

Products For Sour Oilfield Applications Nace Mr0175 Iso

Corrosion Inhibitors in the Oil and Gas Industry Oilfield Engineering with Polymers 2006 Microbiologically Influenced Corrosion in the Upstream Oil and Gas Industry Corrosion Inhibitors in the Oil and Gas Industry Corrosion Inhibitors in the Oil and Gas Industry Trends in Oil and Gas Corrosion Research and Technologies Oilfield Chemistry and its Environmental Impact Underground Gas Storage Weird Texas Corrosion Science and Technology Metallurgy and Corrosion Control in Oil and Gas Production Advances in Corrosion Control and Materials in Oil and Gas Production Corrosion Tests and Standards Applied Metallurgy and Corrosion Control Corrosion in the Petrochemical Industry, Second Edition Production Chemicals for the Oil and Gas Industry, Second Edition Failure Analysis of Microbiologically Influenced Corrosion Standard Handbook of Petroleum and Natural Gas Engineering Corrosion Control in the Oil and Gas Industry Surface Process, Transportation, and Storage Quarterly Bulletin of the Canadian Mining Institute Oil and Gas Production Handbook: An Introduction to Oil and Gas Production Process and Chemical Engineering Oil and Gas Pipelines Offshore and Arctic Operations, 1991 Materials Performance Microbial Enhancement of Oil Recovery Corrosion and Materials in Hydrocarbon Production Corrosion-resistant Alloys in Oil and Gas Production Essentials of Flow Assurance Solids in Oil and Gas Operations Standard Handbook of Petroleum and Natural Gas Engineering Slow Strain Rate Testing for the Evaluation of Environmentally Induced Cracking Journal of Petroleum Technology Transactions of the Society of Petroleum Engineers Oilfield Engineering with Polymers Oilfield Reservoir Souring Flow Assurance Canadian Mining and Metallurgical Bulletin Corrosion and Materials in the Oil and Gas Industries Encyclopedia of Interfacial Chemistry

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Microbiologically Influenced Corrosion in the Upstream Oil and Gas Industry Sep 02 2022 Microorganisms are ubiquitously present in petroleum reservoirs and the facilities that produce them. Pipelines, vessels, and other equipment used in upstream oil and gas operations provide a vast and predominantly anoxic environment for microorganisms to thrive. The biggest technical challenge resulting from microbial activity in these engineered environments is the impact on materials integrity. Oilfield microorganisms can affect materials integrity profoundly through a multitude of elusive (bio)chemical mechanisms, collectively referred to as microbiologically influenced corrosion (MIC). MIC is estimated to account for 20 to 30% of all corrosion-related costs in the oil and gas industry. This book is intended as a comprehensive reference for integrity engineers, production chemists, oilfield microbiologists, and scientists working in the field of petroleum microbiology or corrosion. Exhaustively researched by leaders from both industry and academia, this book discusses the latest technological and scientific advances as well as relevant case studies to convey to readers an understanding of MIC and its effective management.

Corrosion and Materials in the Oil and Gas Industries Jul 28 2019 The advancement of methods and technologies in the oil and gas industries calls for new insight into the corrosion problems these industries face daily. With the application of more precise instruments and laboratory techniques as well as the development of new scientific paradigms, corrosion professionals are also witnessing a new era in the way d

Corrosion in the Petrochemical Industry, Second Edition Aug 21 2021 Originally published in 1994, this second edition of Corrosion in the Petrochemical Industry collects peer-reviewed articles written by experts in the field of corrosion that were specifically chosen for this book because of their relevance to the petrochemical industry. This edition expands coverage of the different forms of corrosion, including the effects of metallurgical variables on the corrosion of several alloys. It discusses protection methods, including discussion of corrosion inhibitors and corrosion resistance of aluminum, magnesium, stainless steels, and nickels. It also includes a section devoted specifically to petroleum and petrochemical industry related issues.

