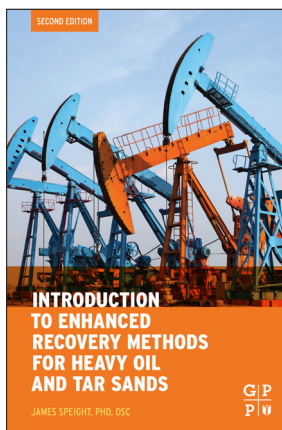
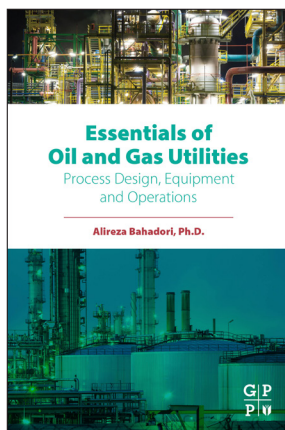
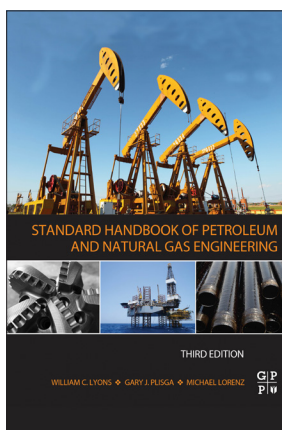
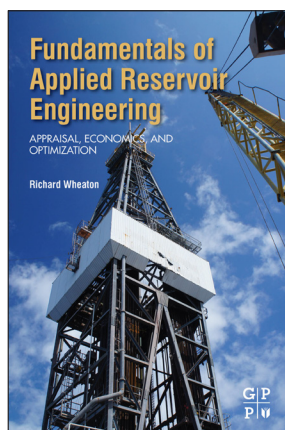


OIL AND GAS



2016 CATALOG

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Practical Engineering Management of Offshore Oil and Gas Platforms

Naeim Nouri Samie



ISBN: 978-0-12-809331-3

PUB DATE: June 2016

FORMAT: Paperback

PAGES: c. 480

AUDIENCE

Offshore Field Managers and Engineers, Project Engineering Managers, and any other interested Offshore Oil and Gas Personnel

Practical Engineering Management of Offshore Oil and Gas Platforms

Naeim Nouri Samie Project Engineering Manager, SLT Engineering



Covering how to interact with various task forces, get through bid proposals, and maintain project control, this must-have reference helps offshore oil and gas operators and engineers harness the multiple disciplines involved in offshore oil and gas projects using experience-based approaches and lessons learned.

KEY FEATURES

- 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 budget 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

DESCRIPTION

Engineering Design and Management of Offshore Oil and Gas Platforms 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. 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.

Engineering Design and Management of Offshore Oil and Gas Platforms 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.

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OFFSHORE GAS HYDRATES

ORIGINS, DEVELOPMENT, AND PRODUCTION

RUDY ROGERS



ISBN: 978-0-12-802319-8

PUB DATE: August 2015

FORMAT: Paperback

PAGES: c. 382

AUDIENCE

petroleum geologists, chemical engineers, petroleum engineers, natural gas engineers and managers, natural gas operators, process engineers, and any personnel/graduate-level students learning and researching about gas hydrates

Offshore Gas Hydrates

Origins, Development, and Production

Rudy Rogers Professor Emeritus in Chemical Engineering at Mississippi State University



Discusses the emergence of offshore gas hydrates as a clean energy source that is more abundant than all other fossil fuels

KEY FEATURES

- Addresses the technical, economic, and environmental problems of producing hydrate gas.
- Introduces the overlooked and uncharted role of microbes in catalyzing offshore hydrate formations with attendant effects on stability/dissociation.
- Reviews the latest world-wide field tests, research, and case studies involving seafloor hydrates, inclusive of most known hydrate provinces.
- Displays two videos within the e-book only: (1) hydrates, carbonates, chemosynthetic communities, and natural hydrocarbon leakages on the seafloor at the Mississippi Canyon hydrate observatory site; (2) hydrate nucleation, migration and self-packing in a laboratory test cell under the influence of anionic surfactants.
- Extends deep-water hydrate knowledge regarding the hydrate formation and protective cover for microbes within the extreme environment of Mars.

DESCRIPTION

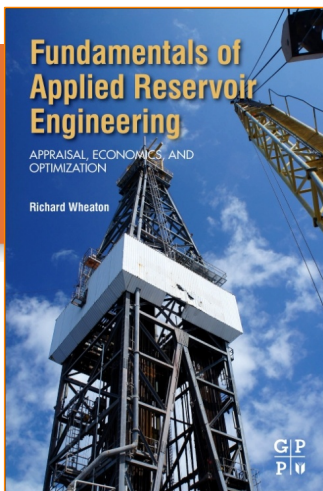
Gas hydrates collect and store both thermogenic and biogenic methane generated in deep ocean sediments that, over geologic time, forms vast methane repositories. ***Offshore Gas Hydrates: Origins, Development, and Production*** presents gas hydrates as an emerging, clean energy source possibly more abundant than all other fossil fuels and especially important for countries geographically and economically restricted from conventional fossil fuel resources. The book explores feasible methods to produce offshore hydrate gas, the means to store and transport the remotely produced gas, new hydrate inhibitors for conventional and hydrate production in ultra-deep waters, instability manifestations of seafloor hydrates, and hydrate roles in complex ecological scenarios. Complementing production and drilling method presentations are computer simulation studies, hydrate field tests, and seismic and logging developments. ***Offshore Gas Hydrates*** delivers a well-developed framework for both the oil and gas researcher and corporate engineer to better exploit this future unconventional resource, empowering the oil and gas professional with the latest data and information on sophisticated challenges that offshore hydrates present.

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ISBN: 978-0-08-101019-8

PUB DATE: May 2016

FORMAT: Paperback

PAGES: c. 220

AUDIENCE

Reservoir Engineers (early career),
Petroleum Engineers, Reservoir
Leads and Team Managers, and
Petroleum Engineering Students

Fundamentals of Applied Reservoir Engineering

Appraisal, Economics and Optimization

Richard Wheaton Senior Lecturer in Petroleum Engineering, University of Portsmouth, Portsmouth, UK



Valuable resource for an introduction to the fundamentals of reservoir engineering

KEY FEATURES

- Covers reservoir appraisal, economics, development planning, and optimization to assist reservoir engineers in their decision-making.
- Provides appendices on enhanced oil recovery, gas well testing, basic fluid thermodynamics, and mathematical operators to enhance comprehension of the book's main topics.
- Offers online spreadsheets covering well test analysis, material balance, field aggregation and economic indicators to help today's engineer apply reservoir concepts to practical field data applications.
- Includes coverage on unconventional resources and heavy oil making it relevant for today's worldwide reservoir activity.

DESCRIPTION

Fundamentals of Applied Reservoir Engineering introduces early career reservoir engineers and those in other oil and gas disciplines to the fundamentals of reservoir engineering. Given that modern reservoir engineering is largely centered on numerical computer simulation and that reservoir engineers in the industry will likely spend much of their professional career building and running such simulators, the book aims to encourage the use of simulated models in an appropriate way and exercising good engineering judgment to start the process for any field by using all available methods, both modern simulators and simple numerical models, to gain an understanding of the basic 'dynamics' of the reservoir –namely what are the major factors that will determine its performance. With the valuable addition of questions and exercises, including online spreadsheets to utilize day-to-day application and bring together the basics of reservoir engineering, coupled with petroleum economics and appraisal and development optimization, *Fundamentals of Applied Reservoir Engineering* will be an invaluable reference to the industry professional who wishes to understand how reservoirs fundamentally work and to how a reservoir engineer starts the performance process.

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ISBN: 978-0-12-803916-8

PUB DATE: May 2016

FORMAT: Paperback

PAGES: c. 223

AUDIENCE

Drilling Engineers, Drilling Fluid Specialists, Cementing Specialists (Primary Audience), Petroleum Engineers-both undergrad and graduate (Secondary Audience)

Lost Circulation

Mechanisms and Solutions

Alexandre Lavrov Senior Scientist in the Rock Mechanics Group at SINTEF Petroleum Research



Through a presentation of the latest information on lost circulation and its ramifications for the oil and gas industry, this book provides today's drilling and cement engineers with tactics on how to detect and prevent improper drilling conditions, manage safety risks, and curb annual losses for oil and gas companies

KEY FEATURES

- Understand the processes, challenges and solutions involved in lost circulation, a critical problem in drilling
- Gain a balance between fundamental understanding and practical application through real-world case studies
- Succeed in solving lost circulation in today's operations such as wells involving casing drilling, deepwater, and managed pressure drilling

DESCRIPTION

Lost Circulation: Mechanisms and Solutions provides the latest information on a long-existing problem for drilling and cementing engineers that can cause improper drilling conditions, safety risks, and annual losses of millions of wasted dollars for oil and gas companies.

While several conferences have convened on the topic, this book is the first reliable reference to provide a well-rounded, unbiased approach on the fundamental causes of lost circulation, how to diagnose it in the well, and how to treat and prevent it in future well planning operations.

As today's drilling operations become more complex, and include situations such as sub-salt formations, deepwater wells with losses caused by cooling, and more depleted reservoirs with reduced in-situ stresses, this book provides critical content on the current state of the industry that includes a breakdown of basics on stresses and fractures and how drilling fluids work in the wellbore.

