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# Opito Petroleum Processing Technology

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Flow Assurance Solids in Oil and Gas Production  
Petroleum Processing Handbook  
Refining Processes Handbook  
PETROLEUM REFINING TECHNOLOGY  
The Chemistry of Petroleum Processing and Extraction  
Elements of Petroleum Processing  
Cryogenic Valves for Liquefied Natural Gas Plants  
Petroleum Refining  
Petroleum Chemistry And Refining  
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The Human Factors of Process Safety and Worker Empowerment in the Offshore Oil Industry  
Human Factors Handbook for Process Plant Operations  
Fundamentals of Petroleum and Petrochemical Engineering  
Handbook of Petroleum Refining Processes, Fourth Edition  
Safety Engineering in the Oil and Gas Industry  
Fundamentals of Oil and Gas Processing  
Equipment and Components in the Oil and Gas Industry Volume 1  
Technical Progress and Profits  
Gains in Oil and Gas Production Refining and Utilization Technology  
Oil Refineries in the 21st Century  
Handbook of Petroleum Refining

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*Flow Assurance Solids in Oil and Gas Production* CRC Press

Using analogies, graphs, formulas and illustrations, the author overviews key topics in the refining industry for professionals in finance and marketing. The third edition reflects changes in petroleum processing and the impact of environmental regulation. Annotation c. Book News, Inc., Portland, OR [Petroleum Processing Handbook](#) CRC Press

Uncertainties in the social, economic, and natural environment are changing workplace behaviors and are setting new demands, especially laws that govern business and society in general. Chapter One discusses this trend in relation to the oil and gas industry. Chapter Two provides a review on the mechanisms and interactions leading to loss of cement integrity, and presents approaches that have tested successfully under the reservoir condition to enhance the resistance of cements when it is exposed to supercritical CO<sub>2</sub>. Chapter Three deals with the pollution of surface and groundwater by oil products, i.e., prevention of their spreading, integrated approach to modeling of wastewater treatment plants (WWTP) in an oil refinery, impact assessment of effluent discharge on receiving water and removal of selected oil substances by ozonation and O<sub>3</sub>/UV processes. Chapter Four gives an overview of the emerging technologies for biomass conversion, hydrocarbon chemistry and sugar and sugar-derivative chemistry. Herein, bio-crude production and characterization; model catalytic cracking, the hydrocracking of ketal-compounds and new results concerning the fluidized catalytic cracking of model ketal-compounds are also described.

*Refining Processes Handbook* Chichester ; Toronto : J. Wiley

This book focuses on the various solvent processes that are used in crude oil refineries. It presents the differences between each type of process and discusses the types of feedstock that can be used for the processes. This accessible guide is written for managers, professionals, and technicians as well as graduate students transitioning into the refining industry. . Key Features: • Describes the various steps that are necessary for the solvent treatment of various feedstocks in crude oil refineries. Brings the reader up to date and adds more data. Provides an extensive glossary. Considers next-generation processes and developments.

**PETROLEUM REFINING TECHNOLOGY** CRC Press

When accidents occur in the oil and gas industry, the impacts can be profound. Serious injury or death to workers, environmental disasters and colossal costs for insurance or clean ups make the industry a hazardous one to operate in. Disasters become major news events such as the Prestige oil spill, Piper Alpha, Exxon Valdez oil spill and Deepwater Horizon. A move towards improving the health and safety of the industry is underway. This book emphasizes controlling, managing, and mitigating the risk of hazards in the oil and gas industry, increasing safety, and protecting the environment by identifying the hazards in the oil and gas industry through safety engineering techniques and management methods. *Safety Engineering in the Oil and Gas Industry* discusses how

to improve safety and reliability in the oil and gas industry so that hazards can be reduced to the lowest level feasible. It covers the techniques needed to operate safely in an oil and/or gas industry setting, the standards that should be adhered to, the impacts of PPE, fire and explosions, equipment and infrastructure failures and storage and reliability engineering, amongst many other topics. This book is written in an easy-to-read and appealing style and multiple-choice questions are included to help with learning and understanding the concepts included. Underpinned by real life case studies and examples, this book aims to allow readers to consider how they can reduce the costs associated with bad safety practices to their business through maintained and consistent health, safety and environmental (HSE) standards. This book is a must-read for any student or professional studying or working in the oil and gas industries. It also has additional appeal to those with an academic or professional interest in occupational health and safety, civil engineering, offshore engineering and maritime engineering.

