

Offshore Operation Facilities Equipment And Procedures

Although the processing of natural gas is in many respects less complicated than the processing and refining of crude oil, it is equally as necessary before its use by end users. The actual process used to separate oil from natural gas, as well as the equipment that is used, can vary widely. Gas Sweetening and Processing Field Manual provides engineers with the ability to understand and select the most efficient and cost effective method to fit their individual needs. Designed for engineers, technologists, and operations personnel involved in the design and operation of gas processing facilities, the book starts with an explanation of the terms and theories used throughout the industry. This is followed by clear and rigorous exposition of sweetness processes such as Solid Bed Adsorption, Chemical Solvents, Physical Solvents, Distillation, and Gas Permeation. Exercises appear at the conclusion of each chapter with hints in addition to full solutions. Other topics include Design Procedure, Design Examples, Problems and Practical Solutions, Value of NGL Components, Liquid Recovery Process, Absorption/Lean Oil Process, Joule-Thomson, Refrigeration and Cryogenic (Expansion Turbine) Plants. Chapters involving applications cover Direct Conversion of H₂S to Sulfur, Removal of H₂S to Meet Pipeline Qualities, Removal of CO₂ to Meet Pipeline Qualities and Selection Charts. Engineers and process designers will find this text a valuable guide to gas sweetening process and equipment, both in terms of its application to efficient and cost effective operations. It will prove particularly useful to readers who want a "quick reference" guide to field operations and procedures as well as those readers who wish to increase their knowledge of best practices.

Rigorous exposition of all natural gas sweetness processes Equipment and process trouble-shooting techniques Tips for diagnosing and solving equipment and process problems Exercises appear at the conclusion of each chapter

Offshore Operation Facilities Equipment and Procedures Gulf Professional Publishing

Produced Water Treatment Field Manual presents different methods used in produced water treatment systems in the oil and gas industry. Produced water is salty water that is produced as a byproduct along with oil or gas during the treatment. Water is brought along with the oil and gas when these are lifted from the surface. The water is then treated before the discharge or re-injection process. In the introduction, the book discusses the basic terms and concepts that describe produced water treatment. It also presents the different methods involved in the treatment. It further discusses the design, operation, maintenance, and sizing of the produced water treatment systems. In the latter part of the book, the ways to remove impurities in water are discussed, including choosing the proper filter, filtering equipment, filtering methods, and filtering types. The main objective of this book is to provide information about proper water management. Readers who are involved in this field will find this book relevant. Present a description of the various water treating

equipment that are currently in use Provide performance data for each unit Develop a "feel" for the parameters needed for design and their relative importance Develop and understanding of the uncertainties and assumptions inherent in the design of the various items of equipment Outline sizing procedures and equipment selection

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

This book provides a comprehensive understanding of each aspect of offshore operations including conventional methods of operations, emerging technologies, legislations, health, safety and environment impact of offshore operations. The book starts by coverage of notable offshore fields across the globe and the statistics of present oil production, covering all types of platforms available along with their structural details. Further, it discusses production, storage and transportation, production equipment, safety systems, automation, storage facilities and transportation. Book ends with common legislation acts and comparison of different legislation acts of major oil/gas producing nations. The book is aimed at professionals and researchers in petroleum engineering, offshore technology, subsea engineering, and Explores the engineering, technology, system, environmental, operational and legislation aspects of offshore productions systems Covers most of the subsea engineering material in a concise manner Includes legislation of major oil and gas producing nations pertaining to offshore operations (oil and gas) Incorporates case studies of major offshore operations (oil and gas) accidents and lessons learnt Discusses environment impact of offshore operations

2010 was a defining year for the offshore oil and gas industry in the United States. On April 20, 2010, the Deepwater Horizon (DWH) floating drilling rig suffered a catastrophic explosion and fire. Eleven men died in the explosion — 17 others were injured. The fire, which burned for a day and a half, eventually sent the entire rig to the bottom of the sea. The extent of the spill was enormous, and the environmental damage is still being evaluated. Following DWH the Bureau of Ocean Energy Management, Regulations and Enforcement (BOEMRE) issued many new regulations. One of them is the Safety and Environmental System (SEMS) rule, which is based on the American Petroleum Institute's SEMP recommended practice. Companies have to be in full compliance with its extensive requirements by November 15, 2011. • Detailed explanation of how to implement the new SEMS standard for offshore operations. • Ties the new regulations in with existing Safety Management approaches helping managers leverage existing processes and paperwork. • Written by a well-respected authority in the field

(quotes from reviews: 'vast expertise', 'Ian has insider access to executive thinking that few others have', 'Ian is a well known figure in the process safety industry and is well regarded'). • CEOs now have to sign off on compliance paperwork, making SEMS implementation something you need to get right first time. Ian Sutton provides the expert insights you need to achieve this.

