago presents a historical economic review of the energy sector of Trinidad and Tobago, followed by a detailed evaluation of policies associated with resource abundance and the effects on the economy from various perspectives, including industrialization, labor productivity, education, export diversification, and competitiveness. This book utilizes a wide range of statistical data and methodologies to both economically and statistically analyze these issues at hand. The content of this book will be useful not only for policymakers but also for researchers and students interested in the field.

The annual proceedings of the Institute on Oil and Gas Law, part of The Institute for Energy Law of The Center for American and International Law's continuing education program, provide expert guidance on current legal issues involving the oil, gas and energy industries. Published in condensed and edited form, the proceedings offer oil, gas and energy practitioners practical ideas and solutions for dealing with the impact of new laws and regulations. The timeliness of the topics and the insight and experience of the authors make The Institute for Energy Law of The Center for American and International Law's Annual Institute on Oil and Gas Law a valuable addition to the library of anyone with a practice concerned with oil and gas law.

Well Testing is recognised by many operating oil and gas companies to be the most hazardous operation they routinely undertake. Therefore, it is of great importance that such operations are extremely well planned and executed. This handbook covers all the major "Operational Aspects of Oil and Gas Well Testing" and uses a structured approach to guide the reader through the steps required to safely and effectively plan a well test operation under just about any circumstances world wide. Safety procedures and well testing recommended practices are rigorously addressed in this book, as are the responsibilities of those persons involved in well testing operations. Perforating equipment, drill stem test equipment and bottom hole pressure gauges are discussed in detail in the book. There is also a very valuable section on sub sea equipment, an area often not well understood even by experienced engineers who may have been primarily involved with land or jackup rigs. A major part of the book is the detailed coverage of the equipment and instrumentation that makes up a surface well testing package. It

also covers operational and testing related problems such as, hydrates, wax and sand, and offers the reader some possible solutions. There are useful chapters on sampling, onsite chemistry, coil tubing and nitrogen operations and basic stimulation as they relate to well testing. Finally there is an extensive section of appendices covering useful engineering calculations and there is a complete example of a detailed well testing programme.

Oil, Gas, and Mining: A Sourcebook for Understanding the Extractive Industries provides developing countries with a technical understanding and practical options around oil, gas, and mining sector development issues. A central premise of the Sourcebook is that good technical knowledge can better inform political, economic, and social choices with respect to sector development and the related risks and opportunities. The guidance provided by the Sourcebook assumes a broad set of overarching principles, all centered on good governance and directed at achieving positive and broadly based sustainable development outcomes. This Sourcebook is rich in presenting options to challenges, on the understanding that contexts and needs vary, and that there is much to be gained from appreciating the lessons learned from a broad set of experiences.

Joseph Hilyard's timely new book provides a broad perspective on the oil and gas industry, with primary attention to the United States. It takes the reader on a tour of the operations used to find and evaluate resources, and then to produce, store and deliver oil and gas. The book's main focus is primarily on the equipment and processes used in exploring new resources; evaluating promising formations; drilling wells; managing oil and gas production; converting oil and gas into products; and transporting oil and gas. Separate chapters address the evolution and current structure of the petroleum industry; oil and gas trading; and challenges likely to face the oil and gas industry in coming years. Three appendices define key industry terminology; suggest further reading on selected topics; and identify organizations that can provide more information.

Well test planning is one of the most important phrases in the life cycle of a well, if done improperly it could cost millions. Now there is a reference to ensure you get it right the first time. Written by a Consultant Completions & Well Test Engineer with decades of experience, Well Test Planning and Operations provides a road map to guide the reader through the maze of governmental regulations, industry codes, local standards and practices. This book describes how to plan a fit-for-purpose and fault free well test, and to produce the documents required for regulatory compliance. Given the level of activity in the oil and gas industry and the shortage of experienced personnel, this book will appeal to many specialists sitting in drilling, completion or exploration departments around the world who find themselves in the business of planning a well test, and yet who may lack expertise in that specialty. Nardone provides a roadmap to guide the planner through this complex subject, showing how to write the necessary documentation and to coordinate the many different tasks and activities, which constitute well test planning. Taking the reader from the basis for design through the well Test program to well test reports and finally to the all-important learning to ensure continuous improvement. Identification and prioritization of well test objectives Confirmation of well test requirements Preparation of detailed well test programs Selection and qualification of test equipment Onsite (onshore and offshore) engineering support and test supervision Detailed well test interpretation Definition of Extended Well Test (EWT) requirements Copyright: 6316bcd7d89ca869e0e893ef4b582e22