

Emulsions And Oil Treating Equipment Selection Sizing And Troubleshooting By Stewart Maurice 2008 Paperback

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 additives. 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 in 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 product 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 details on 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 near 1000 references.

This book covers new micro-/nanoemulsion systems in technology that has developed our knowledge of emulsion stability. The emulsion system is a major phenomenon in well-qualified products and has extensive usages in cosmetic industry, food industry, and mineral processes. In this book, readers will find recent studies, applications, and new technological developments on fundamental properties of emulsion systems.

A discussion of fundamental characteristics, theories and applications for liquid-liquid colloidal dispersions. It profiles experimental and traditional measurement techniques in a variety of emulsified systems, including rheology, nuclear magnetic resonance, dielectric spectroscopy, microcalorimetry, video enhanced microscopy, and conductivity.

Oil-field Emulsions

Microscience and Applications

Encyclopedic Handbook of Emulsion Technology

Vocational Division Bulletin

Bulletin

The latest edition of this best-selling title is updated and expanded for easier use by engineers. New to this edition is a section on the fundamentals of surface production operations taking up topics from the oilfield as originally planned by the authors in the first edition.

This information is necessary and endemic to production and process engineers. Now, the book offers a truly complete picture of surface production operations, from the production stage to the process stage with applications to process and production engineers. New in-depth coverage of hydrocarbon characteristics, the different kinds of reservoirs, and impurities in crude oil. Practical suggestions help readers understand the art and science of handling produced liquids. Numerous, easy-to-read figures, charts, tables, and photos clearly explain how to design, specify, and operate oilfield surface production facilities.

This book explains how to apply economic analysis to the evaluation of engineering challenges in the petroleum industry. Discussion progresses from an introduction to the industry, through principles and techniques of engineering economics, to the application of economic methods. Packed with real-world examples and case studies demonstrating how to

Tackling the issue of water and wastewater treatment nowadays requires novel approaches to ensure that sustainable development can be achieved. Water and wastewater treatment should not be seen only as an end-of-pipe solution but instead the approach should be more holistic and lead to a more sustainable process. This requires the integration of various methods/processes to obtain the most optimized design. Integrated and Hybrid Process Technology for Water and Wastewater Treatment discusses the state-of-the-art

development in integrated and hybrid treatment processes and their applications to the treatment of a vast variety of water and wastewater sources. The approaches taken in this book are categorized as (i) resources recovery and consumption, (ii) optimal performance, (iii) physical and environmental footprints, (iv) zero liquid discharge concept and are (v) regulation-driven. Through these categories, readers will see how such an approach could benefit the water and wastewater industry. Each chapter discusses challenges and prospects of an integrated treatment process in achieving sustainable development. This book serves as a platform to provide ideas and to bridge the gap between laboratory-scale research and practical industry application. Includes comprehensive coverage on

integrated and hybrid technology for water and wastewater treatment Takes a new approach in looking at how water and wastewater treatment contributes to sustainable development Provides future direction of research in sustainable water and wastewater treatment Treating Oilfield Emulsions

Oil Pollution Abstracts

Methods Used for Dehydration of Oil-field Emulsions

Surface Production Operations, Volume 1

Treating Oil Field Emulsions

The immediate product extracted from oil and gas wells consists of mixtures of oil, gas, and water that is difficult to transport, requiring a certain amount of field processing. This reference analyzes principles and procedures related to the processing of reservoir fluids for the separation, handling, treatment, and production of quality petroleum oil and gas products. It details strategies in equipment selection and system design, field development and operation, and process simulation and control to increase plant productivity and safety and avoid losses during purification, treatment, storage, and export. Providing guidelines for developing efficient and economical treatment systems, the book features solved design examples that demonstrate the application of developed design equations as well as review problems and exercises of key engineering concepts in petroleum field development and operation.

This edited book explores the use of surfactants in upstream exploration and production (E&P). It provides a molecular, mechanistic and application-based approach to the topic, utilising contributions from the leading researchers in the field of organic surfactant chemistry and surfactant chemistry for upstream E&P. The book covers a wide range of problems in enhanced oil recovery and surfactant chemistry which have a large importance in drilling, fracking, hydrate inhibition and conformance. It begins by discussing the fundamentals of surfactants and their synthesis. It then moves on to present their applicability to a variety of situations such as gas injections, shale swelling inhibition, and acid stimulation. This book presents research in an evolving field, making it interesting to academics, postgraduate students, and experts within the field of oil and gas.