The Code of Federal Regulations is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government.

Offshore Operation Facilities: Equipment and Procedures provides new engineers with the knowledge and methods that will assist them in maximizing efficiency while minimizing cost and helps them prepare for the many operational variables involved in offshore operations. This book clearly presents the working knowledge of subsea operations and demonstrates how to optimize operations offshore. The first half of the book covers the fundamental principles governing offshore engineering structural design, as well as drilling operations, procedures, and equipment. The second part includes common challenges of deep water oil and gas engineering as well as beach (shallow) oil engineering, submarine pipeline engineering, cable engineering, and safety system engineering. Many examples are included from various offshore locations, with special focus on offshore China operations. In the offshore petroleum engineering industry, the ability to maintain a profitable business depends on the efficiency and reliability of the structure, the equipment, and the engineer. Offshore Operation Facilities: Equipment and Procedures assists engineers in meeting consumer demand while maintaining a profitable operation. Comprehensive guide to the latest technology, strategies, and best practices for offshore operations Step-by-step approach for dealing with common challenges such as deepwater and shallow waters Includes submarine pipeline, cable engineering, and safety system engineering Unique examples from various offshore locations around the world, with special focus on offshore China.

On April 20, 2010, the Macondo well blew out, costing the lives of 11 men, and beginning a catastrophe that sank the Deepwater Horizon drilling rig and spilled nearly 5 million barrels of crude oil into the Gulf of Mexico. The spill disrupted an entire region's economy, damaged fisheries and critical habitats, and brought vividly to light the risks of deepwater drilling for oil and gas—the latest frontier in the national energy supply. Soon after, President Barack Obama appointed a seven-member Commission to investigate the disaster, analyze its causes and effects, and recommend the actions necessary to minimize such risks in the future. The Commission's report offers the American public and policymakers alike the fullest account available of what happened in the Gulf and why, and proposes actions—changes in company behavior, reform of government oversight, and investments in research and technology—required as industry moves forward to meet the nation's energy needs.

Special edition of the Federal Register, containing a codification of documents of general applicability and future effect ... with ancillaries.

With this volume's clear presentation, you will understand the basic concepts and techniques needed to DESIGN, SPECIFY, and OPERATE oilfield surface production facilities and operations

Professor Charlotte Wright updates her indispensable accounting book for the oil and gas industry in this revised & expanded sixth edition. The past several years have seen significant changes in the accounting and disclosure rules for the industry. While the book has thorough updates throughout, there are new industry issues specifically addressed from the accounting perspective.

Some of the significant updates and new material include: Discussion of the significance of shale and unconventional production as it relates to accounting principles New definitions of reserves from the Securities and Exchange Commission, and the impact on accounting processes All citations and references align with the updated authoritative literature from the Financial Accounting Standards Board A new chapter discussing specific issues previously unaddressed regarding property valuation in the industry New, and updated, end-of-chapter problems

This second edition provides extensive information on the attributes of the Natural Gas Hydrate (NGH) system, highlighting opportunities for the innovative use and modification of existing technologies, as well as new approaches and technologies that have the potential to dramatically lower the cost of NGH exploration and production. Above all, the book compares the physical, environmental, and commercial aspects of the NGH system with those of other gas resources. It subsequently argues and demonstrates that natural gas can provide the least expensive energy during the transition to, and possibly within, a renewable energy future, and that NGH poses the lowest environmental risk of all gas resources. Intended as a non-mathematical, descriptive text that should be understandable to non-specialists as well as to engineers concerned with the physical characteristics of NGH reservoirs and their production, the book is written for readers at the university graduate level. It offers a valuable reference guide for environmentalists and the energy community, and includes discussions that will be of great interest to energy industry professionals, legislators, administrators, regulators, and all those concerned with energy options and their respective advantages and disadvantages.