The book then covers the more practical issues caused by induced fractures, such as how to understand where the losses are occurring and how to use proven preventative measures such as wellbore strengthening and the effect of base fluid on lost circulation performance.

Supported by realistic case studies, this book separates the many myths from the known facts, equipping today's drilling and cementing engineer with a go-to solution for every day well challenges.

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Second Edition

GAS and OIL RELIABILITY ENGINEERING

Modeling and Analysis



Eduardo Calixto



ISBN: 978-0-12-805427-7

PREVIOUS EDITION ISBN:
978-0-12-391914-4

PUB DATE: May 2016

FORMAT: Hardback

PAGES: c. 625

AUDIENCE

Reliability engineers; Technical safety engineers; Process safety engineers; Loss prevention engineers and managers; Petroleum engineers; Offshore engineers

Gas and Oil Reliability Engineering, 2e

Modeling and Analysis

Eduardo Calixto RAMS Expert, Philotech GmbH, Germany



As an update on the previous edition, this book 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

KEY FEATURES

- 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

DESCRIPTION

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.

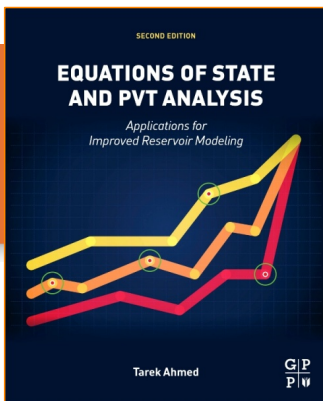
New chapters on safety, more coverage on the latest software, and techniques such as ReBi (Reliability-Based Inspection), ReGBI (Reliability Growth-Based Inspection), RCM (Reliability Centered Maintenance), and LDA (Lifetime Data Analysis), and asset integrity management, make the book a critical resource 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.

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ISBN: 978-0-12-801570-4

PREVIOUS EDITION ISBN:
978-1-933762-03-6

PUB DATE: April 2016

FORMAT: Hardback

PAGES: c. 560

AUDIENCE

Petroleum Engineers, Reservoir Engineers, Production Engineers, Petroleum Engineering Students – Graduate Level

Equations of State and PVT Analysis, 2e

Applications for Improved Reservoir Modeling

Tarek Ahmed Consultant, Tarek Ahmed and Associates, Ltd., Spring, TX, USA



Strengthen your reservoir skills and improve your flow assurance with this must-have reference

KEY FEATURES

- Improve with new material on practical applications, lab analysis, and real-world sampling from wells to gain better understanding of PVT properties for crude and natural gas
- Sharpen your reservoir models with added content on how to tune EOS parameters accurately
- Solve more unconventional problems with field examples on phase behavior characteristics of shale and heavy oil

DESCRIPTION

Understanding the properties of a reservoir's fluids and creating a successful model based on lab data and calculation are required for every reservoir engineer in oil and gas today, and with reservoirs becoming more complex, engineers and managers are back to reinforcing the fundamentals. PVT (pressure-volume-temperature) reports are one way to achieve better parameters, and *Equations of State and PVT Analysis, 2nd Edition*, helps engineers to fine tune their reservoir problem-solving skills and achieve better modeling and maximum asset development. Designed for training sessions for new and existing engineers, *Equations of State and PVT Analysis, 2nd Edition*, will prepare reservoir engineers for complex hydrocarbon and natural gas systems with more sophisticated EOS models, correlations and examples from the hottest locations around the world such as the Gulf of Mexico, North Sea and China, and Q&A at the end of each chapter. Resources are maximized with this must-have reference.

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FUNDAMENTALS OF GAS LIFT ENGINEERING

Well Design and Troubleshooting

Ali Hernandez



ISBN: 978-0-12-804133-8

PUB DATE: March 2016

FORMAT: Hardback

PAGES: c. 966

AUDIENCE

Production Engineers, Completion Engineers, Well Operators, Well Engineers, Well Analysts, Petroleum Engineering Students (both undergrad and graduate level)

Fundamentals of Gas Lift Engineering

Well Design and Troubleshooting

Ali Hernandez Gas Lift Specialist, Zakum Development Company, UAE



This essential training guide will help users prolong oil and gas well assets and optimize costs, with updates on the latest gas lift designs, troubleshooting techniques, and real-world case studies from the field, including offshore, also featuring information on computer utilization, inflow and outflow performance analysis, and worked calculation training examples

KEY FEATURES

- Covers essential gas lift design, troubleshooting, and the latest developments in R&D
- Provides real-world field experience and techniques to solve both onshore and offshore challenges
- Offers past and present analytical and operational techniques available in an easy-to-read manner
- Features information on computer utilization, inflow and outflow performance analysis, and worked calculation training examples

DESCRIPTION

Fundamentals of Gas Lift Engineering: Well Design and Troubleshooting discusses the important topic of oil and gas reservoirs as they continue to naturally deplete, decline, and mature, and how more oil and gas companies are trying to divert their investments in artificial lift methods to help prolong their assets.

While not much physically has changed since the invention of the King Valve in the 1940s, new developments in analytical procedures, computational tools and software, and many related technologies have completely changed the way production engineers and well operators face the daily design and troubleshooting tasks and challenges of gas lift, which can now be carried out faster, and in a more accurate and productive way, assuming the person is properly trained. This book fulfills this training need with updates on the latest gas lift designs, troubleshooting techniques, and real-world field case studies that can be applied to all levels of situations, including offshore.

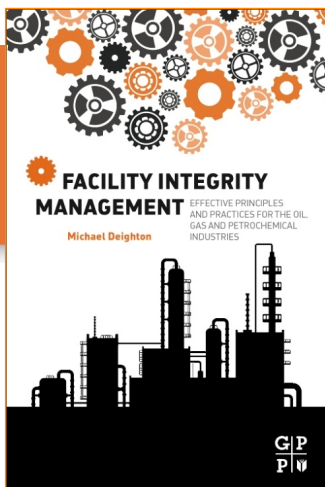
Making operational and troubleshooting techniques central to the discussion, the book empowers the engineer, new and experienced, to analyze the challenge involved and make educated adjustments and conclusions in the most economical and practical way. Packed with information on computer utilization, inflow and outflow performance analysis, and worked calculation examples made for training, the book brings fresh air and innovation to a long-standing essential component in a well's lifecycle.

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ISBN: 978-0-12-801764-7

PUB DATE: March 2016

FORMAT: Paperback

PAGES: c. 232

AUDIENCE

Maintenance Facility Managers, Maintenance Supervisors, Plant Engineers, Operation Engineers, Petrochemical Managers, Safety Engineers and Managers, Reliability Engineers, Safety Engineers and Directors, Plant Inspection Engineers, Design Engineers, and Graduate level petroleum and safety engineers

Facility Integrity Management

Effective Principles and Practices for the Oil, Gas and Petrochemical Industries

Michael Deighton Senior Projects Manager, Kentz, Ltd and Fellow, Institute of Mechanical Engineers



Through a comprehensive approach, this book provides managers and engineers of oil and gas operations with a model that ensures major process incidents are avoided and aging facilities are kept in a safe and reliable state

KEY FEATURES

- Helps readers gain a practical and industry specific approach to facility integrity management supported with real-world case studies from oil, gas, and petrochemical facility locations
- Presents a facility integrity excellence model, a holistic approach for oil and gas companies to drive towards integrity assurance unit monitoring, creating a failure-free environment
- Identifies and addresses failure of facility processes and equipment before the onset of performance degradation, keeping equipment maintenance costs low and reliability high

DESCRIPTION

Facility Integrity Management: Effective Principles and Practices for the Oil, Gas and Petrochemical Industries presents the information needed to completely understand common failures in the facility integrity management process. By understanding this more comprehensive approach, companies will be able to better identify shortcomings within their respective system that they did not realize existed. To introduce this method, the book provides managers and engineers with a model that ensures major process incidents are avoided, aging facilities are kept in a safe and reliable state and are operating at maximum levels, and any gaps within the integrity management system are identified and addressed, such as the all too common fragmented reliability programs.

The book approaches oil and gas facility management from a universal perspective, effectively charting out existing oil and gas facilities and their associated work processes, including maintenance, operations, and reliability, and then reconstructs them in order to optimize the way integrity is managed, creating a synergy across the various elements.

Easy to read, packed with practical applications applied to real process plant scenarios such as key concepts, process flow charts, handy checklists, real-world case studies and a dictionary, provides a high quality guide for a breakdown free facility, maximizing productivity and return to shareholders.

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SECOND EDITION

INTRODUCTION TO ENHANCED RECOVERY METHODS FOR HEAVY OIL AND TAR SANDS

JAMES SPEIGHT, PH.D., DSC



ISBN: 978-0-12-849906-1

PREVIOUS EDITION ISBN:
9781933762258

PUB DATE: March 2016

FORMAT: Paperback

PAGES: c. 560

AUDIENCE

Reservoir Engineers, Production Engineers, Operation Engineers, Petroleum Engineers, Asset Managers, Heavy Oil Specialists, entry-level oil and gas personnel, oil and gas sales and marketing personnel, and Graduate-level Petroleum Engineering Students

Introduction to Enhanced Recovery Methods for Heavy Oil and Tar Sands, 2e

James G. Speight Editor, Petroleum Science and Technology (formerly Fuel Science and Technology International) and editor of the journal, Energy Sources. Dr. Speight is also Adjunct Professor of Chemical and Fuels Engineering at the University of Utah.