Nanoemulsions: Formulation, Applications, and Characterization provides detailed information on the production, application and characterization of food nanoemulsion as presented by experts who share a wealth of experience. Those involved in the nutraceutical, pharmaceutical and cosmetic industries will find this a useful reference as it addresses findings related to different preparation and formulation methods of nanoemulsions and their application in different fields and products. As the last decade has seen a major shift from conventional emulsification processes towards nanoemulsions that both increase the efficiency and stability of emulsions and improve targeted drug and nutraceutical delivery, this book is a timely resource. Summarizes general aspects of food nanoemulsions and their formulation Provides detailed information on the production, application, and characterization of food nanoemulsion Reveals the potential of nanoemulsions, as well as their novel applications in functional foods, nutraceutical products, delivery systems, and cosmetic formulations Explains preparation of nanoemulsions by both low- and high-energy methods

Produced Water Treatment Field Manual

Emulsions and Oil Treating Equipment

Fundamentals and Applications in the Petroleum Industry

The Composite Catalog of Oil Field Equipment & Services

Summaries of Studies in Agricultural Education

Most books on colloid science are either quite theoretical, or focused on a specific types of dispersion, or on specific applications. The second, revised and enlarged edition of this monograph provides an integrated introduction to the classification, formation and occurrence, stability, and uses of the most common types of colloidal dispersion in the process-related industries. Although the initial emphasis covers basic concepts essential for understanding colloidal dispersions, this is done in the context of emulsions, foams, suspensions, and aerosols, and is aimed at providing the necessary framework for understanding industrial and medical applications. Therefore, the first part of the book introduces the fundamental principles, whereas the following chapters discuss a wide range of industrial applications and examples, serving to emphasize the different methodologies that have been successfully applied. Major additions to the new edition comprise the field of aerosols providing the necessary theoretical background as well as a overview on industrial applications and environmental impact.

Many oil production processes present a significant challenge to the oil and gas field processing facilities and equipment design. The optimization of the sequential operations of handling the oil-gas mixture can be a major factor in increasing oil and gas production rates and reducing operating costs. Petroleum and Gas Field Processing provides an all-inclusive guide to surface petroleum operations and solves these and other problems encountered in the field processing of oil and gas. Fully revised and updated to reflect major changes over the past decade or so, this second edition builds on the success attained in the first edition. It delivers an expanded and updated treatment that covers the principles and procedures related to the processing of reservoir fluids for the separation, handling, treatment, and production of quality petroleum oil and gas products. With five new chapters, this second edition covers additional subjects, in particular natural gas, economics and profitability, oil field chemicals, and piping and pumps. The book also contains worked-out examples and case studies from a variety of oil field operations.

This 2000 book provides an introduction to the nature, occurrence, physical properties, propagation, and uses of surfactants in the petroleum industry.

Recovery and Utilization of Oil from Oil-field Waste Emulsion

Advances in Petrochemicals

Surfactants

A Listing of Materials Available from State and Local Sources

Practices and Methods of Preventing and Treating Crude-oil Emulsions

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

The data for each unit Develop a "feel" for the parameters needed for design and their relative importance Develop and understanding of the uncertainties and assumptions inherent in the design of the various items of equipment Outline sizing and selection of equipment The petrochemical industry is an important area in our pursuits for economic growth, employment generation, and basic needs. It is a huge field that encompasses many commercial petrochemical and polymer-enabled products. The book is intended for students and researchers of petroleum science and engineering, to understand synthesis, processing, mechanics, and simulation of the petroleum processes. The selection of topics addressed and the examples, tables, and graphs used to illustrate the concepts are chosen by the fact that this book is aimed primarily at petroleum science and engineering technologists. Undoubtedly, this book contains must read materials for students, engineers, and researchers working in the area of petrochemicals and petroleum processing.

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Emulsions and Oil Treating EquipmentSelection, Sizing and TroubleshootingElsevier

Production Chemicals for the Oil and Gas Industry, Second Edition

Petroleum Economics and Engineering

Petroleum and Gas Field Processing

Comparative of Light Oil, Tar, and Constituents from Carbonization Tests at 800, 900, and 1,000 °C.

This OECD Emission Scenario Document provides information on the sources, use patterns and potential release pathways of chemicals used in metalworking fluids.