**The Chemistry of Petroleum Processing and Extraction** CRC Press| Llc

Uses a practical day-to-day approach regarding the operations of the petroleum industry. Organized to allow ease of reference and data searching, it simplifies the complex subject of crude oil and its composition with easy-to-understand diagrams. Covers vacuum and atmospheric distillation, the recovery of propane and butanes along with in-depth descriptions of catalytic treating and reforming units. Each chapter details various calculation techniques used to define the aspects of every process and includes rules of thumb employed in plant operation and design.

*Elements of Petroleum Processing* National Academies Press

Supported by numerous illustrations and references, this book describes the chemistry and physics that occur during the refinery operations, and how the properties of petroleum can be translated into predictability in refinery scenarios. The chapters discuss such topics as: the composition of petroleum, petroleum analysis and evaluation; metals and heteroatoms in petroleum; asphaltenes and the structure of petroleum, thermal chemistry of petroleum constituents; heavy oil upgrading processes; hydrocracking reactions, catalysts, and processes; and instability and incompatibility of petroleum products.

*Cryogenic Valves for Liquefied Natural Gas Plants* McGraw Hill Professional

\* Offers detailed description of process chemistry and thermodynamics and product by-product specifications of plants \* Contributors are drawn from the largest petroleum producers in the world, including Chevron, Mobil, Shell, Exxon, UOP, and Texaco \* Covers the very latest technologies in the field of petroleum refining processes \* Completely updated 3rd Edition features 50% all new material

[Petroleum Refining](#) CRC Press

Throughout the twentieth century the technology employed by the petroleum refining industry has been advancing rapidly, yet it has generally escaped study. Whatever the explanation for its scholarly neglect, the advances that have been secured over the century have enabled the producers of petroleum products to meet the ever-increasing demands for their products throughout

the world. No other manufactured goods are so universally and so cheaply available. This book concentrates on the technical changes that have been secured in the second half of this century, using as its basis the main petroleum refining process, Fluid Catalytic Cracking. Both technological and economic aspects are examined over the sixty years of the process's history; and, in a novel attempt, related the one to the other: an accomplishment that reveals more about the technology and the economics rather than either engineering or economic analysis would separately. Technology and economics are connected in the real world: in this study they are connected in their exposition. As in conventional economic history, technological improvements are summarized and their sources and consequences determined. In addition, the long-term pattern of costs and profits is displayed; and regular measurements are taken throughout, so that experience can be seen as the continuous unfolding of industrial progress.

Petroleum Chemistry And Refining John Wiley & Sons

The book includes: Basic information of oil and gas treatment, including process calculations. Gas properties, gas calculations, and process vessel sizing and selection. Operation and design of separators, heater treaters, desalters, stabilization and sweetening facilities. Basic of fluid measurement, process instrumentation and control, and pressure relief systems. The book is very useful for Engineers, chemists, and technicians in oil and gas production and processing sections.

**Petroleum Refining Processes** Springer Science & Business Media

Over the last several decades, the petroleum industry has experienced significant changes in resource availability, petro-politics, and technological advancements dictated by the changing quality of refinery feedstocks. However, the dependence on fossil fuels as the primary energy source has remained unchanged. Refinery Feedstocks addresses the problems of changing feedstock availability and properties; the refining process; and solids deposition during refining. This book will take the reader through the various steps that are necessary for crude oil evaluation and refining including the potential for the use of coal liquids, shale oil, and non-fossil fuel materials (biomass) as refinery feedstocks. Other features: Describes the various types of crude oil and includes a discussion of extra heavy oil and tar sand bitumen Includes basic properties and specifications of crude oil and the significance in refinery operations This book is a handy reference for engineers, scientists, and students who want an update on crude oil refining and on the direction the industry must take to assure the refinability of various feedstocks and the efficiency of the refining processes in the next fifty years. Non-technical readers, with help from the extensive glossary, will also benefit from reading this book.

Petroleum Review Pennwell Books

This work highlights contemporary approaches to resource utilization and provides comprehensive coverage of technological advances in residuum conversion. It illustrates state-of-the-art engineering methods for the refinement of heavy oils, bitumen, and other high-sulphur feedstocks.