Essentials of Flow Assurance Solids in Oil and Gas Operations May 06 2020 Flow assurance solids deposition is one of the main challenges in oil and gas production operations with millions of dollars spent annually on their mitigation. Essentials of Flow Assurance Solids in Oil and Gas Operations works as an all-inclusive reference for engineers and researchers, covering all the different types of solids that are commonly encountered in oil and gas fields. Structured to flow through real-world operations, the reference branches through each solid deposit problem where the root causes are as well as modeling, monitoring, characterization, and management strategies, all comprehensively reviewed in the light of contemporary research breakthroughs. Backed by several field case studies, Essentials of Flow Assurance Solids in Oil and Gas Operations gives petroleum and reservoir engineers a resource to correlate between the theoretical fundamentals and field practical applications allowing for sustainable and optimal operations. Provides the main operations of oil and gas fields, the characteristics of produced fluids, and the main flow assurance challenges Furnishes the basic principles of deposits formation and mitigation, starting with a full investigation of the problems, then mechanisms, causes, predictions, modelling, and sample analysis, followed by management Distinctively discusses the operational and environmental implications of flow assurance solids and their management using chemical and nonchemical methods Teaches engineers through impactful visuals and data sets included in every chapter

Slow Strain Rate Testing for the Evaluation of Environmentally Induced Cracking Mar 04 2020 In order to predict when and how a material will crack under environmental conditions, engineers used to subject it to pressure for a long time, up to a year in cases; about 20 years ago, a testing method was developed that slowly but inexorably increases the pressure, which seems to cut down the ti

Oilfield Chemistry and its Environmental Impact Apr 28 2022 Consolidates the many different chemistries being employed to provide environmentally acceptable products through the upstream oil and gas industry This book discusses the development and application of green chemistry in the oil and gas exploration and production industry over the last 25 years — bringing together the various chemistries that are utilised for creating suitable environmental products. Written by a highly respected consultant to the oil and gas industry — it introduces readers to the principles and development of green chemistry in general, and the regulatory framework specific to the oil and gas sector in the North Sea area and elsewhere in the world. It also explores economic drivers pertaining to the application of green chemistry in the sector. Topics covered in Oilfield Chemistry and its Environmental Impact include polymer chemistry, surfactants and amphiphiles, phosphorus chemistry, inorganic salts, low molecular weight organics, silicon chemistry and green solvents. It also looks at sustainability in an extractive industry, examining the approaches used and the other methodologies that could be applied in the development of better chemistries, along with discussions about where the application of green chemistry is leading in this industry sector. Provides the reader with a ready source of reference when considering what chemistries are appropriate for application to oilfield problems and looking for green chemistry solutions Brings together the pertinent regulations which workers in the field will find useful, alongside the chemistries which meet the regulatory requirements Written by a well-known specialist with a combined knowledge of chemistry, manufacturing procedures and environmental issues Oilfield Chemistry and its Environmental Impact is an excellent book for oil and gas industry professionals as well as scientists, academic researchers, students and policy makers.

Standard Handbook of Petroleum and Natural Gas Engineering May 18 2021 This new edition of the Standard Handbook of Petroleum and Natural Gas Engineering 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 text is a handy and valuable reference. Written by over a dozen leading industry experts and academics, the Standard Handbook of Petroleum and Natural Gas Engineering 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 the oil and gas industry for over 65 years! * A comprehensive source for the newest developments, advances, and procedures in the petrochemical industry, covering everything from drilling and production to the economics of the oil patch. * Everything you need - all the facts, data, equipment, performance, and principles of petroleum engineering, information not found anywhere else. * A desktop reference for all kinds of calculations, tables, and equations that engineers need on the rig or in the office. * A time and money saver on procedural and equipment alternatives, application techniques, and new approaches to problems.

