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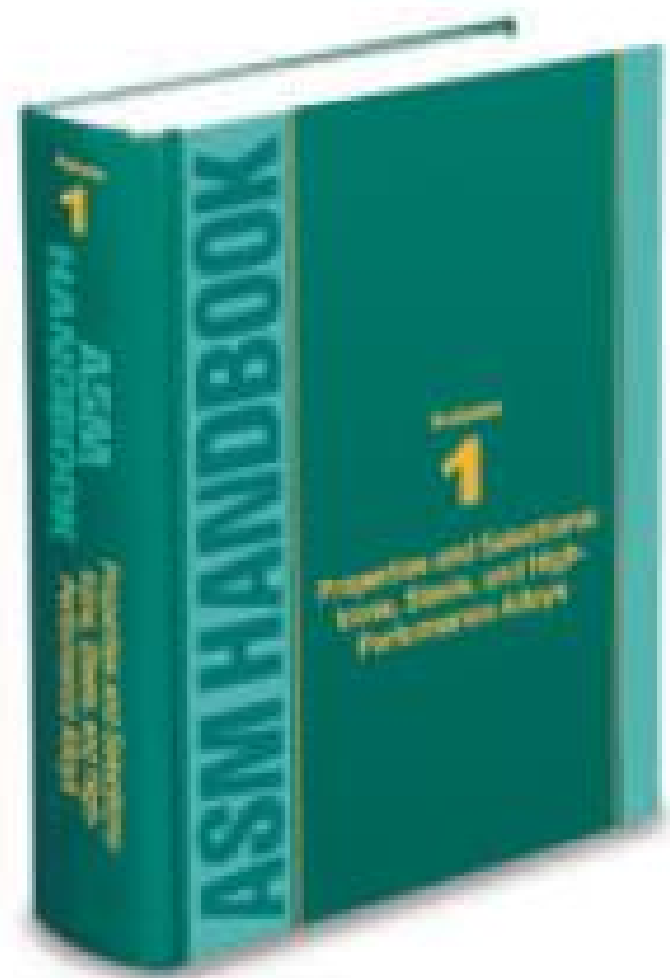
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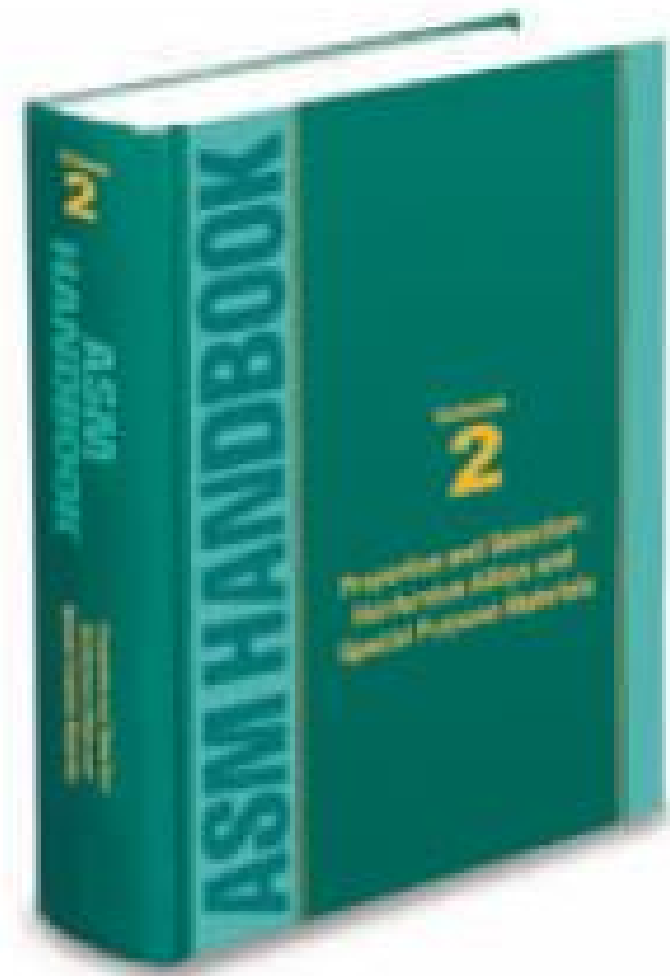
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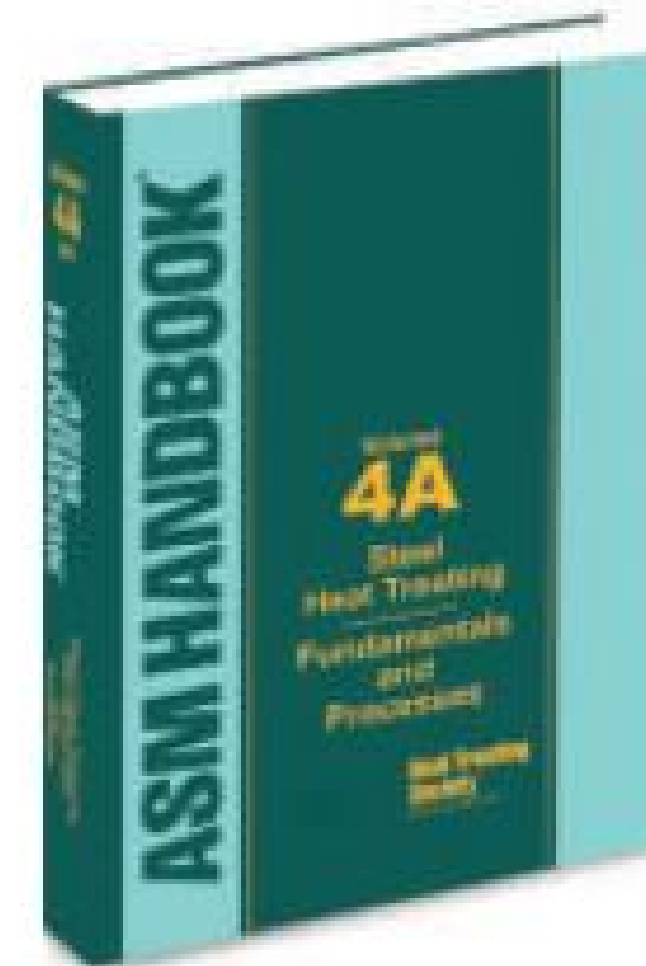
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World's best reference guide to heat treating and surface hardening of steel, heat treating equipment, process and QC considerations, plus heat treating of cast irons, stainless steels, heat-resistant alloys, tool steels and nonferrous alloys.



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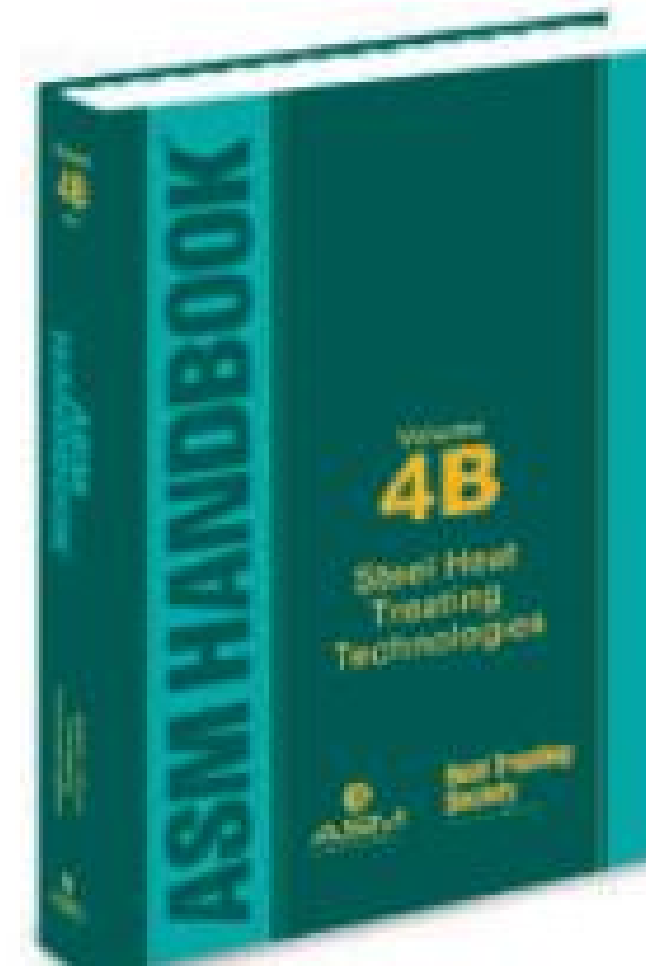
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This volume addresses the basics of steel heat treating and thoroughly covers the many steel heat treating processes. Major topics include: the physical metallurgy of steel heat treatment, fundamentals and practical aspects of steel hardness and hardenability, quenching, annealing, tempering, austempering, and martempering. The volume provides greatly expanded treatment of surface hardening by applied energy, carburizing, carbonitriding, nitriding, and diffusion coatings.



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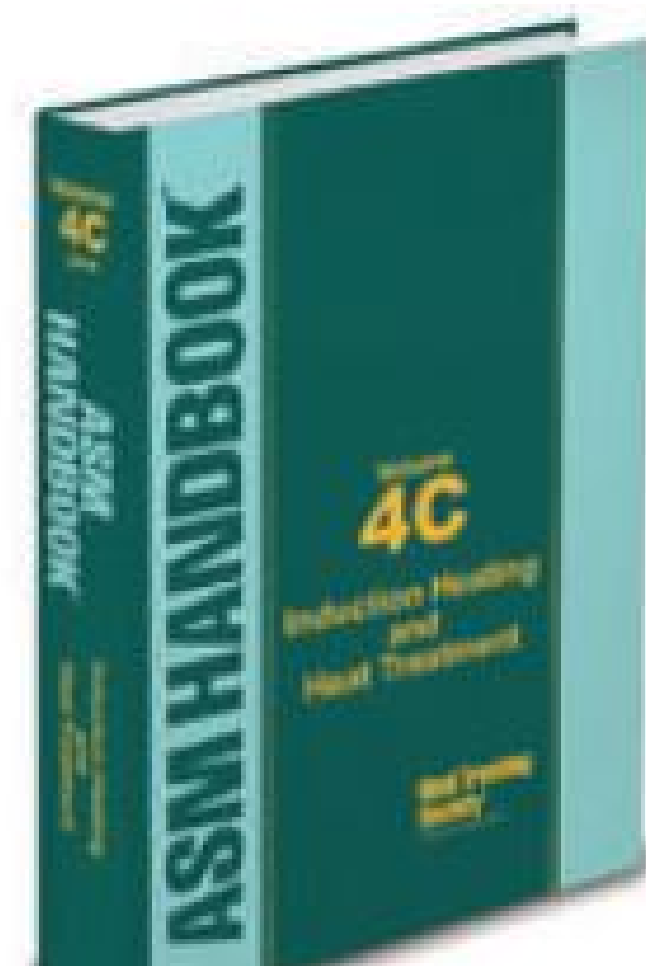
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Volume 4B expands coverage on equipment, control, troubleshooting, and problems associated with steel heat treating. New articles extensively address distortion and the prevention of cracking – including the modeling and simulation of distortion. General process and procedure factors also are introduced—including temperature uniformity of furnaces, calculation of heat treating costs, decarburization, and more.



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Edited by Valery Rudnev and George E. Totten

2014 • 820 pages

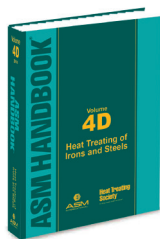
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Volume 4D: Heat Treating of Irons and Steels

Edited by Jon L. Dossett and George E. Totten
2014 • 730 pages
ISBN: 978-1-62708-066-8
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Packed with information and knowledge for anyone who uses or works with heat treated steels or cast irons. Written and reviewed by recognized authorities, this new handbook gives you in-depth articles with details on the processing and properties for all significant applications and types of heat treated ferrous alloys. New content includes not only updates on new alloys, but also expanded coverage on the effects of heat treating on the properties for more carbon and low-alloy steels, tool steels, stainless steels, and other high-alloy grades.



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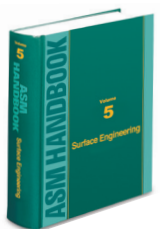
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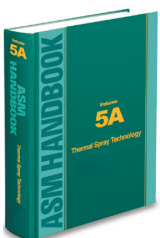
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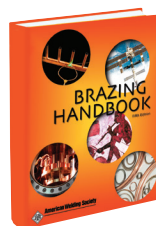
Edited by Robert C. Tucker, Jr.
2013 • 412 pages
ISBN: 978-1-61503-996-8
Product Code: 05348G

Price: \$297 / ASM Member: \$225

Co-published by the Thermal Spray Society and ASM International. Replaces the *Handbook of Thermal Spray Technology*, edited by J.R. Davis

(2004). Covers principles, processes, types of coatings, applications, performance, and testing/analysis. An excellent introduction and guidebook for those new to thermal spray.

Expanded selection of applications includes electronics and semiconductors, automotive, energy, and biomedical. Prominent thermal spray markets such as aerospace and industrial gas turbines, and areas of growth such as advanced thermal barrier materials are also reviewed.



Brazing Handbook Fifth Edition

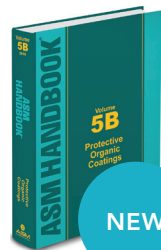
American Welding Society
2007 • 704 pages
ISBN: 0-87171-046-8
Product Code: 05336G

Price: \$144 / ASM Member: \$115

By agreement between the American Welding Society C3 Committee on Brazing and Soldering and the ASM Handbook Committee, the AWS

Brazing Handbook has been formally adopted as part of the ASM Handbook series, and is significantly updated and expanded.

A comprehensive, organized survey of the basics of brazing, processes, and applications. Fundamentals of brazing, brazement design, brazing filler metals and fluxes, safety, and health. New chapters on induction and diamond brazing.



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Edited by Kenneth B. Tator
2015 • 545 pages
ISBN: 978-1-62708-081-1
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Price: \$297 / ASM Member: \$225

This completely new volume addresses a need for comprehensive information on organic coatings, including coating materials, surface preparation, application processes, industrial uses, and coating

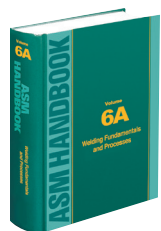
evaluation and analysis methods. This volume is essential for industrial coating users, specifiers, and contractors. The content in this volume has been written and reviewed by leading industry experts, making this latest ASM Handbook the definitive resource on this important topic. Plus, Volume 5B is the first volume in the ASM Handbook series to be printed in full color.

Volume 6: Welding, Brazing and Soldering

Edited by D.L. Olson, T.A. Siewert, S. Liu, and G.R. Edwards
1993 • 1299 pages
ISBN: 978-0-87170-382-8
Product Code: 06480G

Price: \$297 / ASM Member: \$225

Practical advice on consumable selection and procedure development, as well as joining fundamentals, processes, assemblies and selection. More than 500 illustrations and 400 tables.



Volume 6A: Welding Fundamentals and Processes

Edited by T. Lienert, T. Siewert, S. Babu, and V. Acoff
2011 • 936 pages
ISBN: 978-1-61503-133-7
Product Code: 05264G

Price: \$297 / ASM Member: \$225

A focused revision of the welding process information in Volume 6: *Welding, Brazing and Soldering* (1993).

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Edited by Prasan K. Samal and Joseph W. Newkirk
 2015 • 907 pages
 ISBN: 978-1-62708-089-3
 Product Code: 05438G

Price: \$297 / ASM Member: \$225

The updated and revised volume covers all aspects of powder metallurgy – including powder production and characterization, powder compaction, sintering, and compaction methods – and features new coverage of metal injection molding. Extensive coverage is provided of ferrous and nonferrous powder metallurgy materials. The new handbook format simplifies understanding of process and property relationships by treating each metal/alloy family in individual divisions.



Volume 8: Mechanical Testing and Evaluation

Edited by H. Kuhn and D. Medlin
 2000 • 998 pages
 ISBN: 978-0-87170-389-7
 Product Code: 06772G

Price: \$297 / ASM Member: \$225

Mechanical properties and testing of metals, plastics, ceramics, and composites. Comparative mechanical properties and characteristics of materials included throughout. References to ISO, ASTM, DIN, EN, JIS and other standards.

Volume 9: Metallography and Microstructures

Edited by G.F. Vander Voort
 2004 • 1184 pages
 ISBN: 978-0-87170-706-2
 Product Code: 06044G

Price: \$297 / ASM Member: \$225

Recommended for anyone who specifies, performs, monitors, evaluates, or uses metallurgical analysis for production QC,

research, or educational training. Important updates reflecting the substantial changes in automation, equipment, consumable products and preparation methodology, as well as new metals, alloys and manufacturing technologies that have emerged since 1985.



Volume 10: Materials Characterization

1986 • 761 pages
 ISBN: 978-0-87170-016-2
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Price: \$297 / ASM Member: \$225

An easy-to-understand reference on modern analytical techniques. More than 950 illustrations and 95 tables emphasize the practical rather than theoretical. Most common applications and limitations of each method.

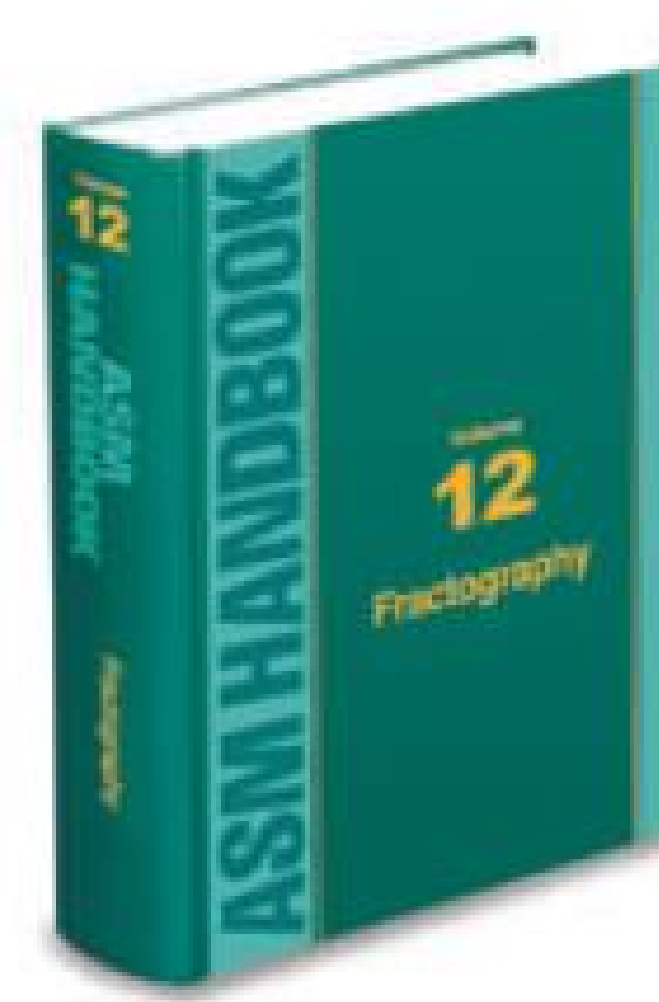
Volume 11: Failure Analysis and Prevention

Edited by R.J. Shipley and W.T. Becker
 2002 • 1164 pages
 ISBN: 978-0-87170-704-8
 Product Code: 06072G

Price: \$297 / ASM Member: \$225

General engineering aspects of failure prevention and fundamental root causes,

materials selection, and role of design reviews. Features failures related to metals manufacturing operations and the increasingly important role of life assessment methods in failure prevention. Learn the failure analysis process, principles, practices, tools, and techniques used to perform and evaluate failure analysis work and the causes, mechanisms, appearances, and prevention methodology for the four classic types of failure.



Volume 12: Fractography

1987 • 517 pages
 ISBN: 978-0-87170-018-6
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Over 1,900 illustrations and fractographs, along with 41 tables, provide engineers with enhanced capability for recognizing and interpreting the various features of a fracture. Supplemental illustrations of failed metal-matrix composites, resin-matrix composites, polymers, and electronic materials.