Petroleum Refining and Oil Well Drilling Gulf Professional Publishing

The supply of petroleum continues to dwindle at an alarming rate, yet it is the source of a range of products — from gasoline and diesel to plastic, rubber, and synthetic fiber. Critical to the future of this commodity is that we learn to use it more judiciously and efficiently. Fundamentals of Petroleum and Petrochemical Engineering provides a holistic understanding of petroleum and petrochemical

products manufacturing, presented in a step-by-step sequence of the entire supply chain. Filled with crucial information relevant to a range of applications, the book covers topics such as: The essential preliminaries for the exploration and production of crude petroleum oil and gas Analysis of crude oil and its petroleum products The processing of petroleum in refineries The fundamentals of lubricating oil and grease Petrochemicals — their raw materials and end products, and manufacturing principles of industrially important products Theories and problems of unit operations and the processes involved in refineries and petrochemical plants Automatic operations in plants Start up, shutdown, maintenance, fire, and safety operations Commercial and managerial activities necessary for the ultimate success of a refining or manufacturing business Due to the advancement of technology, new petrochemicals are being invented and will continue to be relevant to the petroleum industry in the near future. Those entering the industry need a firm grasp of the basics as the field continues to open up new avenues of possibility, while at the same time being cognizant of the challenges that exist through the heightened focus on sustainable energy.

Handbook of Petroleum Refining Processes Nova Science Publishers

Human Factors Handbook for Process Plant Operations Provides clear and simple instructions for integrating Human Factors principles and practices in the design of processes and work tasks Human Factors, the science of interaction between humans and other elements of a system, draws from disciplines such as psychology, ergonomics, anthropometrics, and physiology to understand how and why people behave and perform as they do—and how best to support them in performing tasks. The goals of the Human Factors approach are to improve human reliability, minimize the risk from human error, and optimize the working environment, human wellbeing, and overall system performance. Human Factors Handbook for Process Plant Operations guides supervisors, managers, and engineers on incorporating Human Factors principles and practices into plant maintenance and operations. With thorough and accessible coverage of all Human Factors topics of relevance to process industries, this easy-to-use handbook uses real-world anecdotes and case studies to demonstrate effective training and learning, task planning, communications, emergency response, risk and error management, and more. Throughout the text, the authors offer valuable insights into why people make mistakes while providing advice on how to help workers perform their process operational tasks successfully. Explains all essential Human Factors concepts and knowledge with clear descriptions and illustrative examples Offers actionable advice and models of good practice that can be applied to design, process operations, start-ups and shut-downs, and maintenance Addresses job aids, equipment design, competence, task support, non-technical skills, working with contractors, and managing change Discusses how lack of Human Factors considerations during the engineering design phase can adversely affect safety and performance Describes how to use indicators to both recognize and learn from human error and performance issues Written by highly experienced operating and maintenance personnel, Human Factors Handbook for Process Plant Operations is an indispensable resource for everyone involved with defining, planning, training, and managing process operations, maintenance, and emergency response in the food, pharmaceutical, chemical, petroleum, and refining industries. The missions of both the CCPS and EI include developing and disseminating knowledge, skills and good practices to protect people, the environment, and property by bringing the best knowledge and practices to industry, academia,

governments and the public around the world through collective wisdom, tools, training and expertise. The CCPS, an industrial technology alliance of the American Institute of Chemical Engineers (AIChE), has been at the forefront of documenting and sharing important process safety risk assessment methodologies for more than 35 years and has published over 100 books in its process safety guidelines and process safety concept book series. The EI's Technical Work Program addresses the depth and breadth of the energy sector from fuels and fuels distribution to health and safety, sustainability and the environment. The EI program provides cost-effective, value-adding knowledge on key current and future international issues affecting those in the energy sector.

Petroleum Refining in Nontechnical Language Independently Published

"One of the few petroleum refining textbooks for academic use, this updated edition provides broad and rigorous coverage of all the process technologies of the industry along with discussions of crude oil properties, product specifications, capital cost curves, environmental regulation, and process operations. The book contains a review and edit of the solution manual with new homework problems and relevant interface material that adds to its relevancy and broadens its audience without distracting from the technical aspects"--

Thermal and Catalytic Processing in Petroleum Refining Operations Elsevier

Petroleum refining involves refining crude petroleum as well as producing raw materials for the petrochemical industry. This book covers current refinery processes and process-types that are likely to come on-stream during the next three to five decades. The book includes (1) comparisons of conventional feedstocks with heavy oil, tar sand bitumen, and bio-feedstocks; (2) properties and refinability of the various feedstocks; (3) thermal processes versus hydroprocesses; and (4) the influence of refining on the environment.