Corrosion Tests and Standards Oct 23 2021

Corrosion and Materials in Hydrocarbon Production Jul 08 2020 Comprehensively covers the engineering aspects of corrosion and materials in hydrocarbon production This book captures the current understanding of corrosion processes in upstream operations and provides a brief overview of parameters and measures needed for optimum design of facilities. It focuses on internal corrosion occurring in hydrocarbon production environments and the key issues affecting its occurrence, including: the types and morphology of corrosion damage; principal metallic materials deployed; and mitigating measures to optimise its occurrence. The book also highlights important areas of progress and challenges, and looks toward the future of research and development to enable improved and economical design of facilities for oil and a gas production. Written for both those familiar and unfamiliar with the subject—and by two authors with more than 60 years combined industry experience—this book covers everything from Corrosion Resistant Alloys (CRAs) to internal metal loss corrosion threats, corrosion in injection systems to microbiologically influenced corrosion, corrosion risk analysis to corrosion and integrity management, and more, notably: Comprehensively covers the engineering aspects of corrosion and materials in hydrocarbon production Written by two, renowned experts in the field Offers practical guide to those unfamiliar with the subject whilst providing a focused roadmap to addressing the topics in a precise and methodical manner Covers all aspects of corrosion threat and remedial and mitigation measures in upstream hydrocarbon production applicable to sub-surface, surface, and transportation facilities Outlines technology challenges that need further research as a pre-cursor to moving the industry forward. Operational and Engineering Aspects of Corrosion and Materials in Hydrocarbon Production is an excellent guide for both practicing materials and corrosion engineers working in hydrocarbons production as well as those entering the area who may not be fully familiar with the subject.

Metallurgy and Corrosion Control in Oil and Gas Production Dec 25 2021 Details the proper methods to assess, prevent, and reduce corrosion in the oil industry using today's most advanced technologies This book discusses upstream operations, with an emphasis on production, and pipelines, which are closely tied to upstream operations. It also examines protective coatings, alloy selection, chemical treatments, and cathodic protection—the main means of corrosion control. The strength and hardness levels of metals is also discussed, as this affects the resistance of metals to hydrogen embrittlement, a major concern for high-strength steels and some other alloys. It is intended for use by personnel with limited backgrounds in chemistry, metallurgy, and corrosion and will give them a general understanding of how and why corrosion occurs and the practical approaches to how the effects of corrosion can be mitigated. Metallurgy and Corrosion Control in Oil and Gas Production, Second Edition updates the original chapters while including a new case studies chapter. Beginning with an introduction to oilfield metallurgy and corrosion control, the book provides in-depth coverage of the field with chapters on: chemistry of corrosion; corrosive environments; materials; forms of corrosion; corrosion control; inspection, monitoring, and testing; and oilfield equipment. Covers all aspects of upstream oil and gas production from downhole drilling to pipelines and tanker terminal

operations Offers an introduction to corrosion for entry-level corrosion control specialists Contains detailed photographs to illustrate descriptions in the text Metallurgy and Corrosion Control in Oil and Gas Production, Second Edition is an excellent book for engineers and related professionals in the oil and gas production industries. It will also be an asset to the entry-level corrosion control professional who may have a theoretical background in metallurgy, chemistry, or a related field, but who needs to understand the practical limitations of large-scale industrial operations associated with oil and gas production.

Offshore and Arctic Operations, 1991 Oct 11 2020 Proceedings of the 1991 Offshore and Arctic Operations Symposium, held January 20-23, 1991, in Houston, Texas. Information exchange towards continued economic and environmentally sound utilization of offshore and arctic energy resources.

Corrosion-resistant Alloys in Oil and Gas Production Jun 06 2020

Process and Chemical Engineering Dec 13 2020

Production Chemicals for the Oil and Gas Industry, Second Edition Jul 20 2021 Production chemistry issues result from changes in well stream fluids, both liquid and gaseous, during processing. Since crude oil production is characterized by variable production rates and unpredictable changes to the nature of the produced fluids, it is essential for production chemists to have a range of chemical additives available for rectifying issues that would not otherwise be fully resolved. Modern production methods, the need to upgrade crude oils of variable quality, and environmental constraints demand chemical solutions. Thus, oilfield production chemicals are necessary to overcome or minimize the effects of the production chemistry problems.