This comprehensive book provides users with the knowledge they need to understand and increase their reservoir's recovery potential by as much as 60%, and includes all the current methods of recovery available, including the pros and cons of each, along with discussions of the technologies surrounding offshore applications

KEY FEATURES

- Enables users to quickly learn how to choose the most efficient recovery method for their reservoir while evaluating economic conditions
- Presents the differences between each method of recovery with newly added real-world case studies from around the world
- Helps readers stay competitive with the growing need of extracting unconventional resources with new content on how these complex reservoirs interact with injected reservoir fluids

DESCRIPTION

Introduction to Enhanced Recovery Methods for Heavy Oil and Tar Sands, Second Edition, explores the importance of enhanced oil recovery (EOR) and how it has grown in recent years thanks to the increased need to locate unconventional resources such as heavy oil and shale. Unfortunately, petroleum engineers and managers aren't always well-versed in the enhancement methods that are available when needed or the most economically viable solution to maximize their reservoir's productivity.

This revised new edition presents all the current methods of recovery available, including the pros and cons of each. Expanded and updated as a great preliminary text for the newcomer to the industry or subject matter, this must-have EOR guide teaches all the basics needed, including all thermal and non-thermal methods, along with discussions of viscosity, sampling, and the technologies surrounding offshore applications.

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Essentials of Oil and Gas Utilities

Process Design, Equipment
and Operations

Alireza Bahadori, Ph.D.



ISBN: 978-0-12-803088-2

PUB DATE: February 2016

FORMAT: Paperback

PAGES: c. 564

AUDIENCE

Primary: Maintenance
Manager/Director, Industrial
Engineer, Plant Engineer, Project
Engineer, Gas Refining Engineer,
Operations Manager/ Personnel
Secondary: Process Engineer/
Personnel

Essentials of Oil and Gas Utilities

Process Design, Equipment, and Operations

Alireza Bahadori Research staff member, School of Environment, Science,
and Engineering, Southern Cross University, Lismore, NSW, Australia



Go-to resource to help engineers and industry professionals maximize utility resources and process design for a successful operation.

KEY FEATURES

- 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

DESCRIPTION

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.

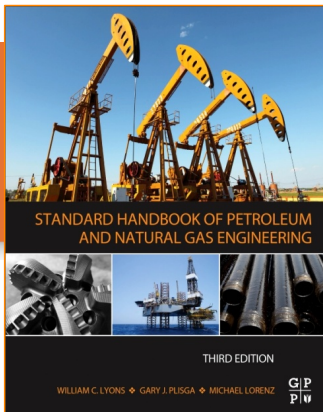
Essentials of Oil and Gas Utilities is a go-to resource for engineers and refinery personnel who must consider utility system design parameters and associated processes for the successful operations of their plants.

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ISBN: 978-0-12-383846-9

PREVIOUS EDITION ISBN:

978-0-7506-7785-1

PUB DATE: December 2015

FORMAT: Hardback

PAGES: c. 1800

AUDIENCE

Production, Reservoir, Completion, Chemical, Petroleum and Pipeline Engineers; any engineer working with the production, transportation, or drilling of natural gas

Standard Handbook of Petroleum and Natural Gas Engineering, 3e

Edited by: **William Lyons** Technical Learning Advisor, Chevron, Houston, TX
Gary J Plisga, BS Retired from active consulting, Katy, TX
Michael Lorenz Completions Engineer, Chevron



A classic for over 65 years, this book provides the most comprehensive coverage of developments, advances, and procedures in the oil and gas industry

KEY FEATURES

- Presents new and updated sections in drilling and production
- Covers all calculations, tables, and equations for every day petroleum engineers
- Features new sections on today's unconventional resources and reservoirs

DESCRIPTION

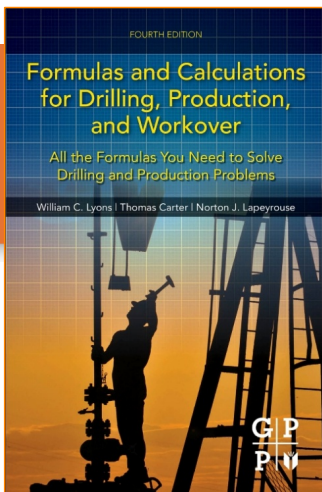
Standard Handbook of Petroleum and Natural Gas Engineering, Third Edition, provides you with the best, state-of-the-art coverage for every aspect of petroleum and natural gas engineering. With thousands of illustrations and 1,600 information-packed pages, this handbook is a handy and valuable reference. Written by dozens of leading industry experts and academics, the book provides the best, most comprehensive source of petroleum engineering information available. Now in an easy-to-use single volume format, this classic is one of the true "must haves" in any petroleum or natural gas engineer's library. A classic for over 65 years, this book is the most comprehensive source for the newest developments, advances, and procedures in the oil and gas industry. New to this edition are materials covering everything from drilling and production to the economics of the oil patch. Updated sections include: underbalanced drilling; integrated reservoir management; and environmental health and safety. The sections on natural gas have been updated with new sections on natural gas liquefaction processing, natural gas distribution, and transport. Additionally there are updated and new sections on offshore equipment and operations, subsea connection systems, production control systems, and subsea control systems. *Standard Handbook of Petroleum and Natural Gas Engineering, Third Edition*, is a one-stop training tool for any new petroleum engineer or veteran looking for a daily practical reference.

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ISBN: 978-0-12-803417-0

PREVIOUS EDITION ISBN:
978-1856179294

PUB DATE: January 2016

FORMAT: Spiral bound

PAGES: c. 382

AUDIENCE

Petroleum Engineers, Production Engineers, Drilling Engineers, Completion Engineers, Operations Engineers, Drilling Managers, Operations Managers, Project Production Engineers, and Graduate-level Petroleum Engineering Students

Formulas and Calculations for Drilling, Production, and Workover, 4e *All the Formulas You Need to Solve Drilling and Production Problems*

William C. Lyons, PhD, PE, New Mexico Institute of Mining and Technology, Socorro, New Mexico, USA

Thomas Carter Technical Learning Advisor, Chevron, Houston, TX
Norton J. Lapeyrouse



A must-have, handy reference for oil field workers to help them perform calculations, conduct operations, and evaluate the performance of wells on-the-go.

KEY FEATURES

- Features a new chapter focused on cementing
- Includes on-the-job answers and formulas for today's hydraulic fracturing methods
- Provides extra utility with an online basic equation calculator for 24/7 problem-solving access
- Covers topics such as drilling fluids, pressure control, engineering calculations, and air and gas calculations

DESCRIPTION

Formulas and Calculations for Drilling, Production, and Workover, All the Formulas You Need to Solve Drilling and Production Problems, Fourth Edition provides a convenient reference for oil field workers who do not use formulas and calculations on a regular basis, aiming to help reduce the volume of materials they must carry to the rig floor or job site.

Starting with a review of basic equations, calculations, and featuring many examples, this handy reference offers a quick look-up of topics such as drilling fluids, pressure control, engineering calculations, and air and gas calculations. The formulas and calculations are provided in either English field units or in metric units.

This edition includes additional coverage on cementing, subsea considerations, well hydraulics, especially calculating for hydraulic fracturing methods, and drill string design limitations.

This practical guide continues to save time and money for the oil field worker or manager, with an easy layout and organization to help confidently conduct operations and evaluate the performance of wells on-the-go.

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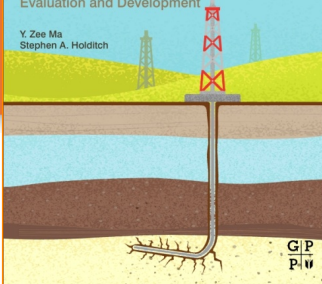


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Unconventional Oil and Gas Resources Handbook

Evaluation and Development

Y. Zee Ma
Stephen A. Holditch



ISBN: 978-0-12-802238-2

PUB DATE: October 2015

FORMAT: Paperback

PAGES: c. 536

AUDIENCE

(Primary): Petroleum Engineers, Geologists, Reservoir Engineers, Drilling Engineers, Natural Gas Engineers, Well Designers, Well Managers, Petrophysicists, Production Engineers, and Completion Engineers; (Secondary): Graduate level Petroleum Engineering Students

Unconventional Oil and Gas Resources Handbook

Evaluation and Development

Y. Zee Ma Scientific Advisor in Geomechanics and Mathematical Modeling, Schlumberger

Stephen Holditch Professor Emeritus of Petroleum Engineering, Texas A&M University



Elevate your reservoir's potential for unconventional resources with this must-have handbook packed with practical methods to lead you to a better-defined reservoir

KEY FEATURES

- 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

DESCRIPTION

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.

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Petrophysics

Fourth Edition

Theory and Practice of Measuring Reservoir Rock
and Fluid Transport Properties

Djebbar Tiab and Erle C. Donaldson



ISBN: 978-0-12-803188-9

PREVIOUS EDITION ISBN:
978-0-12-383848-3

PUB DATE: October 2015

FORMAT: Hardback

PAGES: c. 894

AUDIENCE

Reservoir Engineers, Production
Engineers, Engineering Advisors,
Reservoir Management Specialists,
Graduate level Petroleum
Engineering Students

Petrophysics, 4e

*Theory and Practice of Measuring Reservoir Rock and Fluid
Transport Properties*

Djebbar Tiab Consultant and Senior Professor of Petroleum Engineering,
University of Oklahoma

Erle C. Donaldson Independent Engineering Consultant, Tetrahedron, Inc.