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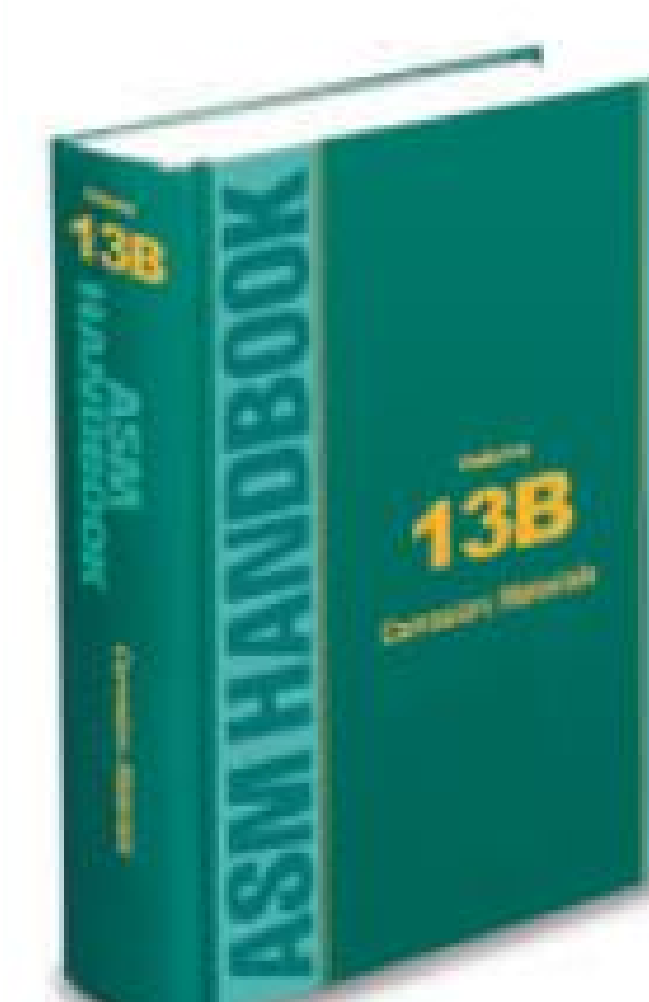


Volume 13A: Corrosion: Fundamentals, Testing, and Protection

Edited by Stephen D. Cramer and Bernard S. Covino, Jr.
 2003 • 1135 pages
 ISBN: 978-0-87170-705-5
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Price: \$297 / ASM Member: \$225

Every article from the 1987 edition has been reviewed, revised, expanded, and updated. Six major sections: Fundamentals of Corrosion, Forms of Corrosion, Corrosion Testing and Evaluation, Methods of Corrosion Protection, Designing for Corrosion Control, and Prevention Tools for the Corrosionist.



Volume 13B: Corrosion: Materials

Edited by Stephen D. Cramer and Bernard S. Covino, Jr.
 2005 • 703 pages
 ISBN: 978-0-87170-707-9
 Product Code: 06508G

Price: \$297 / ASM Member: \$225

48 peer-reviewed articles on how ferrous metals, nonferrous metals, and nonmetals are affected by various elements. Covers: processed materials, including thermal spray coatings, electroplated materials, and clad metals; special products, such as amorphous materials, intermetallics, and metal matrix composites; and nonmetallics, including ceramics, concrete, coatings, composites, and elastomers. Features article on global cost of corrosion and full-color gallery of corrosion damage.

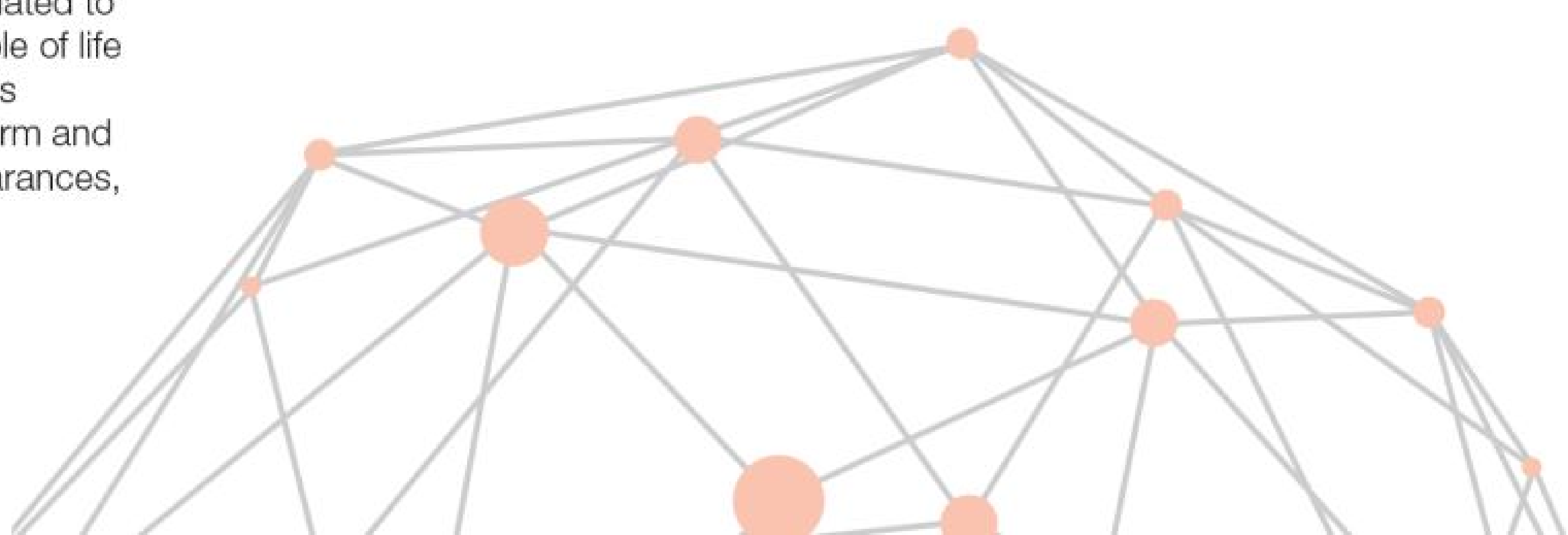


Volume 13C: Corrosion: Environments and Industries

Edited by Stephen D. Cramer and Bernard S. Covino, Jr.
 2006 • 1168 pages
 ISBN: 978-0-87170-709-3
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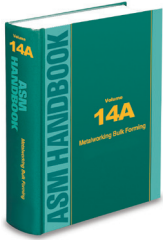
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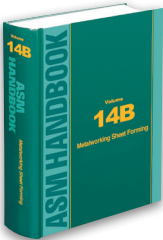
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Edited by S.L. Semiatin

2005 • 888 pages
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For manufacturing, materials, and design engineers. Covers the process-design relationships needed to select and control metalworking operations that produce shapes from forging, extrusion, drawing, and rolling methods.



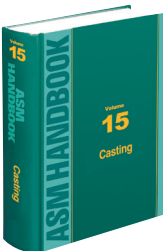
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Edited by S.L. Semiatin

2006 • 940 pages
ISBN: 978-0-87170-710-9
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For product and production engineers. Methods of sheet metal fabrication technologies, selection of equipment and die materials, specification of forming practices for specific alloys, and new techniques for process design and control.



Volume 15: Casting

S. Viswanathan, Editorial Chair; D. Apelian, R. DasGupta, M. Gwyn, J.L. Jorstad, R.W. Monroe, T.E. Prucha, M. Sahoo, E.S. Szekeres, and D. Twarog

2008 • 1256 pages
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Molten metal processing, solidification behavior, modeling, molding, foundry practice, and casting properties. Basic steps and equipment are described for casting processes, along with their advantages, limitations, and applications.

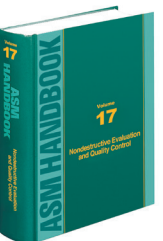


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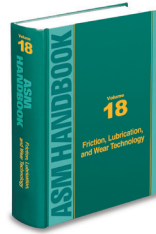


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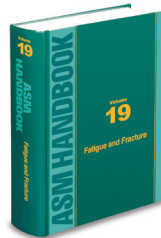


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Edited by P.J. Blau
1992 • 942 pages
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A guide to the basic concepts, methods of lab testing and analysis, materials selection, and field diagnosis of friction, lubrication, and wear problems. Provides the tools needed to understand the tribological behavior of materials and solve problems on the job.

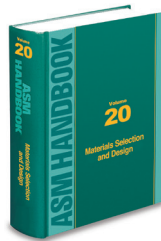


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Especially valuable in evaluating test data and knowing the key variables that affect results. Gain a better understanding of fracture mechanics to aid in life assessment and life extension of components.

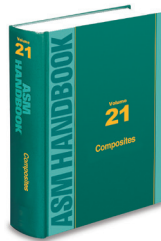


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Edited by G.E. Dieter
1997 • 901 pages
ISBN: 978-0-87170-386-6
Product Code: 06481G

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Contributions from more than 100 experts involved with design, materials selection, and manufacturing. Covers metals, ceramics, polymers, and composites and provides case histories and examples.



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2001 • 1201 pages
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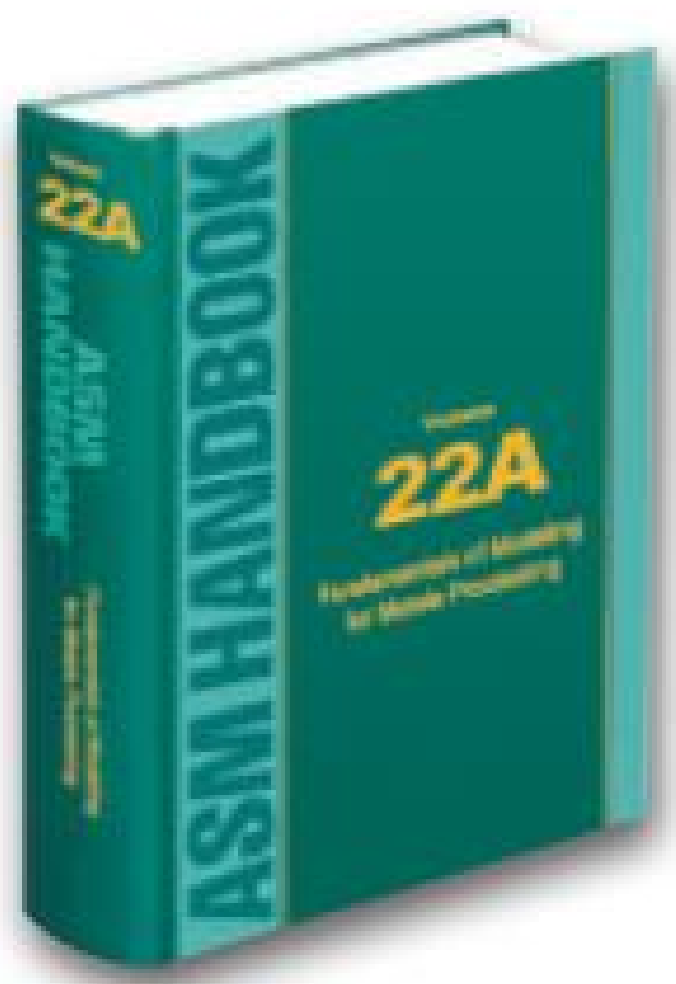
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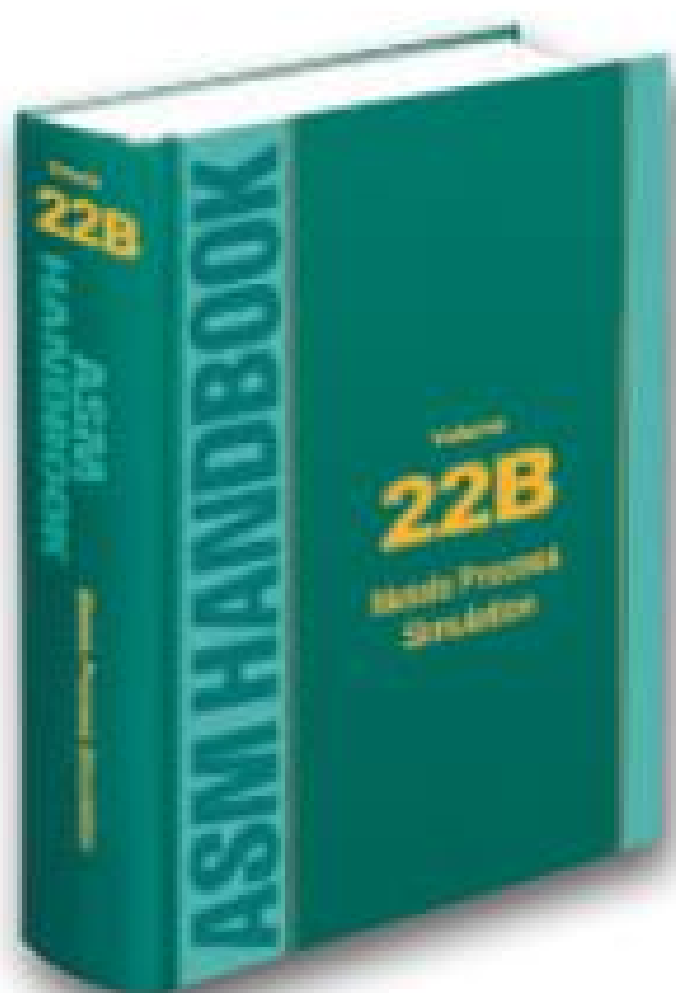


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Edited by David Furrer and Lee Semiatin
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Development of metallic materials and process models that affect nearly every manufacturing industry. A solid foundation of the underlying physics that support many industrial simulation software packages.

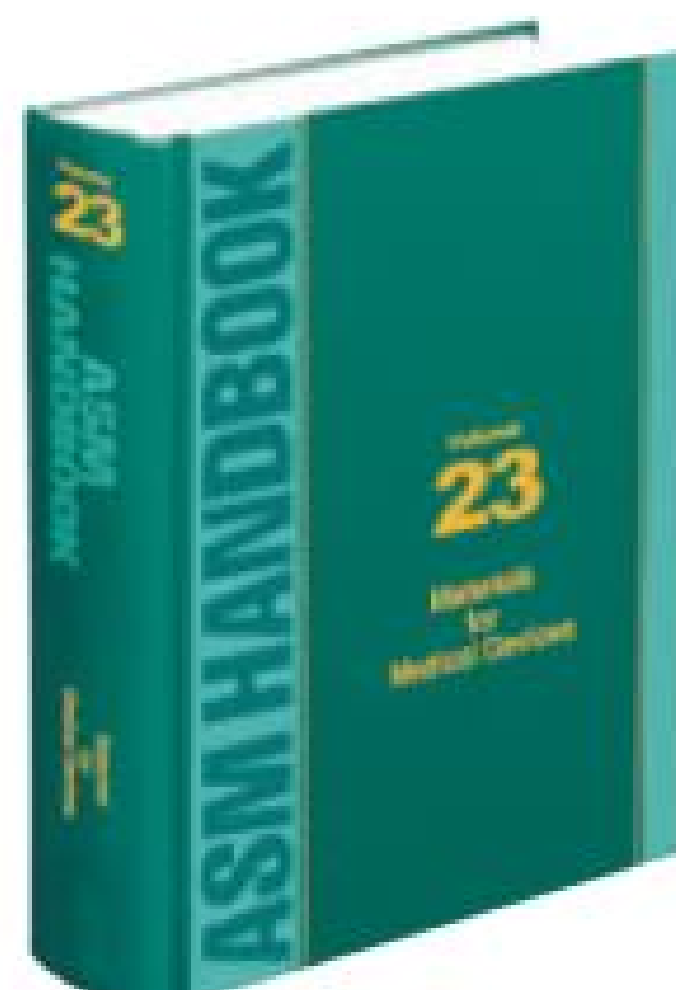


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Edited by David Furrer and Lee Semiatin
2010 • 724 pages
ISBN: 978-0-61503-005-7
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Fundamentals include input data, thermophysical properties and their measurement, phase diagrams, and microstructure. Processes include solidification, casting, metal forming, machining, joining, and heat treatment. Design topics include design optimization, error propagation and uncertainty, and cost estimating.



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Edited by Roger Narayan
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Edited by J.R. Davis
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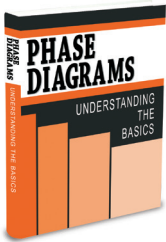
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The best of the ASM Handbook® series. A convenient source on the properties, selection, processing, testing, and characterization of metals and their alloys.



Phase Diagrams: Understanding the Basics

Edited by F.C. Campbell
2012 • 470 pages
ISBN: 978-1-61503-835-0
Product Code: 05342G

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Exceptionally well-written text for non-metallurgists or anyone seeking a quick refresher on an essential tool in modern metallurgy. Ample

illustrations for all important liquid and solid reactions. Gas-metal reactions, important in metals processing and in-service corrosion, are also discussed.



Advances in Materials Technology for Fossil Power Plants Proceedings from the Seventh International Conference, 2013, EPRI

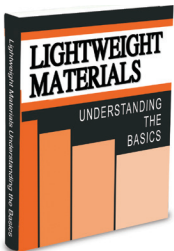
Edited by: D. Gandy and J. Shingledecker
2013 • 1465 pages
ISBN: 978-1-62708-060-6
Product Code: 05440G

Price: \$187 / ASM Member \$135

The conference brought together representatives from all of the national advanced ultrasupercritical

projects including the U.S., Europe, Japan, China, and India. Proceedings are organized into nine topical areas: technology overviews, nickel-base alloys for advanced ultrasupercritical power plants, materials for turbines, alloys T23/24, Grades 91/92, oxidation and corrosion, welding and weld performance, new alloys concepts, and creep and general topics.

Co-published by the Electric Power Research Institute (EPRI) and ASM International.



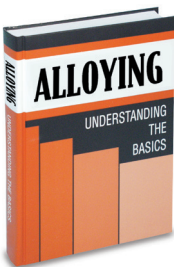
Lightweight Materials: Understanding the Basics

Edited by F.C. Campbell
2012 • 720 pages
ISBN: 978-1-61503-849-7
Product Code: 05355G

Price: \$187 / ASM Member: \$135

Learn the basics of aluminum, titanium, magnesium, beryllium, engineering plastics, polymer-, metal-, and ceramic-matrix composites, and structural ceramics.

Includes basic metallurgy or materials science aspects of each material, as well as properties, processing, and applications. Guidelines for selecting materials for specific weight-critical applications.



Alloying: Understanding the Basics

Edited by J.R. Davis
2001 • 647 pages
ISBN: 978-0-87170-744-4
Product Code: 06117G

Price: \$187 / ASM Member: \$135

A complete guide to the influence of alloy additions on mechanical properties, physical properties, corrosion and chemical behavior, and processing and manufacturing characteristics.

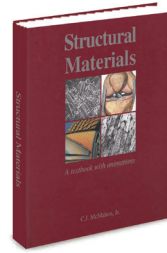


MS&T 2014 CD

Published by MS&T Partner Societies
CD-ROM papers in PDF format
Product Code: 05506A

Price: \$203 / ASM Member: \$152

Proceedings from the Materials Science and Technology 2014 Conference, Pittsburgh, PA October 13-16, 2014.



Structural Materials: A Textbook with Animations

By C.J. McMahon, Jr.
2004 • 470 pages
ISBN: 978-0-96465-985-8
Product Code: 05913G

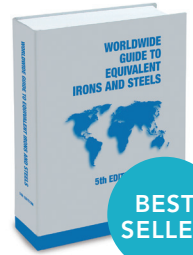
Price: \$107 / ASM Member: \$81

A comprehensive introduction to structural materials and the underlying principles that affect their selection, properties, and performance. The book focuses on familiar applications (for example, materials selection for bicycle components) to tell a coherent story that conveys important concepts in a memorable fashion. Purchase of the book includes online access to dozens of animations and tutorials to visually demonstrate key concepts and processes.



