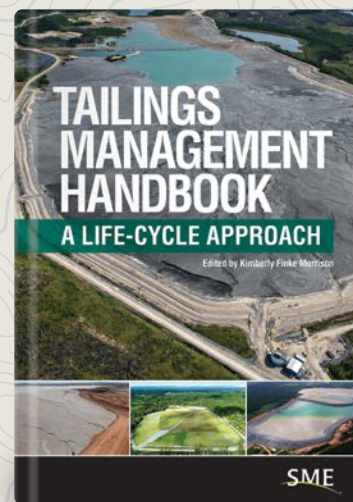
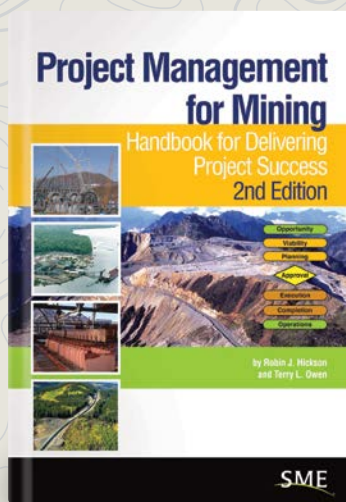
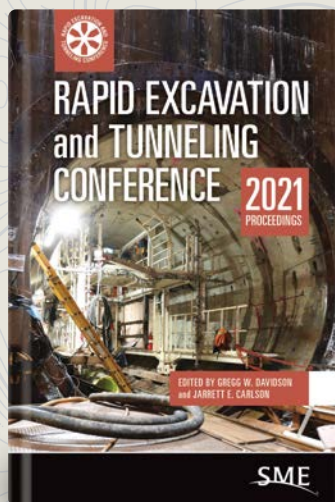


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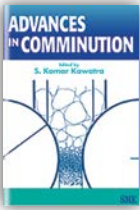
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Advances in Comminution

Edited by S. Komar Kawatra

Advances in Comminution focuses on the dilemma of needing to grind materials to finer sizes while maintaining reasonable energy costs. Because the selection and sizing of stirred mills for regrinding and ultrafine-grinding applications do not lend themselves to conventional methodologies,

new approaches are being developed. Activity has been directed toward improving ore characterization to predict AG/SAG mill energy requirements, as well as developing improved models and instrumentation for the optimization and control of comminution circuits. Instrumentation, modeling, and control functions in particular have benefited from rapidly advancing computer technology. These advances will minimize energy waste and provide the increased energy efficiency needed to maintain ongoing success.

MEMBERS SAVE \$40

2006 / 568 pages / 4 lbs / ISBN: 978-0-87335-246-8

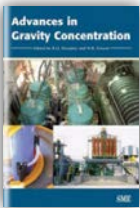
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Advances in Gravity Concentration

Edited by R.Q. Honaker and W.R. Forrest

This compilation focuses on state-of-the-art developments and future trends in gravity concentration techniques. Leading experts discuss recent developments in the design, optimization, and control of gravity-based separation processes and their associated applications. *Advances in Gravity Concentration* is divided into three sections: fundamentals, coal applications, and non-coal applications. The fundamentals section reviews developments in the knowledge of particle characterization, particle-setting kinetics, slurry rheology, and overall process modeling. Chapters examine novel technological and circuitry advances in coal and non-coal applications and discuss technologies incorporating other physical forces, such as those associated with surface chemistry properties and their relative efficiencies.

Gravity Concentration is divided into three sections: fundamentals, coal applications, and non-coal applications. The fundamentals section reviews developments in the knowledge of particle characterization, particle-setting kinetics, slurry rheology, and overall process modeling. Chapters examine novel technological and circuitry advances in coal and non-coal applications and discuss technologies incorporating other physical forces, such as those associated with surface chemistry properties and their relative efficiencies.

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The Aggregates Handbook, 2nd edition

National Stone, Sand and Gravel Association

For more than two decades, *The Aggregates Handbook* has been the industry's source of aggregates technology and knowledge. This edition incorporates new and updated

material, including the rapidly changing technologies in the aggregates industry. It includes expanded coverage of developments in sustainability, production technology, safety, transportation, design, technology standards, and industry trends, just to name a few. Whether you are new to the industry, a seasoned professional, or simply curious about aggregates mining, you will find this volume informative and a valuable reference book.

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Published by the National Stone, Sand and Gravel Association

2012 / Hardbound / 880 pages / 3 lbs

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An American Dream: Autobiography of Syd Peng

By Syd Peng

This is the story of a remarkable life—a life of hard work and tenacity and how that life benefitted an industry and inspired many.

Born in 1939 in Taiwan, Syd Peng was one of seven children of a poor but hardworking farmer and his wife. Peng began life in a ramshackle house with a leaky roof, carrying water for his family from a nearby well. But Peng worked and studied hard, in Taiwan and then in America, and—thanks to his intelligence and strong work ethic—built a life as an engineer, researcher, teacher, author, and founder of the acclaimed International Conference on Ground Control in Mining. Peng became an international expert in ground control for mining, longwall mining, and mine subsidence, helping to create safer conditions for miners and higher productivity for the industry.

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Published by Syd S. Peng

2017 / Hardbound / 216 pages / 3 lbs

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Application of Computers and Operations Research in the Mineral Industry

Edited by Sukumar Bandopadhyay

APCOM is an international forum for presentation discussion, and criticism of the state-of-the-art and emerging technologies in the fields of computer and operations research applications applied to the broad minerals industry.

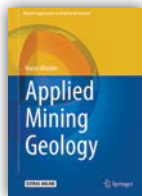
With 113 peer-reviewed papers from all mineral industry sectors—industry, academia, and government agencies—the 37th APCOM proceedings holds current best practices to incorporate computer technology into mining operations and mining public relations.

The mining operations topics cover sophisticated new engineering techniques to identify better mineral deposits and extract them more efficiently in a safer, better-managed mine using the latest tools in geometallurgy, geostatistics, mine design, production planning, 2D and 3D modeling, simulations, mine automation, rock mechanics, mineral processing and unconventional energy resources.

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Applied Mining Geology

By Marat Abzalov

Applied Mining Geology provides a detailed overview of the operational principles of modern mining geology. It includes descriptions of mining geology techniques, including conventional methods and new approaches.

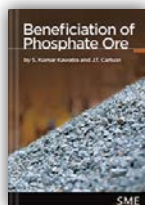
The book presents a comprehensive summary of mining geology procedures from data collection, quality assurance to their utilization in resource/reserve models, and implementation in mine production plans, which can be used as guidelines by mining industry specialists. A good mix of theory and practice is covered and will be of interest to a wide range of experienced geologists, specialists, students, lecturers, and researchers. Applications of the methods are explained using case studies and are facilitated by the computer scripts added to the book as electronic supplementary material.

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Published by Springer

2016 / Hardbound / 448 pages / 3 lbs

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Beneficiation of Phosphate Ore

By S. Komar Kawatra and J.T. Carlson

Phosphate rock is an important mineral commodity used in the production of phosphoric acid. The majority of phosphoric acid is produced by the wet process in which phosphate rock is reacted with sulfuric acid to produce phosphoric acid and gypsum (calcium sulfate dihydrate). The wet process demands

a phosphate rock feed that meets certain specifications to produce phosphoric acid efficiently and economically.

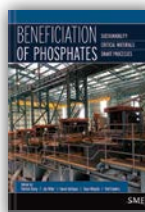
Beneficiation of Phosphate Ore thoroughly explains the methods used in beneficiation of different types of phosphate ores for use in the wet process. The mineralogical properties of the two major types of phosphate deposits, sedimentary and igneous, are described along with the processing methods. The benefits and disadvantages of each process are also discussed.

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2014 / 168 pages

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Beneficiation of Phosphates: Sustainability, Critical Materials, Smart Processes

Edited by: Patrick Zhang, Jan Miller, Guven Akdogan, Ewan Wingate, and Neil Snyders

This compilation from the 2018 Beneficiation of Phosphates Conference includes insights from dozens of internationally respected experts on key breakthroughs that will shape the industry in the years ahead. Learn from the best and the brightest in the industry.

The book reflects on the recent impetus for reviewed research in the recovery of rare earth elements from secondary resources. Recovery of rare earth elements from phosphate processing has been one of the important projects of the Critical Materials Institute (CMI). This compilation highlights some of the findings of the CMI phosphate project.

Learn how competition in the flotation reagent market has stimulated innovative reagent development work. As a result, new reagents have been formulated and targeted at dolomite flotation, calcite flotation, more selective phosphate flotation, and even flotation in seawater.

Contact customer service to purchase proceedings from previous Beneficiation of Phosphates conferences.

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The Business of Mining

The Business of Mining, a three-book series, provides readers with a holistic all-embracing appraisal of the analytical tools available for assessing the economic viability of prospective mines. Each volume has a discrete focus.

The books were written primarily for undergraduate applied geologists, mining engineers, extractive metallurgists, and those pursuing course-based postgraduate programs in mineral economics. However, the complete series will also be an extremely useful reference text for practicing mining professionals as well as for consultant geologists, mining engineers or primary metallurgists.

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Volume 1: The Business of Mining:

The Mining Business, Uncertainty, Project Variables and Risk, Royalty Agreements, Pricing and Contract Systems, and Accounting for the Extractive Industry

By Odwyn Jones, Eric Lilford, Sam Spearing, and Grantley Taylor

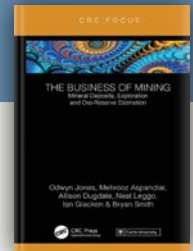
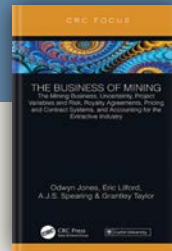
This first volume presents an overview of the mining business, followed by an analysis of project variables and risk, an overall coverage of the royalty agreements, pricing and contract systems followed by a final chapter on accounting standards and practices for the minerals industry.

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2018 / Hardbound / 68 pages / 1 lb

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Volume 2: The Business of Mining: Mineral Project Evaluation

By Odwyn Jones, Eric Lilford, and Felix Chan

This second volume discusses, in some depth, alternative means of assessing the economic viability of mining projects based on the best estimate of the recoverable mineral and/or fossil fuel reserves.

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Volume 3: Mineral Deposits, Exploration and Ore-Reserve Estimation

By Odwyn Jones, Eric Lilford, and Felix Chan

This third volume commences with "Our Earth, Its Minerals and Ore Bodies" followed by a review of mineral exploration and sampling of mineral deposits. It continues with detailed sections covering the reporting of mineral resources and reserves in Australia, then concludes with the basic principles and application of the various methods of estimating the in-situ mineral resources and ore reserves.

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2020 / Hardbound / 180 pages / 1 lb

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Challenges and Opportunities in Coal Preparation

Edited by Mark S. Klima, Barbara J. Arnold, and Peter J. Bethell

With recent reductions in U.S. coal production, it is important for coal preparation engineers and practitioners to be aware of advances in technology to improve plant efficiency and productivity in cost-effective ways. *Challenges and Opportunities in Coal Preparation* provides both a domestic and international perspective on these new technologies and includes papers from industry leaders in the United States, as well as Australia and South Africa.

Opportunities for overall plant efficiency improvements and new technologies that address many aspects of the coal preparation value chain—from pre-sorting to coarse and fine coal cleaning to dewatering—are presented. Read the latest thinking from industry experts in this handy reference that will assist current and future plant engineers and designers in achieving higher efficiency and productivity.

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Challenges in Fine Coal Processing, Dewatering, and Disposal

Edited by Mark S. Klima, Barbara J. Arnold, and Peter J. Bethell

New sources of energy, increased environmental awareness, and more stringent regulations are changing the way coal is found, extracted, and used. As a result, fine coal cleaning, dewatering, and refuse disposal are now at a major crossroads. The increased level of fines and near-density material in the inferior seams being mined today necessitate the development of more efficient fine coal cleaning devices. This, in turn, requires improvements in traditional dewatering techniques to address the need for acceptable moisture levels in plant products. Moreover, the larger volume of fine refuse being generated, coupled with harsher disposal regulations, require upgraded treatment options.

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2012 / 404 pages / 2 lbs / ISBN: 978-0-87335-363-2

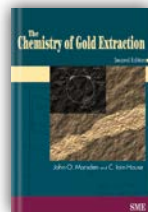
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The Chemistry of Gold Extraction, 2nd edition

By John O. Marsden and C. Iain House

The Chemistry of Gold Extraction provides the broad knowledge base required by those working in the gold extraction and gold processing industries. This book bridges the gap between research and industry by emphasizing the practical applications of chemical principles and techniques. It includes in-depth discussions on historical developments; ore deposits and process mineralogy; process selection; principles of gold hydrometallurgy; oxidative pretreatment; leaching; solution purification and concentration; recovery; surface chemical methods; refining; effluent treatment; and industrial applications.

A valuable asset for all professionals involved in the precious metals industries, *The Chemistry of Gold Extraction* will be particularly useful to engineers and scientists (including extractive metallurgists, mineral/metallurgical engineers, electrochemists, chemical engineers, mineral technologists, mining engineers, and material scientists); plant operators and managers; academics; educators; and students working in the production, research, or consulting capacities of gold extraction.