Offshore Operation Facilities: Equipment and Procedures provides new engineers with the knowledge and methods that will assist them in maximizing efficiency while minimizing cost and helps them prepare for the many operational variables involved in offshore operations. This book clearly presents the working knowledge of subsea operations and demonstrates how to optimize operations offshore. The first half of the book covers the fundamental principles governing offshore engineering structural design, as well as drilling operations, procedures, and equipment. The second part includes common challenges of deep water oil and gas engineering as well as beach (shallow) oil engineering, submarine pipeline engineering, cable engineering, and safety system engineering. Many examples are included from various offshore locations, with special focus on offshore China operations. In the offshore petroleum engineering industry, the ability to maintain a profitable business depends on the efficiency and reliability of the structure, the equipment, and the engineer. Offshore Operation Facilities: Equipment and Procedures assists engineers in meeting consumer demand while maintaining a profitable operation. Comprehensive guide to the latest technology, strategies, and best practices for offshore operations Step-by-step approach for dealing with common challenges such as deepwater

and shallow waters Includes submarine pipeline, cable engineering, and safety system engineering Unique examples from various offshore locations around the world, with special focus on offshore China

Surface Production Operations: Facility Piping and Pipeline Systems, Volume III is a hands-on manual for applying mechanical and physical principles to all phases of facility piping and pipeline system design, construction, and operation. For over twenty years this now classic series has taken the guesswork out of the design, selection, specification, installation, operation, testing, and trouble-shooting of surface production equipment. The third volume presents readers with a "hands-on" manual for applying mechanical and physical principles to all phases of facility piping and pipeline system design, construction, and operation. Packed with charts, tables, and diagrams, this authoritative book provides practicing engineer and senior field personnel with a quick but rigorous exposition of piping and pipeline theory, fundamentals, and application. Included is expert advice for determining phase states and their impact on the operating conditions of facility piping and pipeline systems; determining pressure drop and wall thickness; and optimizing line size for gas, liquid, and two-phase lines. Also included are a guide to applying international design codes and standards, and guidance on how to select the appropriate ANSI/API pressure-temperature ratings for pipe flanges, valves, and fittings. Covers new and existing piping systems including concepts for expansion, supports, manifolds, pigging, and insulation requirements Presents design principles for a pipeline pigging system Teaches how to detect, monitor, and control pipeline corrosion Reviews onshore and offshore safety and environmental practices Discusses how to evaluate mechanical integrity

Gas-Liquid And Liquid-Liquid Separators is practical guide designed to help engineers and operators develop a ?feel? for selection, specification, operating parameters, and trouble-shooting separators; form an understanding of the uncertainties and assumptions inherent in operating the equipment. The goal is to help familiarize operators with the knowledge and tools required to understand design flaws and solve everyday operational problems for types of separators. Gas-Liquid And Liquid-Liquid Separators is divided into six parts: Part one and two covers fundamentals such as: physical properties, phase behaviour and calculations. Part three through five is dedicated to topics such as: separator construction, factors affecting separation, vessel operation, and separator operation considerations. Part six is devoted to the ASME codes governing wall thickness determination of vessel weight fabrication, inspection, alteration and repair of separators 500 illustrations Easy to understand calculations methods Guide for protecting downstream equipment Helps reduce the loss of expensive intermediate ends Helps increase product purity

Offshore oil and gas production was conducted throughout the entire 20th century, but the industry's modern importance and vibrancy did not start until the early 1970s, when the North Sea became a major producer. Since then, the expansion of the offshore oil industry has been

continuous and rapid. Pipelines, and more generally long tubular structures, are major oil and gas industry tools used in exploration, drilling, production, and transmission. Installing and operating tubular structures in deep waters places unique demands on them. Technical challenges within the field have spawned significant research and development efforts in a broad range of areas. Volume I addresses problems of buckling and collapse of long inelastic cylinders under various loads encountered in the offshore arena. Several of the solutions are also directly applicable to land pipelines. The approach of Mechanics of Offshore Pipelines is problem oriented. The background of each problem and scenario are first outlined and each discussion finishes with design recommendations. * New and classical problems addressed - investigated through a combination of experiments and analysis * Each chapter deals with a specific mechanical problem that is analyzed independently * The fundamental nature of the problems makes them also applicable to other fields, including tubular components in nuclear reactors and power plants, aerospace structures, automotive and civil engineering structures, naval vehicles and structures

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