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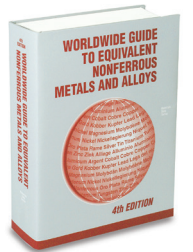
Worldwide Guide to Equivalent Irons & Steels, 5th Edition

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Product Code: 05121G

Price: \$307 / ASM Member: \$231

Standard worldwide designations for cast irons and steels, wrought carbon and alloy steels, plus stainless, high-strength, and tool steels. Entries for more than 30,000 alloy designations. Well over 5,000 entries have been updated and over 3,000 are new additions. Newly expanded

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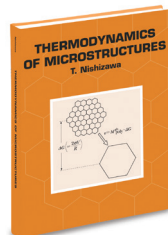


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ISBN: 978-0-87170-741-3
Product Code: 06735G

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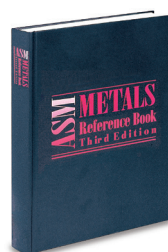


Thermodynamics of Microstructures

By Taiji Nishizawa, translated by Kiyohito Ishida
2008 • 308 pages
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Product Code: 05232G

Price: \$207 / ASM Member: \$155

Fundamental relationships governing the behavior of microstructures.

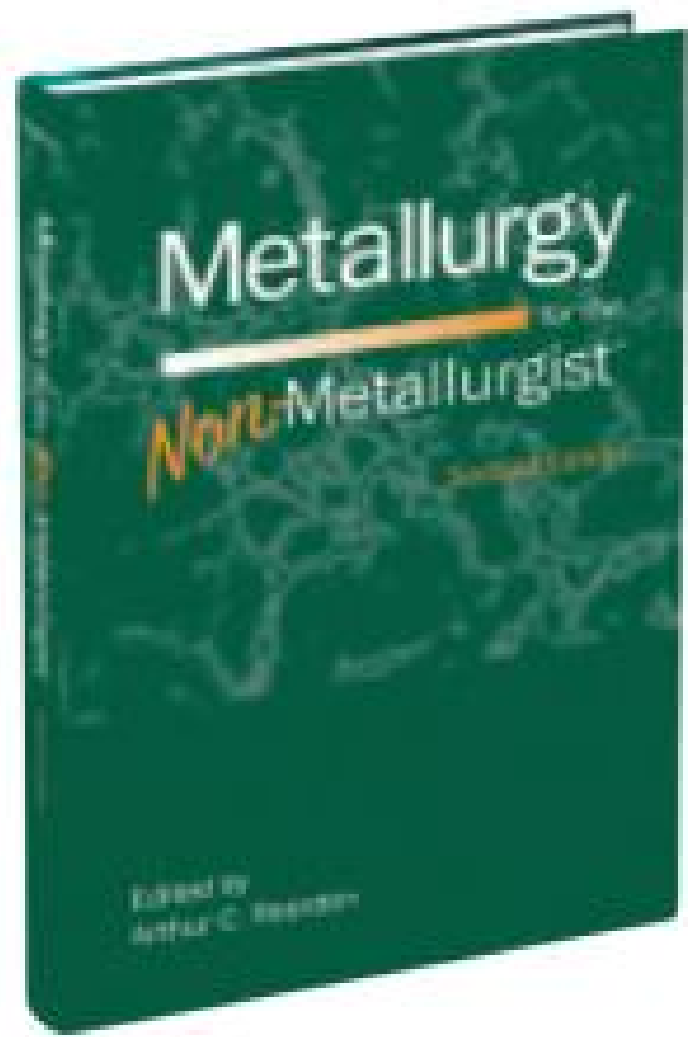


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1993 • 614 pages
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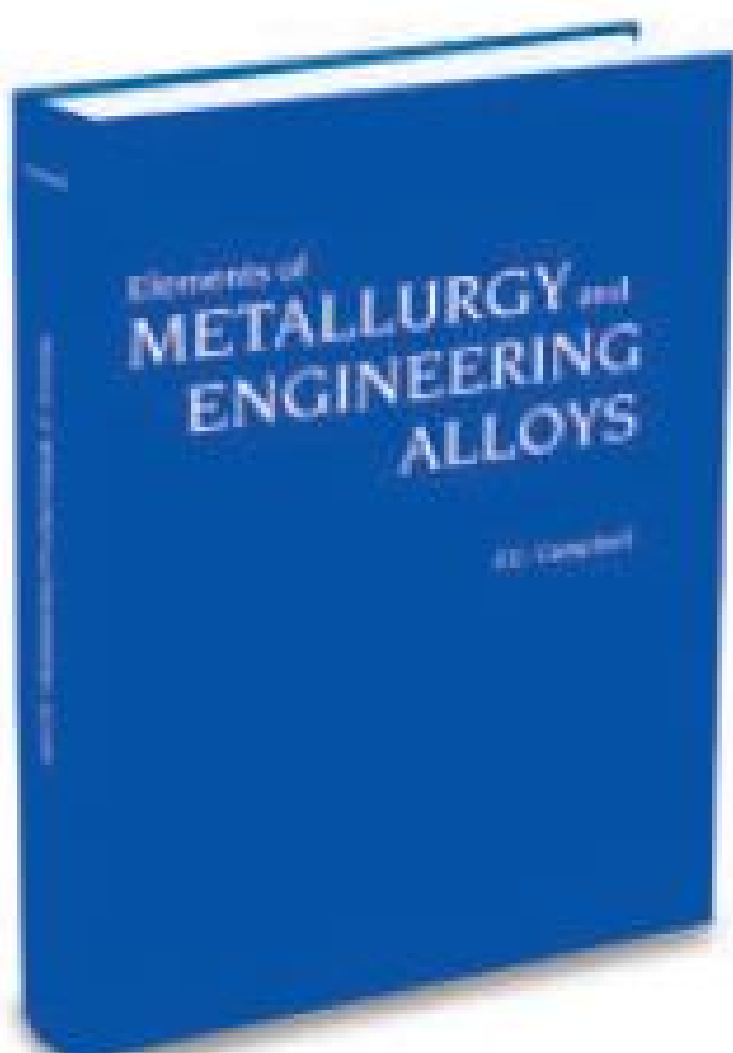
Price: \$177 / ASM Member: \$135

This completely revised edition provides an all new modern view of the basic principles and current practices of metallurgy. Recommended for anyone who uses, makes, buys or tests metal products.

Why are cast irons so suitable for casting? Do some nonferrous alloys respond to heat treatment like steels? Why is corrosion so pernicious? Answer all your basic metallurgy questions in this updated reference featuring many new illustrations, examples, and descriptions.



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Green Tribology, Green Surface Engineering, and Global Warming

By Ramnarayan Chattopadhyay

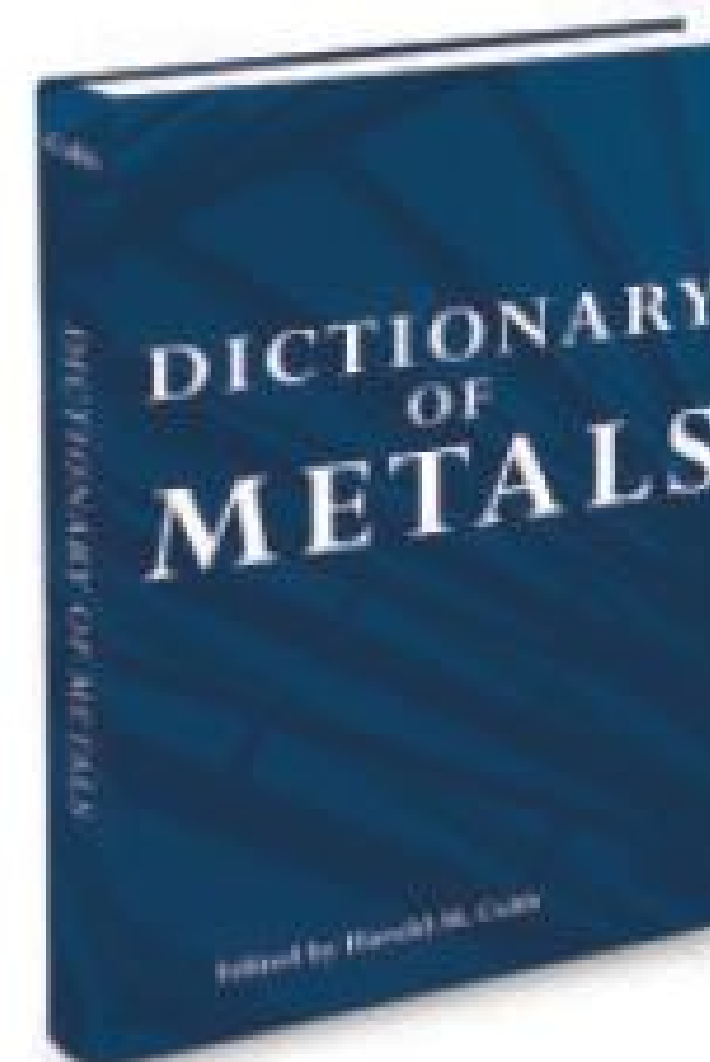
2014 • 336 pages

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Product Code: 05436G

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This book describes green engineering concepts to improve energy efficiency by reducing energy losses due to friction and wear in metalworking operations and by extending component life.



Dictionary of Metals

Edited by Harold M. Cobb

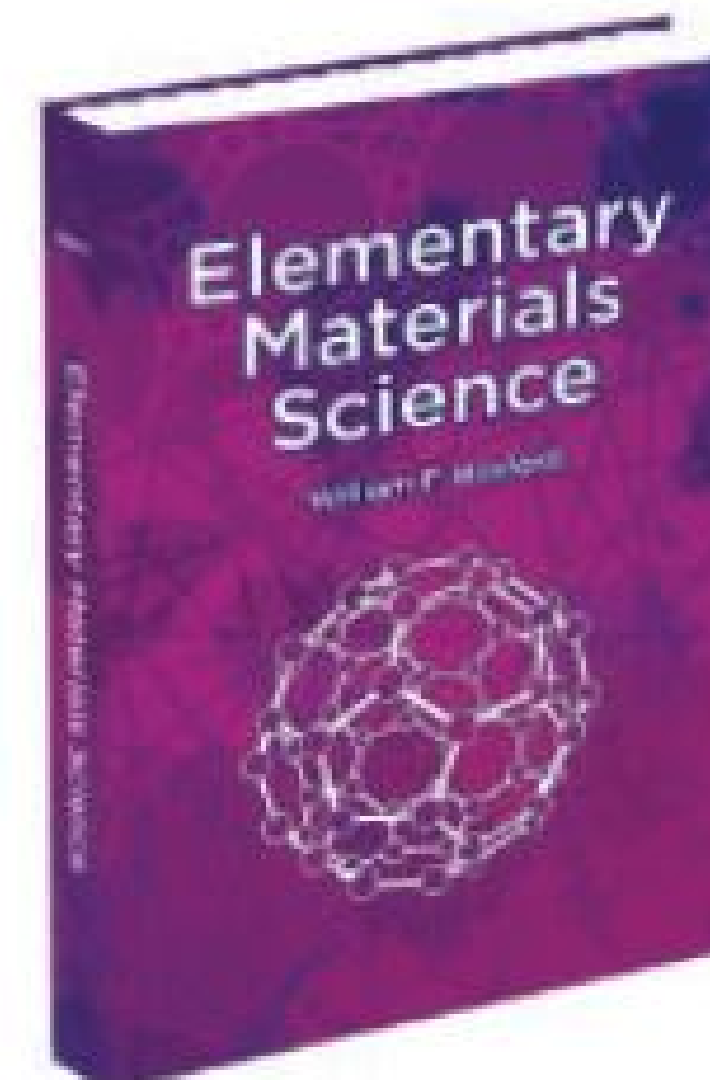
2012 • 374 pages

ISBN: 978-1-61503-978-4

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Price: \$157 / ASM Member: \$115

Includes historical overview beginning with the seven metals of antiquity. Showcases each metallic element, the discoverer and date, naming and its meaning, major applications, significance of the discovery and physical properties.



Elementary Materials Science

By William F. Hosford

2013 • 188 pages

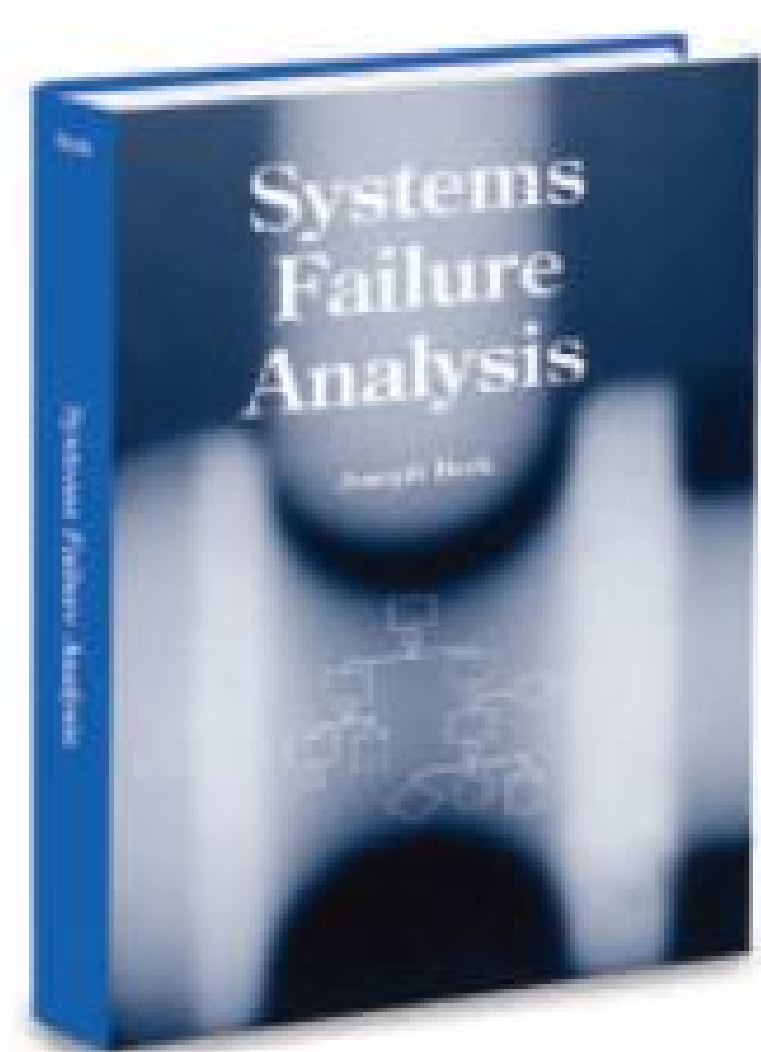
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Very few equations! Intended for students with limited science backgrounds. Useful for nontechnical professionals in the materials industry. The basics of bonding, crystal structures, and amorphous materials. Chapters devoted to phase relations, mechanical behavior, electrical behavior, magnetic behavior, and corrosion. Addresses nonferrous metals, iron and steel, ceramics, polymers, composites, and wood. More on forming and shaping, and recycling.

FAILURE ANALYSIS



Systems Failure Analysis

By Joseph Berk

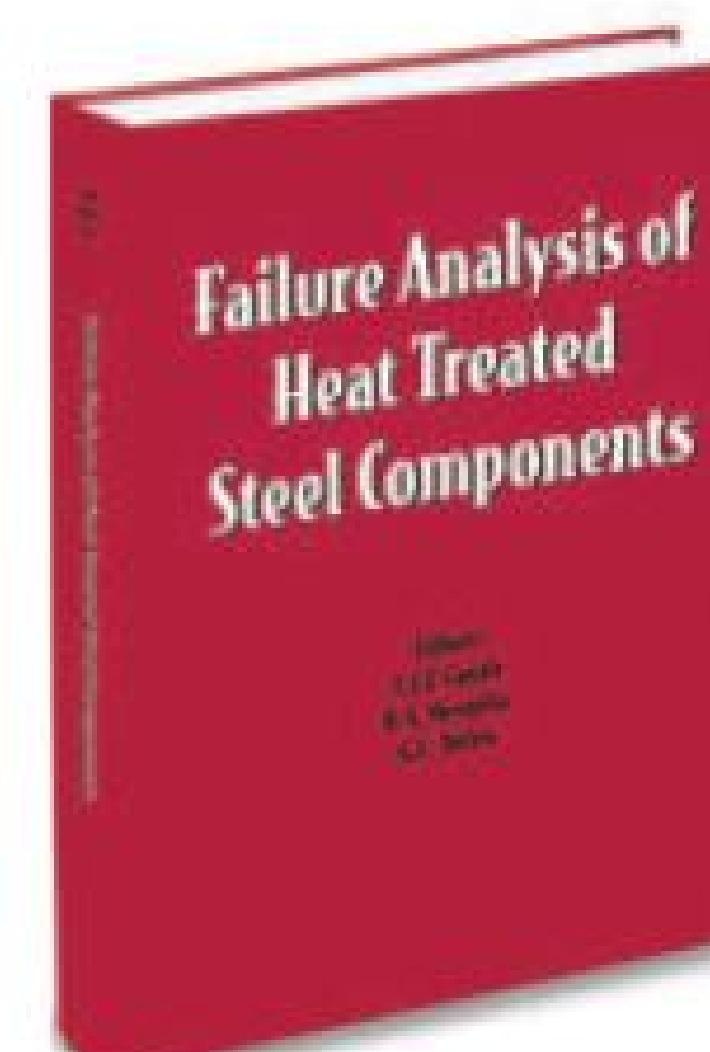
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ISBN: 978-1-61503-012-5

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Complex systems failures can have hundreds of potential causes. Learn how to analyze and prevent them. Written for development engineers, quality assurance specialists, manufacturing engineers, purchasing personnel, and field service engineers. Great for organizations that produce or procure complex systems in the aerospace, defense, automotive, biomedical, electronic, and related industries.



Failure Analysis of Heat Treated Steel Components

Edited by L.C.F. Canale, R.A. Mesquita and G.E. Totten

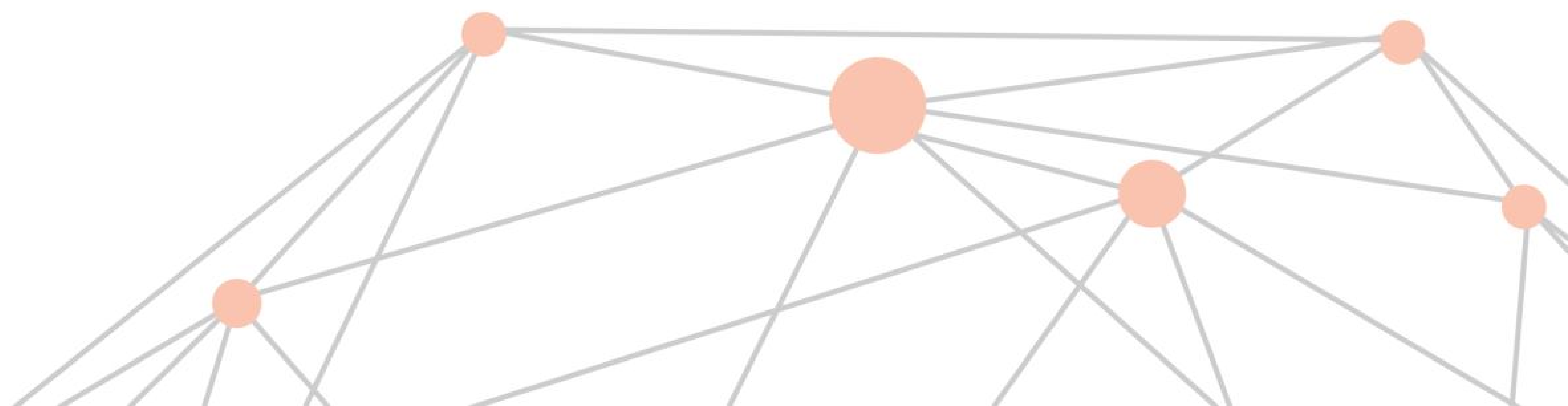
2008 • 652 pages

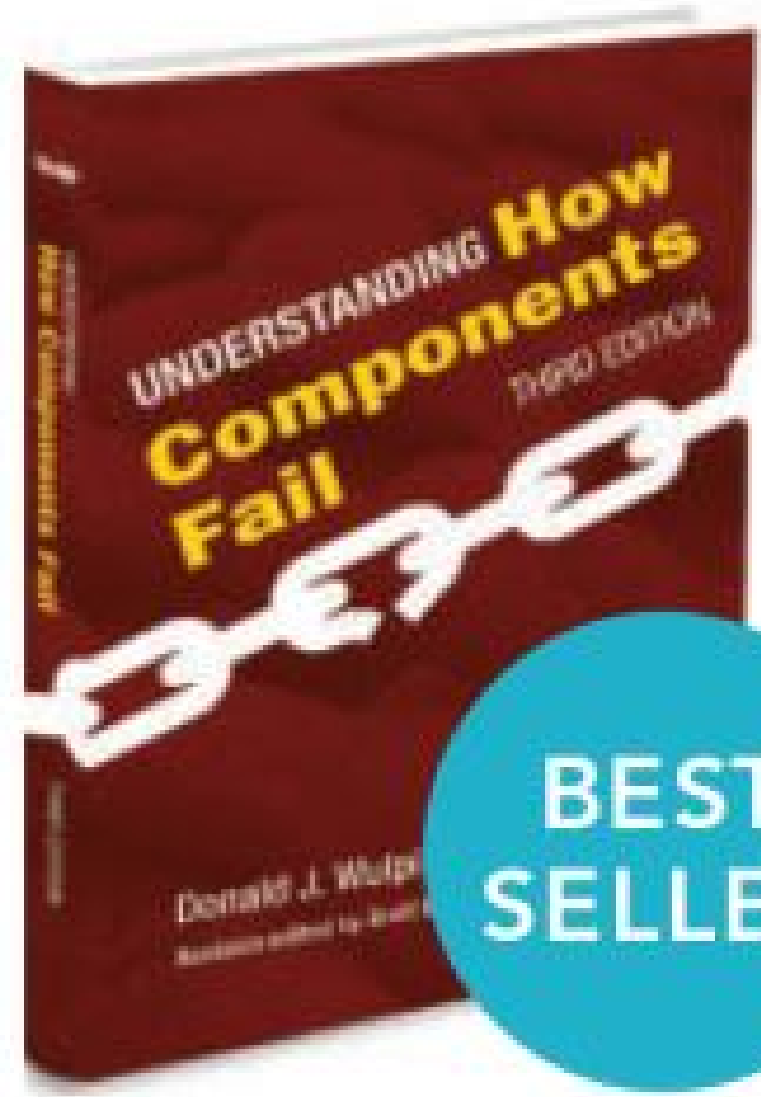
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Learn how to identify causes of failures, prevent future occurrences, and improve reliability. Numerous examples helpful to designers, engineers, metallurgists, mechanical and materials engineers, quality control technicians, and heat treaters. Special focus on the demands of tool steels and aerospace materials.