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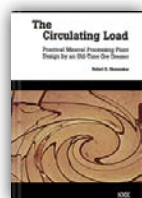
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The Circulating Load: Practical Mineral Processing Plant Design by an Old-Time Ore Dresser

By Robert S. Shoemaker

This how-to guide is loaded with innovative ideas and practical solutions to some of the most troublesome mineral processing challenges. From mess-free flooring and inventive crusher and conveyor designs to time-saving quality-control techniques, *The Circulating Load* captures fresh approaches to age-old problems that can inhibit mill operating performance. Part engineering, part common sense, this treasure trove of tips and tricks presents smarter methods of minerals processing management.

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La Carga Circulante: Guía Práctica para el Diseño de Plantas de Concentración de Minerales por un Veterano en la Especialidad

By Robert S. Shoemaker, Translation by Mario E. Watkins

This is the Spanish version of the popular SME book, *The Circulating Load: Practical Mineral Processing Plant Design by an Old-Time Ore Dresser*.

Esta guía es un compendio de ideas innovativas y soluciones prácticas a algunos de los problemas que comúnmente enfrentan los diseñadores y los operadores de plantas de concentración de minerales. Desde el diseño de pisos fáciles de mantener limpios y seguros para transitar a inventivos detalles para diseño de sistemas de trituración, transporte, y técnicas que facilitan el control de operaciones, esta referencia incluye prácticos enfoques a viejos problemas que pueden inhibir el buen rendimiento de una planta de concentración.

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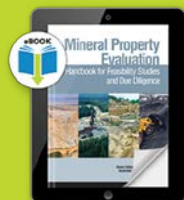
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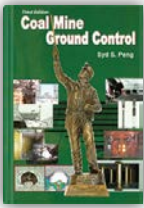
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Coal Mine Ground Control, 3rd edition

By Syd S. Peng

This is the complete and authoritative reference on U.S. coal mining methods. Authored by expert Syd S. Peng, this book covers all areas of coal mine ground control: rock properties and in situ stresses; geological conditions that form the rock strata, their anomalies, and geophysical methods

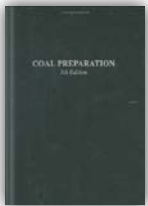
employed to detect the anomalies; roof bolts and roof bolting systems; pillar design; recent myths of high horizontal stresses; longwall mining; multiple seam mining; bumps, occurrence, mechanisms, and control; entry stability problems; theories and methods of underground and surface instrumentation; material models; surface subsidence; and highwall stability.

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Published by Syd S. Peng

2008 / Hardbound / 764 pages / 5 lbs

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Coal Preparation, 5th edition

Edited by Joseph W. Leonard III

This classic 1,154-page reference comprehensively covers the industry, with chapters on chemical/physical properties and marketing; preliminary design considerations; coal preparation costs; pre-preparation; size reduction; sizing; concentration; dewatering; post-preparation/storage and

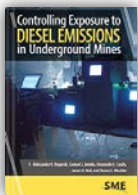
loading; process control; plant waste and environmental considerations; sampling and analysis; and utilization.

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1991 / 1,154 pages

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Controlling Exposure to Diesel Emissions in Underground Mines

By Aleksandar D. Bugarski, Samuel J. Janisko, Emanuele G. Cauda, James D. Noll, and Steven E. Mischler

The use of diesel-powered equipment in underground mining operations provides many benefits to the industry. It

also presents many challenges to the health and safety of workers, as it is a significant source of submicrometer aerosols and noxious gases.

This book was developed to assist the coal and metal/nonmetal underground mining industries in their efforts to reduce the exposure of workers to aerosols and gases from diesel-powered equipment. It includes information collected by researchers at the National Institute for Occupational Safety and Health/Office of Mine Safety and Health Research (NIOSH/OMSHR).

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Copper Leaching, Solvent Extraction, and Electrowinning Technology

Edited by Gerald V. Jergensen II

This book recognizes the growing role of solvent extraction and electrowinning technology—an efficient and cost-effective process for extracting copper—in the global copper business.

These proceedings document the status of the SX-EW business, representing a substantial body of historical, scientific, engineering, and commercial information on the technology's growth and application. The book includes the following sections: Business and Technology of SX-EW, Theory and Practice of Copper Leaching, Theory and Practice of Tankhouse Operations, and Theory and Practice of Solvent Extraction.

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De Re Metallica

By Georgius Agricola

Originally published in 1556, Agricola's groundbreaking *De Re Metallica* was the first mining book based on field research and observation. For almost 200 years, it remained the only authoritative work in this area, and by modern times it had become one of the most highly respected scientific

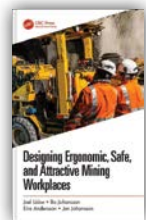
classics on the subject. The oft-referenced book's original Latin text prevented its wider use until 1912, when future president Herbert Clark Hoover and his wife translated *De Re Metallica*. Printed in a limited edition, the work was quickly acquired by book collectors, historians, and medievalists who found much to be learned from its pages. The book contains an unprecedented wealth of material on alluvial mining, alchemy, silver refining, smelting, surveying, timbering, nitric acid making, and hundreds of other phases in the medieval art of metallurgy.

MEMBERS SAVE \$10

Published by Dover Publications

1950 / 670 pages / 4 lbs

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Designing Ergonomic, Safe, and Attractive Mining Workplaces

By Joel Löf, Bo Johansson, Eira Andersson, and Jan Johansson

Designing Ergonomic, Safe, and Attractive Mining Workplaces gives an understanding of what must be considered in the design of mining workplaces. By reviewing and discussing

the historic and current development of the mining industry as well as problems related to the safety, ergonomics, and attractiveness of mining workplaces, it demonstrates that the challenges facing the mining industry often need to be solved on a case-to-case basis.

The processes through which these issues are managed are of significant importance. To facilitate a proactive approach, the book covers the principles of systematic work environment management, together with examples of methods for risk management and work environment monitoring. It introduces a systematic and iterative design and planning method for the mining industry. This method acknowledges that all relevant stakeholders must be able to influence the design of ergonomic, safe, and attractive mining workplaces.

MEMBERS SAVE \$30

Published by CRC Press, an imprint of Taylor & Francis

2019 / 162 pages / 2 lbs

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Designing the Coal Preparation Plant of the Future

Edited by Barbara J. Arnold, Mark S. Klima, and Peter J. Bethell

Most coal preparation books focus on theory or day-to-day issues and operations. *Designing the Coal Preparation Plant of the Future* provides a unique, thought-provoking look

at the industry from a different point of view—that of the preparation plant designer or engineer. How can we design more effective plants and what will plants look like in the future? What are the new techniques for designing plant layouts, monitoring performance, and building in preventive maintenance? What challenges face the industry, and how can operators capitalize on opportunities to maximize yield, reduce costs, and improve efficiency?

MEMBERS SAVE \$40

2007 / 216 pages / 2 lbs / ISBN: 978-0-87335-257-4

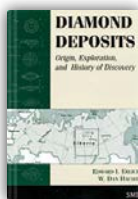
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Diamond Deposits: Origin, Exploration, and History of Discovery

By Edward I. Erlich and W. Dan Hausel

The material found in *Diamond Deposits* provides a foundation for discussing some of the most fundamental problems of theoretical geology, such as the timing of geological events

and the development of cratonic areas. Written for geologists and diamond prospectors, this book provides a general overview of diamond exploration and exploitation. The text covers how to find, recognize, and evaluate the potential of diamond deposits. The book offers examples of these processes by reviewing the history of important diamond discoveries in the western United States and Russia. *Diamond Deposits* primarily focuses on the geology of common diamond host rocks, including kimberlite and lamproite. It also reviews the occurrence of some unconventional host rocks that have produced notable diamond discoveries.

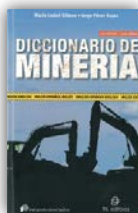
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2002 / 392 pages

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Diccionario de Minería, 2nd edition

By María Isabel Sillano and Jorge Pérez Rojas

This dictionary provides clear English to Spanish and Spanish to English dictionary translations of more than 6,000 mining and geological terms shown in context.

Translation has never been easier or more interesting.

This second edition includes a valuable new section on construction as well as 1,500 new terms. Use the alphabetical

lists to search for terms and learn their Spanish or English equivalents.

In addition, each entry includes a number that corresponds to one of the process-specific sections. These full-color sections allow you to view translated terms in context. Descriptive graphs, diagram, and photos further enhance the translations.

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Dictionary of Mining, Mineral, and Related Terms, 2nd edition

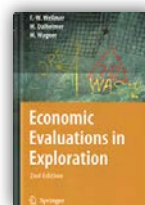
A wealth of information at your fingertips, this industry standard defines, not only standard mining terms, but also terminology in the related but peripheral environmental, marine mining, leaching, pollution, automation, and health and safety fields. Containing more than 28,500 definitions, this edition incorporates the technological developments and environmental regulations that have changed the minerals industry.

MEMBERS SAVE \$20

Published by the American Geological Institute

1997 / Hardbound / 656 pages / 5 lbs

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Economic Evaluations in Exploration, 2nd edition

By F.W. Wellmer, M. Dalheimer, and M. Wagner

Economic Evaluations in Exploration is ideal for the economic geologist who deals with the evaluation of deposits at an early stage of development. It offers rules for quick-and-easy calculations based on the application of approximate

data. It provides a complete set of rules and methods to enable performance of a quick initial evaluation of the deposit without the support of specialists or computers. All rules for calculations are illustrated with examples, mistakes, and pitfalls the authors encountered during their careers. The case histories, exercises, metal prices and terminology, especially concerning reserves and resources, have been fully updated in this second edition.

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Published by Springer

2008 / Hardbound / 266 pages / 2 lbs

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Environmental Considerations in Energy Production

Edited by John R. Craynon

The *Environmental Considerations in Energy Production* conference proceedings include submissions from international energy professionals who discuss a wide range of topics on energy production and how these topics impact society and the environment. Coal mining, oil and gas production, and electrical power generation are included. Both the USB drive of the 2015 conference proceedings and the print and

eBook from the 2013 proceedings are available. This is your opportunity to learn about existing and emerging issues, best practices and techniques, and appropriate and innovative solutions to meet the present and future challenges of energy production.

Second Environmental Considerations in Energy Production

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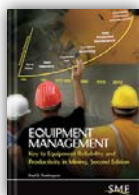
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Maintenance has typically been regarded as a "necessary evil" rather than a vital contributor to effective mining operations. Today's enlightened mining managers acknowledge the urgent need for a new approach. An integrated and accessible company-wide strategy is essential to succeeding in today's fiercely competitive, high-stakes marketplace. *Equipment Management* explains how to make that strategy come alive. Essential reading for mining professionals, this book explains how to create an environment and a culture that allow maintenance to thrive. Author Paul D. Tomlison draws on more than 35 years of direct, worldwide maintenance-management consulting experience in the design, implementation, and evaluation of maintenance programs for the industry.

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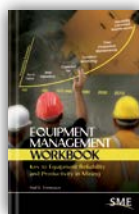
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By Paul D. Tomlison

The *Equipment Management Workbook* is a companion to the highly acclaimed *Equipment Management: Key to Equipment Reliability and Productivity in Mining*. The workbook's step-by-step approach focuses on the most critical aspects of a successful maintenance management program. Each chapter challenges the reader to recall the real-world experiences and recommendations from the text. Tomlison's textbook and workbook comprise a how-to guide that enables mining organizations to implement a comprehensive equipment management strategy that ensures equipment reliability, as well as workforce productivity.

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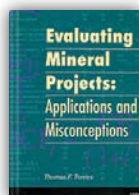
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By Thomas F. Torries

Designed to complement traditional engineering texts, this book emphasizes mineral project evaluation concepts rather than computational details. *Evaluating Mineral Projects* describes the various economic evaluation techniques employed (including conventional cost analysis, discounted cash flow, and option analysis), their uses, and their relationships with geological, technological, and financial assessments. Torries also discusses the strengths and weaknesses of commonly practiced evaluation methods. This book explains the practical difficulties with conducting an analysis and correctly interpreting the results, as well as alternative techniques.

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Edited by Jürgen Brune

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You will learn the latest information on preventing catastrophic events, such as fires and major roof or slope failures; providing adequate ventilation to dilute explosive or toxic gases and dusts; avoiding hearing loss; offering emergency communication and life support for miners trapped underground; developing training materials and guidelines for improving safety, health, and productivity in mines; and a host of other critical topics.

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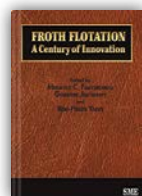
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Froth Flotation: A Century of Innovation

Edited by Maurice C. Fuerstenau, Graeme Jameson, and Roe-Hoan Yoon

This thorough volume describes state-of-the-art research and practice in mineral froth flotation as known and practiced a century after its introduction. Recognized experts provide in-depth coverage on the historical aspects of flotation; flotation fundamentals; flotation chemistry; flotation cells, modeling, and simulation; and flotation plant practice.

Froth Flotation is an invaluable reference for industry professionals, researchers, and graduate students. A supplemental CD includes presentations from the Centenary of Flotation Symposium managed by the Australasian Institute of Mining and Metallurgy.