Provides users with a resource that will help them understand reservoir performance, including shale

KEY FEATURES

- Strengthened with a new chapter on shale oil and gas, adding the latest technological advances in the field today
- Covers topics relating to porous media, permeability, fluid saturation, well logs, Dykstra-Parson, capillary pressure, wettability, Darcy's law, Hooke's law, reservoir characterization, filter-cake, and more
- Updated with relevant practical case studies to enhance on the job training
- Continues its longstanding, 20-year history as the leading book on petrophysics

DESCRIPTION

Petrophysics: Theory and Practice of Measuring Reservoir Rock and Fluid Transport Properties, Fourth Edition provides users with tactics that will help them understand rock-fluid interaction, a fundamental step that is necessary for all reservoir engineers to grasp in order to achieve the highest reservoir performance.

The book brings the most comprehensive coverage on the subject matter, and is the only training tool for all reservoir and production engineers entering the oil and gas industry. This latest edition is enhanced with new real-world case studies, the latest advances in reservoir characterization, and a new chapter covering unconventional oil and gas reservoirs, including coverage on production techniques, reservoir characteristics, and the petrophysical properties of tight gas sands from NMR logs.

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ISBN: 978-0-12-801898-9

PREVIOUS EDITION ISBN:
978-0750677387

PUB DATE: September 2015

FORMAT: Hardback

PAGES: c. 1012

AUDIENCE

Reservoir Engineers, Well Designers, Asset Managers, Production Engineers, Petrophysicists, Completion Engineers, Fracturing Specialists, Petroleum Geologists, Petrologists, Petroleum Engineers, and Graduates in Petroleum Engineering

Reservoir Formation Damage, 3e

Faruk Civan Martin G. Miller Chair Professor of the Mewbourne School of Petroleum and Geological Engineering at the University of Oklahoma in Norman



This updated text helps readers predict and improve productivity of unconventional and conventional reservoirs, providing new methodologies and optimal strategies for success

KEY FEATURES

- Understand relevant formation damage processes by laboratory and field testing
- Develop theories and mathematical expressions for description of the fundamental mechanisms and processes
- Predict and simulate the consequences and scenarios of the various types of formation damage processes encountered in petroleum reservoirs
- Develop methodologies and optimal strategies for formation damage control and remediation

DESCRIPTION

Reservoir Formation Damage, Third Edition, provides the latest information on the economic problems that can occur during various phases of oil and gas recovery from subsurface reservoirs, including production, drilling, hydraulic fracturing, and workover operations.

The text helps readers better understand the processes causing formation damage and the factors that can lead to reduced flow efficiency in near-wellbore formation during the various phases of oil and gas production.

The third edition in the series provides the most all-encompassing volume to date, adding new material on conformance and water control, hydraulic fracturing, special procedures for unconventional reservoirs, field applications design, and cost assessment for damage control measures and strategies.

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Multiphase Fluid Flow in Porous and Fractured Reservoirs

Yu-Shu Wu



ISBN: 978-0-12-803848-2

PUB DATE: September 2015

FORMAT: Paperback

PAGES: c. 402

AUDIENCE

Petroleum Engineers, Reservoir Engineers, Reservoir Simulation Modelers (Primary) / Petroleum Engineering Students – Graduate Level (Secondary)

Multiphase Fluid Flow in Porous and Fractured Reservoirs

Yu-Shu Wu Colorado School of Mines, Golden, CO, USA



As the practice of modeling fluid flow petroleum and natural gas reservoirs has become commonplace, this book provides the reservoir engineer of today with the latest developments in reservoir simulation by combining a powerhouse of theory, analytical, and numerical methods

KEY FEATURES

- Delivers updates on recent developments in reservoir simulation such as modeling approaches for multiphase flow simulation of fractured media and unconventional reservoirs
- Explains analytical solutions and approaches as well as applications to modeling verification for today's reservoir problems, such as evaluating saturation and pressure profiles and recovery factors or displacement efficiency
- Utilize practical codes and programs featured from online companion website

DESCRIPTION

Multiphase Fluid Flow in Porous and Fractured Reservoirs discusses the process of modeling fluid flow in petroleum and natural gas reservoirs, a practice that has become increasingly complex thanks to multiple fractures in horizontal drilling and the discovery of more unconventional reservoirs and resources.

The book updates the reservoir engineer of today with the latest developments in reservoir simulation by combining a powerhouse of theory, analytical, and numerical methods to create stronger verification and validation modeling methods, ultimately improving recovery in stagnant and complex reservoirs.

Going beyond the standard topics in past literature, coverage includes well treatment, Non-Newtonian fluids and rheological models, multiphase fluid coupled with geomechanics in reservoirs, and modeling applications for unconventional petroleum resources. The book equips today's reservoir engineer and modeler with the most relevant tools and knowledge to establish and solidify stronger oil and gas recovery.

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ABDUS SATTER
GHULAM IQBAL

RESERVOIR ENGINEERING

THE FUNDAMENTALS, SIMULATION, AND MANAGEMENT
OF CONVENTIONAL AND UNCONVENTIONAL RECOVERIES



ISBN: 978-0-12-800219-3

PUB DATE: September 2015

FORMAT: Hardback

PAGES: c. 472

AUDIENCE

Reservoir Engineers,
Unconventional Reservoir
Engineers, Reservoir managers and
decision makers, Petrophysics
professionals, and Completion
Engineers, Petroleum Engineering
students (both undergraduate and
graduate), Production Engineering
students

Reservoir Engineering

*The Fundamentals, Simulation, and Management of
Conventional and Unconventional Recoveries*

Abdus Satter President – Satter and Associates, Houston, Texas

Ghulam M. Iqbal Independent Consultant, Washington, D.C., USA



Get more out of today's unconventional reservoir life cycle with this must-have engineering guide

KEY FEATURES

- Connects key reservoir fundamentals to modern engineering applications
- Bridges the conventional methods to the unconventional, showing the differences between the two processes
- Offers field case studies and workflow diagrams to help the reservoir professional and student develop and sharpen management skills for both conventional and unconventional reservoirs

DESCRIPTION

Reservoir Engineering focuses on the fundamental concepts related to the development of conventional and unconventional reservoirs and how these concepts are applied in the oil and gas industry to meet both economic and technical challenges. Written in easy to understand language, the book provides valuable information regarding present-day tools, techniques, and technologies and explains best practices on reservoir management and recovery approaches. Various reservoir workflow diagrams presented in the book provide a clear direction to meet the challenges of the profession. As most reservoir engineering decisions are based on reservoir simulation, a chapter is devoted to introduce the topic in lucid fashion. The addition of practical field case studies make **Reservoir Engineering** a valuable resource for reservoir engineers and other professionals in helping them implement a comprehensive plan to produce oil and gas based on reservoir modeling and economic analysis, execute a development plan, conduct reservoir surveillance on a continuous basis, evaluate reservoir performance, and apply corrective actions as necessary.

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Dennis P. Nolan | Eric T. Anderson

Applied Operational Excellence for the Oil, Gas, and Process Industries

Applied Operational Excellence for the Oil, Gas, and Process Industries

Dennis P. Nolan Loss Prevention Manager and Chief Fire Prevention Engineer, Saudi Aramco

Eric T. Anderson, Consultant with expertise within fire, health, safety, environment, and security support function



An essential guide for oil and gas companies seeking to understand the various types of safety management processes in order to achieve operational excellence

KEY FEATURES

- 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

DESCRIPTION

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 pre-built 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.

ISBN: 978-0-12-802788-2

PUB DATE: August 2015

FORMAT: Paperback

PAGES: c. 222

AUDIENCE

(Primary): Oil and Gas Safety Managers, Oil and Gas Plant Managers, Process Plant Managers and Engineers, Safety Engineers and Managers, Risk Consultants and Advisors, (Secondary): Educational Organizations, Universities and Colleges, Specialized Training Courses for Process Engineering, Risk Analysis, Safety Management/Engineering, 3rd Party Auditors and Inspectors, and Regulatory Organizations

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PETROLEUM ENGINEER'S GUIDE TO
**OIL FIELD CHEMICALS
AND FLUIDS**

SECOND EDITION

JOHANNES FINK



ISBN: 978-0-12-803734-8

PREVIOUS EDITION ISBN:
978-0-12-383844-5

PUB DATE: June 2015

FORMAT: Paperback

PAGES: c. 826

AUDIENCE

Petroleum Engineers, Production Engineers, Drilling Fluid Specialists/Engineers, Completion Engineers, Operation Managers, Drilling Engineers, and Mud Engineers

Petroleum Engineer's Guide to Oil Field Chemicals and Fluids, 2e

Johannes Fink Professor of Polymer Chemistry, Montanuniversität Leoben, Vienna, Austria



Understand and choose the best oil and gas chemical application while lowering costs and staying environmentally safe

KEY FEATURES

- Effectively locate and utilize the right chemical application specific to your oil and gas operation with author's systematic approach by use
- Gain coverage on all oil field chemicals and fluids needed throughout the entire oil and gas life cycle, including drilling, production, and cementing
- Understand environmental factors and risks for oil field chemicals, along with pluses and minuses of each application, to make the best and safest choice for your operation

DESCRIPTION

The oil and gas engineer on the job requires knowing all the available oil field chemicals and fluid applications that are applicable to the operation. Updated with the newest technology and available products, *Petroleum Engineer's Guide to Oil Field Chemicals and Fluids, Second Edition*, delivers all the necessary lists of chemicals by use, their basic components, benefits, and environmental implications. In order to maintain reservoir protection and peak well production performance, operators demand to know all the options that are available. Instead of searching through various sources, *Petroleum Engineer's Guide to Oil Field Chemicals and Fluids, Second Edition*, presents a one-stop non-commercialized approach by organizing the products by function, matching the chemical to the process for practical problem-solving and extending the coverage with additional resources and supportive materials. Covering the full spectrum, including fluid loss additives, drilling muds, cement additives, and oil spill treating agents, this must-have reference answers to every oil and gas operation with more options for lower costs, safer use, and enhanced production.