Production Chemicals for the Oil and Gas Industry, Second Edition discusses a wide variety of production chemicals used by the oil and gas industry for down-hole and topside applications both onshore and offshore. Incorporating the large amount of research and applications since the first edition, this new edition reviews all past and present classes of production chemicals, providing numerous difficult-to-obtain references, especially SPE papers and patents. Unlike other texts that focus on how products perform in the field, this book focuses on the specific structures of chemicals that are known to deliver the required or desired performance—information that is very useful for research and development. Each updated chapter begins by introducing a problem, such as scale or corrosion, for which there is a production chemical. The author then briefly discusses all chemical and nonchemical methods to treat the problem and provides in-depth descriptions of the structural classes of relevant production chemicals. He also mentions, when available, the environmental properties of chemicals and whether the chemical or technique has been successfully used in the field. This edition includes two new chapters and nearly 50 percent more references.

Corrosion Inhibitors in the Oil and Gas Industry Jun 30 2022 Provides comprehensive coverage of corrosion inhibitors in the oil and gas industries Considering the high importance of corrosion inhibitor development for the oil and gas sectors, this book provides a thorough overview of the most recent advancements in this field. It systematically addresses corrosion inhibitors for various applications in the oil and gas value chain, as well as the fundamentals of corrosion inhibition and interference of inhibitors with co-additives. Corrosion Inhibitors in the Oil and Gas Industries is presented in three parts. The first part on Fundamentals and Approaches focuses on principles and processes in the oil and gas industry, the types of corrosion encountered and their control methods, environmental factors affecting inhibition, material selection strategies, and economic aspects of corrosion. The second part on Choice of Inhibitors examines corrosion inhibitors for acidizing processes, inhibitors for sweet and sour corrosion, inhibitors in refinery operations, high-temperature corrosion inhibitors, inhibitors for challenging corrosive environments, inhibitors for microbiologically influenced corrosion, polymeric inhibitors, vapor phase inhibitors, and smart controlled release inhibitor systems. The last part on Interaction with Co-additives looks at industrial co-additives and their interference with corrosion inhibitors such as antiscalants, hydrate inhibitors, and sulfide scavengers.

-Presents a well-structured and systematic overview of the fundamentals and factors affecting corrosion -Acts as a handy reference tool for scientists and engineers working with corrosion inhibitors for the oil and gas industries -Collectively presents all the information available on the development and application of corrosion inhibitors for the oil and gas industries -Offers a unique and specific focus on the oil and gas industries Corrosion Inhibitors in the Oil and Gas Industries is an excellent resource for scientists in industry as well as in academia working in the field of corrosion protection for the oil and gas sectors, and will appeal to materials scientists, electrochemists, chemists, and chemical engineers.

Microbial Enhancement of Oil Recovery Aug 09 2020 This conference was instituted to examine field activities in Microbial Enhancement of Oil Recovery. The U.S. Department of Energy has sponsored several field projects and the details from some of these were presented, as well as a few from industry. The balance of the program was concerned with new developments in research. Today's oil production technology leaves one third to one half of the original oil in place in the reservoir at abandonment of secondary recovery (waterflooding). This leaves a very large target for microbial enhanced oil recovery which was shown by the research papers of this conference to be capable of producing up to 50% of the residual oil. The field trials show that the normal projected oil production decline curve can be reversed, or leveled off by microbial enhancement of oil recovery. This conference has shown that a variety of applications are possible to correct oilfield problems as well as to enhance oil recovery. Among these is the suppression of hydrogen sulfide production which alone is a tremendous advance because of the large quantity of sour oil production. If hydrogen sulfide production can be curtailed it would increase the value of the produced oil, decrease its toxicity, and largely decrease its corrosiveness. All of these would be welcome both in the field and at the petroleum refinery where special precautions must be taken to process sour crude oil. Another very important discovery is the ability of certain bacteria to eliminate paraffin deposition around the producing well and in the tubulars. This is a welcome improvement for many producers who have considerable difficulty in controlling paraffin deposition.