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Functional Fillers and Nanoscale Minerals: New Markets/New Horizons

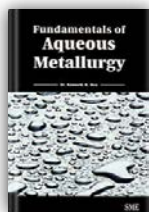
Edited by Jon J. Kellar

Mineral additives are widespread in industrial manufacturing processes. Mineral fillers are used to extend raw materials and cut costs. Minerals and associated inorganics have been increasingly used for their functionality and other mineral-specific qualities. Likewise, the emergence of nanoscale minerals parallels the global pursuit of nanotechnology. These minerals play an important role in the low-cost, high-performance application of nanotechnology.

Functional Fillers and Nanoscale Minerals is intended for mineral suppliers, industrial users of mineral fillers, and those concerned with new trends in mineral processing and nanotechnology. Contributions by leading international researchers highlight the emerging markets and applications of functional fillers and nanoscale minerals.

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Fundamentals of Aqueous Metallurgy

By Kenneth N. Han

Intended for college and graduate-level instruction, this book presents the fundamentals of aqueous metallurgy and its applications in mineral processing operations. The text presents the physiochemical principles of various water-based processes, including interfacial phenomena, hydrometallurgy, and metallurgical kinetics.

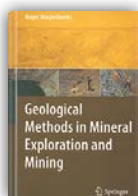
A valuable reference for those studying mineral processing, resource recovery, and the corrosion of metals and alloys, *Fundamentals of Aqueous Metallurgy* also serves environmental and chemical engineers, chemists, and mineral processing engineers responsible for mineral processing plant design and operations. To enhance learning and provide practical experience, each chapter closes with a series of homework problems based on the concepts presented. Solutions to the problems, including full explanations, are provided in the back of the book.

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Geological Methods in Mineral Exploration and Mining, 2nd edition

By Roger Marjoribanks

This practical step-by-step guide describes the key geological field techniques needed by today's exploration geologists involved in the search for metallic deposits. The techniques

described are fundamental to the collection, storage, and presentation of geological data and their use to locate ore.

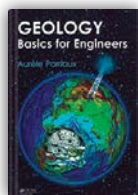
Geological Methods in Mineral Exploration and Mining explains the various tasks that the exploration geologist is asked to perform in the sequence in which they might be employed in an actual exploration project. Hints and tips are given. The steps are illustrated with numerous examples drawn from real projects. The book emphasizes traditional skills and shows how they can be combined effectively with modern technological approaches.

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Published by Springer

2010 / Hardbound / 238 pages / 2 lbs

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Geology: Basics for Engineers

By Aureule Parriaux

Geology: Basics for Engineers examines Earth's physical and chemical characteristics, the nature and the properties of rocks and unconsolidated deposits/sediments, the action of water, and how the Earth is transformed by various phenomena at different scales of time and space. The book shows the

engineer how to take geological conditions into account in projects and how to intelligently exploit a wide range of natural resources, reduce geological hazards, and manage subsurface pollution.

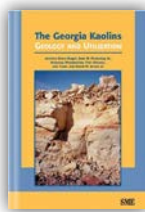
Through a problem-based learning approach, this instructional text imparts knowledge and practical experience to engineering students as well as experts in the fields of civil engineering, environmental engineering, earth sciences, land and urban planning, and architecture. A supplemental DVD presents solutions to the problems presented and animations illustrating additional features of the living Earth.

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Published by Taylor & Francis Group

2009 / 590 pages + DVD / 4 lbs

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The Georgia Kaolins: Geology and Utilization

By Jessica Elzea Kogel, Sam M. Pickering Jr., Evgenya Shelobolina, Tim Chowns, Jun Yuan, and David M. Avant Jr.

The Georgia Kaolins looks at the various disciplines involved in kaolin production, including geology, mining, mineralogy, geochemistry, and microbiology. It gives industry practitioners a better understanding of this versatile material in order to improve exploration, processing, and product quality. The book presents an excellent overview of the types and grades of kaolin, their mineralogy, and how these qualities relate to various commercial applications and processing techniques employed to remove impurities and improve kaolin quality.

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2002 / 96 pages

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Gold Ore Processing: Project Development and Operations, 2nd edition

By Mike Adams

Gold Ore Processing: Project Development and Operations brings together all the technical aspects relevant to modern gold ore processing, offering a practical perspective that is vital to the successful and responsible development, operation, and closure of any gold ore processing operation.

This completely updated edition includes all aspects of gold ore processing, from feasibility and development stages through environmentally responsible operations, to the rehabilitation stage. It offers a mineralogy-based approach to gold ore process flow sheet development that has application to multiple ore types.

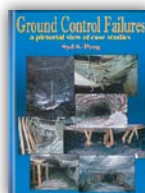
The book covers established, newly implemented, and emerging technologies; updated case studies; and additional topics, such as automated mineralogy and geometallurgy, cyanide code compliance, recovery of gold from e-waste, handling of gaseous emissions, mercury and arsenic, emerging non-cyanide leaching systems, hydro re-mining, water management, and solid-liquid separation.

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Published by Elsevier

2016 / Hardbound / 1,275 pages / 5 lbs

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Ground Control Failures: A Pictorial View of Case Studies

By Syd S. Peng

Ground Control Failures contains a storehouse of color photos investigating 50 case studies about topics such as pillar failures, roof falls, cutters, roof bolting failures, floor heave, multiple-seam mining, flooding, abandoned mine workings, and longwalls from coal producing areas in the United States, Canada, and Mexico. Each case study identifies the year, the mining and geological conditions encountered, a summarized history, current ground control problems, and recommended solutions and results. Detailed event illustrations demonstrate the varying forms that change over time and the different degrees of failure severity that can occur in a mine's structure.

MEMBERS SAVE \$40

Published by Syd S. Peng

2007 / Hardbound / 348 pages / 4 lbs

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Groundbreaking! America's New Quest for Mineral Independence

By Ned Mamula and Ann Bridges

This is not a textbook about the geology of ore deposits or mining or mineral economics. This is the factual story about the United States' enormous mineral wealth sitting right

under its citizens' feet and the tragic irony that it is also the largest importer of minerals in the industrial world. This country could be held hostage over critical minerals used in all advanced technologies due to the decades-long shunning of domestic mining.

Groundbreaking! describes the consequences of misguided policy decisions and environmental alarmism and recommends 21st-century solutions to sustainable self-reliance by leveraging the wealth right under our feet.

The authors assert that policies must acknowledge the reality that critical minerals, or more accurately the lack thereof, often play a key role in dictating foreign policy and national security decisions. Planning to adapt before a problem occurs must become a national goal. This means reversing dangerous import trends and exploring for domestic minerals—the two major policy goals explained in this book.

Published by Penned Source Production

2018 / 296 pages / 2 lbs

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Guidelines for Evaluating Water in Pit Slope Stability

Edited by Geoff Beale and John Read

This book offers slope design practitioners a road map that will help them decide how to investigate and treat water pressures in pit slopes. *Guidelines for Evaluating Water in*

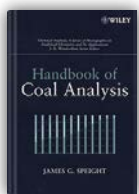
Pit Slope Stability includes six sections that outline the latest technology and best practice procedures for hydrogeological investigations. The sections cover the framework used to assess the effect of water in slope stability; how water pressures are measured and tested in the field; how a conceptual hydrogeological model is prepared; how water pressures are modeled numerically; how slope depressurization systems are implemented; and how the performance of a slope depressurization program is monitored and reconciled with the design.

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Published by Taylor & Francis Group

2014 / Hardbound / 680 pages / 5 lbs

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Handbook of Coal Analysis

By James G. Speight

Handbook of Coal Analysis provides readers with everything they need to know about testing and analyzing coal. It explains the meaning of test results, and how these results can predict coal behavior and its corresponding environmental impact during use. The thorough coverage of coal analysis

includes detailed information on necessary standard tests and procedures; explanation of coal behavior relative to its use alongside the corresponding environmental issues; and coverage of nomenclature, terminology, sampling, accuracy, and precision of analysis.

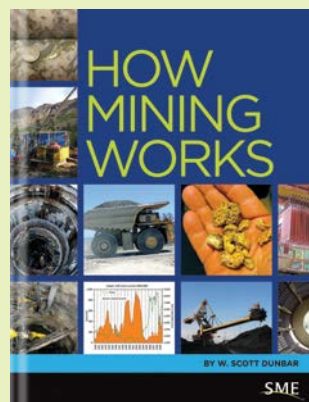
Step-by-step test method protocols are included for proximate and ultimate analysis, mineral matter, and physical, electrical, thermal, mechanical, spectroscopic, and solvent properties.

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Published by John Wiley & Sons

2005 / Hardbound / 240 pages / 2 lbs

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How Mining Works

By W. Scott Dunbar

How Mining Works explains complex mining concepts in a way simple enough for those who are not familiar with the industry, yet thorough enough to be useful to long-time professionals.

This colorful book presents a logical and sensible sequence for acquiring a strong working knowledge of the world of mining. Chapter 1 provides a quick geology review, explaining how the Earth is structured; how, why, and where mineral ores are created; and how technological advances help us make educated guesses about where to locate new mines.

Chapter 2 offers in-depth explanations about the different types of mining, the equipment and procedures needed for both surface and deep mining, and Chapter 3 follows with six methods for processing the ore into usable refined metal. And, since not all mines produce metals, Chapter 4 covers nonmetallic operations that produce coal, diamonds, and aggregates.

The second half of the book puts mining in the context of the wider world. Chapter 5 examines four types of mining waste and how to deal with each. Chapter 6 looks at labor practices, environmental sustainability, and worker and community health and safety—all critical in today's highly regulated environment.

Chapter 7 highlights mining economics, with detailed information on how mine products are priced, monetary arrangements between mines and smelters, and even the impact of reserves on mining's future. Chapter 8 takes a visionary yet practical look at the future of mining, covering not only advances in expected areas (like robotics) but also in biotechnology, with a fascinating look at how plants, insects, and various microbes could be used to detect the presence of minerals and extract metals.

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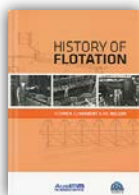
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History of Flotation

By Alban Lynch, Greg Harbort, and Mike Nelson

When the improbable process of flotation transformed the nonferrous mining industry—100 years ago, no one could have predicted that floating highly specific gravity particles on water would become one of the world's greatest technologies.

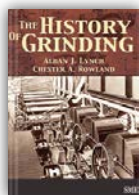
This book chronicles the early days of flotation and the evolution of this technology, as well as the engineers, managers, and financiers who supported flotation experimentation and development. Flotation practitioners will enjoy learning about the history of flotation machines, the ingenuity applied to this process, and the competitive tensions between manufacturers.

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The History of Grinding

By Alban J. Lynch and Chester A. Rowland

An in-depth examination of the oldest engineering process, *The History of Grinding* begins at the start of agriculture and outlines the development of size reduction, without overwhelming the reader with technical details.

Chapters cover size reduction from the Stone Age to the Space Age; the science of grinding and the scientists behind it; hand stones, water wheels, windmills, and beyond; stamp mills and crushers; roller mills; tumbling mills; fine-grinding mills; classifiers; explosive rock breakage; and size reduction in the 21st century. The book includes photos and illustrations gleaned from numerous sources, as well as a glossary, reference list, and complete index.

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Hoist & Haul 2015: Proceedings of the International Conference on Hoisting and Haulage

Edited by Borje Johansson

As ore bodies are explored at greater depths and larger payloads need to be transported at higher speeds, larger and more powerful equipment is necessary. *Hoist & Haul 2015* includes information on a range of topics including hoisting, conveying, and rail and truck haulage. Industry experts from ten countries discuss complete transport systems, subsystems and components, design, installation, maintenance, and economic issues. Important developments in mine hoisting safety requirements are covered with the objective of reaching a common understanding and approach when defining new safety requirements.

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Hydrometallurgy 2008: Proceedings of the Sixth International Symposium

Edited by Courtney A. Young, Patrick R. Taylor, Corby G. Anderson, and Yeonuk Choi

This resource tackles advances in primary and secondary resource recovery with sections on environmental hydrometallurgy, research and industrial applications,

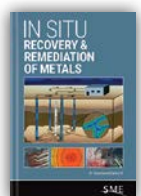
base and precious metals, and leaching. Case histories from around the world provide a hands-on look at how industry leaders continue to solve problems and set new standards. Experts share insights on minerals biotechnology, plant design and operation, the challenges of plant startups, and solutions for reducing energy consumption in all aspects of unit operations.

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In Situ Recovery & Remediation of Metals

By Drummond Earley III

This book provides a state-of-the-art synopsis of in situ metal recovery and remediation technologies based on both research and commercial projects. In situ recovery uses fluid-

based metal dissolution and recovery to extract one or more commodities from a largely intact rock mass using similar processes that create ore deposits. The fluid is circulated through ore by gravity and/or pumps using injection and recovery wells. A processing facility is usually established at the surface of the operation to extract the commodity of interest. The barren fluid is then recirculated back into the recovery circuit. In situ remediation uses similar wellfield technology and chemical processes to stabilize metal contaminants by injecting agents that form stable solids or less toxic species when combined with a contaminant. The fluid depleted in the stabilizing agent is then pumped back to the surface and regenerated.