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Personnel Protection and Safety Equipment for the Oil and Gas Industries

Alireza Bahadori Research staff member, School of Environment, Science, and Engineering, Southern Cross University, Lismore, NSW, Australia



Personnel Protection and Safety Equipment for the Oil and Gas Industries

Alireza Bahadori, PhD



ISBN: 978-0-12-802814-8

PUB DATE: May 2015

FORMAT: Paperback

PAGES: c. 578

AUDIENCE

Oil and Gas Facility Managers, Safety Engineers, Safety Inspectors, Maintenance Engineers and Managers, Operation Managers, Risk Managers, Drilling Companies and Operators, Product Manufacturers and Designers, Safety Training Organizations, Pipeline Engineers, Process Engineers and Managers, and Corrosion Engineers

Save the lives of your oil and gas workers with this must-have guide to personnel protective equipment

KEY FEATURES

- Know recommended US and international protective safety equipment regulations
- Learn the types, classes, and materials of safety and protective equipment specific to the oil and gas industry
- Gain knowledge on how to select, test, maintain, and store protective equipment properly

DESCRIPTION

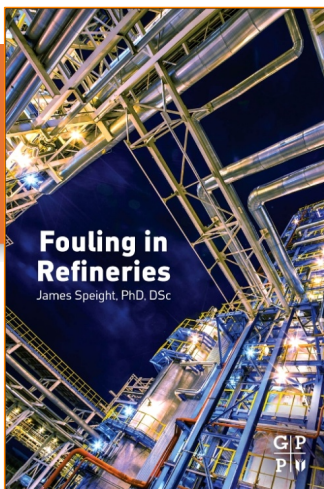
Oil and gas companies are repeatedly cited by regulatory organizations for poor training and maintenance on providing personal protective equipment to their refinery workers. Managers of refinery and petrochemical plants are responsible for instructing their workers with the types of equipment available, how to properly wear the equipment, how to properly care and maintain the equipment, and, most importantly, it's their responsibility to enforce these regulations and safety requirements. While there are many reference materials on the subject, most are too broad to apply directly to the unique and highly volatile atmosphere of an oil and gas operation. *Personnel Protection and Safety Equipment for the Oil and Gas Industries* answers the call for safety managers onsite as well as workers to understand all the safety equipment available specifically for the energy sector. Condensed into one convenient reference location, this training guide is designed to inform on several types of personnel protective clothing, firefighting protective clothing, respiratory protective devices available as well as many other types of protective equipment, including fall protection and vehicle safety belts and harnesses. Industry-specific examples, multiple illustrations, and a glossary of terms make *Personnel Protection and Safety Equipment for the Oil and Gas Industries* a must-have on every oil and gas operation.

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ISBN: 978-0-12-800777-8

PUB DATE: May 2015

FORMAT: Paperback

PAGES: c. 522

AUDIENCE

Refinery managers, Refinery decision makers, Chemical Engineers, R&D Personnel in oil companies, Chemists, Process Engineers, Petroleum Engineers, Heat Exchanger Manufacturers, and Safety Engineers

Fouling in Refineries

James G Speight Editor, Petroleum Science and Technology (formerly Fuel Science and Technology International) and editor of the journal, Energy Sources. Dr. Speight is also Adjunct Professor of Chemical and Fuels Engineering at the University of Utah.



How to control, treat, and prevent fouling within refinery units to avoid unscheduled shutdowns

KEY FEATURES

- Presents an understanding of the breakdown of fouling per refinery unit, including distillation and coking units
- Provides all the factors, crude types, and refining blends that cause fouling, especially the unconventional feedstocks and high acid crudes used today
- Helps users develop an analysis-based treatment and control strategy that empowers them to operate refinery equipment at a level that prevents fouling from occurring

DESCRIPTION

Fouling in Refineries is an important and ongoing problem that directly affects energy efficiency resulting in increased costs, production losses, and even unit shutdown, requiring costly expenditures to clean up equipment and return capacity to positive levels.

This text addresses this common challenge for the hydrocarbon processing community within each unit of the refinery. As refineries today face a greater challenge of accepting harder to process heavier crudes and the ongoing flow of the lighter shale oil feedstocks, resulting in bigger challenges to balance product stability within their process equipment, this text seeks to inform all relative refinery personnel on how to monitor fouling, characterize the deposits, and follow all available treatments.

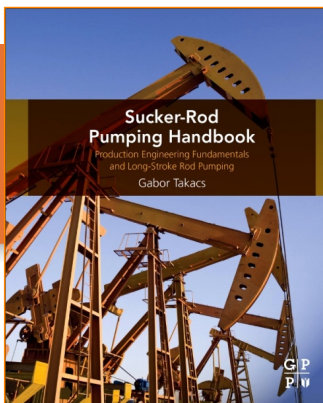
With basic modeling and chemistry of fouling and each unit covered, users will learn how to operate at maximum production rates and elongate the efficiency of their refinery's capacity.

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Sucker-Rod Pumping Handbook

Production Engineering Fundamentals and Long-Stroke Rod Pumping

Gabor Takacs Professor, Petroleum Engineering Department, University of Miskolc, Hungary



Optimize and design new rod pumping systems with this must-have sucker-rod pump manual

ISBN: 978-0-12-417204-3

PUB DATE: May 2015

FORMAT: Paperback

PAGES: c. 586

AUDIENCE

Production engineers; Production Operators; Pump Engineers; Plant Operators; Equipment Maintenance Engineers; Artificial Lift Managers; Directors and Advisors; Petroleum Engineering Professors; Petroleum Engineering Students; Mechanical Engineers; Mechanical Engineering Students and Professors

"Dr. Gabor Takacs has done it again and in much better fashion. This book is well-worthy and much improved successor to the author's previous volume on sucker rod pumping. Size of the book, almost 600 pages, may appear daunting, however, the right balance of academic and practical discussions in this book makes it equally accessible to university students, practicing engineers, and field personnel. The language, illustrations and examples are useful to experienced practitioner while easy to follow for a casual observer of this important artificial lift form. The book starts with basics on petroleum production engineering and after detailed coverage on equipment and components; it focuses on design workflows from empirical to API through wave equation based approaches. Next the book covers well analysis techniques that help answer question like how do I get most out of the system that I have now without significant CAPEX/OPEX inputs. I would have preferred more coverage on application challenges like severely dog-legged and/or horizontal wells, solids and gas handling, and rapidly changing production environment. In the closing, the book covers the long stroke pumping application for optimal production in challenging conditions like gassy, deep and relatively higher volume wells. I highly recommend this book." -- Anonymous

KEY FEATURES

- Covers basic equipment, techniques, and codes to follow in a comprehensive and easy-to-understand format
- Helps users grasp common handling problems that lead to failures
- Provides analysis of sucker rod pump installations, including well testing, dynamometer surveys, and modern interpretation methods
- Aids operators in understanding and applying fundamental production theories and calculations of operational parameters

DESCRIPTION

Sucker-Rod Pumping Handbook presents the latest information on the most common form of production enhancement in today's oil industry, making up roughly two-thirds of the producing oilwell operations in the world. The book begins with an introduction to the main features of sucker rod pumping and an explanation and comparison of lift methods. It goes on to provide the technical and practical knowledge needed to introduce the new and practicing production engineer and operator to the equipment, technology, and applications required to maintain optimum operating conditions. ***Sucker-Rod Pumping Handbook*** is a must-have manual that ensures operators understand the design, components, and operation of sucker rod pump systems, learn the functions of the systems, apply the fundamental production engineering theories and calculations, and accomplish maximum system efficiency by avoiding the typical pitfalls that lead to fatigue and failure.

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Practical Reservoir Engineering and Characterization

Richard Baker • Harvey Yarranton • Jerry Jensen



G|P
P|U

ISBN: 978-0-12-801811-8

PUB DATE: May 2015

FORMAT: Paperback

PAGES: c. 522

AUDIENCE

Reservoir Engineers, Production Engineer, Drilling Engineers, Exploration Geophysicists

Practical Reservoir Engineering and Characterization

Richard O. Baker Baker Hughes, Strategic Advisor Reservoir Development Services
Harvey W. Yarranton Professor, Chemical and Petroleum Engineering, Schulich School of Engineering, University of Calgary
Jerry Jensen Professor, Chemical and Petroleum Engineering, Schulich Chair in Geostatistics, Schulich School of Engineering, University of Calgary



Illustrates the reservoir characterization process in an easy to understand way, allowing each member of the team to appreciate the resulting interpretations and effectively contribute

KEY FEATURES

- Thoroughly explains the data gathering methods required to characterize, forecast, and simulate a reservoir
- Provides the fundamental background required to analyze, characterize, and develop real reservoirs in the most complex depositional environments
- Presents a step-by-step approach for building a one, two, or three-dimensional representation of all reservoir types

DESCRIPTION

Practical Reservoir Characterization expertly explains key technologies, concepts, methods, and terminology in a way that allows readers in varying roles to appreciate the resulting interpretations and contribute to building reservoir characterization models that improve resource definition and recovery even in the most complex depositional environments.