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Damage Mechanisms and Life Assessment of High-Temperature Components

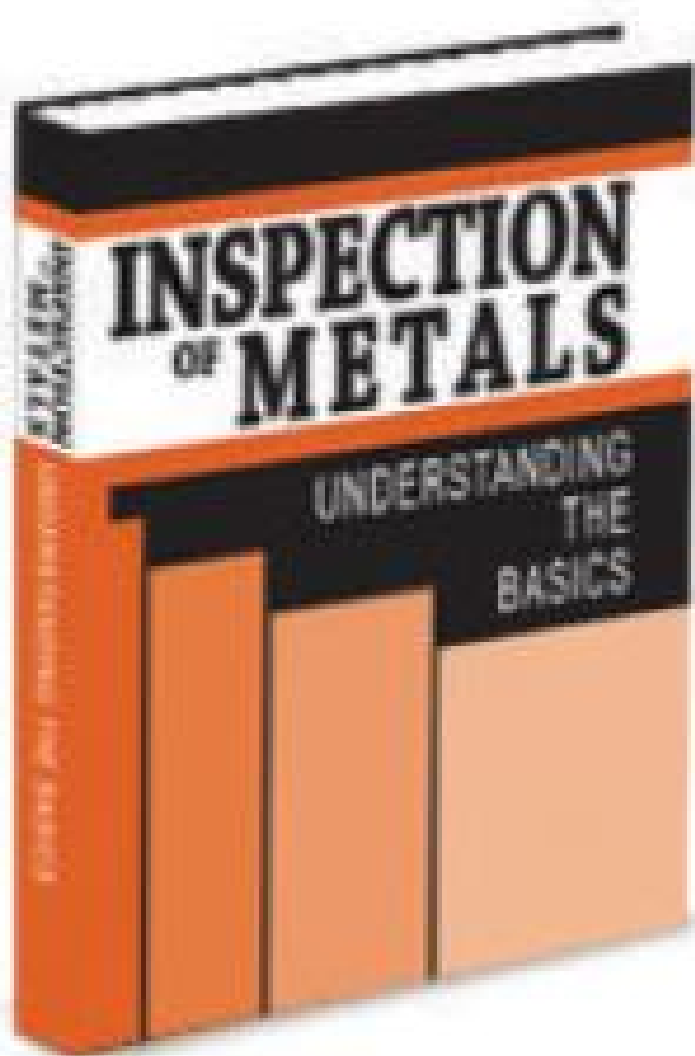
By R. Viswanathan

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ISBN: 978-0-87170-358-3
Product Code: 06049G

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Brings together the theoretical aspects of high-temperature damage phenomena and the practical aspects of assessing the actual damage on a component-specific basis. Lays the theoretical foundation with respect to toughness, embrittlement phenomena, creep, fatigue, and creep-fatigue interaction.

METALLOGRAPHY & MATERIALS CHARACTERIZATION



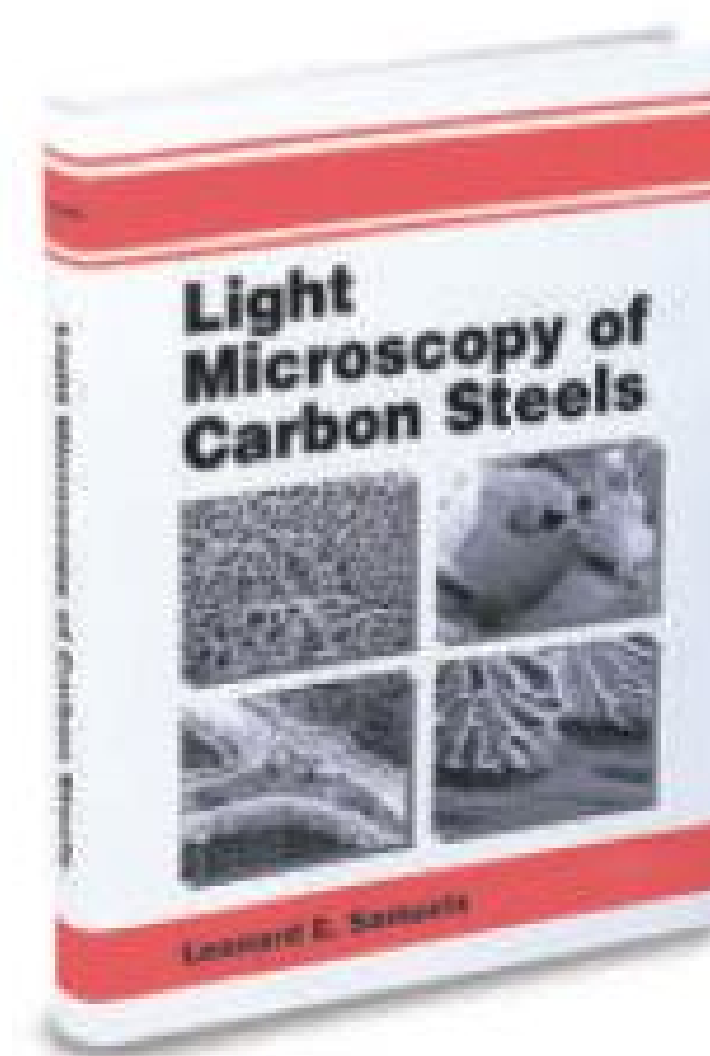
Inspection of Metals: Understanding the Basics

Edited by F.C. Campbell

2013 • 487 pages
ISBN: 978-1-62708-000-2
Product Code: 05372G

Price: \$187 / ASM Member: \$135

Emphasizes final part inspection at the manufacturing facility or on receipt at the user's facility. Provides an intermediate level overview to the different methods used to inspect metals and finished parts and a more detailed review of the specific inspection methods for important metal product forms. The advantages and limitations of each method are discussed, including when other methods may be warranted. Chapters on specific product forms (e.g., castings) compare the different inspection methods and why they are used.



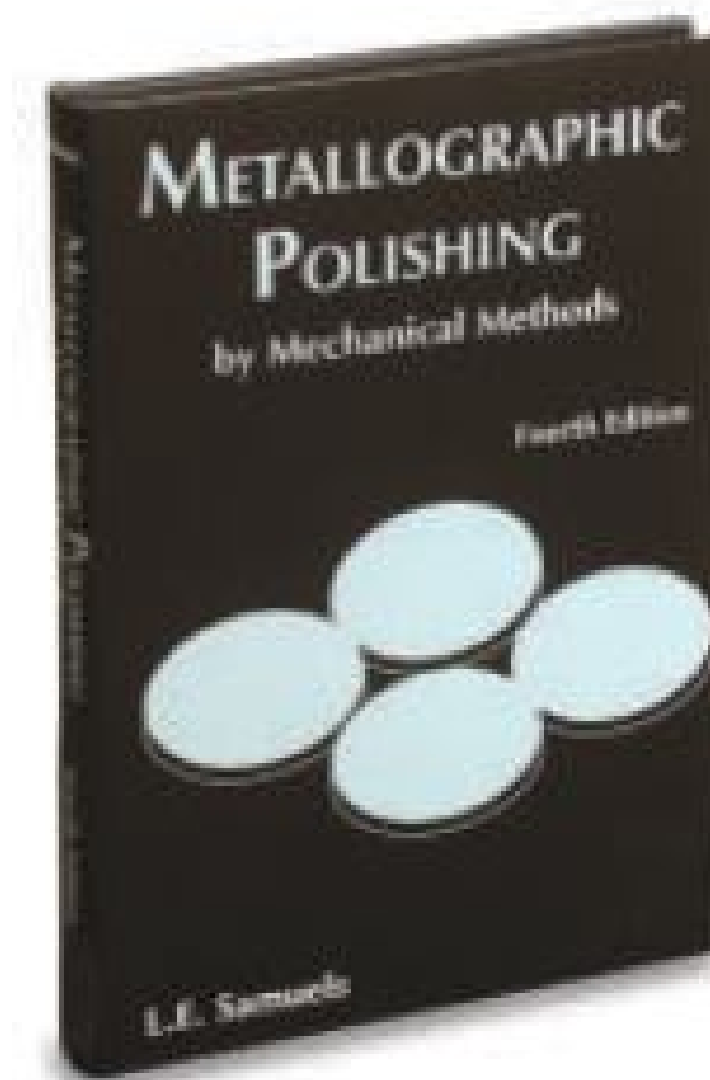
Light Microscopy of Carbon Steels

By L.E. Samuels

1999 • 502 pages
ISBN: 978-0-87170-655-3
Product Code: 06656G

Price: \$237 / ASM Member: \$175

"How to" book gives everyday working examples and discusses the relationship between the constitution, properties, and microstructure of various carbon steel products. Over 1,200 micrographs and 90 other figures.

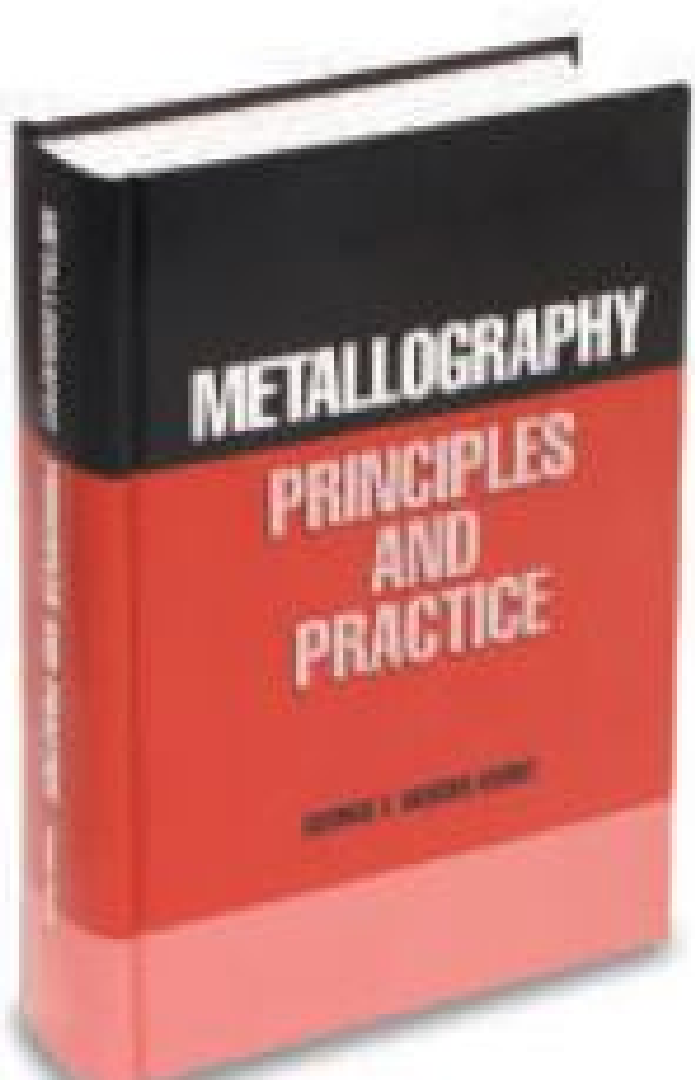


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Price: \$157 / ASM Member: \$115



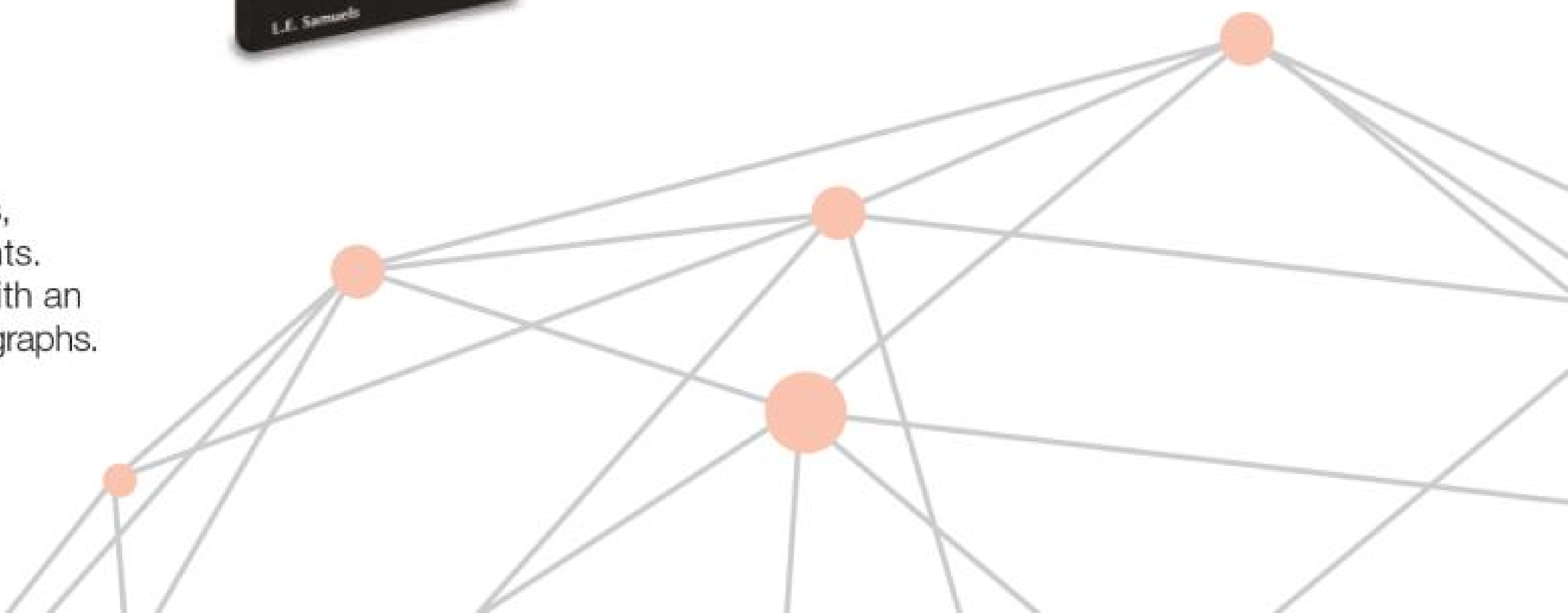
Metallography: Principles and Practice

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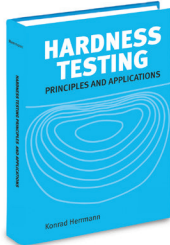
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Hardness testing of metals, plastics, rubber and other materials. Technical developments such as the introduction of image processing in the Brinell

and Vickers method, the adaptation of hardness testing machines to process-oriented testing conditions, and the development of highly accurate and efficient calibration methods.

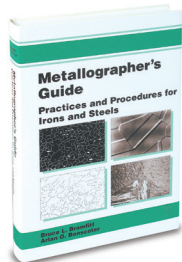


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By Brian S. Hayes and Luther M. Gammon
2010 • 284 pages
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Price: \$177 / ASM Member: \$135

Optical microscopy is one of the most valuable, but under-utilized, tools for analyzing fiber-

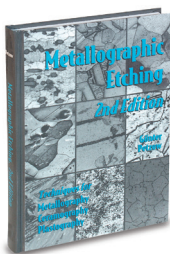
reinforced polymer matrix composites. Hands-on book covers: sample preparation, microscopic techniques, and applications. Over 180 full color images illustrate the technology's power to study the microstructure of heterogeneous, anisotropic materials.



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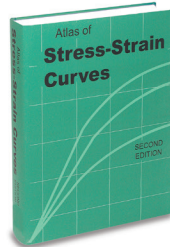
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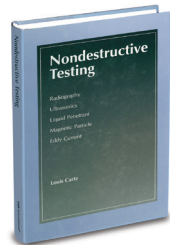
standard designation, the primary source of the curve, mechanical properties, condition of sample, strain rate, test temperature, and alloy composition.



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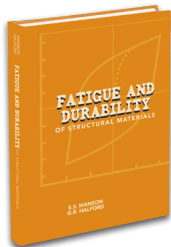
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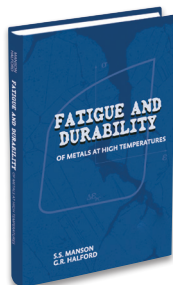
Fatigue and Durability of Structural Materials

By S.S. Manson and G.R. Halford

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ISBN: 978-0-87170-825-0
Product Code: 06987G

Price: \$257 / ASM Member: \$185

Focuses on metallic materials but also addresses unique capabilities of important nonmetals.



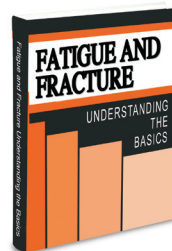
Fatigue and Durability of Metals at High Temperatures

By S.S. Manson and G.R. Halford

2009 • 268 pages
ISBN: 978-0-87170-718-5
Product Code: 05206G

Price: \$257 / ASM Member: \$185

Written by preeminent experts, this work gives development engineers, students, and component designers an important reference on how to analyze time-dependent metal fatigue at high temperatures.



Fatigue and Fracture: Understanding the Basics

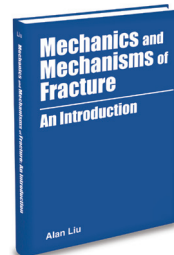
Edited by F.C. Campbell

2012 • 698 pages
ISBN: 978-1-61503-976-0
Product Code: 05361G

Price: \$187 / ASM Member: \$135

Covers mechanical properties of materials, differences between ductile and brittle fractures, fracture mechanics, the basics of fatigue,

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By A.F. Liu

2005 • 458 pages

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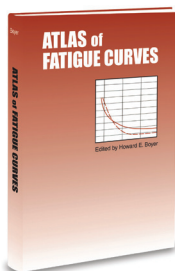
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Atlas of Fatigue Curves

Edited by H.E. Boyer

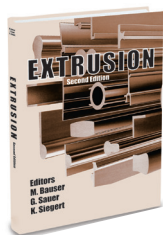
1986 • 518 pages • Illustrated
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Product Code: 06156G

Price: \$307 / ASM Member: \$231

More than 500 fatigue curves for industrial ferrous and nonferrous alloys. Standard S-N curves, curves showing effect of surface hardening on fatigue strength, crack growth-rate curves, curves comparing the

fatigue strengths of various alloys, effect of temperature, humidity, frequency, aging, environment and more.