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Industrial Minerals & Rocks: Commodities, Markets, and Uses, 7th edition

Edited by Jessica Elzea Kogel, Nikhil C. Trivedi, James M. Barker, and Stanley T. Krukowski

This widely read international reference is one of the most authoritative sources for timely information on industrial minerals and rocks, the markets they serve, and their

many uses. Changes in the global economy have greatly impacted the mining, processing, and marketing of industrial minerals. Additionally, new technologies and customer-based globalization have driven fast-paced innovation in processing, packaging, transporting, and end use. *Industrial Minerals & Rocks* examines these important and diverse changes and their complex ramifications.

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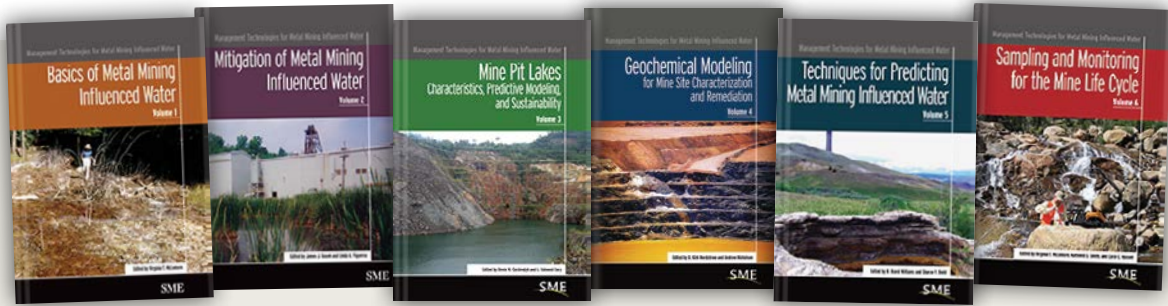
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These handbooks describe the technical aspects of sampling, monitoring, mitigation, and prediction programs of the mine-life cycle. The audience includes planners, regulators, consultants, land managers, researchers, students, stakeholders, and anyone with an interest in mining influenced water.

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Edited by Virginia T. McLemore

Planning a new mine in today's increasingly contentious regulatory and political environment demands a different philosophy. *Basics of Metal Mining Influenced Water* takes an innovative, holistic approach to these issues by considering all aspects of the mine-life cycle, including closure. The handbook discusses the major physical and chemical relationship between mining, climate, environment, and mine-waste drainage quality.

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Volume 4: Geochemical Modeling for Mine Site Characterization and Remediation

Edited by D. Kirk Nordstrom and Andrew Nicholson

This handbook describes the important components of hydrogeochemical modeling for mine environments, primarily those mines where sulfide minerals are present—metal mines and coal mines. It provides general guidelines on the strengths and limitations of geochemical modeling and an overview of its application to the hydrogeochemistry of both unmined mineralized sites and those contaminated from mineral extraction and mineral processing. The handbook includes an overview of the models behind the codes, explains vital geochemical computations, describes several modeling processes, provides a compilation of codes, and gives examples of their application, including both successes and failures.

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Volume 5: Techniques for Predicting Metal Mining Influenced Water

Edited by R. David Williams and Sharon F. Diehl

This book identifies the tools available for characterizing mine and processing wastes that can be useful in predicting drainage quality. It shows how effective and accurate characterization and prediction work will result in a mine-life waste management plan that minimizes the exposure of problematic wastes to the environment.

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Edited by Virginia T. McLemore, Kathleen S. Smith, and Carol C. Russell

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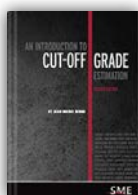
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An Introduction to Cut-off Grade Estimation, 2nd edition

By Jean-Michel Rendu

An Introduction to Cut-off Grade Estimation examines one of the most important calculations in the mining industry. Cut-off grades are essential to determining the economic feasibility and mine life of a project. Profitability and socio-economic impact of mining operations are influenced by the choice of cut-off grades. Cut-off grades play a key role in estimating mineral reserves that can be publicly reported.

This second edition is easier to read and of greater practical interest to practitioners. The relationship between optimization of net present value, capacity constraints, and opportunity cost is explained in greater detail. A new section discusses blending strategies, which play a critical role in an increasing number of mining operations.

MEMBERS SAVE \$30

2014 / 168 pages / 2 lbs / ISBN: 978-0-87335-393-9

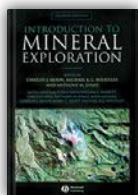
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Also available as a bundle



Introduction to Mineral Exploration, 2nd edition

Edited by Charles Moon, Michael Whateley, and Anthony M. Evans

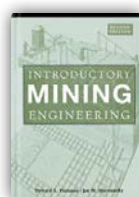
Introduction to Mineral Exploration provides a comprehensive overview of all aspects of mineral exploration. It covers the nature of mineral exploration and considers other factors essential to successful exploration—from target evaluation to feasibility studies for extraction and production. The book includes six detailed case studies, selected for the range of problems addressed and the issues they introduce to the mineral explorationist. This is essential reading for upper-level undergraduates studying ore geology, mineral exploration, mining geology, coal exploration, or industrial minerals, and a trusted reference for professional geologists.

MEMBERS SAVE \$50

Published by Wiley/Blackwell

2006 / 496 pages / 4 lbs

\$129 Member / \$109 Student Member / \$179 Nonmember/List / ORDER NO. 9086



Introductory Mining Engineering, 2nd edition

By Howard L. Hartman and Jan M. Mutmansky

This introductory mining engineering text highlights the latest in mining technology. It outlines the role of the mining engineer throughout the life of a mine, including prospecting for the deposit, determining the site's value, developing the mine, extracting the mineral values, and reclaiming the land afterward.

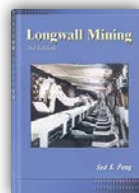
Introductory Mining Engineering presents the latest information on such technologies as remote sensing, GPS, geophysical surveying, and mineral deposit evaluation, as well as continuous integrated mining operations and autonomous trucks. This edition includes information on landscape restoration, regional planning, wetlands protection, and subsidence mitigation. Chapters discuss coverage of environmental responsibility, regulations, and health and safety issues.

MEMBERS SAVE \$20

Published by John Wiley & Sons

2002 / Hardbound / 584 pages / 3 lbs

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Longwall Mining, 2nd edition

By Syd S. Peng

Longwall Mining covers longwall mining technology developed and practiced in the United States during the last 30 years. It begins with a description of the technology and the special characteristics of U.S. longwalls, including their requirements and constraints. It goes on to cover an array of topics, including the factors involved in a preliminary evaluation of longwall feasibility for a coal reserve; abutment pressures; methods for multiple-entry development; two-leg shield support; shearer and automated plow systems; coal transportation systems; ventilation requirements and practices, and methane and dust control; methods and equipment required for a face move; mine power distribution and system control; and surface subsidence and dewatering.

MEMBERS SAVE \$40

Published by Syd S. Peng

2006 / Hardbound / 636 pages / 3 lbs

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Management of Mineral Resources: Creating Value in the Mining Business

By Juan P. Camus

The mining industry's strategy for coping with low profitability has primarily focused on controlling production costs. Despite mechanization, automation, and other technical improvements, mining's aggregate profitability still falls far short of that realized by most industries. Author Juan Camus contends that additional technical knowledge is not required, but rather, the implementation of sound management practices that utilize the existing knowledge base more productively.

Management of Mineral Resources explores mining management—the process of generating plans and supervising their implementation. This book is concerned with the analysis of some of the internal, controllable factors that influence mining production effectiveness. It combines the best thinking in mining and management, allowing practitioners to devise concrete strategies for generating maximum shareholder value.

MEMBERS SAVE \$30

2002 / 120 pages / 2 lbs / ISBN: 978-0-87335-216-1

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Also available as an eBook



Also available as a bundle



Mine Health and Safety Management

Edited by Michael Karmis

Mine Health and Safety Management presents the management, leadership, regulation, and compliance factors involved in mining health and safety. It focuses on the importance of instilling a safety culture and fostering the ability to recognize and manage health and safety responsibilities and requirements.

The book also details effective health and safety management systems and concentrates on safety and health-hazard anticipation, identification, evaluation, and control.

Intended for practicing engineers and supervisors, health and safety professionals, and members of the research community, this book will also prove useful to undergraduate and graduate students in the minerals disciplines.

MEMBERS SAVE \$40

2001 / Hardbound / 472 pages / 3 lbs / ISBN: 978-0-87335-200-0

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Mine Maintenance Management Reader

By Paul D. Tomlinson

The *Mine Maintenance Management Reader* is an indispensable handbook for maintenance managers and supervisors, as well as mine and plant managers in heavy industry. Virtually every

aspect of this essential function is addressed, from organizing maintenance around a plant-level production strategy to creating a road map for increasing organization efficiency. These critical "big picture" issues are brought to life through engaging vignettes on maintenance men and women dealing with real-life, day-to-day problems and concerns.

Author Paul D. Tomlinson draws on his 35 years of maintenance management consulting experience to craft these compelling and highly instructional stories. Each reveals a powerful lesson, equipping you with ideas and techniques for solving the maintenance problems you may be grappling with today.

LAST CHANCE – FINAL SALE \$29

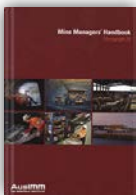
2007 / 96 pages / 1 lb / ISBN: 978-0-87335-258-1 / ORDER NO. 258-1



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Mine Managers' Handbook

Edited by AusIMM

The *Mine Managers' Handbook* is a comprehensive volume describing all of the important aspects of managing a mining company. It addresses topics such as corporate strategy, leadership, operations management, and world markets for minerals. Written by experts from industry, consulting

firms, and academia, it will be of great value to corporate executives, directors of mining companies, students, and all of those wishing to understand the industry. While written primarily for Australian conditions, much of the content is applicable to the global minerals industry.

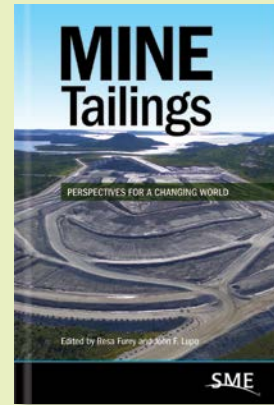
Topics include overview of mine management; occupational health and safety; environment management; stakeholder relationships; human resources; capital investment and project development; operations management; finance and administration; minerals and markets; and strategic planning. Also included is a CD that covers guidelines for technical economic evaluations of minerals industry projects.

MEMBERS SAVE \$50

Published by AusIMM

2012 / Hardbound Book & CD / 580 pages / 4 lbs

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Mine Tailings: Perspectives for a Changing World

Edited by Resa Furey and John F. Lupo

The *Mine Tailings: Perspectives for a Changing World* symposium, held at the SME 2020 annual conference, started a conversation. Over three days, tailings professionals from around the world gathered to discuss tailings storage practices and the changes both the industry and the world want and need. The discussions squarely focused on how we, as an industry, can collectively make changes that will eliminate catastrophic tailings dam failures and lead to better outcomes for the industry and society.

Through sharing and conversation, the symposium participants recognized risks associated with our approach to tailings management and existing structures and discussed the gaps that need to be addressed, including how the behavior of tailings and mining professionals must change. The human element of risk must be recognized so it can be talked about openly, given the attention it deserves, and adequately addressed. We need to own this problem and the impact of our actions. We have the power to change this; when we own our actions, we can act differently for a different outcome.

MEMBERS SAVE \$50

2020 / 208 pages / 2 lbs / ISBN 978-0-87335-488-2

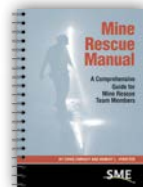
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Also available as an eBook



Also available as a bundle



Mine Rescue Manual: A Comprehensive Guide for Mine Rescue Team Members

By Chris Enright and Robert L. Ferriter

With its clear descriptions, best practice benchmarks, step-by-step lists, and easy-to-follow procedural diagrams, *Mine Rescue Manual* will be your go-to guide if there is an accident at your mine. It will walk you through every contingency: properly dealing with mine fires, toxic gases, loss of oxygen, injured workers, and more. It covers how to stay in legal, regulatory, and National Incident Management System compliance when responding to and reporting an accident. An extensive section on mine recovery (and potentially resuming operation) in the aftermath is also included.

This well-organized handbook is designed to help you respond to a mine emergency successfully, maximizing the protection of human life while minimizing the cost not only of rescue and recovery, but to your corporate reputation.

LAST CHANCE – FINAL SALE \$49

2015 / 196 pages / 2 lbs / ISBN: 978-0-87335-405-9 / ORDER NO. 405-9



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SME is the premier book publisher for the mining and metallurgy industry.

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Minefill 2017: Proceedings of the 12th International Symposium on Mining with Backfill

Edited by David Stone

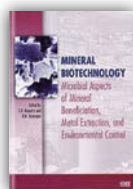
Minefill is recognized as an integral component of most underground mining operations. The stability of and safety within underground mines are enhanced by the design, operation, and control of minefill systems. The proceedings of the 12th International Symposium on Mining with Backfill include 37 papers from experts from around the world. It focuses on the application of mine backfill technologies including planning, design, operations, and research.

There is no other forum available that provides this same focus on minefill technology. The information is even more valuable in today's stakeholder-driven economy where the pressure to place mine wastes back underground has never been stronger.