It is the perfect reference for senior reservoir engineers who want to increase their awareness of the latest in best practices, but is also ideal for team members who need to better understand their role in the characterization process. The text focuses on only the most critical areas, including modeling the reservoir unit, predicting well behavior, understanding past reservoir performance, and forecasting future reservoir performance.

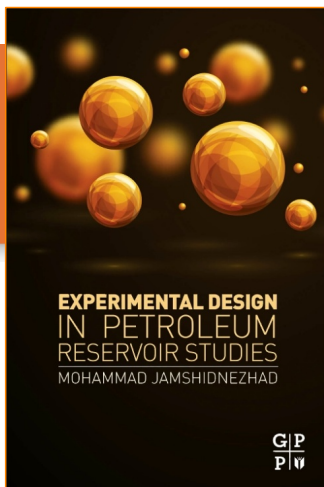
The text begins with an overview of the methods required for analyzing, characterizing, and developing real reservoirs, then explains the different methodologies and the types and sources of data required to characterize, forecast, and simulate a reservoir.

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Experimental Design in Petroleum Reservoir Studies

Mohammad Jamshidnezhad Deputy Head of Research and Technology,
National Iranian South Oil Company



The first book to focus on application of experimental design to analyse and quantify the uncertainties of reservoir modelling

KEY FEATURES

- Apply the practical knowledge and know-how now with real-world case studies included
- Gain confidence in deviating uncertain parameters surrounding the underdeveloped reservoir with a focus on application of experimental design
- Alleviate some of the guesswork in history-matching and prediction phrases with explanations on uncertainty analysis

DESCRIPTION

One of the main duties for reservoir engineers is reservoir study, which starts when a reservoir is explored and it continues until the reservoir abandonment. Reservoir study is a continual process and due to various reasons such as complexity at the surface and limited data, there are many uncertainties in reservoir modelling and characterization causing difficulties in reasonable history-matching and prediction phases of study. *Experimental Design in Petroleum Reservoir Studies* concentrates on experimental design, a trusted method in reservoir management, to analyze and take the guesswork out of the uncertainties surrounding the underdeveloped reservoir. Case studies from the Barnett shale and fractured reservoirs in the Middle East are just some of the practical examples included. Other relevant discussions on uncertainty in PVT, field performance data, and relevant outcomes of experimental design all help you gain insight into how better data can improve measurement tools, your model, and your reservoir assets.

ISBN: 978-0-12-803070-7

PUB DATE: April 2015

FORMAT: Paperback

PAGES: c. 176

AUDIENCE

Petroleum Engineers, Reservoir
Engineers and Managers, and
Petrophysicists

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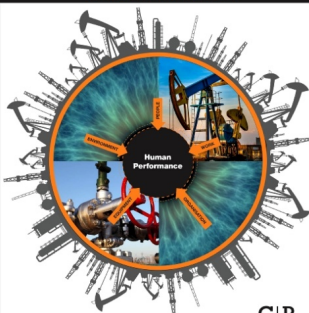
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DESIGNING FOR HUMAN RELIABILITY

Human Factors Engineering in the Oil, Gas, and Process Industries



Ronald W. McLeod



ISBN: 978-0-12-802421-8

PUB DATE: March 2015

FORMAT: Paperback

PAGES: c. 398

AUDIENCE

Oil and Gas Executives; Managers; and Technical Safety, Health and Safety professionals, Process Safety Professionals/Engineers, and Human Factors Engineers

Designing for Human Reliability

Human Factors Engineering in the Oil, Gas, and Process Industries

Ronald W. McLeod Independent Human Factors Consultant, UK



Increase operational performance, productivity, and return on investment through human factors engineering during the design, construction, and operation of your oil and gas facilities

"Often when people from industry ask me what they should read on Human Factors, I pause, because there are actually few books on the subject that aren't written by academics for academics. Now, thankfully, there is such a book. It has a solid industry feel to it, and the questions it poses and answers remind me of many discussions I've had over the years in numerous industries, but particularly Oil and Gas where the dollar is what really counts.....If you are a manager, engineer, or designer facing human performance issues and wondering what to do about them, read this book." --Barry Kirwan, EUROCONTROL

KEY FEATURES

- Recognise some 'hard truths' of human performance and learn about the importance of applying the principles of Human Factors Engineering on capital projects
- Learn from analysis of real-world incidents how differences between 'fast' and 'slow' styles of thinking can lead to human error in industrial processes
- Learn how controls and barrier against major incidents that rely on human performance can be strengthened throughout the design and development of assets and equipment

DESCRIPTION

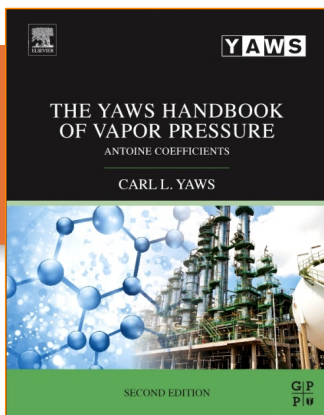
Industry underestimates the extent to which behaviour at work is influenced by the design of the working environment. *Designing for Human Reliability* argues that greater awareness of the contribution of design to human error can significantly enhance HSE performance and improve return on investment. Illustrated with many examples, *Designing for Human Reliability* explores why work systems are designed and implemented such that "design-induced human error" becomes more-or-less inevitable. McLeod demonstrates how well understood psychological processes can lead people to make decisions and to take actions that otherwise seem impossible to understand. *Designing for Human Reliability* sets out thirteen key elements to deliver the levels of human reliability expected to achieve the return on investment sought when decisions are made to invest in projects. And it demonstrates how investigation of the human contribution to incidents can be improved by focusing on what companies expected and intended when they chose to rely on human performance as a barrier, or control, against incidents.

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ISBN: 978-0-12-802999-2

PREVIOUS EDITION ISBN:
978-1933762104

PUB DATE: March 2015

FORMAT: Paperback

PAGES: c. 328

AUDIENCE

Primary - Petroleum Engineers,
Chemical Engineers, Process Design
Engineers, R&D / Secondary -
Petroleum and Chemical
Engineering Students (graduate and
post-grad level)

The Yaws Handbook of Vapor Pressure, 2e

Antoine coefficients

Carl Yaws Professor of Chemical Engineering (retired) at Lamar University,
Beaumont, TX



Covering over 25,000 organic and inorganic compounds, this unequalled handbook can help you solve all petrochemical and process design questions faster from a single reliable data reference

KEY FEATURES

- Increase compound coverage from 8,200 to over 25,000 organic and inorganic compounds, including sulfur and hydrocarbons
- Solve process design questions quickly from a single reliable data source
- Locate answers easily for multiple petrochemical related questions such as bubble point, dew point temperatures, and vapor-liquid equilibrium

DESCRIPTION

Increased to include over 25,000 organic and inorganic compounds, *The Yaws Handbook of Vapor Pressure: Antoine Coefficients, 2nd Edition* delivers the most comprehensive and practical database source for today's petrochemical. Understanding antoine coefficients for vapor pressure leads to numerous critical engineering applications such as pure components in storage vessels, pressure relief valve design, flammability limits at the refinery, as well as environmental emissions from exposed liquids, making data to efficiently calculate these daily challenges a fundamental need. Written by the world's leading authority on chemical and petrochemical data, *The Yaws Handbook of Vapor Pressure* simplifies the guesswork for the engineer and reinforces the credibility of the engineer's calculations with a single trust-worthy source. This data book is a must-have for the engineer's library bookshelf.

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HANDBOOK OF
**NATURAL GAS
TRANSMISSION AND
PROCESSING**

PRINCIPLES AND PRACTICES

THIRD EDITION



SAEID MOKHATAB, WILLIAM A. POE, AND JOHN Y. MAK



ISBN: 978-0-12-801499-8

PREVIOUS EDITION ISBN:

978-0123869142

PUB DATE: February 2015

FORMAT: Hardback

PAGES: c. 598

AUDIENCE

Professional gas processing engineers and technologists, gas-processing plant designers and operators, scientists and researchers working in the natural gas industry.

Handbook of Natural Gas Transmission and Processing, 3e

Principles and Practices

Saeid Mokhatab Independent Consultant, Canada

William A. Poe Business Consultant, Invensys Operations Management, USA

John Y. Mak Senior Fellow and Technical Director at Fluor, USA



Stay ahead of the competitive natural gas market with this updated transmission and processing handbook

"This unique handbook, written by internationally renowned gas-engineering experts, is a major contribution to the professional and scholarly literature, offering an excellent coverage of key topics in the natural gas supply chain. It addresses the principles, practices, advanced technologies, new issues and challenges related to the natural gas transmission and processing industry, which have not been addressed in depth in any existing books. I recommend it highly, as a reference and textbook."

Dr. Brian F. Towler, Professor and Chair of Petroleum Engineering, University of Queensland, Australia

KEY FEATURES

- Covers all technical and operational aspects of natural gas transmission and processing in detail.
- Provides pivotal updates on the latest technologies, applications and solutions.
- Offers practical advice on design and operation based on engineering principles and operating experiences.