**Solvent Processes in Refining Technology** CRC Press

Natural gas and liquefied natural gas (LNG) continue to grow as a part of the sustainable energy mix. While oil and gas companies look to lower emissions, one key refinery component that contributes up to 60% of emissions are valves, mainly due to poor design, sealing, and testing. Cryogenic Valves for Liquefied Natural Gas Plants delivers a much-needed reference that focuses on the design, testing, maintenance, material selection, and standards needed to stay environmentally compliant at natural gas refineries. Covering technical definitions, case studies, and Q&A, the reference includes all ranges of natural gas compounds, including LPG, CNG, NGL, and PNG. Key design considerations are included that are specific for cryogenic services, including a case study on cryogenic butterfly valves. The material selection process can be more complex for cryogenic services, so the author goes into more detail about materials that adhere to cryogenic temperature resistance. Most importantly, testing of valves is covered in depth, including shell test, closure or seat test, and thermal shock tests, along with tactics on how to prevent dangerous cryogenic leaks, which are very harmful to the environment. The book is a vital resource for today's natural gas engineers. Teaches LNG valve design, including sealing selection, wall thickness calculation of the valve body and bonnet, and proper material selection Provides tactics on how to prevent cryogenic leaks with compliant valve testing Applies natural gas calculations that will better support the LNG supply chain Enables readers to understand cryogenic valve standards, including EN, ISO, and MSS SP

Hydrotreating and Hydrocracking Processes in Refining Technology Oxford University Press, USA

Since the 2010 Deepwater Horizon blowout and oil spill, efforts to improve safety in the offshore oil industry have resulted in the adoption of new technological controls, increased promotion of safety culture, and the adoption of new data collection systems to improve both safety and performance. As an essential element of a positive safety culture, operators and regulators are increasingly integrating strategies that empower workers to participate in process safety decisions that reduce hazards and improve safety. While the human factors of personal safety have been widely studied and widely adopted in many high-risk industries, process safety "the application of engineering, design, and operative practices to address major hazard concerns" is less well understood from a human factors perspective, particularly in the offshore oil industry. The National Academies of Sciences, Engineering, and Medicine organized a workshop in January 2018 to explore best practices and lessons learned from other high-risk, high-reliability industries for the benefit of the research community and of citizens, industry practitioners, decision makers, and officials addressing safety in the offshore oil industry. This publication summarizes the presentations and discussions from the workshop.

**Petroleum Processing Handbook** Gulf Professional Publishing

This book on oil and gas processing discusses the various processes that are involved in petroleum refining such as distillation, dimerization and fluid cracking. Oil refineries can have different configurations depending on the end product. Such plants also require adequate storage facilities, electricity and cooling water for proper functioning. Those in search of information to further their knowledge will be greatly assisted by this book. The various sub-fields of oil and gas processing along with technological progress that have future implications are glanced at. This book is a vital tool for all researching or studying oil and gas processing as it gives incredible insights into emerging trends and concepts.

Practical Advances in Petroleum Processing CRC Press

Written by an industry expert with over 50 years of experience, this book details the various solvent processes that are used in crude oil refineries. Providing an in-depth exploration of the different types of processes, as well as the types of feedstocks that can be used with them, this book prepares readers for changes as the industry evolves. Key Features: Describes feedstock evaluation and the effects of elemental, chemical, and fractional composition. Contains an extensive glossary of all related concepts in hydrotreating and hydrocracking processes. Considers next-generation processes and developments. This book is an essential guide for engineers, scientists, and students in the field of petroleum processing and refining technology, including professionals, technicians, management personnel, and academics.

Surface Operations in Petroleum Production, I CRC Press

This book serves as a textbook for undergraduate and graduate courses on petroleum refining and production technologies. The book explains in step-by-step detail all aspects of petroleum and crude oil operations, i.e., production, transportation, characteristics of crude oil, distillation, refining, petroleum products and their quality control and testing, physical and conversion processes, petrochemical products, corrosion control, environmental pollution, and design and operation of petroleum processing equipment. The book is written in an easy-to-understand manner and includes

illustrations. It covers specification of petroleum products along with ASTM standards. The book also offers a rich pedagogical makeup with summaries, case studies, and example problems and

solutions. The book can also be used for professional training programs targeted at the petroleum and crude oil industry.