Corrosion Inhibitors in the Oil and Gas Industry Aug 01 2022 Provides comprehensive coverage of corrosion inhibitors in the oil and gas industries Considering the high importance of corrosion inhibitor development for the oil and gas sectors, this book provides a thorough overview of the most recent advancements in this field. It systematically addresses corrosion inhibitors for various applications in the oil and gas value chain, as well as the fundamentals of corrosion inhibition and interference of inhibitors with co-additives. Corrosion Inhibitors in the Oil and Gas Industries is presented in three parts. The first part on Fundamentals and Approaches focuses on principles and processes in the oil and gas industry, the types of corrosion encountered and their control methods, environmental factors affecting inhibition, material selection strategies, and economic aspects of corrosion. The second part on Choice of Inhibitors examines corrosion inhibitors for acidizing processes, inhibitors for sweet and sour corrosion, inhibitors in refinery operations, high-temperature corrosion inhibitors, inhibitors for challenging corrosive environments, inhibitors for microbiologically influenced corrosion, polymeric inhibitors, vapor phase inhibitors, and smart controlled release inhibitor systems. The last part on Interaction with Co-additives looks at industrial co-additives and their interference with corrosion inhibitors such as antiscalants, hydrate inhibitors, and sulfide scavengers.

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Materials Performance Sep 09 2020

Standard Handbook of Petroleum and Natural Gas Engineering Apr 04 2020 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. 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

Surface Process, Transportation, and Storage Mar 16 2021 Petroleum engineers search through endless sources to understand oil and gas chemicals, identify root cause of the problems, and discover solutions while operations are becoming more unconventional and driving toward more sustainable practice. Oil and Gas Chemistry Management Series brings an all-inclusive suite of tools to cover all the sectors of oil and gas chemistry-related issues and chemical solutions from drilling and completion, to production, surface processing, and storage. The fourth reference in the series, Surface Process, Transportation, and Storage delivers the critical basics while also covering latest research developments and practical solutions. Organized by the type of challenges, this volume facilitates engineers to fully understand underlying theories, practical solutions, and keys for successful applications. Basics include produced fluids treating, foam control, pipeline drag reduction, and crude oil and natural gas storage, while more advanced topics cover CO₂ recovery, shipment, storage, and utilization. Supported by a list of contributing experts from both academia and industry, this volume brings a necessary reference to bridge petroleum chemistry operations from theory into more cost-effective and sustainable practical applications. Petroleum engineers search through endless sources to understand oil and gas chemicals, identify root cause of the problems, and discover solutions while operations are becoming more unconventional and driving toward more sustainable practice. Oil and Gas Chemistry Management Series brings an all-inclusive suite of tools to cover all the sectors of oil and gas chemistry-related issues and chemical solutions from drilling and completion, to production, surface processing, and storage. The fourth reference in the series, Surface Process, Transportation, and Storage delivers the critical basics while also covering latest research developments and practical solutions. Organized by the type of challenges, this volume facilitates engineers to fully understand underlying theories, practical solutions, and keys for successful applications. Basics include produced fluids treating, foam control, pipeline drag reduction, and crude oil and natural gas storage, while more advanced topics cover CO₂ recovery, shipment, storage, and utilization. Supported by a list of contributing experts from both academia and industry, this volume brings a necessary reference to bridge petroleum chemistry operations from theory into more cost-effective and sustainable practical applications.