DESCRIPTION

Written by an internationally-recognized author team of natural gas industry experts, the third edition of **Handbook of Natural Gas Transmission and Processing** is a unique, well-documented, and comprehensive work on the major aspects of natural gas transmission and processing. Two new chapters have been added to the new edition: a chapter on nitrogen rejection to address today's high nitrogen gases and a chapter on gas processing plant operations to assist plant operators with optimizing their plant operations. In addition, overall updates to **Handbook of Natural Gas Transmission and Processing** provide a fresh look at new technologies and opportunities for solving current gas processing problems on plant design and operation and on greenhouse gases emissions. It also does an excellent job of highlighting the key considerations that must be taken into account for any natural gas project in development.

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Advanced Production Decline Analysis and Application

Hedong Sun Senior Engineer, Research Institute of Petroleum Exploration and Development, PetroChina, Beijing, China



Advanced Production Decline Analysis and Application

Hedong Sun



ISBN: 978-0-12-802411-9

PUB DATE: February 2015

FORMAT: Paperback

PAGES: c. 336

AUDIENCE

engineers and technologists who use decline curve analysis on a regular basis involved in any of the following areas: exploitation, reserves, production/operations and well testing

Provides a systematic and comprehensive introduction to several key analysis methods, from fundamentals to applications

KEY FEATURES

- Understand the most comprehensive and current list of decline methods, including Arps, Fetkovich, Blasingame, and Agarwal-Gardner
- Gain expert knowledge with principles, processes, real-world cases and field examples
- Includes online downloadable computer programs on Blasingame decline type curves and normalized pseudo-pressure of gas wells

DESCRIPTION

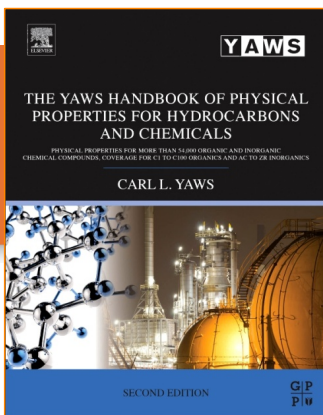
In recent years, production decline-curve analysis has become the most widely used tool in the industry for oil and gas reservoir production analysis. However, most curve analysis is done by computer today, promoting a "black-box" approach to engineering and leaving engineers with little background in the fundamentals of decline analysis. *Advanced Production Decline Analysis and Application* starts from the basic concept of advanced production decline analysis, and thoroughly discusses several decline methods, such as Arps, Fetkovich, Blasingame, Agarwal-Gardner, NPI, transient, long linear flow, and FMB. A practical systematic introduction to each method helps the reservoir engineer understand the physical and mathematical models, solve the type curves and match up analysis, analyze the processes and examples, and reconstruct all the examples by hand, giving way to master the fundamentals behind the software. An appendix explains the nomenclature and major equations, and as an added bonus, online computer programs are available for download.

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ISBN: 978-0-12-800834-8

PREVIOUS EDITION ISBN:
978-0-9765113-7-3

PUB DATE: January 2015

FORMAT: Hardback

PAGES: c. 824

AUDIENCE

Petroleum Engineers, Chemical Engineers, Process Design engineers, R&D, Petroleum and Chemical Engineering students (graduate and post-grad level)

The Yaws Handbook of Physical Properties for Hydrocarbons and Chemicals, 2e

Physical Properties for More Than 54,000 Organic and Inorganic Chemical Compounds, Coverage for C1 to C100 Organics and Ac to Zr Inorganics

Carl L. Yaws Professor of Chemical Engineering (retired) at Lamar University, Beaumont, TX



Improve your crude purchase decisions with all the critical hydrocarbon property data in one reference

KEY FEATURES

- Coverage added on elements for hydrocarbons and chemicals with more than 200 real-world cases included for practicality
- Increased compound coverage from 41,000 to 54,000 total compounds to quickly access for everyday use
- New functions added such as testing boiling point temperature and new data on density and refractory index

DESCRIPTION

Refineries and petrochemical engineers today are accepting more unconventional feedstocks such as heavy oil and shale, causing unique challenges on the processing side of the business. To create more reliable engineering design of process equipment for the petrochemical industry, petroleum engineers and process managers are forced to study the physical properties and compounds of these particular hydrocarbons. Instead of looking up each compound's information, ***The Yaws Handbook of Physical Properties for Hydrocarbons and Chemicals, Second Edition*** presents an easy-to-use format with rapid access to search for the particular compound and understand all the complex calculations in one tabular format. Understanding the composition of hydrocarbons is not easy to calculate quickly or accurately, but this must-have reference leads the engineer to better estimated properties and fractions from easily measured components. Expanded to cover more total compounds and relevant functions, ***The Yaws Handbook of Physical Properties for Hydrocarbons and Chemicals, Second Edition*** remains a necessary reference tool for every petrochemical and petroleum engineers' library.

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

Alireza Bahadori, Ph.D.



ISBN: 978-0-12-801407-3

PUB DATE: January 2015

FORMAT: Paperback

PAGES: c. 820

AUDIENCE

Oil and Gas Engineers, Corrosion Engineers, Operation Managers, Production Directors and Managers, Refinery Managers, Safety Inspectors, Oil and Gas Consultants, Chemical Engineers, Risk Managers, and Post-Graduate Students in Petroleum and Safety Engineering

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

Alireza Bahadori Research staff member, School of Environment, Science, and Engineering, Southern Cross University, Lismore, NSW, Australia



Provide smart corrosion protection internally and externally for all oil and gas applications with this coating, painting and lining guide

"Extensively illustrated and comprising 830 pages the book provides detailed guidance on the selection and application of coatings and linings and is described as a 'must-have' training tool."--

Plastics Information Direct, January 21, 2015

"This book is a great contribution to the corrosion literature in the crucial area of the coating, painting and lining in the oil and gas industries. It offers a full coverage of key topics in the corrosion protection with special focus on oil and gas industries, as well as covering some topics rarely discussed and hard to find in the literature. The book provides an excellent access to a number of design guidelines and operating procedures, which makes it a standalone reference for coating, painting and lining in the oil and gas industries and an excellent textbook for graduate programs on this subject. The complex details of the coating, painting and lining in the oil and gas industries are fully addressed in a straightforward fashion that makes the book appealing to all parties who are involved in the oil and gas corrosion protection projects". -- Dr. S. R. Gomari, Teesside University, United Kingdom

KEY FEATURES

- 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

DESCRIPTION

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.

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Johannes Fink

WATER-BASED CHEMICALS AND TECHNOLOGY FOR DRILLING, COMPLETION, AND WORKOVER FLUIDS



ISBN: 978-0-12-802505-5

PUB DATE: January 2015

FORMAT: Paperback

PAGES: c. 280

AUDIENCE

Drilling Engineers, Mud Engineers, Completion Engineers, Reservoir Engineers, Rig Service Personnel, Procurement Specialists, Any Chemists seeking to gain a familiarity and background in drilling fluids

Water-Based Chemicals and Technology for Drilling, Completion, and Workover Fluids

Johannes Fink Professor of Polymer Chemistry, Montanuniversität Leoben, Vienna, Austria



Lower costs and stabilize your oil and gas well's entire life cycle system with water-based fluids

KEY FEATURES

- Understand the basics and functions on all water-based fluids for drilling, completion, cementing, and enhanced oil recovery operations
- Get up to date with the growing need for water-based fluids in hydraulic fracturing operations including supportive materials such as an index of trade names, acronyms, and chemicals
- Stay responsible and know the environmental aspects and current regulations, including disposal and discharge

DESCRIPTION

Oil and gas engineers today use three main factors in deciding drilling fluids: cost, performance, and environmental impact, making water-based products a much more attractive option. *Water-Based Chemicals and Technology for Drilling, Completion, and Workover Fluids* effectively delivers all the background and infrastructure needed for an oil and gas engineer to utilize more water-based products that benefit the whole spectrum of the well's life cycle. Helping to mitigate critical well issues such as formation damage, fluid loss control, and borehole repair, more operators demand to know the full selection of water-based products available to consistently keep a peak well performance. This must-have training guide provides the necessary coverage in the area, broken down by type and use, along with an extensive list of supportive materials such as a chemical index of structural formulas and helpful list of references for further reading. In addition to understanding the types, special additives, and chemical compatibilities of the products available, the reader will also learn proper waste disposal techniques, including management of produced water, a component mandatory to hydraulic fracturing operations. Concise and comprehensive, *Water-Based Chemicals and Technology for Drilling, Completion, and Workover Fluids* details all the necessary educational content and handy references to elevate your well's performance while lowering your environmental impact.

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ISBN: 978-0-12-805418-5

PUB DATE: April 2016

FORMAT: Paperback

PAGES: c. 160

AUDIENCE

Students and researchers across the sciences interested in improving their oral communication skills; in particular non-native English speakers

Oral Communication Skills for Scientific Presentations

William B. Krantz President's Teaching Scholar and Professor Emeritus, University of Colorado, Boulder, CO, USA; Rieveschl Ohio Eminent Scholar and Professor Emeritus, University of Cincinnati, Cincinnati, OH, USA



A practical, compact guidebook covering the 'nuts and bolts' of effective public speaking

KEY FEATURES

- Discusses best practices in putting together an effective talk
- Focuses on leveraging the speaker's existing skill sets to develop the delivery style that works best for that individual
- Features one-page quick reference guides for giving formal oral and informal poster presentations
- Addresses cross-cultural communication as well as particular concerns for non-native English speakers
- Includes a companion site with tools and video examples of formal and informal presentations for further self-guidance

DESCRIPTION

Oral Communication Skills for Scientific Presentations is intended for inexperienced speakers as well as those aspiring to improve their communication skills in making either formal or informal presentations on a technical subject. A complement to having good organization for a technical presentation is to have an effective delivery style. This book provides a template for organizing a technical talk that will include a discussion of various ways to effectively develop each part of a technical presentation.