MEMBERS SAVE \$30

2017 / USB Drive / 1 lb

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Mineral Biotechnology: Microbial Aspects of Mineral Beneficiation, Metal Extraction and Environmental Control

Edited by S.W. Kawatra and K.A. Natarajan

Rapid progress is being made in minerals processing based on biological principles. Microorganisms can play a beneficial role in all facets of mineral processing, from mining to waste disposal and management. Biohydrometallurgical extraction of metals from a wide variety of ores is being commercially practiced all over the world. *Mineral Biotechnology* provides the technical knowledge necessary to compete in this arena by presenting specific detailed technologies and real-world case studies.

MEMBERS SAVE \$20

2001 / 272 pages

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eBook version only



Mineral Economics and Policy

By John E. Tilton and Juan Ignacio Guzmán

This book provides an introduction to the field of mineral economics and its use in understanding the behavior of mineral commodity markets and in assessing both public and corporate policies in this important economic sector. The focus is on metal and non-metallic commodities rather than oil, coal, and other energy commodities.

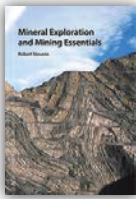
The work draws on John Tilton's teaching experience over the last 30 years at the Colorado School of Mines and the Catholic University of Chile, as well as short courses for Rio Tinto and other mining companies. This is combined with the professional consulting and academic research of Juan Ignacio Guzmán over the past decade, in order to demonstrate the industry application of the economic principles described in the earlier chapters.

MEMBERS SAVE \$30

Published by RFF Press, an imprint of Taylor & Francis

2016 / 270 pages / 2 lbs

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Mineral Exploration and Mining Essentials

By Robert Stevens

The mineral exploration and mining industry is a dynamic, diverse, and profitable sector involving a wide range of people in different stages of their professional careers and investments. At the same time, it is an industry based on applied science and technology with a lexicon not widely understood by many of these participants. This book bridges that gap.

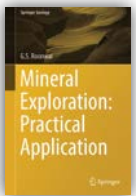
Mineral Exploration and Mining Essentials is an indispensable primer for anyone interested in the mineral exploration and mining industry but lacks experience in the field. Consider this book if you need to make informed mining-related investment decisions; want to better evaluate mineral-development proposals; or are interested in the basics of exploration, discovery, geology, and mining.

MEMBERS SAVE \$30

Published by Robert Stevens

2011 / 336 pages / 2 lbs

\$99 Member / \$79 Student Member / \$129 Nonmember/List / ORDER NO. 9100



Mineral Exploration: Practical Application

By G.S. Roonwal

Mineral Exploration covers mineral exploration, mine evaluation, and resource assessment of a discovered mineral deposit. It helps readers understand the important concepts

needed when searching for mineral deposits and understanding the chances of success. The book discusses the fundamentals of mineral resources composition, the formation of rock and mineral deposits, and the attempt to search for ore deposits. It includes details on how to conduct surveys and evaluations to arrive at a decision to open and/or carry out further exploration in an operating mine.

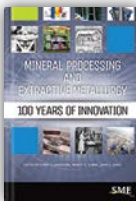
The book offers a reference for policy makers and private investors in mining. It will be of great interest to professionals and students alike in both the geology and mining communities.

MEMBERS SAVE \$40

Published by Springer

2018 / Hardbound / 298 pages / 2 lbs

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Mineral Processing and Extractive Metallurgy: 100 Years of Innovation

Edited by Corby G. Anderson, Robert C. Dunne, and John L. Uhrig

Mineral Processing and Extractive Metallurgy presents more than a century of innovation drivers that have advanced the

mineral processing industry. Trends, developments, and improvements are discussed in depth, and likely areas for future innovations are explored. Subject-matter experts share their knowledge, experience, and passion for the metallurgical industry with topics such as comminution equipment, modeling, and instrumentation; magnetic, electrostatic, density-based, dense medium, and liquid/solid separations; nickel and cobalt, zinc and lead, copper and rare earth hydrometallurgy, and gold and silver extraction; innovations in pyrometallurgy, copper smelting, and the iron and steel industry, and refining of platinum group metals; process mineralogy and laboratory automation, analytical chemistry, and measurement of mineral structure and surface chemistry; and environmental breakthroughs.

MEMBERS SAVE \$50

2014 / Hardbound / 696 pages / 3 lbs / ISBN: 978-0-87335-371-7

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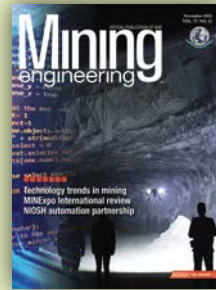


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SME PERIODICALS



Mining Engineering

(Published monthly)

Recognized as the foremost trade magazine of the worldwide minerals industry, *Mining Engineering* covers the full spectrum of current topics in the field. Each month the entire issue is posted on the magazines' website (www.me.smenet.org) along with daily news, archived issues, and other features. Members have full access to the digital edition of every issue anywhere there is an internet connection.

Member: Subscription rate included with dues

Nonmember: \$245 / Single copies: \$25

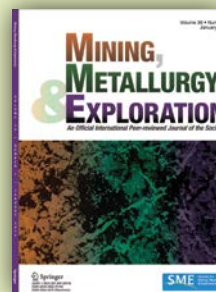


Tunneling & Underground Construction

(Included quarterly with Mining Engineering)

Tunneling & Underground Construction is official publication of the Underground Construction Association of SME. It promotes the use of underground space and provides information on the technologies related to underground tunneling and construction.

Member: Subscription rate included with dues



Mining, Metallurgy & Exploration

(Published bi-monthly)

An international peer-reviewed journal covering the latest technical developments in the mining, mineral, and geology communities, *Mining, Metallurgy & Exploration* is published in six issues a year in partnership with Springer Nature, one of the world's leading global research, educational, and professional publishers.

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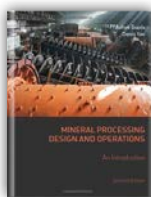
SME Member: Electronic only: Automatically free with SME membership

Nonmember: Electronic only: \$259

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Member of AIST/SPE/TMS: Electronic only: \$116

Library: Print and electronic: \$851 from 1997 onwards, \$1,021 including all the backfiles from Volume 1 onwards



Mineral Processing Design and Operations, 2nd edition

By Ashok Gupta and Denis Yan

Mineral Processing Design and Operations helps readers understand the various methods commonly used in mineral beneficiation and concentration processes. Application of theory to practice is explained at each stage, helping operators understand associated implications in each unit process.

This second edition outlines the basics of process controls for efficient and economic modes of separation and includes theory and practice in the design of flow sheets and operation of an integrated mineral processing plant. It introduces the basic magnetism, electrostatic, conductivity, and dielectrophoresis properties of minerals and related separation techniques. The text describes automation in mineral processing plants allowing maximum yields and consistent high concentrate grades. And finally, it outlines problems and offers solutions in the form of various examples.

MEMBERS SAVE \$40

Published by Elsevier

2016 / Hardbound / 882 pages / 5 lbs

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Mineral Processing Plant Design, Practice, and Control

Edited by Andrew L. Mular, Doug N. Halbe, and Derek J. Barratt

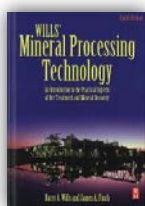
This extensive compilation on the design and operation of mineral processing facilities covers all aspects of plant design—from concept and pilot plant to full-scale production. In addition to valuable guidance on overall

project management, chapters address the design, optimization, and control of all related processes, including crushing and grinding, separation, flotation, pumping and material transport, preoxidation, extraction, and proper disposal of by-products and tailings. This book offers the most current thinking on minerals processing from the mining industry's leading engineers, consultants, and operators.

MEMBERS SAVE \$40

2002 / Hardbound / 2 volumes / 2,500 pages / 10 lbs / ISBN: 978-0-87335-223-9

\$89 Member / \$59 Student Member / \$129 Nonmember/List / ORDER NO. 223-8



Mineral Processing Technology: An Introduction to the Practical Aspects of Ore Treatment and Mineral Recovery, 8th edition

By Barry A. Wills and James A. Finch

Wills' *Mineral Processing Technology* has been the definitive reference for the mineral processing industry for more than thirty years. This industry standard provides practicing engineers and students of mineral processing, metallurgy, and mining with practical information on all the common techniques used in modern processing installations.

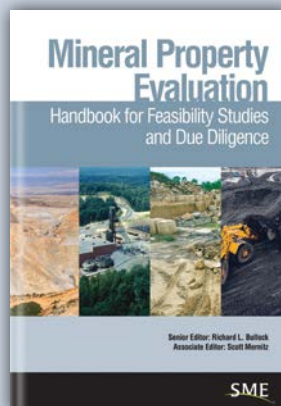
Each chapter is dedicated to a major processing procedure—from underlying principles and technologies to the latest developments in strategies and equipment for processing increasingly complex refractory ores. The eighth edition enhances coverage of practical applications with the inclusion of new material focused on meeting the pressing demand for ever greater operational efficiency, while addressing the pivotal challenges of waste disposal and environmental remediation.

MEMBERS SAVE \$40

Published by Butterworth-Heinemann

2015 / 512 pages / 3 lbs

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Mineral Property Evaluation: Handbook for Feasibility Studies and Due Diligence

Edited by Richard L. Bullock and Scott Mernitz

Mineral Property Evaluation provides guidelines to follow in performing mineral property feasibility and evaluation studies and due diligence, and in preparing proper documents for bankable presentations. It highlights the need for a consistent, systematic methodology in performing evaluation and feasibility work.

The objective of a feasibility and evaluation study should be to assess the value of the undeveloped or developed mineral property and to convey these findings to the company that is considering applying technical and physical changes to bring the property into production of a mineral product. The analysis needs to determine the net present worth returned to the company for investing in these changes and to reach that decision point as early as possible and with the least amount of money spent on the evaluation study.

MEMBERS SAVE \$80

2017 / Hardbound / 552 pages / 4 lbs / ISBN: 978-0-87335-445-5

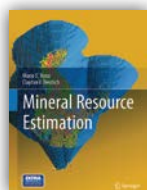
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Also available as an eBook



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Mineral Resource Estimation

By Mario E. Rossi and Clayton V. Deutsch

This comprehensive text covers the modern practice of mineral resource estimation, a field that has changed considerably in the past 25 years. Geostatistical techniques have become commonplace and continue to evolve; computational horsepower has revolutionized

all facets of numerical modeling; mining and processing operations are often larger; and uncertainty quantification is becoming standard practice.

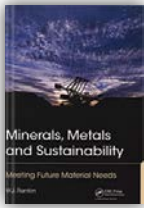
Mineral Resource Estimation is about resource modeling. It discusses both theory and practice in sufficient detail for both practitioners and students. It avoids strict theoretical presentations, and focuses on practical adaptations that result in good resource estimation practices. As a bonus, case studies are included.

MEMBERS SAVE \$40

Published by Springer

2014 / Hardbound / 332 pages / 3 lbs

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Minerals, Metals, and Sustainability: Meeting Future Material Needs

By W.J. Rankin

Minerals, Metals and Sustainability examines the exploitation of minerals and mineral products and the implications for sustainability of the consumption of finite mineral resources and the wastes associated with their production and use.

It provides a multi-disciplinary approach that integrates the physical and earth sciences with the social sciences, ecology, and economics.

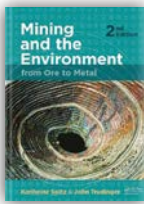
This is an important reference for students of engineering and applied science and geology; practicing engineers, geologists, and scientists; students of economics, social sciences, and related disciplines; professionals in government service in areas such as resources, environment, and sustainability; and non-technical professionals working in the minerals industry or in sectors servicing the minerals industry.

MEMBERS SAVE \$40

Published by Taylor & Francis Group

2011 / 440 pages / 3 lbs

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Mining and the Environment: from Ore to Metal, 2nd Edition

By Karlheinz Spitz and John Trudinger

Mining and the Environment identifies and discusses the wide range of social and environmental issues pertaining to mining, with particular reference to mining in developing countries, from where many of the project examples and case studies have been selected.

Following an introductory overview of pressing issues, the book illustrates how environmental and social impact assessment, such as defined in "The Equator Principles," integrates with the mining lifecycle and how environmental and social management aims to eliminate the negative and accentuate the positive mining impacts. This second edition of *Mining and the Environment* includes new chapters on health impact assessment, biodiversity and gender issues, all of which have become more important since the first edition appeared a decade ago.

MEMBERS SAVE \$30

Published by CRC Press, an imprint of Taylor & Francis Group

2019 / 818 pages / 5 lbs

\$119 Member / \$99 Student Member / \$149 Nonmember/List / ORDER NO. 9196



Mining and Rock Construction Technology Desk Reference

Edited by Agne Rustan

This is a comprehensive and illustrated desk reference with terms, definitions, explanations, abbreviations, trade names, quantifications, units, and symbols used in rock mechanics, drilling, and blasting.

Terms are included from related disciplines, such as chemistry, detonics, fractography, fracture dynamics, mechanics and strength of materials, micro mechanics, geology, geophysics, image analysis, petrology, physics, seismology, and more.

MEMBERS SAVE \$20

Published by CRC Press/Balkema, an imprint of Taylor & Francis Group

2011 / Hardbound / 466 pages / 3 lbs

\$129 Member / \$119 Student Member / \$149 Nonmember/List / ORDER NO. 9102



Mining Capital: Methods, Best Practices, and Case Studies for Financing Mining Projects

By Michael Seeger

This book presents a step-by-step approach to develop a mining business case that will raise capital.