Journal of Petroleum Technology Feb 01 2020

Oilfield Engineering with Polymers Dec 01 2019 This series of conferences, occurring regularly since 1996, is becoming recognised as the leading forum for open discussion on the behaviour of non-metallic materials when used in upstream oilfield service. Offshore oil & gas production is frequently associated with harsh operating environments. Equipment, systems and components used must survive these rigours whilst continuing to operate efficiently for long periods. The event provided an excellent overview of the current state and future potential for polymers in the oilfield environment. Session 1: Rapid Gas (Explosive) Decompression: Mechanisms And Laboratory Versus Field; Session 2: Laminated Polymer/Metal Structures: Development And Design Session 3: Risers And Pipelines Thermoplastics: Testing And Qualification; Session 4: Pipelines: Repair Guidelines And Insulation; Session 5: High Pressure Gas Permeation Through Oilfield Polymers Session 6: Advanced Composites: Durability In Water And Service In Downhole Environments; Session 7: Thermoplastics For High Pressure And Other Oilfield Service; Session 8: Fluorinated Elastomers For Severe Oilfield Service; Session 9: Thermal Insulation

Oil and Gas Pipelines Nov 11 2020 A comprehensive and detailed reference guide on the integrity and safety of oil and gas pipelines, both onshore and offshore Covers a wide variety of topics, including design, pipe manufacture, pipeline welding, human factors, residual stresses, mechanical damage, fracture and corrosion, protection, inspection and monitoring, pipeline cleaning, direct assessment, repair, risk management, and abandonment Links modern and vintage practices to help integrity engineers better understand their system and apply up-to-date technology to older infrastructure Includes case histories with examples of solutions to complex problems related to pipeline integrity Includes chapters on stress-based and strain-based design, the latter being a novel type of design that has only recently been investigated by designer firms and regulators Provides information to help those who are responsible to establish procedures for ensuring pipeline integrity and safety

Transactions of the Society of Petroleum Engineers Jan 02 2020

Applied Metallurgy and Corrosion Control Sep 21 2021 This book serves as a comprehensive resource on metals and materials selection for the petrochemical industrial sector. The petrochemical industry involves large scale investments, and to maintain profitability the plants are to be operated with minimum downtime and failure of equipment, which can also cause safety hazards. To achieve this objective proper selection of materials, corrosion control, and good engineering practices must be followed in both the design and the operation of plants. Engineers and professional of different disciplines involved in these activities are required to have some basic understanding of metallurgy and corrosion. This book is written with the objective of serving as a one-stop shop for these engineering professionals. The book first covers different metallic materials and their properties, metal forming processes, welding, and corrosion and corrosion control measures. This is followed by considerations in material selection and corrosion control in three major industrial sectors, oil & gas production, oil refinery, and fertilizers. The importance of pressure vessel codes as well as inspection and maintenance repair practices have also been highlighted. The book will be useful for technicians and entry level engineers in these industrial sectors. Additionally, the book may also be used as primary or secondary reading for graduate and professional coursework.

Trends in Oil and Gas Corrosion Research and Technologies May 30 2022 Trends in Oil and Gas Corrosion Research and Technologies: Production and Transmission delivers the most up-to-date and highly multidisciplinary reference available to identify emerging developments, fundamental mechanisms and the technologies necessary in one unified source. Starting with a brief explanation on corrosion management that also addresses today's most challenging issues for oil and gas production and transmission operations, the book dives into the latest advances in microbiology-influenced corrosion and other corrosion threats, such as stress corrosion cracking and hydrogen damage just to name a few. In addition, it covers testing and monitoring techniques, such as molecular microbiology and online monitoring for surface and subsurface facilities, mitigation tools, including coatings, nano-packaged biocides, modeling and prediction, cathodic protection and new steels and non-metallics. Rounding out with an extensive glossary and list of abbreviations, the book equips upstream and midstream corrosion professionals in the oil and gas industry with the most advanced collection of topics and solutions to responsibly help solve today's oil and gas corrosion challenges. Covers the latest in corrosion mitigation techniques, such as corrosion inhibitors, biocides, non-metallics, coatings, and modeling and prediction Solves knowledge gaps with the most current technology and discoveries on specific corrosion mechanisms, highlighting where future research and industry efforts should be concentrated Achieves practical and balanced understanding with a full spectrum of subjects presented from multiple academic and world-renowned contributors in the industry