A special feature of *Oral Communication Skills for Scientific Presentations* is the focus on making presentations to a cross-cultural audience. This relates to relatively minor considerations such as how to list the names of the co-authors on your presentation as well as to more substantive considerations such as how to handle eye contact and use humor, both of which can differ across the global spectrum of cultures. The cross-cultural focus of this book relates not only to the audience, but also to the speaker. This book also includes helpful tips for non-native English speakers.

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Graduate Research, 4e

A Guide for Students in the Sciences

Robert V. Smith Collaborative Brain Trust University Consulting (CBT UC),
Sacramento, CA, USA

Llewellyn D. Densmore Department of Biological Sciences, Texas Tech
University, Lubbock, TX, USA

Edward F. Lener University Libraries, Virginia Tech, Blacksburg, VA, USA



This newly revised go-to resource is for graduate researchers at all stages of study and covers a range of topics including writing and preparation of research proposals, developing and refining teaching skills, and ethics and compliance areas such as research involving human subjects and animals

KEY FEATURES

- Discusses a broad range of topics including time management, library and literature work, and grant support
- Includes a new chapter on career planning and development with advice on careers in academia, government, and the private sector
- Contains chapters that promote the development of a varied set of communication skills
- Greatly expanded treatment of graduate study and research in international settings

DESCRIPTION

Graduate Research is an all-in-one resource for prospective and matriculated graduate students in the sciences. The newly revised edition includes updates to every chapter. *Graduate Research* covers a range of topics including writing and preparation of research proposals, developing and refining teaching skills, and ethics and compliance areas such as research involving human subjects and animals.

Graduate Research helps readers navigate the multidimensional and interdisciplinary world of scientific research and it is an invaluable resource for graduate researchers as well as those in advising or mentoring roles.

ISBN: 978-0-12-803749-2

PREVIOUS EDITION ISBN:
9780295977058

PUB DATE: February 2016

FORMAT: Paperback

PAGES: c. 288

AUDIENCE

Graduate student, graduate
advisors, and mentors across the
Sciences

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ORAL EXAMS

PREPARING FOR AND PASSING CANDIDACY,
QUALIFYING, AND GRADUATE DEFENSES



A. LEE FOOTE



ISBN: 978-0-12-802578-9

PUB DATE: September 2015

FORMAT: Paperback

PAGES: c. 192

AUDIENCE

Graduate students, postdoctoral fellows and faculty in every discipline

Oral Exams

Preparing For and Passing Candidacy, Qualifying, and Graduate Defenses

Lee A Foote Professor and Director, Devonian Botanic Garden, University of Alberta, Edmonton, AB, Canada



This book provides students with a great resource to help them prepare for oral comprehensive and viva voce exams, and is also valuable for faculty as they prepare new questions.

KEY FEATURES

- Describes in detail the general format of oral comprehensive exams, viva voce examinations and defenses, what to expect, and what the requirements are that students need to fulfill to pass.
- Includes appendices with numerous practice questions sourced from a range of disciplines and countries for individual or group learning
- Useful for Early Career academics that are supervising, supporting, and examining PhD students

DESCRIPTION

Oral Exams: Preparing For and Passing Candidacy, Qualifying, and Graduate Defenses provides guidance on how to prepare for oral comprehensive and viva voce exams.

Topics discussed include the supervisory committee, preparing the seminar, arranging content, mental preparation, question framing, and the types of questions to expect.

At its core, the book prepares students to be the best they can be by offering insights into how to interpret and appropriately respond to explicit and implied oral comps questions.

This book benefits faculty by helping them prepare new questions, also providing tips on how to mentor their students in preparation for exams.

The training included can be used to prepare for intensive qualifying or certification exams, job interviews, and presentations.

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COMMUNICATE SCIENCE
PAPERS, PRESENTATIONS,
AND POSTERS EFFECTIVELY



GREGORY S. PATIENCE
DARIA C. BOFFITO
PAUL A. PATIENCE



ISBN: 978-0-12-801500-1

PUB DATE: August 2015

FORMAT: Paperback

PAGES: c. 264

AUDIENCE

Graduate students, research fellows, post-docs, professors, scientists and researchers in STEM fields.

Communicate Science Papers, Presentations, and Posters Effectively

Gregory S. Patience Department of Chemical Engineering, Ecole Polytechnique de Montreal, Canada

Daria C. Boffito Department of Chemical Engineering, Ecole Polytechnique de Montreal, Canada

Paul Patience Ecole Polytechnique de Montreal, Canada



The tools readers need to become better writers, presenters, and communicators

KEY FEATURES

- Covers how to accurately and clearly exhibit results, ideas, and conclusions
- Identifies phrases common in scientific literature that should never be used
- Discusses the theory of presentation, including “before and after” examples highlighting best practices
- Provides concrete, step-by-step examples on how to make camera ready graphs and tables

DESCRIPTION

Communicate Science Papers, Presentations, and Posters Effectively is a guidebook on science writing and communication that professors, students, and professionals in the STEM fields can use in a practical way. This book advocates a clear and concise writing and presenting style, enabling users to concentrate on content.

The text is useful to both native and non-native English speakers, identifying best practices for preparing graphs and tables, and offering practical guidance for writing equations. It includes content on significant figures and error bars, and provides the reader with extensive practice material consisting of both exercises and solutions.

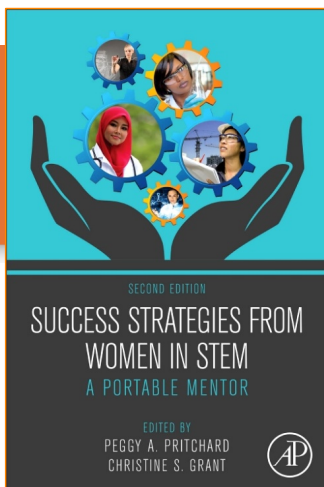
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PREVIOUS EDITION ISBN:
978-0-12-088411-7

PUB DATE: June 2015

FORMAT: Paperback

PAGES: c. 460

AUDIENCE

Women pursuing careers or involved in careers in science, technology, engineering and mathematics

Success Strategies From Women in STEM, 2e

A Portable Mentor

Edited by: **Peggy A. Pritchard** Associate Librarian, Learning and Curriculum Support Team, University of Guelph, Guelph, ON, Canada

Christine Grant PhD, Full Professor of Chemical and Biomolecular Engineering and Associate Dean of Faculty Advancement, North Carolina State University, College of Engineering, Raleigh, NC, USA



A comprehensive and accessible manual that provides valuable strategies, tools, and success tips for women pursuing and involved in STEM careers

"...we need women to fully participate in this industry...morally and ethically, it's simply the right thing to do. This book will undoubtedly help."--**Network Security, *Success Strategies from Women in STEM, Second Edition***

KEY FEATURES

- Preserves the style and tone of the first edition by bringing together mentors, trainees and early-career professionals in a series of conversations about important topics related to careers in STEM fields, such as leadership, time stress, negotiation, networking, social media and more
- Identifies strategies that can improve career success along with stories that elucidate, engage, and inspire
- Companion website provides authoritative information from successful women engaged in STEM careers, including annotated links to key organizations, associations, granting agencies, teaching support materials, and more

DESCRIPTION

Success Strategies from Women in Stem: A Portable Mentor, Second Edition, is a comprehensive and accessible manual containing career advice, mentoring support, and professional development strategies for female scientists in the STEM fields.

This updated text contains new and essential chapters on leadership and negotiation, important coverage of career management, networking, social media, communication skills, and more. The work is accompanied by a companion website that contains annotated links, a list of print and electronic resources, self-directed learning objects, frequently asked questions, and more.

With an increased focus on international relevance, this comprehensive text contains shared stories and vignettes that will help women pursuing or involved in STEM careers develop the necessary professional and personal skills to overcome obstacles to advancement.

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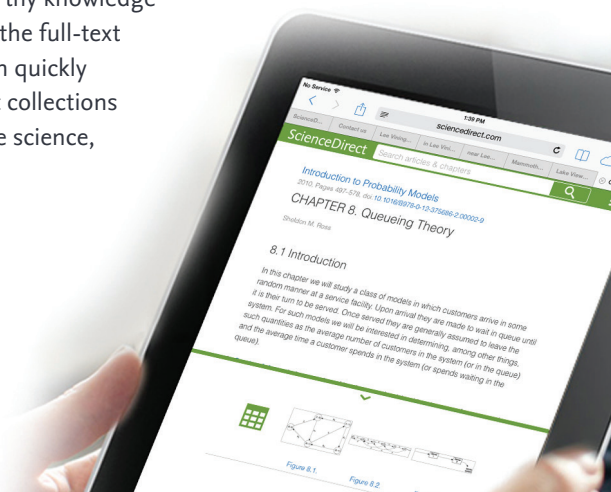
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