Mining is a capital-intensive industry, one that involves long lead times to develop projects that demand a structured approach, from mine exploration to exit. This book provides mine developers, investors, owners, shareholders, and mineral policymakers a comprehensive game plan to raise capital for the development of new mining projects or to bolster operational mines.

The author, an experienced mining capital consultant, shows how mine developers and mine owners can secure capital in any phase of the commodity price cycle, at any site, and at any project stage. The book follows a proven and structured approach that enables mine developers and owners to successfully raise capital for their projects. With the aid of case studies and practical methods, the reader will learn the essentials on topics ranging from developing and marketing a business case for investment, to the types and sources of mining capital for different project stages, as well as the structure and significance of due diligence.

MEMBERS SAVE \$30

Published by Springer

2019 / 274 pages / 2 lbs

\$59 Member / \$49 Student Member / \$89 Nonmember/List / ORDER NO. 9203



Mining Economics and Strategy

By Ian C. Runge

This book will help you effectively direct mining operations through the use of innovative economic strategies. The text covers what is meant by a cost-effective mining scheme, the economics of information, and the procedures for rational evaluation of uncertain projects. It defines "ore" from an economic perspective and covers the influence of scheduling on ore reserves.

Discounted cash flow techniques are covered in detail. The application of DCF techniques in an operating mine environment is given expanded coverage and examples are drawn from real-life studies. Capital and decision-making procedures associated with capital investments in a risk environment are given extensive coverage. Case studies for capital investment in an operating mine are included. Comprehensive examples investigate "value" from a risk-reduction perspective and from an "expected return on investment" perspective.

This book offers solutions to the problem that many mining projects fail to achieve expectations because of their inability to adapt to change. A new technique is explained that allows calculation of capital that is "at risk" from capital that is not at risk. This promises significant advances in the way that investments are made and capital is valued in the industry.

MEMBERS SAVE \$40

1998 (updated in 2003) / 316 pages / 3 lbs / ISBN: 978-0-87335-165-2

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Also available as an eBook



Also available as a bundle



Mining Engineering Analysis, 2nd edition

By Christopher J. Bise

This bestseller sets the standard for university-level instruction of mining engineering principles. Striking a thoughtful balance between theory and application, *Mining Engineering Analysis* imparts students with a practical working knowledge of all of the concepts presented. Its utility extends beyond the classroom as a valuable field reference for practicing engineers and those preparing for the Mining/Mineral Professional Engineering Exam.

This useful book covers virtually every aspect of mine design and operation, making it an excellent reference for engineering students studying mine design or those looking for help in assembling a mine-design project, as well as industry professionals in need of a comprehensive mine-design reference book.

MEMBERS SAVE \$40

2003 / 328 pages / 3 lbs / ISBN: 978-0-87335-221-5

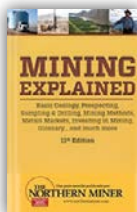
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This basic reference on exploration, mining, metallurgy, and investing explains in lay terms how minerals are discovered, extracted, refined, and marketed. The 11th edition simplifies and clarifies the scientific, engineering, and fiscal processes

used to transform a mine prospect into a metal producer. *Mining Explained* covers basic geology, ore deposits, high-tech prospecting, sampling and drilling, mining methods, ore processing, mining and the environment, the mining team, the business of mining, feasibility, metal markets, making sense of the numbers, and investing in mining.

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Minería Explicada

Esta guía popular sobre lo básico de la industria minera está ahora disponible en español.

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Mining Haul Roads: Theory and Practice

By Roger Thompson, Rodrigo Peroni, and Alex T. Visser

Mining haul roads are a critical component of surface mining infrastructure and the performance of these roads has a direct impact on operational efficiency, costs, and safety. This book is the most definitive treatise on mining haul roads ever written.

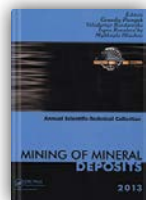
Mining Haul Roads: Theory and Practice presents an authoritative compendium of worldwide experience and state-of-the-art practices developed and applied over the last 25 years by the three authors, over three continents and many of the world's leading surface mining operations. In this book, the authors introduce the four design components of an integrated design methodology for mining haul roads; illustrate how mine planning constraints inform road design requirements; develop the analytical framework for each of the design components from their theoretical basis, and using typical mine-site applications, illustrate how site-specific design guidelines are developed, together with their practical implementation; and summarize the key road safety and geometric design considerations specific to mining haul roads.

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Mining of Mineral Deposits

Edited by Genadiy Pivnyak, Volodymyr Bondarenko, Iryna Kovalevs'ka, and Mykhaylo Illiashov

Mining of Mineral Deposits focuses the mining of coal and ores, geomechanical processes, labor protection and ventilation, and borehole extraction of minerals. The book covers the results of new equipment introduction; experiments

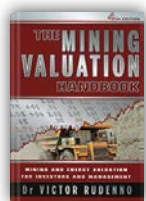
on mutual interaction of roof support elements, protective construction, and near-the-contour rock massifs; analytical and calculation methods of geomechanical tasks solution; development of gas hydrates and technologies of underground coal gasification; studies on environment protection; economic aspects; management and marketing in mining production, and other important aspects of mineral deposits exploitation.

MEMBERS SAVE \$50

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2013 / Hardbound / 382 pages / 3 lbs

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The Mining Valuation Handbook: Mining and Energy Valuation for Investors and Management, 4th edition

By Victor Rudenko

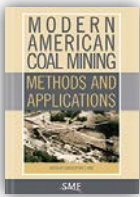
Equity markets have experienced turbulent times in recent years, particularly in resource valuations and commodity prices. In this international bestseller, Victor Rudenko once again provides comprehensive, current information on mining and unravels some of the mystery surrounding the resources industry. Now in its fourth edition, *The Mining Valuation Handbook* will assist those in the mining industry seeking financial information, as well as people in finance looking for characteristics of the resources industry in an economic light.

For the non-professional who is keen to invest in resource companies, this book will also help remove some of the mystique that often surrounds technical disciplines. *The Mining Valuation Handbook* is an essential addition to the libraries of astute investors and mining and financial analysts.

LAST CHANCE – FINAL SALE \$69

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Modern American Coal Mining: Methods and Applications

Edited by Christopher J. Bise

Modern American Coal Mining: Methods and Applications covers a full range of coal mining and coal industry topics, with chapters written by leading coal mining industry

professionals and academicians. Highlights from the book include coal resources and distribution, mine design, advances in strata control and power systems, improvements in surface mining, ventilation to reduce fires and explosions, drilling and blasting, staffing requirement ratios, management and preplanning, and coal preparation and reclamation. The text is enhanced with 11 case studies that are representative of underground and surface mines in the United States. Narrative descriptions and appropriate mine plans are presented, with attention given to unique features and situations that are addressed through mine design and construction.

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Mountain Movers: Mining, Sustainability and the Agents of Change

By Daniel M. Franks

Mountain Movers explores the dynamics of change-making for sustainable development in the resources sector,

specifically the mining of mineral and energy resources. The author recounts the stories and insights of over forty change-makers both inside and outside the industry, from anti-mining activists to the professionals charged with the task of reform, introducing the people who are moving an industry that moves mountains. The book takes stock of what has worked and what has not, analyzing the relative influence and dynamics of the key corporate, civil society and government actors with a view to developing new approaches for improving environmental and social outcomes from mineral and energy development.

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Published by Taylor & Francis Group

2016 / 178 pages / 2 lbs

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Orebody Modelling and Strategic Mine Planning

Edited by R. Dimitrakopoulos

Orebody Modelling 2014 follows the success of previous symposium proceedings. It reassesses methods and ideas as well as highlights the latest advances, state-of-the-art technologies, practices and concerns in the field.

Internationally-recognized experts discuss and analyze simultaneous global optimization of multiple operations and mining complexes; mineral supply chains; advances in optimization of open pit and underground mine planning; increasing value and productivity in unforgiving markets; strategic innovation and research needs; open pit to underground transition; mine production scheduling, stockpiling and blending; cloud computing and advances in information technologies for optimization; advances in conditional simulation for complex applications and advances and applications in mine optimization.

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Plant Auditing: A Powerful Tool for Improving Metallurgical Plant Performance

By Deepak Malhotra

The word *audit* brings discomfort to many mine managers and owners. But this book shows you how to turn the audit into something positive, desirable, and profitable. Hiring the right audit team and putting its recommendations into practice can lower costs, increase revenues, and boost profits. In some cases, you can add millions of dollars directly into the bottom line. *Plant Auditing* is the first book ever written to show you how to get maximum benefit out of an audit. This comprehensive guide walks you through the complexities of setting up the right kind of audit, the type that will provide you with actionable steps to profitable outcomes. Also included are 20 case studies illustrating real-life problems typically encountered at plants that can be resolved through the audit procedures described in this book.

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Politics of Mining: What They Don't Teach You in School

Edited by Deepak Malhotra

The mining industry presents many challenges, such as the necessity of working in remote locations with unfamiliar cultures; the business of permitting, environmental protection, and sustainable development; the existence and persistence of negative stereotypes about the business; and the sometimes-tricky mechanics of training and transferring technology. In addition, tensions may arise between the competing interests of the various disciplines represented—engineers, attorneys, accountants, and environmentalists often encounter difficulty in speaking a common language. Engineer schooling rarely prepares students for these issues, but *The Politics of Mining* does.

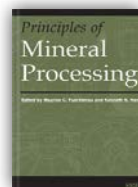
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2001 / 164 pages

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Principles of Mineral Processing

Edited by Maurice C. Fuerstenau and Kenneth N. Han

This reference examines all aspects of mineral processing, from raw materials handling to separation strategies to waste product remediation. The book incorporates developments from the engineering, chemistry, computer science, and environmental science fields and explains how these disciplines contribute to the ultimate goal of economically producing minerals and metals from ores. Chapters cover particle characterization; size reduction and liberation; size separation; movement of solids in liquids; gravity concentration; magnetic and electrostatic separation; flotation; liquid-solid separation; metallurgical balances and efficiency; bulk solids handling; hydrometallurgy and solution kinetics; and mineral processing wastes and their remediation.

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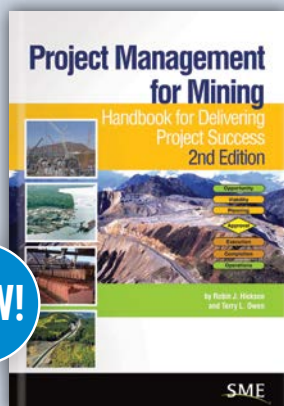
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Project Management for Mining: Handbook for Delivering Project Success, 2nd Edition

By Robin J. Hickson and Terry L. Owen

Opening a successful new mine is a vastly complex undertaking entailing several years and millions to billions of dollars. In today's world, when environmental and labor policies, regulatory compliance, and impact on the community must be factored in, you cannot afford to make a mistake. Written by two hands-on, in-the-trenches mining project managers with decades of experience who bring some of the world's most successful, profitable mines into operation on time, within budget, and ethically, *Project Management for Mining* gives you step-by-step instructions in every process you are likely to encounter.

Beginning with a discussion of mining ethics and governance, this clearly written handbook walks you through all the project management steps—defining the scope, performing prefeasibility and feasibility studies, gaining societal acceptance, minimizing the impact and risks, creating workable schedules and budgets, setting in place the project execution plan, assembling the human resources, hiring the contractors, and establishing project controls—and then on into the delivery of the engineering and design, construction, progress reviews, pre-launch commissioning, and ramping up for operation.

This second edition is a significant accomplishment that includes 5 new chapters, substantial updates to the original 34 chapters, and 56 new or updated figures, flowcharts, and checklists that every project manager can use.

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Proceedings of the 39th International Conference on Ground Control in Mining

Edited by Ted Klemetti, Brijes Mishra, Heather Lawson, Michael Murphy, and Kyle Perry

The International Conference on Ground Control in Mining (ICGCM) has a rich history in advancing ground control techniques and knowledge. It provides a unique platform for researchers, regulators, consultants, manufacturers, and mine operators to present and exchange challenging industry topics as well as to expedite solutions to ground control problems that require immediate attention.

This proceeding from the 39th International Conference is no exception. It includes 37 peer-reviewed research papers from industry experts covering topics of importance for today and the future.

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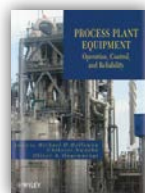
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2020 / 353 pages

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Process Plant Equipment: Operation, Control, and Reliability

Edited by Michael D. Holloway, Chikezie Nwaoha, and Oliver A. Onyewuenyi

With this book as their guide, readers have the information and practical guidelines needed to select, operate, maintain, control, and troubleshoot process plant equipment so that it is efficient, cost-effective, and reliable throughout its lifetime. Following careful explanatory text and instruction, readers will find that they are better able to reduce downtime and unscheduled shutdowns, streamline operations, and maximize the service life of processing equipment.

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2012 / Hardbound / 724 pages / 3 lbs

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Race Against Time: Building a Culture of Mine Safety

By Gregory M. Anderson and Stephen R. Rosene

Everyone agrees—one serious accident is too many.