Canadian Mining and Metallurgical Bulletin Aug 28 2019

Oilfield Reservoir Souring Oct 30 2019

Corrosion Inhibitors in the Oil and Gas Industry Nov 04 2022 Provides comprehensive coverage of corrosion inhibitors in the oil and gas industries Considering the high importance of corrosion inhibitor development for the oil and gas sectors, this book provides a thorough overview of the most recent advancements in this field. It systematically addresses corrosion inhibitors for various applications in the oil and gas value chain, as well as the fundamentals of corrosion inhibition and interference of inhibitors with co-additives. Corrosion Inhibitors in the Oil and Gas Industries is presented in three parts. The first part on Fundamentals and Approaches focuses on principles and processes in the oil and gas industry, the types of corrosion encountered and their control methods, environmental factors affecting inhibition, material selection strategies, and economic aspects of corrosion. The second part on Choice of Inhibitors examines corrosion inhibitors for acidizing processes, inhibitors for sweet and sour corrosion, inhibitors in refinery operations, high-temperature corrosion inhibitors, inhibitors for challenging corrosive environments, inhibitors for microbiologically influenced corrosion, polymeric inhibitors, vapor phase inhibitors, and smart controlled release inhibitor systems. The last part on Interaction with Co-additives looks at industrial co-additives and their interference with corrosion inhibitors such as antiscalants, hydrate inhibitors, and sulfide scavengers. -Presents a well-structured and systematic overview of the fundamentals and factors affecting corrosion -Acts as a handy reference tool for scientists and engineers working with corrosion inhibitors for the oil and gas industries -Collectively presents all the information available on the development and application of corrosion inhibitors for the oil and gas industries -Offers a unique and specific focus on the oil and gas industries Corrosion Inhibitors in the Oil and Gas Industries is an excellent resource for scientists in industry as well as in academia working in the field of corrosion protection for the oil and gas sectors, and will appeal to materials scientists, electrochemists, chemists, and chemical engineers.

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Encyclopedia of Interfacial Chemistry Jun 26 2019 Encyclopedia of Interfacial Chemistry: Surface Science and Electrochemistry summarizes current, fundamental knowledge of interfacial chemistry, bringing readers the latest developments in the field. As the chemical and physical properties and processes at solid and liquid interfaces are the scientific basis of so many technologies which enhance our lives and create new opportunities, its important to highlight how these technologies enable the design and optimization of functional materials for heterogeneous and electro-catalysts in food production, pollution control, energy conversion and storage, medical applications requiring biocompatibility, drug delivery, and more. This book provides an interdisciplinary view that lies at the intersection of these fields. Presents fundamental knowledge of interfacial chemistry, surface science and electrochemistry and provides cutting-edge research from academics and practitioners across various fields and global regions

Weird Texas Feb 24 2022 "If your taste extends to the odd side of traveling, [this is your ticket]." -"Booklist."