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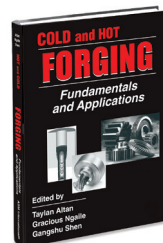
Extrusion, 2nd Edition

Edited by M. Bauser, G. Sauer, and K. Siegert

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Product Code: 06998G

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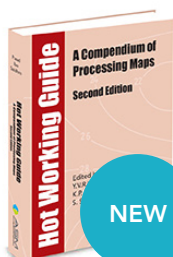
Cold and Hot Forging: Fundamentals and Applications

Edited by T. Altan, G. Ngaile and G. Shen

2005 • 341 pages
ISBN: 978-0-87170-805-2
Product Code: 05104G

Price: \$207 / ASM Member: \$155

Fundamentals of forging technology, principal variables of the forging process and their interactions, and computer-aided techniques such as finite-element analysis (FEA) for forging process and tooling design.



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Edited by Y.V.R.K. Prasad, K.P. Rao, and S. Sasidhara

2015 • 628 pages
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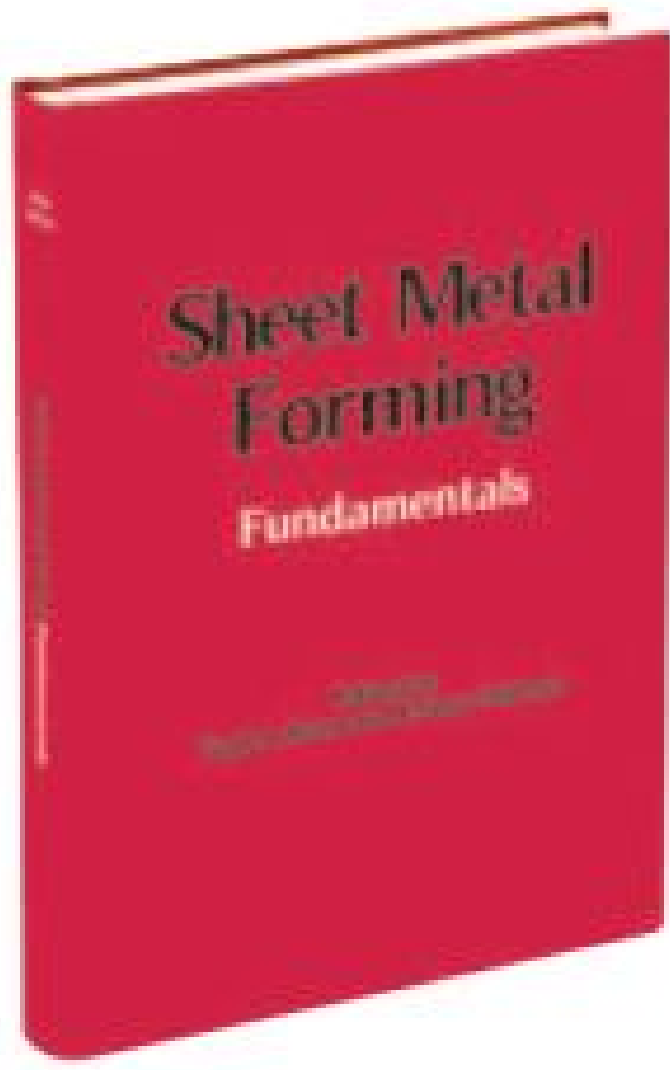
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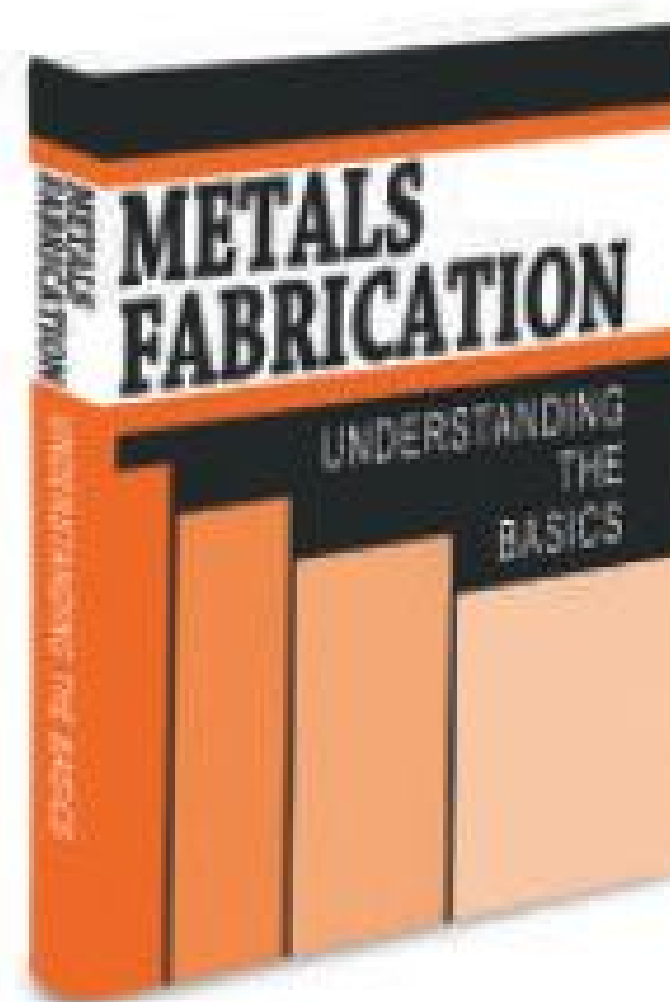


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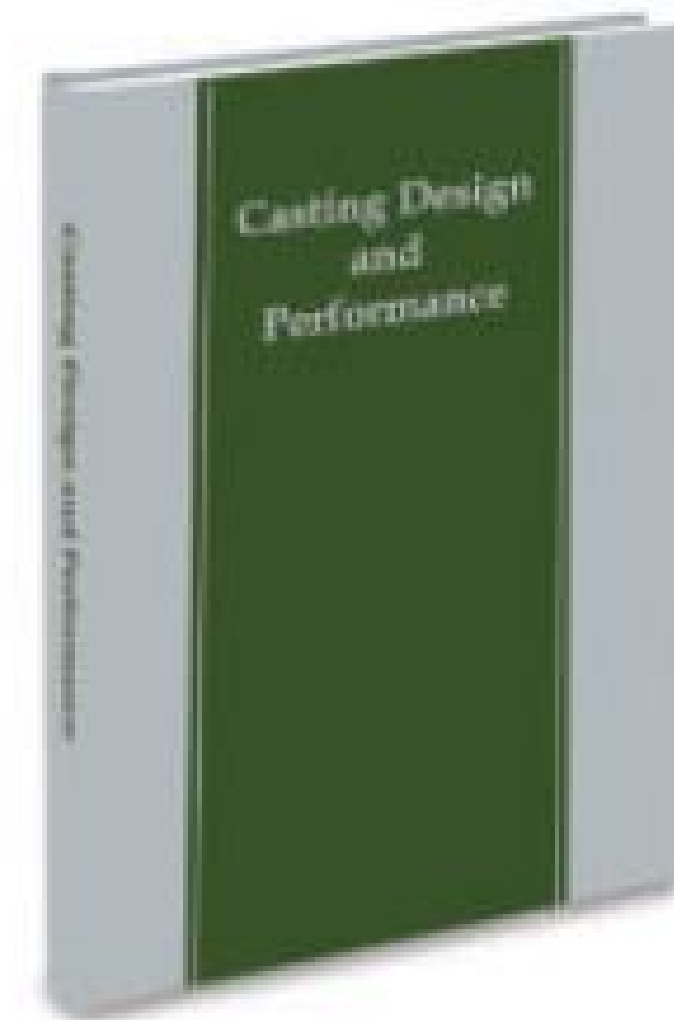
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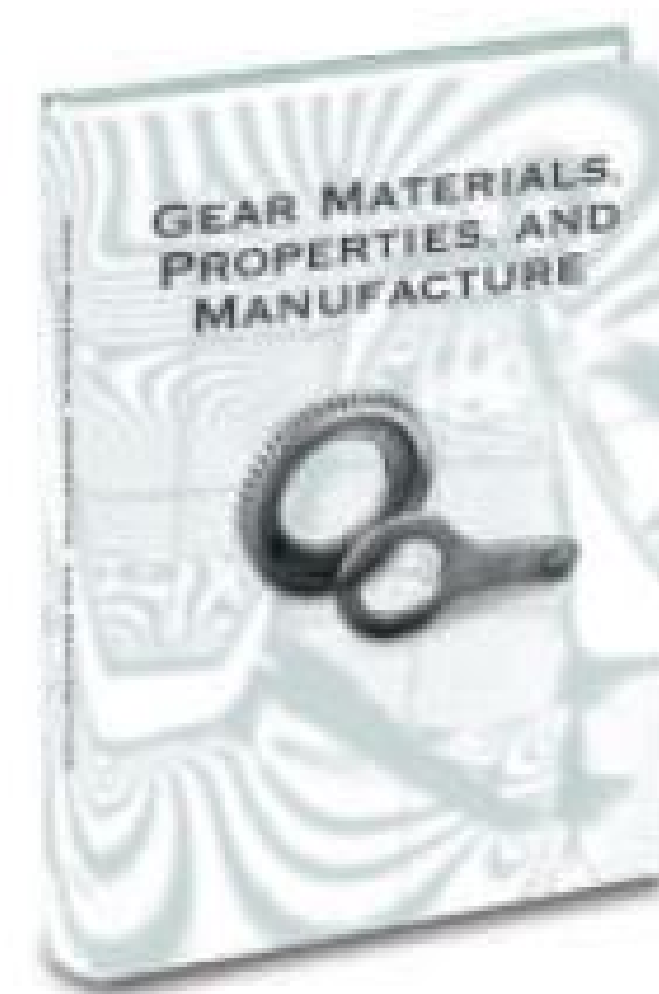


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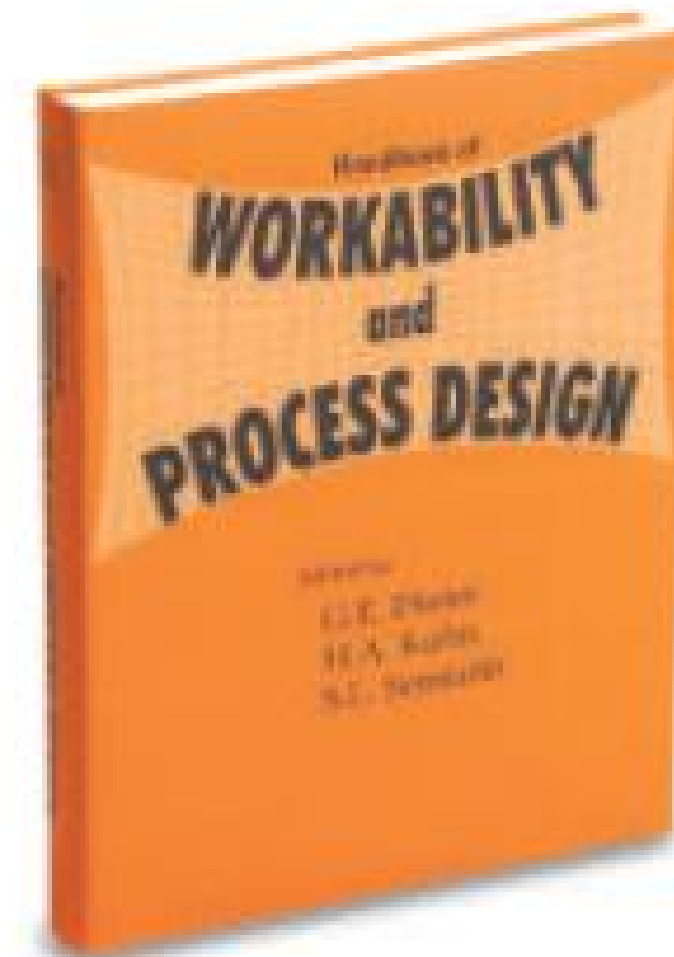


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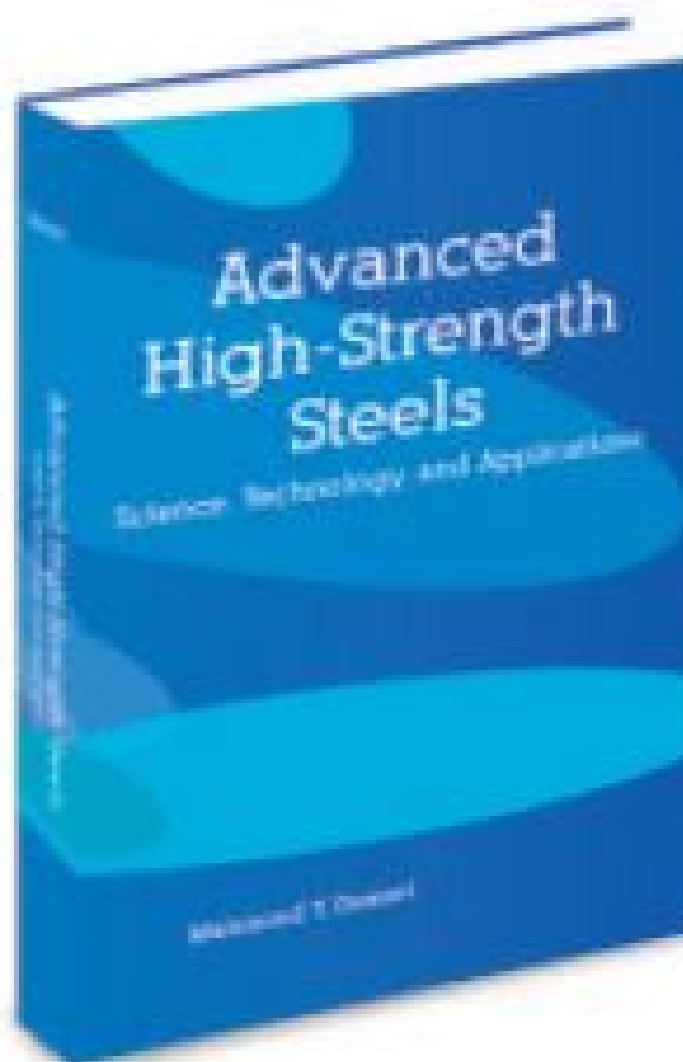


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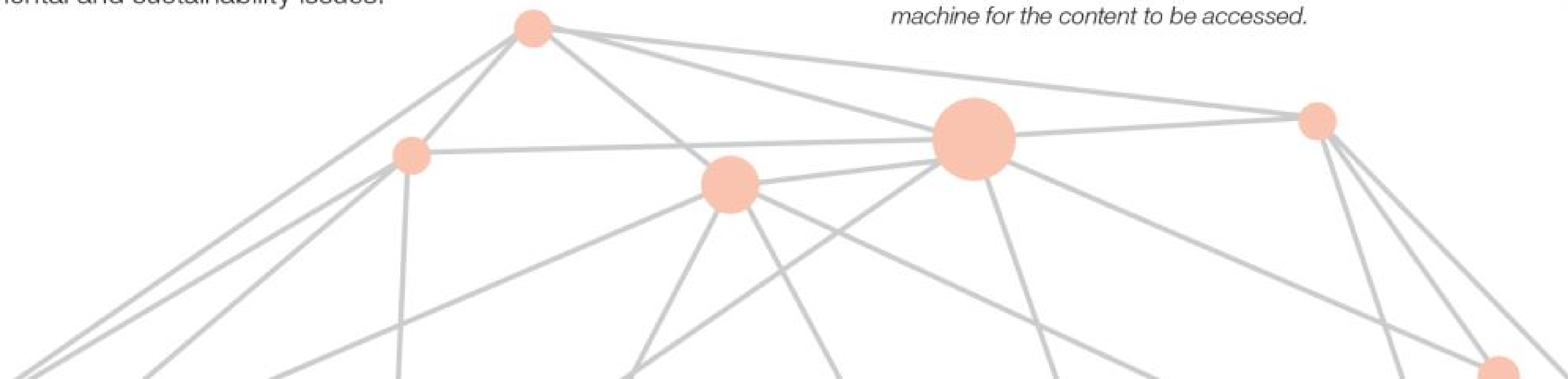
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Engineering Properties of Steel