Race Against Time introduces you to a proven process for eliminating such incidents from mining processes, as well as everyday life. The book demonstrates how each of us impacts safety in the mining industry and how our individual commitment can make a real difference in every miner's life. Easy to read, this accessible book provides a blueprint to building a culture of mine safety. A portion of the proceeds from each book sold is donated to SME by the authors.

Contact customer service for a quote on bulk orders.

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Published by Moody International

2008 / 136 pages / 2 lbs

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Recent Advances in Mineral Processing Plant Design

Edited by Deepak Malhotra, Patrick R. Taylor, Erik Spiller, and Marc LeVier

A compilation of engaging and insightful papers from the prestigious 2009 plant design conference, this volume is a sequel to *Mineral Processing Plant Design, Practice, and*

Control, an industry standard published in 2002. Both books are essential for university-led instruction and valuable guides for operators considering new construction, plant renovation, or plant expansion.

You will learn about the role of innovation, how to finance and conduct feasibility studies, and how to reduce your plant's carbon footprint. The book also includes extensive discussions on the latest advances in flotation, extractive metallurgy, crushing and grinding, separation processes, and process developments. Case studies and plenary speakers highlight which process design concepts work well and which do not.

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2009 / Hardbound / 592 pages / 4 lbs / ISBN: 978-0-87335-316-8
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Regulatory Governance and Risk Management: Occupational Health and Safety in the Coal Mining Industry

By Binglin Yang

Regulatory Governance and Risk Management is the first book that addresses the diffusion of risk-based governance in the coal mining industry from a health and safety standpoint. Using a diffusion approach and comparisons between Australia and the United States, this book examines mechanisms that both drive and prevent the diffusion of risk-based governance in the coal mining industry.

This is a timely work given the Upper Big Branch coal mine explosion of April 2010. After this disaster, many asked why an enhanced level of enforcement has not prevented catastrophic accidents from occurring and why risk-based governance, which helps other countries achieve better safety performance, has not been practiced in the United States. This book answers these questions and makes recommendations on how to remove barriers in moving toward risk-based governance.

LAST CHANCE – FINAL SALE \$69

Published by Routledge, an imprint of Taylor & Francis Group
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Remote Sensing of the Mine Environment

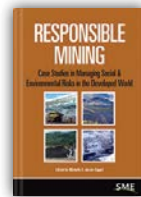
By Sebnem Duzgun and Nuray Demirel

A guide for students and professionals, *Remote Sensing of the Mine Environment* covers the basic principles of remote sensing and its applications in mine environment monitoring. Following a general introduction to remote

sensing principles and image analysis, the book covers mine subsidence monitoring, slope stability monitoring, reclamation planning and implementation, and post-closure mine and land use analysis. The techniques and tools presented are demonstrated in case studies.

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Responsible Mining: Case Studies in Managing Social and Environmental Risks in the Developed World

Edited by Michelle E. Jarvie-Eggart

Responsible Mining is your comprehensive guide to addressing social and environmental risks at mines in the developed world.

This book gathers case studies of best practices across the full range of issues. With examples from four continents, you can learn from both your home territory and around the world. Seventy-two leading mine engineers, forestry scientists, conservationists, environmental consultants, sustainability professionals, and geologists from prominent universities, extraction businesses, nongovernmental organizations, and governments have come together within these pages to lead you safely and profitably toward socially, environmentally, and economically beneficial mining practices.

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Rise to the Occasion: Lessons from the Bingham Canyon Manefay Slide

By Brad Ross

Rise to the Occasion tells the dramatic story of the men and women who safely led Utah's 107-year-old Bingham Canyon Mine through the largest mining highwall failure in history.

The Manefay failure resulted in 144.4 million tons of rock plummeting more than 2,000 feet and traveling 1.5 miles within 90 seconds—without a single death or injury. The story is told through the eyes of an insider, as the author was brought into the mine just six short weeks before the failure and was a key member of the management team. It's a story only he can tell.

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2017 / 244 pages / 2 lbs / ISBN: 978-0-87335-431-8

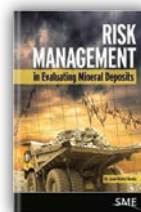
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Risk Management in Evaluating Mineral Deposits

By Jean-Michel Rendu

Mining is not for the fainthearted. Yes, the rewards are enormous. But so are the risks—and consequences—of failure. *Risk Management in Evaluating Mineral Deposits* walks you through the many-faceted risk evaluation you need to conduct before you invest your hard-earned dollars.

Written by a mining professional with a strong background in technical and financial studies, risk assessment, and statistics, this book provides a detailed suite of tools so you can determine whether investing in a mining project makes sense for you. Looking at a host of issues—the composition of the ore deposit, the management's previous record, the quality of the information at hand, and your own risk-tolerance comfort level, to name a few—author Jean-Michel Rendu provides a comprehensive guide to determine when to invest with high confidence, when to demand a plan that reduces the risks and increases the chances of a positive outcome, and when to just walk away.

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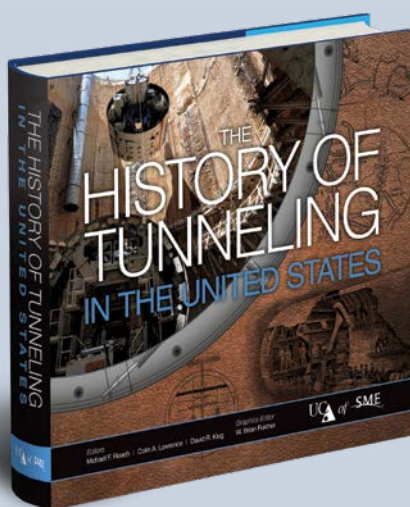
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Tunneling and Underground Construction Collection

Covering a wide variety of industry-specific subjects, these books are written especially for the underground construction professional to deepen knowledge and expertise in this ever-changing field.



The History of Tunneling in the United States

**Edited by Michael F. Roach,
Colin A. Lawrence, and David R. Klug**
Graphics Editor: W. Brian Fulcher

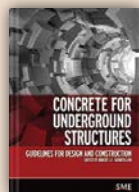
Imagine Washington, D.C., without its clean and efficient Metro. Or New York City without the Lincoln and Holland tunnels. Or Boston without the Big Dig. This nation without its tunnels would be a quagmire of clogged streets, urban gridlock, massive sewage and water pipes along our sidewalks, and train routes that would take hours longer just to veer around a mountain instead of going straight through it. Unlivable.

Tunnels have been built for 200 years to solve some of society's most pressing and dangerous problems. And yet the public rarely understands the complexity of boring through the Earth under urban skyscrapers or the danger of burrowing under rivers, lakes, and oceans. This smartly told, beautifully illustrated book, by the construction experts who know the underground world better than anyone, gives tunnels their long-deserved due.

This is a story that can only be told by these industry experts who have studied that two-century journey, learned from it, and created the tools and technology needed to improve it. That is what the Underground Construction Association delivers with its beautifully told, richly illustrated book, *The History of Tunneling in the United States*, which includes a collection of museum-worthy historical photos.

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Concrete for Underground Structures

Edited by Robert J.F. Goodfellow

This practical nuts-and-bolts handbook provides an industry voice as well as recommendations for areas of concrete application. You will get valuable insights into current best practices for all aspects of the design and construction of underground structural concrete. Internationally respected authors examine three key applications: cast-in-place concrete, precast concrete segmental linings, and shotcrete. The various types of concrete admixtures are discussed, and sample specifications for each are included.

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Design-Build Subsurface Projects, 2nd edition

**Edited by Gary S. Brierley, David H. Corkum,
and David J. Hatem**

With its opportunities for cost containment and substantial risk transfer, design-build is increasingly becoming the delivery method of choice for owners with challenging funding limitations. But deciding to use the design-build system for underground projects is one thing; successfully implementing it is quite another. *Design-Build Subsurface Projects* can bridge that gap. This cutting-edge book provides a straightforward, comprehensive look at how to make design-build work on complicated projects involving tunnels, highways, dams, and deep foundations. The authors represent a "who's who" of subsurface construction experts. Drawing on their wealth of practical experience, they spell out a list of common sense best practices that can be used by today's project owners and designers.

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2010 / 228 pages / 3 lbs / ISBN: 978-0-87335-321-2

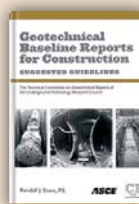
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Geotechnical Baseline Reports for Construction: Suggested Guidelines

By Randall J. Essex

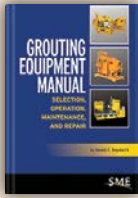
Geotechnical Baseline Reports for Construction examines the role of the geotechnical baseline report (GBR) as a means of allocating and managing the risks associated with subsurface construction. The guidelines identify the rationale for using GBRs as risk-management tools, the organization and content of a GBR, and the importance and benefit of ensuring compatibility between the GBR and other contract documents. The book also addresses owners' perspectives and the importance of involving experienced professionals in GBR preparation and review.

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Published by the American Society of Civil Engineers

2007 / 72 pages / 1 lb

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Grouting Equipment Manual: Selection, Operation, Maintenance, and Repair

By Donald C. Hegebarth

Grouting Equipment Manual introduces various types of equipment employed in pressure grouting applications performed in geotechnical works and examines the operating principles and maintenance issues relative to each equipment type. Pressure grouting encompasses a wide variety of applications and operations, including dam foundation grouting, soil stabilization and permeation, consolidation and compaction grouting (except low mobility), water cutoff and structural stabilization in rock tunnels, deep foundations via drilled piers, underwater concrete, structural concrete repairs, raising of settled slabs and structures, rock and soil anchors, and machine foundations and bases. The applications for pressure grouting operations are almost limitless, as the equipment can be employed anywhere fluid grout can be used.

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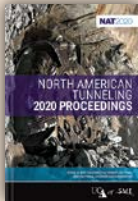
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North American Tunneling: 2020 Proceedings

Edited by Brett Campbell, Paul Madsen, Jim Rush, Matthew Preedy, and Dawn Dobson Markman

The 2020 proceedings deliver the knowledge and technical detail you are in search of. Crafted from a collection of 87 papers written by experts and leaders in the industry who share their expertise, real-world applications, and "lessons learned" from around the globe, this book takes you deep inside today's projects. It includes challenging design issues, fresh approach on performance, future projects, and industry trends as well as ground movement and support, structure analysis, risk and cost management, rock tunnels, caverns and shafts, TBM technology, and water and wastewater conveyance.

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Rapid Excavation and Tunneling Conference: 2021 Proceedings

Edited by Jarrett E. Carlson and Gregg W. Davidson

Every two years, industry leaders and practitioners from around the world gather at the Rapid Excavation and Tunneling Conference (RETC), the authoritative program for the tunneling profession, to learn about the most recent advances and breakthroughs in this unique field. The information presented helps professionals keep pace with the every-changing and growing tunneling industry. This book includes the full text of 106 papers presented at the 2021 conference. Though the tunneling industry continues to develop both technically and contractually, one notable adaptation of the last two years has been the onset and management of COVID-19. The hallmarks of tunneling professionals include adaptability, resiliency, optimism, and management of change.

Contact customer service to purchase proceedings from previous RETC conferences.

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Recommended Contract Practices for Underground Construction, 2nd Edition

Edited by Sarah H. Wilson

Recommended Contract Practices for Underground Construction is a valued resource for the underground industry, serving as a concise guide for drafting and implementation of contract provisions. The recommendations contained in this edition are intended to guide owners and their engineers in developing and administering contracts and to give contractors a better understanding of the rationale behind contract provisions. The goal is that more underground projects in this country can be best projects, where improved relationships and fair contracts enable all project participants to personally invest in cost-effective, profitable projects, ensuring the continued health of the underground industry.

MEMBERS SAVE \$50

2019 / 232 pages / 3 lbs / ISBN 978-0-87335-459-2

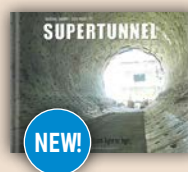
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Supertunnel: Journey from Light to Light

By Catherine Bassetti

This book is a look backstage at an incredible show of engineering. Discover the complete story of the building of the Seattle State Route 99 tunnel, as told by project managers, planners, civic leaders, key contractors, labor unions, and crew members. This full color hardcover publication covers a five-year period (2014–2019) of this engineering megaproject that broke records and defied odds in the underground tunneling industry. Photographed in all its phases, the book illustrates six work zones, events, and milestones. It celebrates "Bertha", the largest tunnel boring machine in the world at the time, and the Alaskan Way Viaduct which the tunnel replaced.

MEMBERS SAVE \$60

Published by Catherine Bassetti

2020 / Hardbound / 190 pages / 4 lbs

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Technology Innovation in Underground Construction

Edited by Gernot Beer

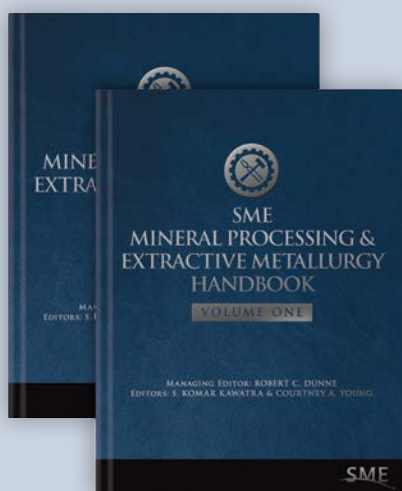
Technology Innovation in Underground Construction presents technological innovations in underground design, construction, and operation and comprehensively discusses novelties in ground improvement, simulation, process integration, safety, monitoring, environmental impact, equipment, boring and cutting, personnel training, materials, robotics, and more. The innovations presented result from a large research project involving many players in the field and aimed at advancing underground engineering.