Advances in Corrosion Control and Materials in Oil and Gas Production Nov 23 2021 These papers from two recent European Federation of Corrosion conferences, EURCORR '97 and EURCORR '98, deal with advances in the understanding of corrosion and performance of equipment in upstream oil and gas operations. The opening section includes two keynote papers on: the materials and corrosion view of wet gas transportation; and the modelling of low induced localised corrosion from critical hydrodynamic data and fracture mechanics data of CO2 corrosion scales. The further 45 papers cover carbon and low alloy steels, martensitic stainless steels, corrosion resistant alloys, galvanic corrosion, corrosion inhibitors and other materials. **Failure Analysis of Microbiologically Influenced Corrosion Jun 18 2021** Failure Analysis of Microbiologically Influenced Corrosion serves as a complete guide to corrosion failure analysis with an emphasis on the diagnosis of microbiologically influenced corrosion (MIC). By applying the principles of chemistry, microbiology, and metallurgy, readers will be able to reliably determine the mechanistic cause of corrosion damage and failures and select the appropriate methods for mitigating future corrosion incidents. FEATURES Provides background information on the forensic process, types of data or evidence needed to perform the analysis, industrial case studies, details on the MIC failure analysis process, and protocols for field and lab use Presents up-to-date advances in molecular technologies and their application to corrosion failure investigations Offers specific guidelines for conducting MIC failure analyses and case studies to illustrate their application Examines state-of-the-art information on MIC analytical tools and methods With authors with expertise in microbiology, corrosion, materials, and failure investigation, this book provides tools for engineers, scientists, and technologists to successfully combat MIC issues.

Corrosion Control in the Oil and Gas Industry Apr 16 2021 The effect of corrosion in the oil industry leads to the failure of parts. This failure results in shutting down the plant to clean the facility. The annual cost of corrosion to the oil and gas industry in the United States alone is estimated at \$27 billion (According to NACE International)—leading some to estimate the global annual cost to the oil and gas industry as exceeding \$60 billion. In addition, corrosion commonly causes serious environmental problems, such as spills and releases. An essential resource for all those who are involved in the corrosion management of oil and gas infrastructure, Corrosion Control in the Oil and Gas Industry provides engineers and designers with the tools and methods to design and implement comprehensive corrosion-management programs for oil and gas infrastructures. The book addresses all segments of the industry, including production, transmission, storage, refining and distribution. Selects cost-effective methods to control corrosion Quantitatively measures and estimates corrosion rates Treats oil and gas infrastructures as systems in order to avoid the impacts that changes to one segment if a corrosion management program may have on others Provides a gateway to more than 1,000 industry best practices and international standards

Oilfield Engineering with Polymers 2006 Oct 03 2022 This fifth international MERL Oilfield Engineering with Polymers conference, organised jointly with Rapra Technology, provided a unique forum to discuss the latest developments in the selection, qualification and performance of polymeric materials. It brought together operators, contractors, equipment and component suppliers, materials suppliers and research organisations involved with polymers and their use in oil & gas sector applications.

Corrosion Science and Technology Jan 26 2022 Twenty years after its first publication, Corrosion Science and Technology continues to be a relevant practical guide for students and professionals interested in material science. This Third Edition thoroughly covers the basic principles of corrosion science in the same reader-friendly manner that made the previous edition invaluable, and enlarges the scope of the content with expanded chapters on processes for various metals and new technologies for limiting costs and metal degradation in a variety of commercial enterprises not explored in previous editions. This book also presents expertly developed methods of corrosion testing and prediction.

Quarterly Bulletin of the Canadian Mining Institute Feb 12 2021

Underground Gas Storage Mar 28 2022 The UK became a net importer of natural gas in 2004 and by 2020 will import up to 90% of its requirements, leaving it vulnerable to increasing energy bills and risk of disruption to supply. New pipelines to Europe and improvements to interconnectors will meet some demand, but Government recognises the need for increased gas storage capacity: best met by the construction of underground storage facilities. Energy security has also raised the likelihood of a new generation of coal-fired power-stations, which to be environmentally viable, will require clean-coal technologies with near-zero greenhouse gas emissions. A key element of this strategy will be underground CO2 storage. This volume reviews the technologies and issues involved in the underground storage of natural gas and CO2, with examples from the UK and overseas. The potential for underground storage of other gases such as hydrogen, or compressed air linked to renewable sources is also reviewed.

Oil and Gas Production Handbook: An Introduction to Oil and Gas Production Jan 14 2021