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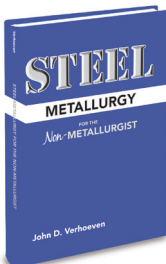
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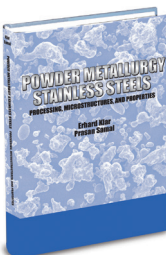
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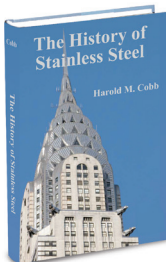
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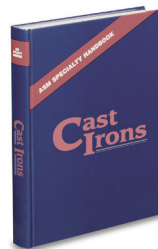
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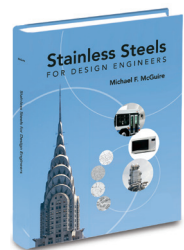
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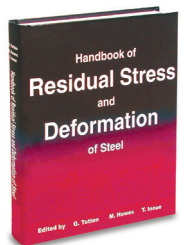
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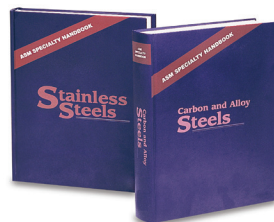
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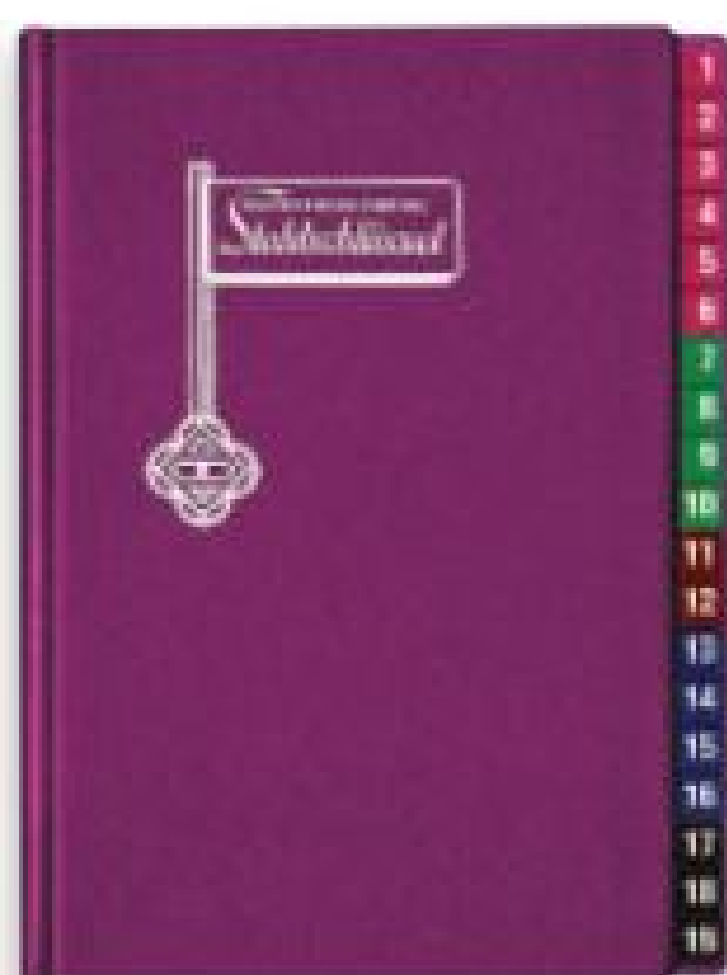
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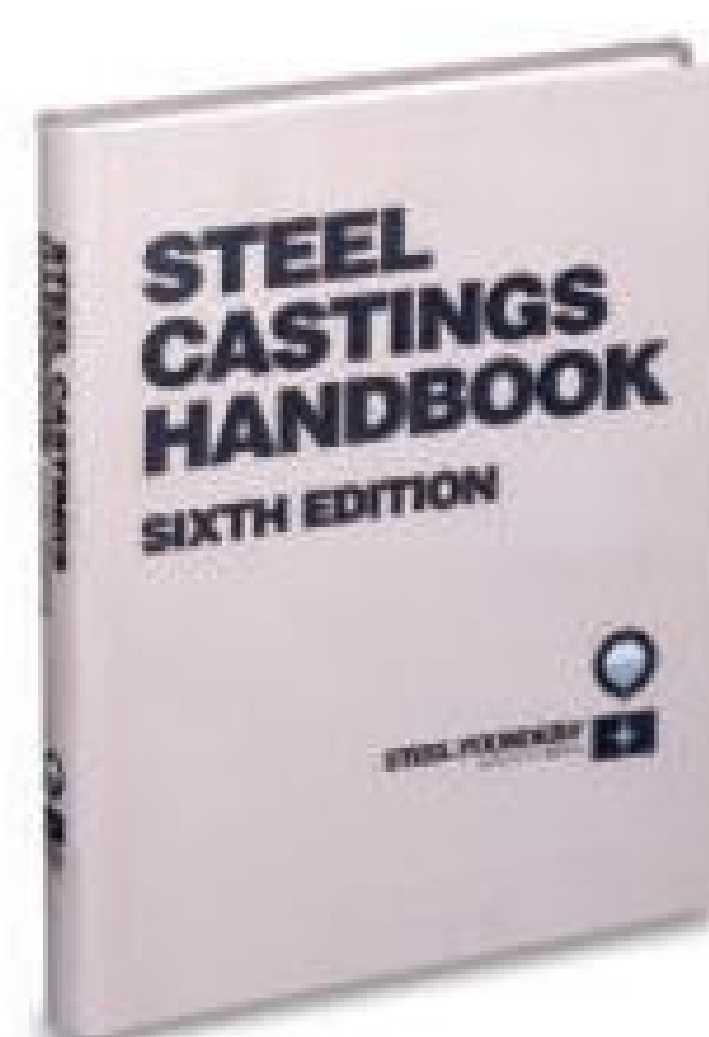
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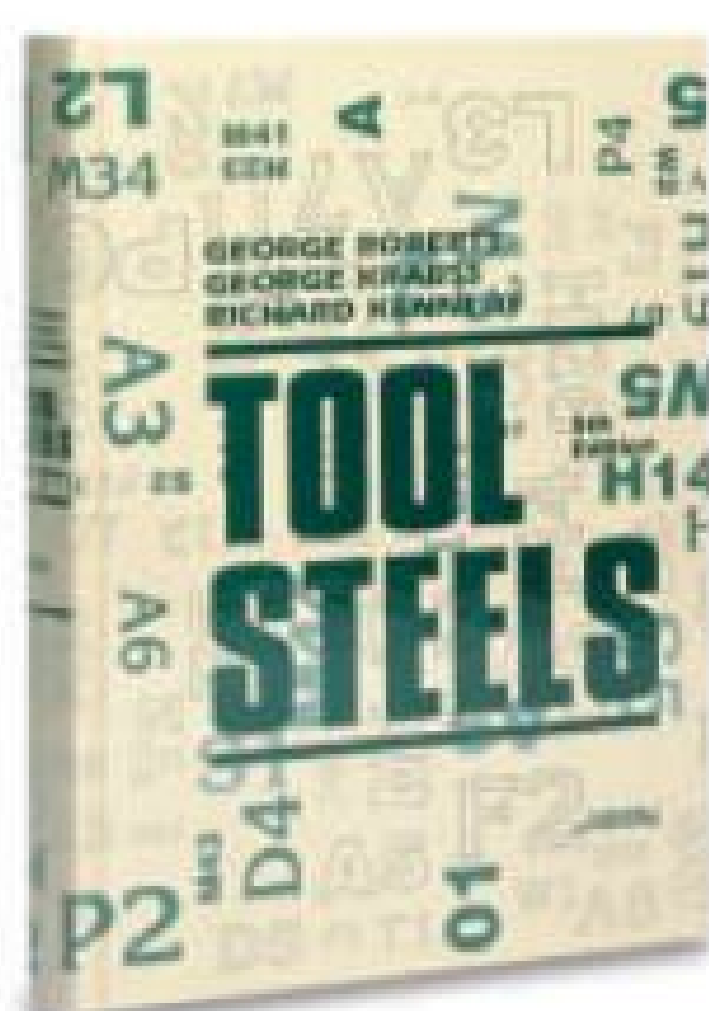


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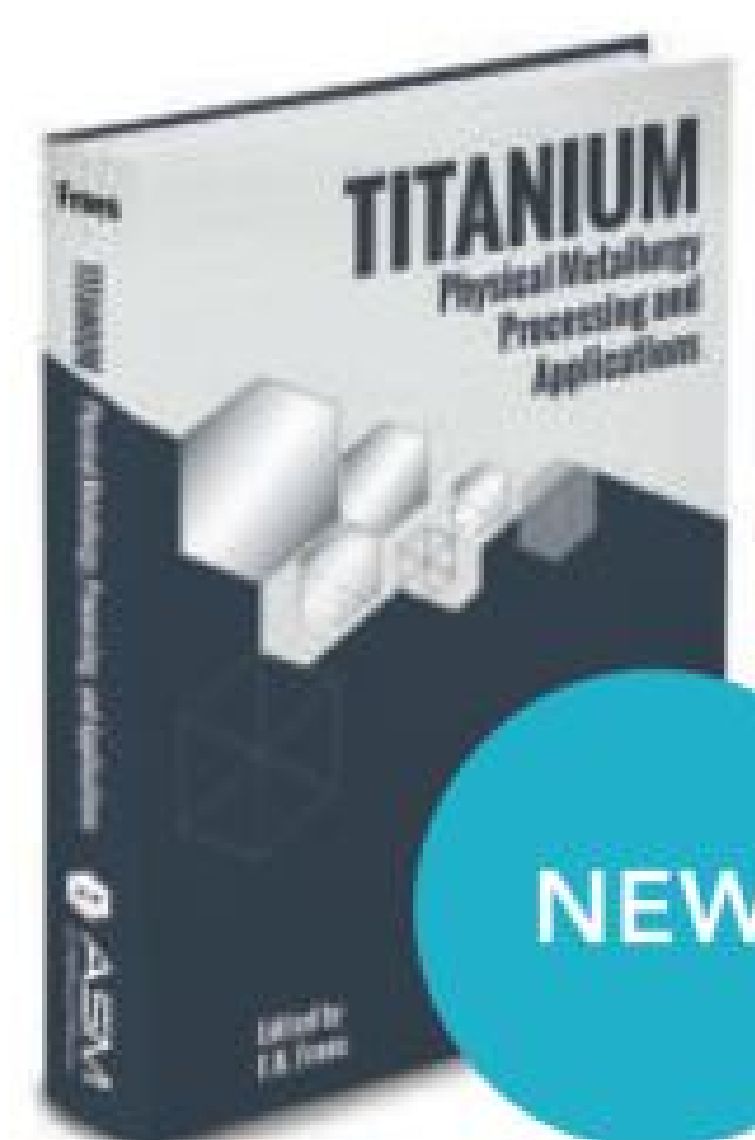
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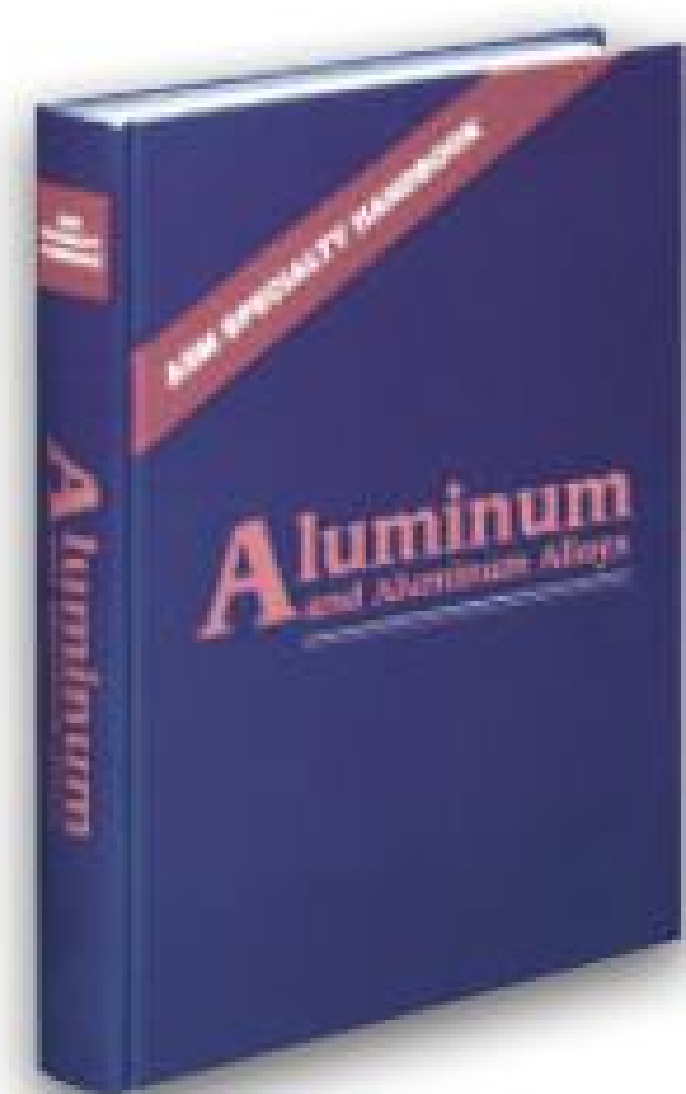
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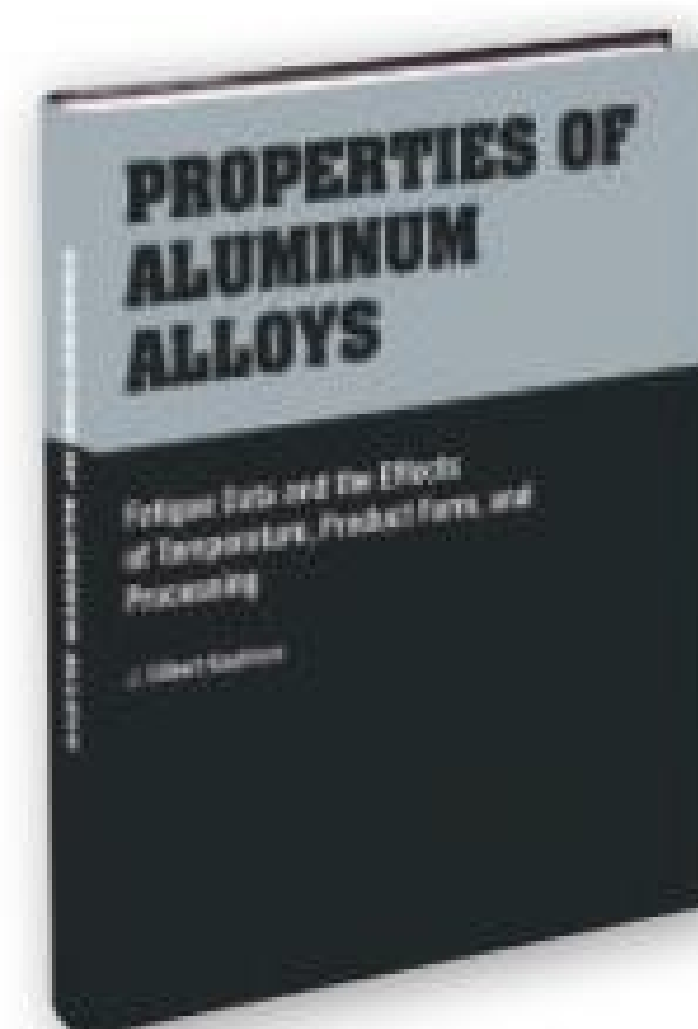
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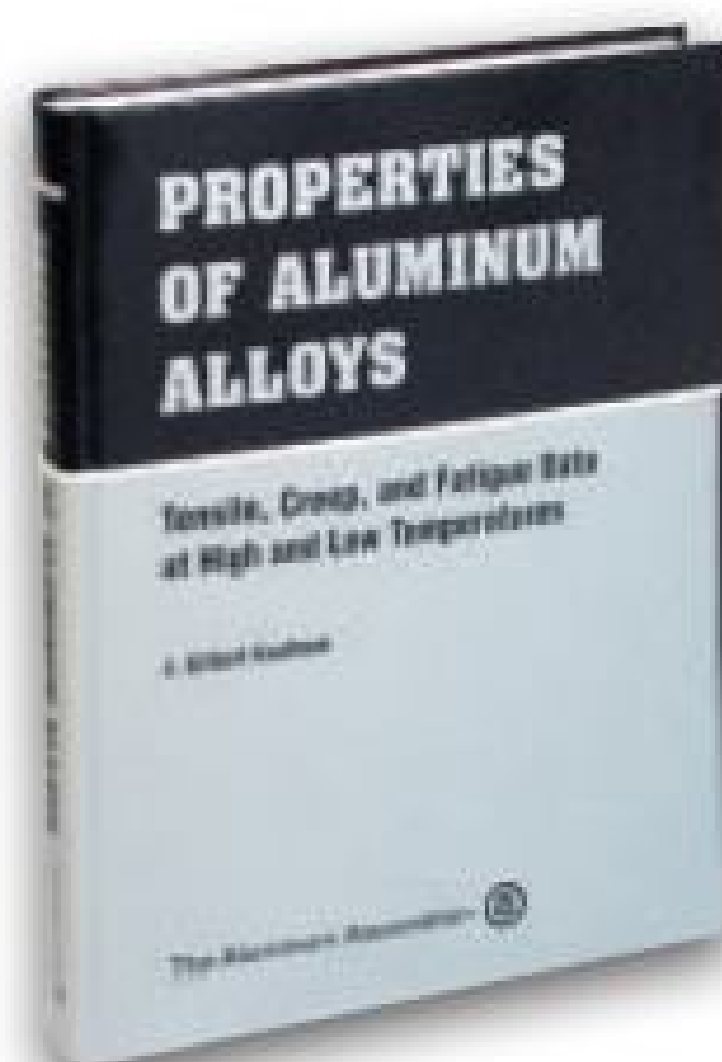


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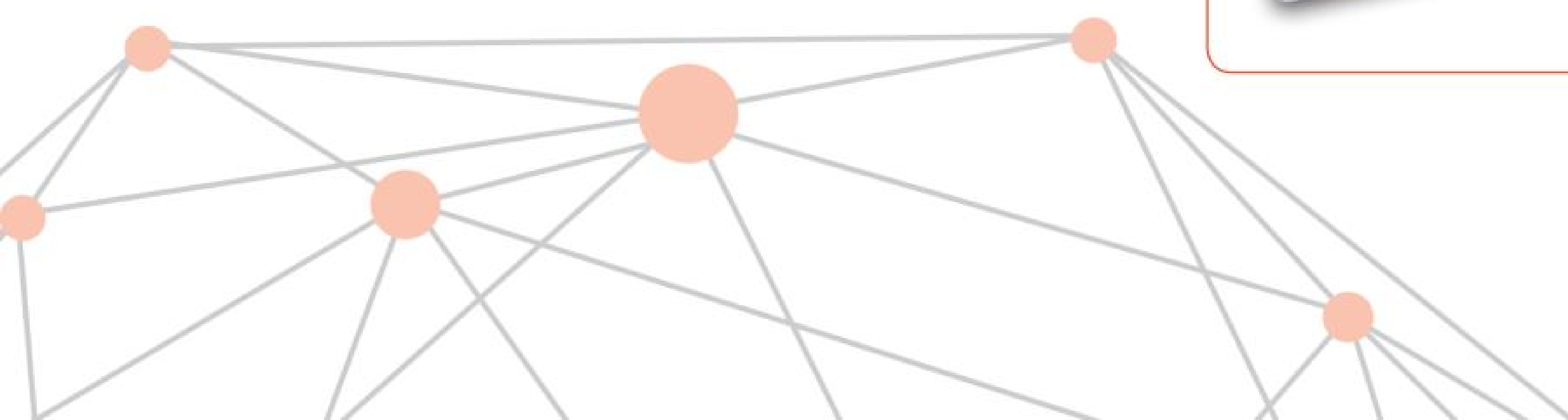


Properties of Aluminum Alloys: Tensile, Creep, and Fatigue Data at High and Low Temperatures

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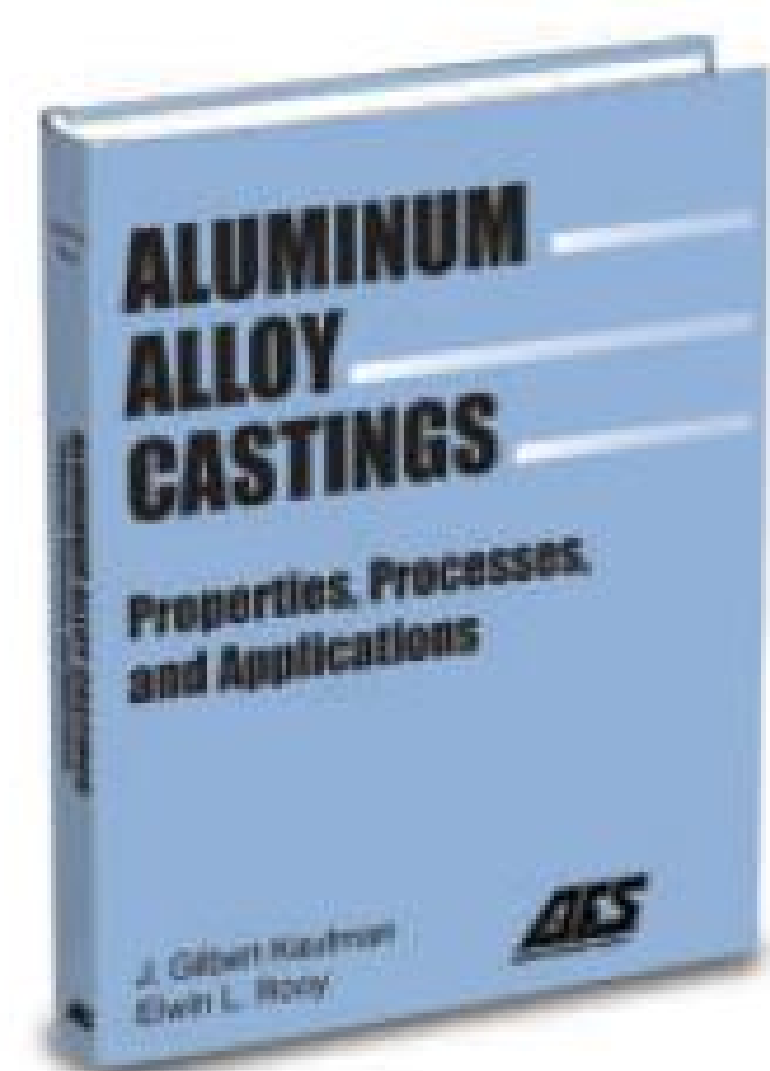
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Aluminum Alloy Castings: Properties, Processes, and Applications