The problem of removing water which is emulsified with produced oil has grown more widespread and often times more difficult as producers attempt to access more difficult reserves. This practical guide is designed to help engineers and operators develop a "feel" for selection, sizing, and troubleshooting emulsion equipment. These skills are of vital importance to ensure low operating costs and to meet crude export quality specifications. The book is written for engineers and operators, who need advanced knowledge of the numerous techniques and the equipment used to destabilize and resolve petroleum emulsions problems. In Emulsions and Oil Treating Equipment: Selection, Sizing and Troubleshooting the author provides engineers and operators with a guide to understanding emulsion theory, methods and equipment, and practical design of a treating system. Comprehensive in its scope, the author explains methods such as: demulsifiers, temperature, electrostatics and non-traditional methods of modulated or pulsed voltage control, as well as equipment such as: electrostatic treater (dehydrator), separator, gunbarr heater-treater and free water knockout. Written in a "how to" format, it brings together hundreds of methods, handy formulas, diagrams and tables in one convenient book. Detailed coverage emulsion equipment and removal methods Tips for selecting, sizing, and operating emulsion equipment Overview of emulsion theory and factors affecting treatment methods Packed with equipment diagrams, worked out calculations covers equipment and removal methods

In Emulsions and Oil Treating Equipment: Selection, Sizing and troubleshooting the author provides engineers and operators with a guide to understanding emulsion theory, methods and equipment, and practical design of a treating system. This practical guide is designed to help engineers and operators develop a "feel" for selection, sizing, and troubleshooting emulsion equipment. These skills are of vital importance to ensure low operating costs and to meet crude export quality specifications. The book is written for engineers and operators, who need advanced knowledge of the numerous techniques and the equipment used to destabilize and resolve petroleum emulsions problems. Comprehensive in its scope, the author explains methods such as: demulsifiers, temperature, electrostatics and non-traditional methods of modulated or pulsed voltage control, as well as equipment such as: electrostatic treater (dehydrator), separator, gunbarr heater-treater and free water knockout.

Petroleum Engineering Handbook

Selection, Sizing and Troubleshooting

Series on Emission Scenario Documents Metalworking Fluids

Integrated and Hybrid Process Technology for Water and Wastewater Treatment

Design of Oil Handling Systems and Facilities

Covers emulsion theory, treating methods, treating equipment, cost control, and conservation of fuel and light ends. Also presents sampling and testing methods for S&W content and detailed instructions for bottle testing. Incorporated into the manual is a student guide and workbook. A set of questions ensures a thorough understanding of the concepts presented.

One of the major challenges for many Mediterranean and other countries is finding viable solutions to tackle water shortage. Some of the major water quality constraints derive from the high salinity of groundwater and from pollution sources such as: untreated domestic sewage, fertilizers and pesticides from irrigation drainage, industrial effluents, and solid waste disposal. Wastewater treatment processes involving physico-chemical and biological treatment, chemical oxidation, membrane technologies, along with methods of solids concentration and disposal are of special relevance in dealing with these problems. This volume contains selected lectures presented at the NATO ADVANCED TRAINING COURSE held in Oviedo (November 15-21, 2009) and sponsored by the NATO Science for Peace and Security (SPS) Programme. They cover a variety of topics from wastewater treatment methods to cleaner production strategies, as a careful management of water resources is the basis for sustainable development and to avoid potential security threats. The reader will benefit from a general view of some of the operations involved in wastewater treatment and solid concentration and disposal methods. A proper water reuse and recycling, together with efficient solid disposal, would contribute to a better use of the resources and a sustainable economic growth, particularly in many arid lands of the world.

Volume 1, General Engineering, includes chapters on mathematics, fluid properties (fluid sampling techniques; properties and correlations of oil, gas, condensate, and water; hydrocarbon phase behavior and phase diagrams for hydrocarbon systems; the phasebehavior of water/hydrocarbon systems; and the properties of waxes, asphaltenes, and crude oil emulsions), rock properties (bulk rock properties, permeability, relative permeability, and capillary pressure), the economic and regulatory environment, and the role of fossil energy in the 21st century energy mix (from SPE Website).

Oil Pollution Reports

EPA-600/7

An Annotated Bibliography of Studies in Agricultural Education, with Classified Subject Index. Supplement 14 to ... Bulletin No.180

Nanoemulsions

EPA-600/2