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Managing Editor: Robert C. Dunne
Edited by S. Komar Kawatra and Courtney A. Young

This landmark publication distills the body of knowledge that characterizes mineral processing and extractive metallurgy as disciplinary fields. It will inspire and inform current and future generations of minerals and metallurgy professionals.

Mineral processing and extractive metallurgy are atypical disciplines, requiring a combination of knowledge, experience, and art. Investing in this trove of valuable information is a must for all those involved in the industry—students, engineers, mill managers, and operators.

More than 192 internationally recognized experts have contributed to the handbook's 128 thought-provoking chapters that examine nearly every aspect of mineral processing and extractive metallurgy. This inclusive reference addresses the magnitude of traditional industry topics and also addresses the new technologies and cultural and social issues that are important today.

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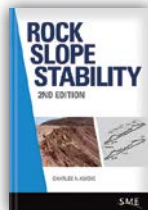
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By Charles A. Kliche

Rock Slope Stability is a comprehensive guide for mining construction engineers responsible for rock slope stability. This book focuses on rock slope stability, with sections of geological data collection, geotechnical data collection and analysis, surface water and groundwater effects, kinematic and kinetic stability analysis, rock slope stabilization techniques, and rock slope instrumentation and monitoring. Because of the discontinuous nature of rock, the design of stable rock slopes is as much an art as it is applied engineering. Experience can only be achieved from the proper utilization of the theories of soil and rock mechanics, structural geology, and hydrology.

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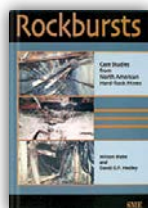
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By Wilson Blake and David G.F. Hedley

Rockbursts pose a significant and growing threat to mines—and miners—throughout North America. High stress on brittle rock structures during mining operations can produce sudden, explosive reactions that result in costly mine failures, serious injury, and even death. Through a series of case studies, this book documents the experiences of 15 of the most rockburst-prone mines in the United States and Canada over the last century. The book provides a historical analysis of rockburst activity along with state-of-the-art strategies for anticipating and preventing this dangerous and disruptive phenomenon.

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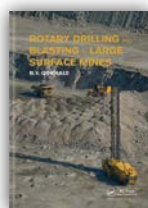
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By Bhalchandra V. Gokhale

In large surface mining operations, drilling and blasting activities constitute more than 15% of the total costs. In order to optimize performance and minimize costs, a thorough knowledge of drill and blast operations is, therefore, extremely important. In this unique reference volume, rotary blasthole drilling and surface blasting, as applied in large surface mines, are comprehensively covered. Both new and classic concepts, techniques and methodologies are presented, supported by numerous illustrations and practical data. In 26 chapters, drilling, surface blasting, rock, rock mass, machinery, tools and accessories, compressors and air flushing, computing and practice are many other relevant subjects are treated.

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Separation Technologies for Minerals, Coal, and Earth Resources

Edited by Courtney A. Young and Gerald H. Luttrell

Separation Technologies for Minerals, Coal, and Earth Resources is an authoritative digest of the latest developments in the mineral processing industry. Dozens of authors share their insights on how practitioners can develop earth resources more economically while simultaneously addressing vital factors ranging from sustainability to environmental stewardship. The book examines coal processing, surface forces and hydrophobicity, process improvements and environmental controls, dewatering and drying, gravity separation, industrial minerals flotation, base metal flotation, flotation equipment and practice, process reagents, magnetic and electrostatic separation, modeling and process control, and resource engineering. Important current issues such as gas hydrates, oil sands, secondary materials, metals and waste, and process waters are also discussed.

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Edited by William A. Hustrulid, Michael K. McCarter, and Dirk J.A. Van Zyl

So far, the 21st century has seen mines more than 1,100 meters deep; waste rock embankments 600 meters tall; tailings dams 200 meters high; and heap leach facilities have topped 150 meters. The push toward higher, deeper, and steeper,

combined with the use of larger and more productive equipment, continues to test our tools and capabilities.

Slope Stability in Surface Mining documents the progressive rise in technical understanding and sophistication in the field. Only by continuously collecting and exchanging information can design concepts, construction methods, monitoring strategies, and reclamation practices keep pace with the times. This text creates a common platform on which to base correct, economical, and safe slope design and construction decisions.

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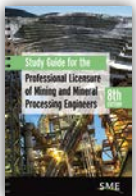
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Prepare for your exam with this new study guide. This handy workbook lets you know what to expect and provides the opportunity to practice your test-taking skills. The text

covers what licensing can do for you, outlines the engineering licensure process, highlights the steps to licensure, summarizes the application process, and provides test-taking strategies specific to the PE exam. The text also includes a chapter on ethics for professional engineers and details the rules of professional conduct from the National Council of Examiners for Engineering and Surveying (NCEES). Perhaps the most useful element is a sample test, including the solutions, that is similar in content and format to the actual Principles and Practice of Engineering licensure exam.

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This third edition of the *SME Mining Engineering Handbook* reaffirms its international reputation as "the handbook of choice" for today's practicing mining engineer. It distills the body of knowledge that characterizes mining engineering as a disciplinary field and has subsequently helped to inspire and inform generations of mining professionals.

More than 250 internationally recognized experts have contributed to this completely revised edition. The handbook's 115 thought-provoking chapters examine nearly every aspect of mining, including market economics, exploration, deposit assessment, management and administration, method selection, rock breaking, ground mechanics, infrastructure and services, surface extraction, hydraulic and pipeline mining, underground development and extraction, mineral processing, and health and safety, as well as environmental, community, and social issues.

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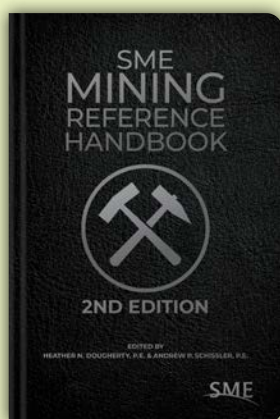
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SME Mining Reference Handbook, 2nd edition

**Edited by Heather N. Dougherty, P.E.
and Andrew P. Schissler, P.E.**

The *SME Mining Reference Handbook* was the first concise reference published in the mining field and it quickly became the industry standard. It sits on almost every mining engineer's desk or bookshelf with worn pages, tabs to find most used equations, and personal notes. It has been the unequalled single reference and the first source of information for countless engineers.

This second edition of the *SME Mining Reference Handbook* builds on that success. With an enhanced presentation, new and updated information is represented in a concise, well-organized guide of important data for everyday use by engineers and other professionals engaged in mining, exploration, mineral processing, and environmental compliance and reclamation.

With its exhaustive trove of charts, graphs, tables, equations, and guidelines, the handbook is the essential technical reference for mobile mining professionals.

The *SME Mining Reference Handbook* will continue to be used by engineers for their daily work, but also for the advancement of their careers. It now becomes the single-source reference for the Professional Licensure of Mining and Mineral Processing Engineers.

One of the strengths of this edition is the tremendous wealth of talent that has contributed to this publication. These contributors include authors and subject matter experts, as well as technical reviewers. It literally represents a who's who of industry experts, each prominent in one or more specific area(s) of technical expertise.

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This classic is a reference book for the working engineer and a textbook for the mining student. It presents a brief history of surface mining and a general overview of the state of surface mining.

Topics range from production and productivity to technological developments and equipment trends. *Surface Mining* adopts the approach that exploration and mining geologists must become experts in a number of fields, including basic finance and economics, logistics, and pragmatic prospecting.

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Edited by J.A. Botin

The pressure is on to enhance corporate reputations, achieve higher operational efficiency, improve planning and control, gain access to mineral resources, build trust with stakeholders, attract financing, recruit and retain a quality work force, and lower costs. *Sustainable Management of Mining Operations* provides a holistic, practical approach to achieving these goals. The key, say the authors, is to foster an organizational culture that recognizes the value of sustainability by effectively integrating economic, environmental, and social considerations.

Each section of this book focuses on sustainable management from a different perspective, management level, or stage in a mine's life cycle. You'll benefit from the real-life, practical insights of 27 internationally respected authors whose job titles range from CEO to master mechanic.

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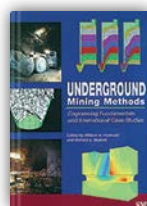
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Underground Mining Methods: Engineering Fundamentals and International Case Studies

Edited by William A. Hustrulid and Richard L. Bullock

Just as Agricola documented the business of mining as practiced in his time, *Underground Mining Methods: Engineering Fundamentals and International Case Studies* presents the principles and techniques in use today. Reflecting the international and diverse nature of the industry, a series of mining case studies is presented covering the commodity range from iron ore to diamonds extracted by operations located in all corners of the world. This book has indeed become a standard for practicing mining engineers and students alike.

Industry experts have contributed sections on general mine design considerations, room-and-pillar mining of hard rock, room-and-pillar mining of soft rock, long-wall mining of hard rock, shrinkage stope, sublevel stope, cut-and-fill mining, sublevel caving, panel caving, foundations for design, and underground mining looks to the future.

LAST CHANCE – FINAL SALE \$59

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Tailings Management Handbook: A Life-Cycle Approach

Edited by Kimberly Finke Morrison

As long as we have mining and mineral processing, tailings and the responsible management thereof will remain at the forefront, with a company's environmental, social, and governance performance in part a reflection of how well tailings risks are being managed.

The Global Industry Standard on Tailings Management (GISTM) was published in August 2020, aiming to prevent catastrophic failure of tailings facilities by providing operators with specified measures and approaches throughout the mine life cycle, taking into account multiple stakeholder perspectives. In 2021, the International Council on Mining & Metals (ICMM) published the *Tailings Management: Good Practice Guide* intended to support safe, responsible management of tailings across the global mining industry, providing guidance on good governance and engineering practices to support continual improvement in tailings storage facility (TSF) management and help foster and strengthen the safety culture of mining companies.

The *Tailings Management Handbook* is important and timely because there is no other comprehensive resource rooted in these new fundamentals and global principles for tailings management. Tailings management requires interdisciplinary and cross-functional understanding and support, which is apparent throughout this handbook.

Dive into the wealth of information contributed by more than 100 world-renowned experts, beautifully crafted into a full-color handbook that focuses on the basics, life-cycle planning, site and tailings characterization, TSF design and construction, as well as systems and operations of TSFs. The inclusion of 42 case studies is an added plus with real-world successes and lessons learned.

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Underwater Tailing Placement at Island Copper Mine: A Success Story

By George W. Poling, Derek V. Ellis, James W. Murray,
Timothy R. Parsons, and Clem A. Pelletier

This book documents the use of deep-sea tailing placement at the Island Copper Mine on Canada's Vancouver Island, providing the most extensive study on underwater tailing placement ever conducted. Over the course of 30 years, more than 400 million tons of tailing solids were deposited on the ocean floor with minimal environmental impact.

The study evaluates the relevant issues associated with the implementation of a deep-sea tailing placement program, including engineering, chemical, biological, and environmental considerations.

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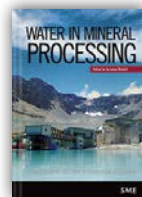
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Water in Mineral Processing

Edited by Jaroslaw Drelich

One of the major challenges confronting the mining and minerals processing industry in the 21st century will be managing in an environment of ever decreasing water resources. Because most mineral processing requires high water use, there will be even more urgency to develop and

employ sustainable technologies that will reduce consumption and the discharge of process-affected water.

Water in Mineral Processing provides a comprehensive, state-of-the-art examination of this vital issue. A compilation of papers presented at the First International Symposium on Water in Mineral Processing, this book shares the insights of dozens of respected experts from industry and academia.

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The World of Mining

By Richard Woldendorp, Jim Wark,
Karlheinz Spitz, and John Trudinger

In this truly unique celebration of mining, breathtaking aerial photographs by award-winning photographers Jim Wark and Richard Woldendorp accompany ground-level pictures of mines, mine-site oddities, and mine communities. Informed but breezy narratives by mining experts John Trudinger and Karlheinz Spitz identify and explain the images.

The World of Mining shows that mining and associated activities can be impressive, attractive, and even spectacular. The book illustrates most, if not all, aspects of mining and mineral processing, in all its varieties, and from different environments throughout the world. It illustrates the colorful history of mining and its importance to the development of civilization as we know it. It depicts the wide range of activities in modern mining, from exploration to mine closure, as well as traditional mining by skilled practitioners using methods adapted to local conditions.

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Email: eurospan@turpin-distribution.com

Bank Transfers

JP Morgan Chase Bank, N.A.
2696 S. Colorado Blvd.
Denver, Colorado 80222 USA

Bank Contact: Jessica Loscalzo 813-300-3921
Account Name: Society for Mining, Metallurgy & Exploration
ABA Routing Number: 102001017
Account Number: 619661221
Swift Code: CHASUS33