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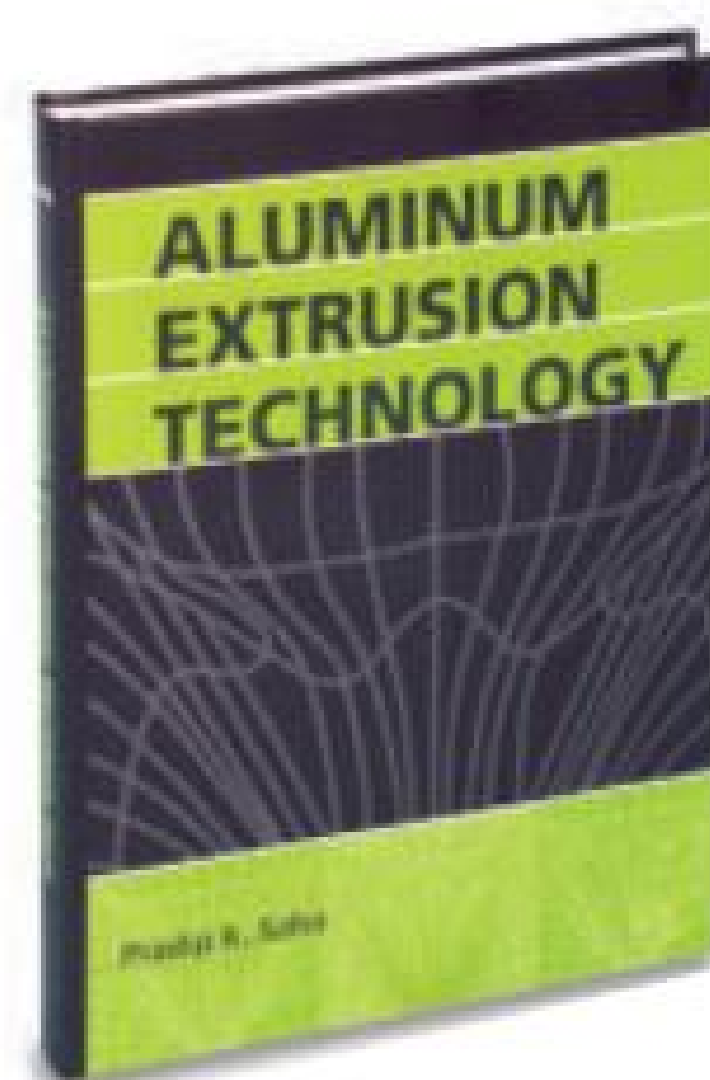
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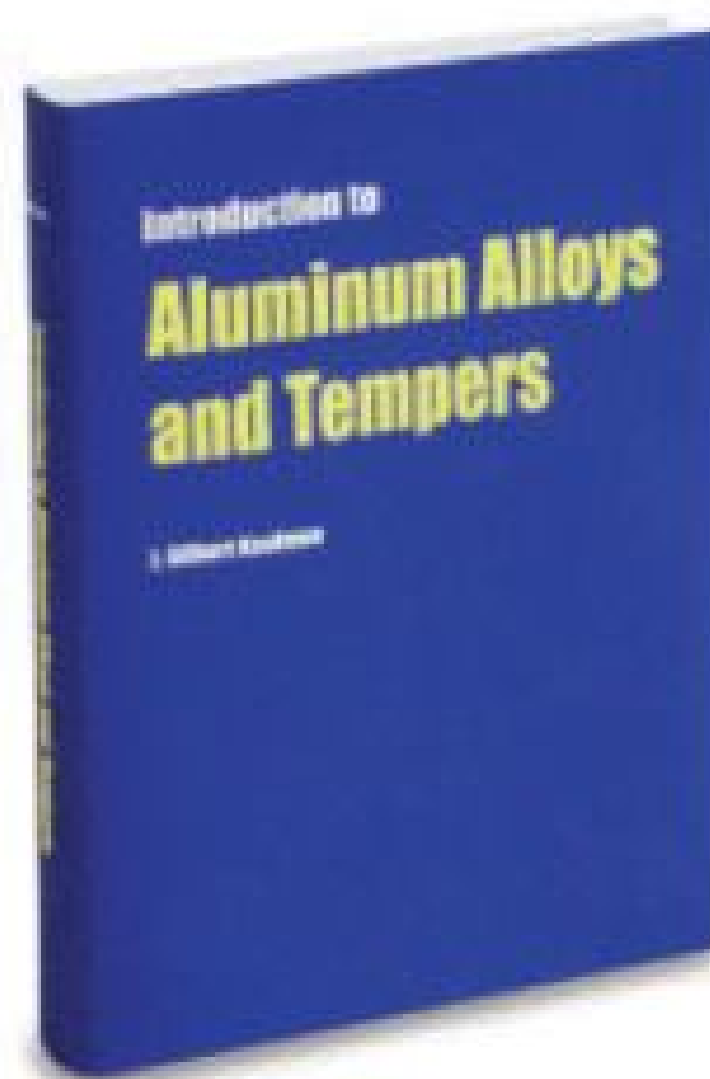


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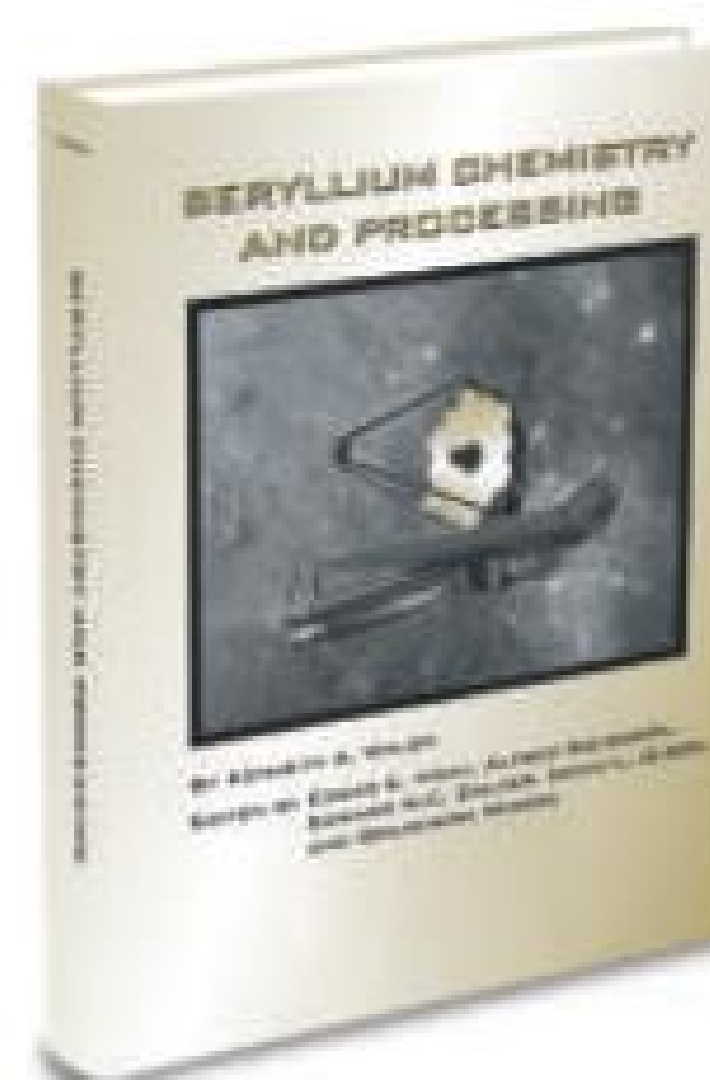


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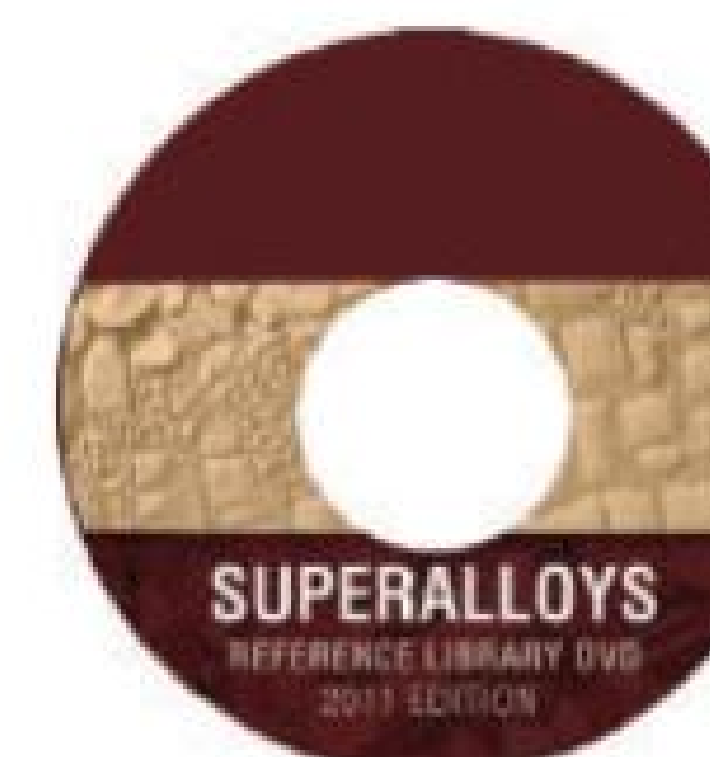
Beryllium Chemistry and Processing

By K.A. Walsh • Edited by E.E. Vidal, A. Goldberg, E. Dalder, D.L. Olson, and B. Mishra

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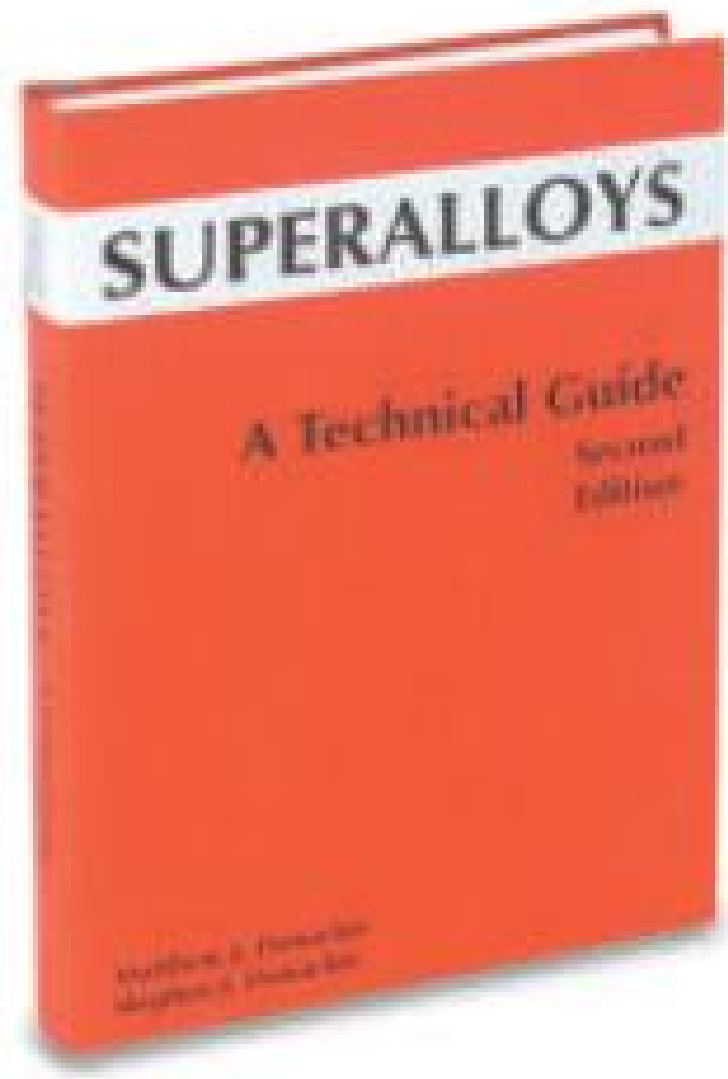
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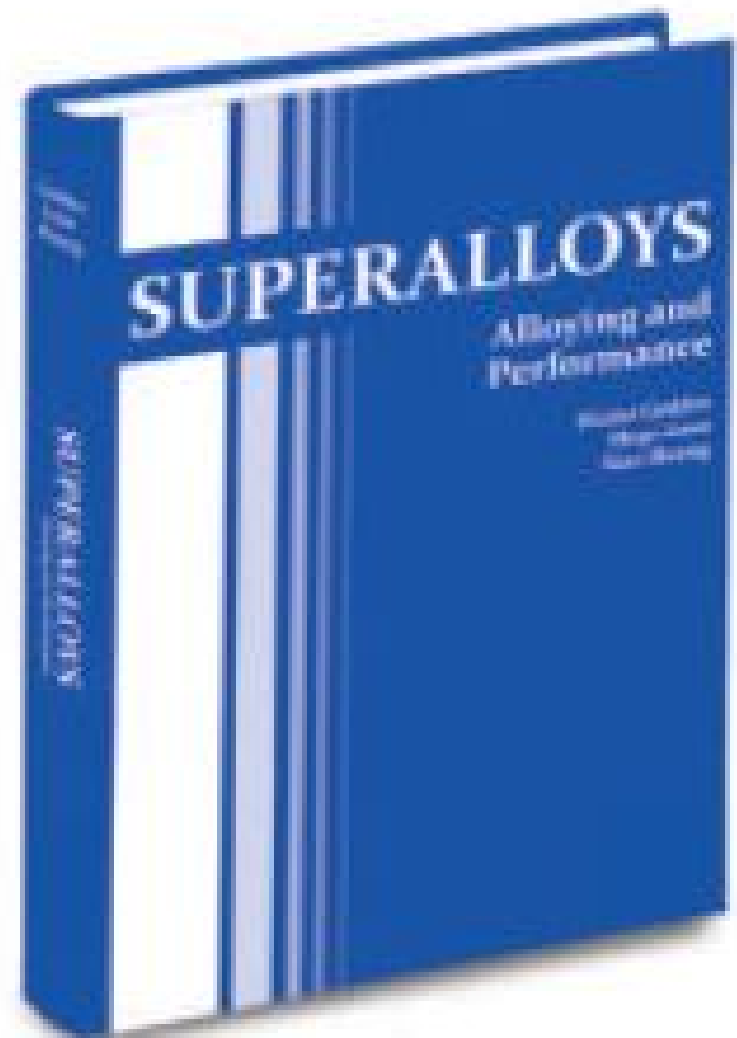
Superalloys: A Technical Guide, 2nd Edition

By M.J. Donachie and S.J. Donachie

2002 • 439 pages
ISBN: 978-0-87170-749-9
Product Code: 06128G

Price: \$207 / ASM Member: \$155

Covers virtually all technical aspects related to the selection, processing, use, and analysis of superalloys.



Superalloys: Alloying and Performance

Blaine Geddes, Hugo Leon, and Xiao Huang

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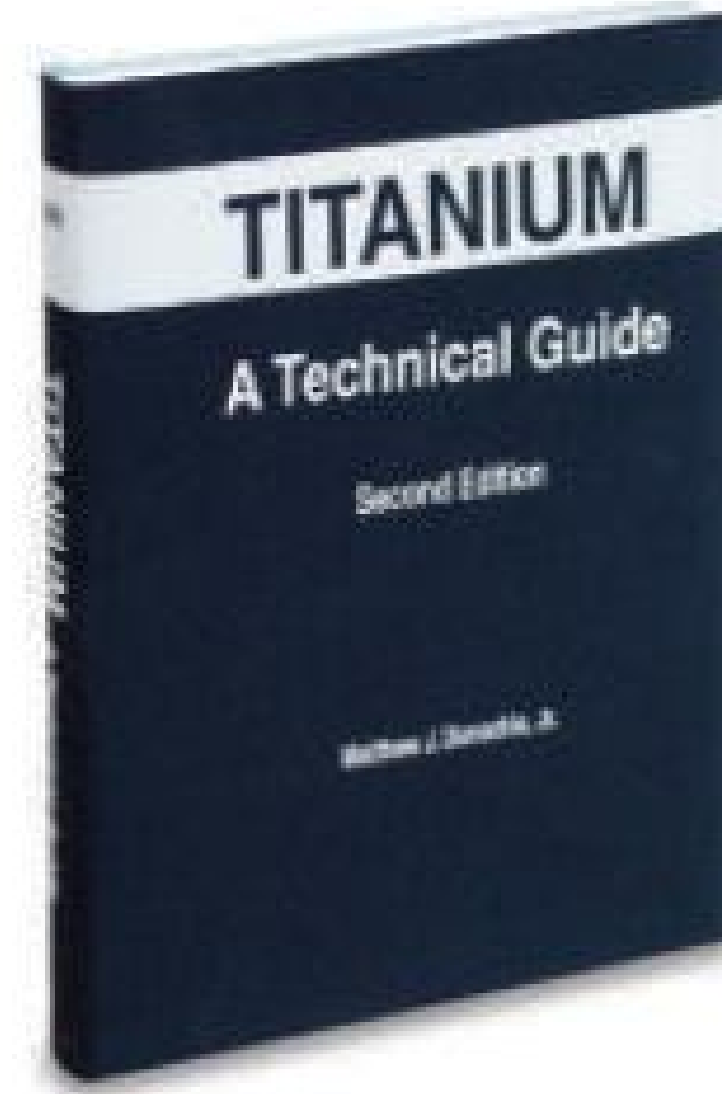


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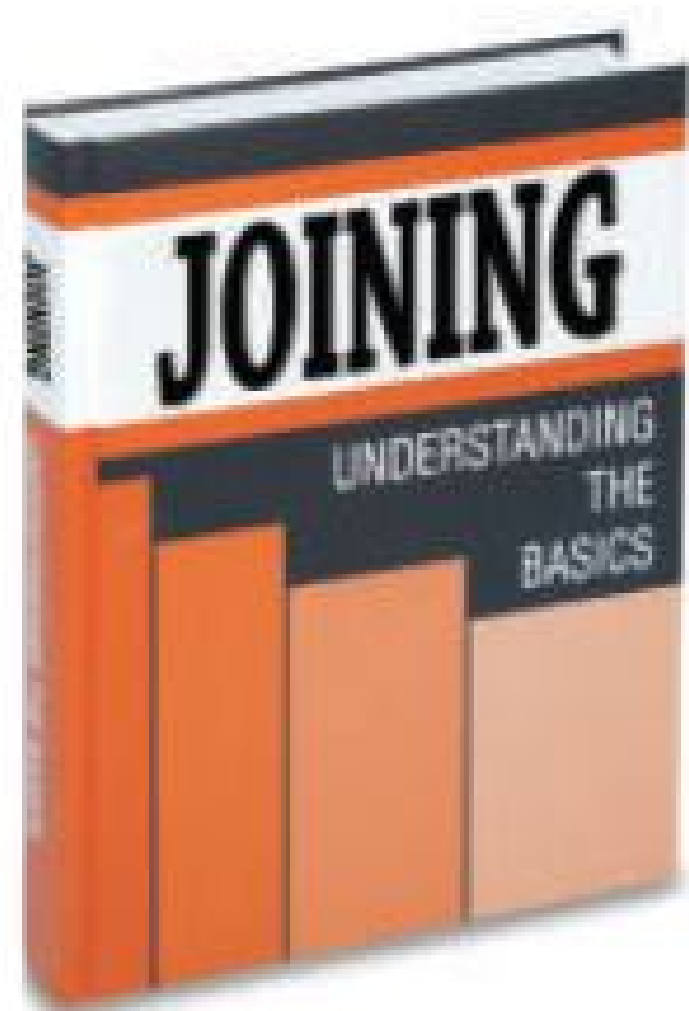
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Compares joining methods, explains the fundamental parameters of brazes, and surveys the metallurgy of braze alloy systems.

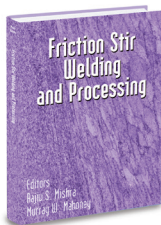
Principles of Soldering

By Giles Humpston and David M. Jacobson

2004 • 271 pages
ISBN: 978-0-87170-792-5
Product Code: 06244G

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The fundamental characteristics of solders, fluxes, and joining environments and the impact these have in the selection and successful use of soldering.



Friction Stir Welding and Processing

Edited by R.S. Mishra and M.W. Mahoney
2007 • 368 pages
ISBN: 978-0-87170-840-3
Product Code: 05112G

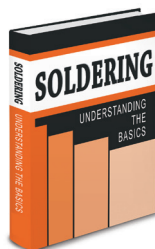
Price: \$157 / ASM Member: \$115

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For welding engineers, welders, metallurgists, and materials science engineers involved with the application, fabrication, and assessment of welded structures. Selected articles are compiled from various ASM International publications that deal with structural welds involving important ferrous and nonferrous engineering metals and alloys.



Soldering: Understanding the Basics

By M.M. Schwartz
2014 • 184 pages
ISBN: 978-1-62708-058-3
Product Code: 05338G

Price: \$187 / ASM Member: \$135

Covers various soldering methods and techniques as well as the latest on solder alloys, solder films, surface preparation, fluxes and cleaning methods, heating methods, inspection techniques, and quality control and reliability.

Brazing, 2nd Edition

By M.M. Schwartz
2003 • 421 pages
ISBN: 978-0-87170-784-0
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Product Code: 06325G

Price: \$307 / ASM Member: \$231

Quick access to recommended heat treating information for hundreds of nonferrous alloys, plus composition, trade names, common name, specifications (both U.S. and foreign), available product forms, and typical applications. Information is presented by alloy group in the datasheet format established in the companion edition on irons and steels.

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Edited by G. Vander Voort
1991 • 804 pages • 1,839 diagrams
ISBN: 978-0-87170-415-3
Product Code: 06150G

Price: \$307 / ASM Member: \$231

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Edited by G. Vander Voort
1991 • 474 pages • 500 diagrams
ISBN: 978-0-87170-428-3
Product Code: 06190G

Price: \$307 / ASM Member: \$231



Atmosphere Heat Treatment: Principles, Applications, Equipment, Volume 1

By Daniel H. Herring • Publisher: BNP Media
2014 • 700 pages
ISBN: 978-0-692-28393-6
Product Code: 75149G

Price: \$162.99 / ASM Member \$145.49

This comprehensive resource emphasizes fundamental principles, materials, metallurgy, applications, and equipment. The focus is on the needs of heat treating and engineering practitioners working in the field. It provides practical advice, a diverse set of application examples, and a wide range of technical and engineering information necessary to make informed decisions about how to heat treat and what equipment and features are necessary to do the job.

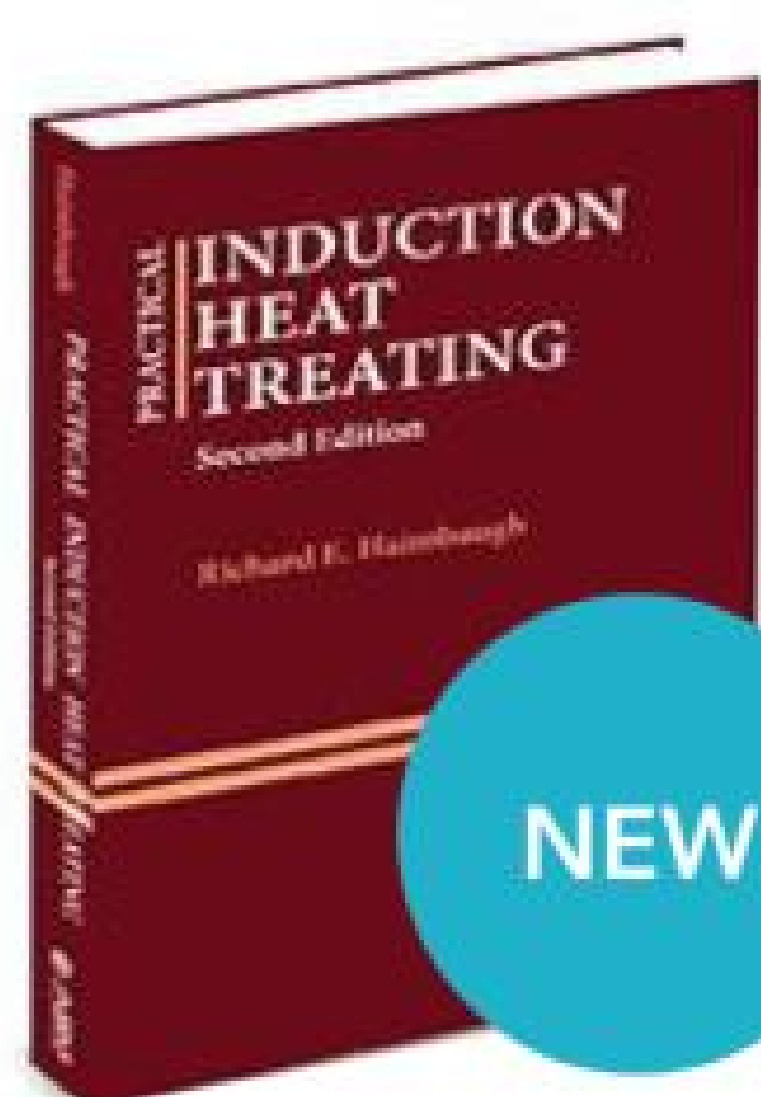


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Quick reference data on more than 430 steel, aluminum, and magnesium alloys. Use by itself or as a companion to the Heat Treater's Guide print and online database products. Published by ASM and the Heat Treating Society.



Practical Induction Heat Treating, Second Edition

By R.E. Haimbaugh

2015 • 365 pages

ISBN: 978-1-62708-089-7

Product Code: 05505G

Price: \$207 / ASM Member: \$155

This book is a quick reference source for induction heaters and ties-in the metallurgy, theory, and practice of induction heat treating

from a hands-on explanation of what floor people need to know. New material has been added including updated information on quenching methods, applications, inspection for quality control, and updated material on power supplies.

Heat Treatment of Gears: A Practical Guide for Engineers

By A.K. Rakhit

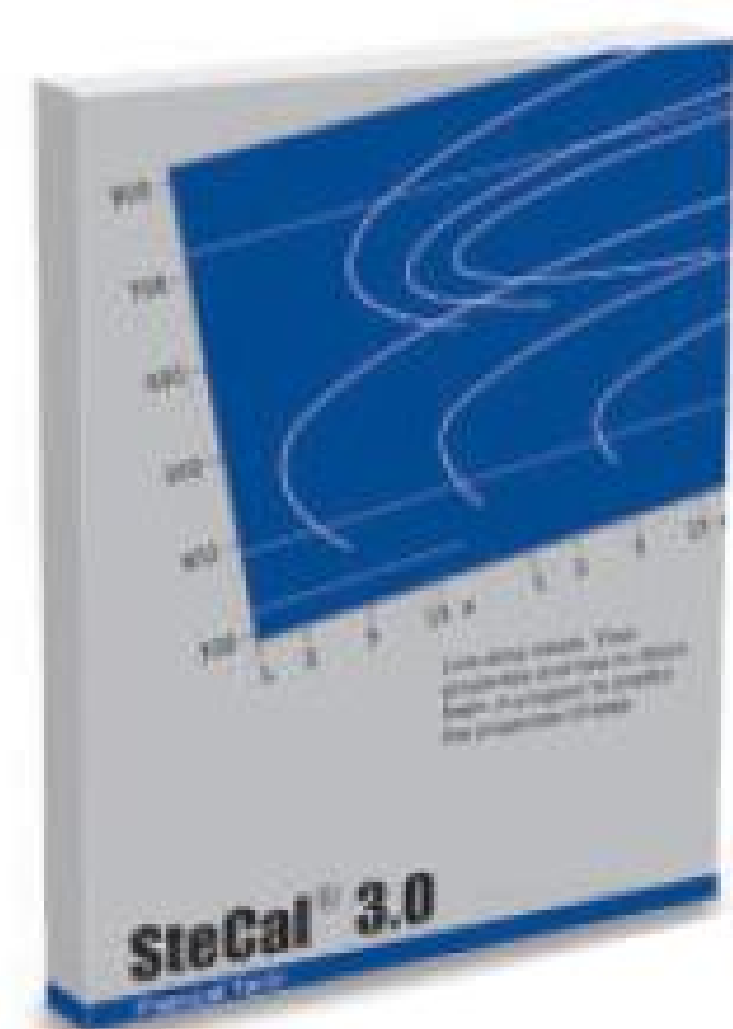
2000 • 209 pages

ISBN: 978-0-87170-694-2

Product Code: 06732G

Price: \$167 / ASM Member: \$125

Heat treat distortion of gears is discussed in detail for the major heat treat processes. A case history of each successful gear heat treat process is included.



SteCal® 3.0 (CD + Booklet)

By P. Tarin and J. Pérez

2004 • Microsoft Windows format

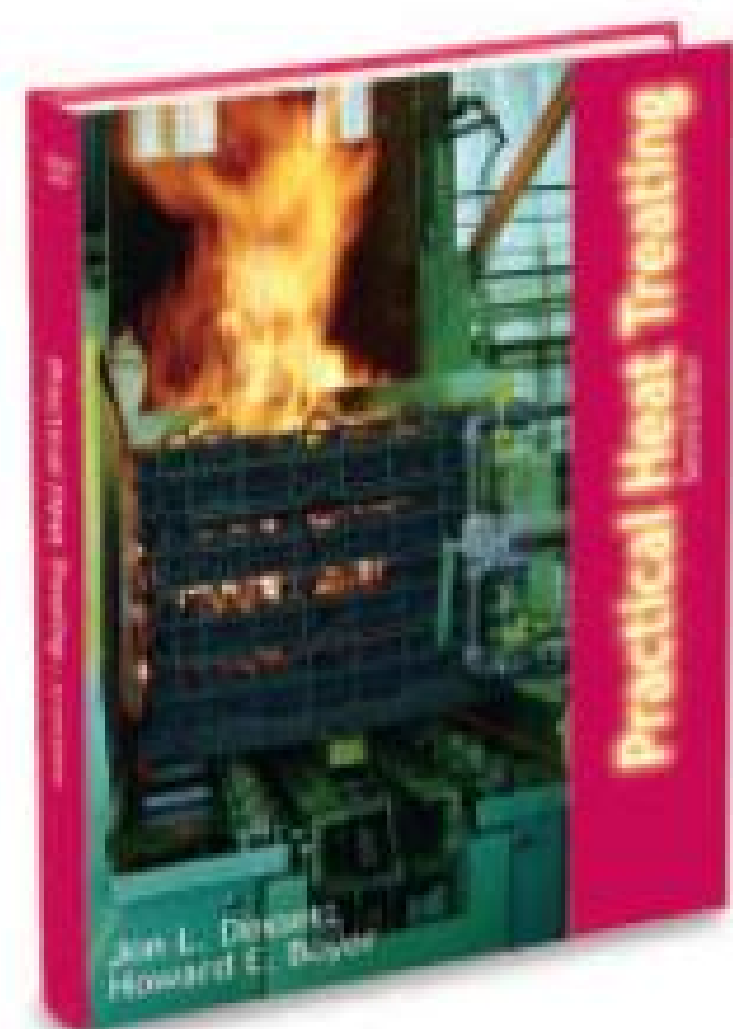
ISBN: 978-0-87170-796-3

Product Code: 07482A

Price: \$447 / ASM Member: \$335

Use for predicting the properties obtained from heat treating low-alloy steels. An excellent tool for heat treaters to use in estimating and refining heat treating parameters for unfamiliar steels, or

comparing the properties of two steels of different composition to arrive at the most appropriate composition for a particular application.



Practical Heat Treating, 2nd Edition

By J.L. Dossett and H.E. Boyer

2006 • 296 pages

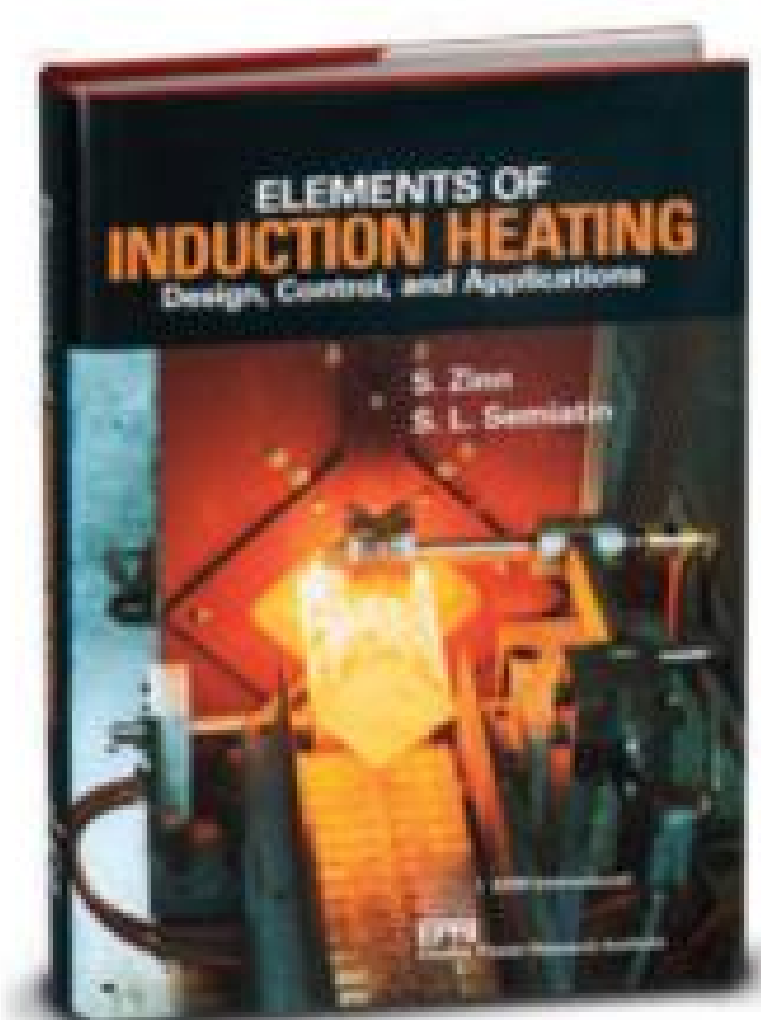
ISBN: 978-0-87170-829-8

Product Code: 05144G

Price: \$147 / ASM Member: \$105

An excellent introduction and guide for design and manufacturing engineers, technicians, students, and others who need to understand why heat treatment

is specified and how different processes are used to obtain desired properties. Clear, concise, and non-theoretical language.



Elements of Induction Heating: Design, Control, & Applications

By S. Zinn, S.L. Semiatin

1988 • 335 pages

ISBN: 978-0-87170-308-8

Product Code: 06522G

Price: \$107 / ASM Member: \$75

Surface Hardening of Steels: Understanding the Basics

Edited by J.R. Davis

2002 • 364 pages

ISBN: 978-0-87170-764-2

Product Code: 06952G

Price: \$147 / ASM Member: \$105

A practical selection guide to help engineers and technicians choose the most efficient surface hardening techniques that offer consistent and repeatable results. Emphasis is placed on processing temperature, case/coating thickness, bond strength, and hardness level obtained.

Heat Treating Reference Library DVD, 2012 Edition

2012 • ASM International

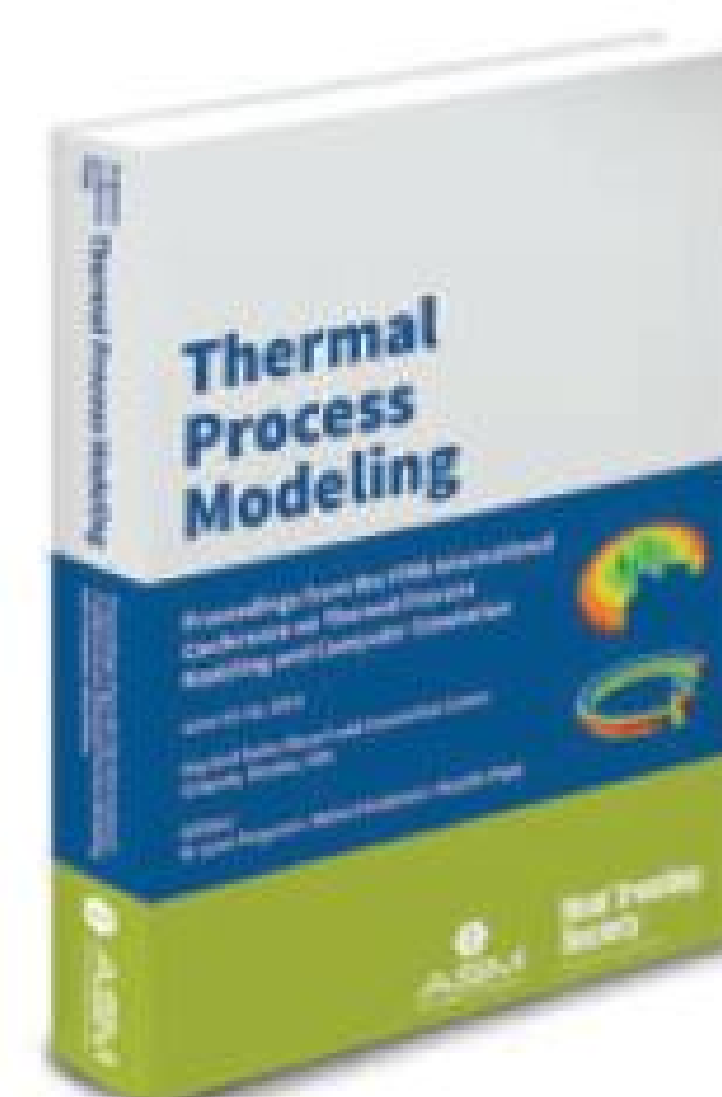
ISBN: 978-1-61503-840-4

Product Code: 05347V

Price: \$703 / ASM Member: \$601

A complete guide to the heat treating of steels and nonferrous alloys. More than 3000 articles, data sheets, and diagrams from the ASM Handbook and other authoritative sources—more than 15,000 pages of content.

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Thermal Process Modeling: Proceedings of the 5th International Conference on Thermal Process Modeling and Computer Simulation

Edited by B.L. Ferguson, R. Goldstein, and R. Papp

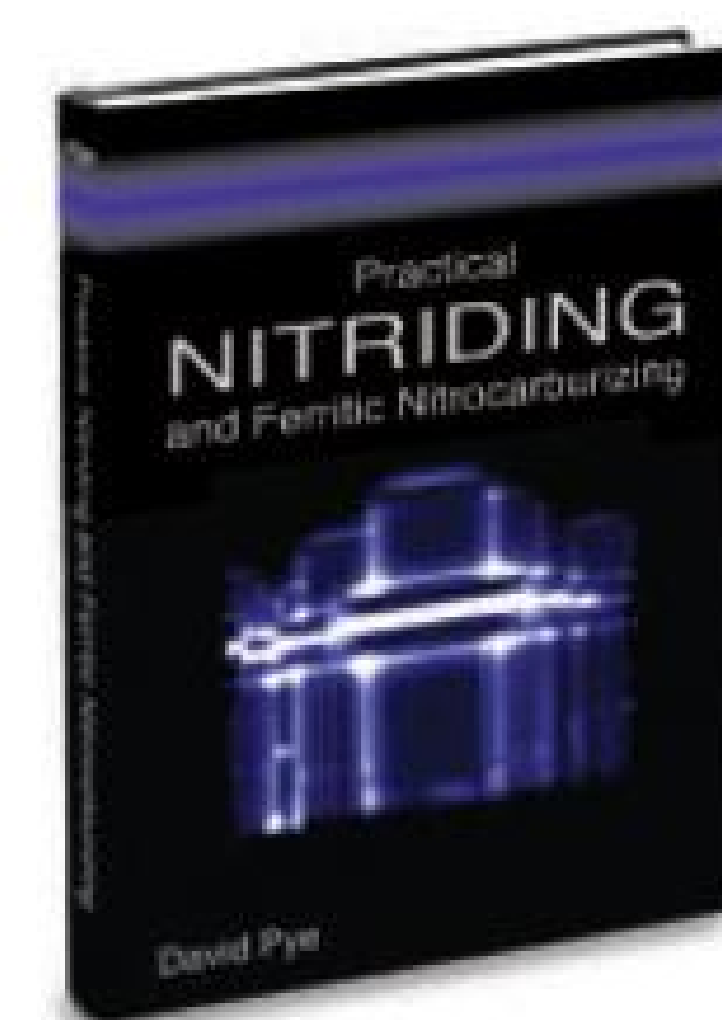
2014 • 329 pages

ISBN: 978-1-62708-068-2

Product Code: 05447G

Price: \$168 / ASM Member: \$139

This collection of papers represents the heart of the 5th International Conference on Thermal Process Modeling and Computer Simulation. Thermal processes are key manufacturing steps in producing durable and useful products, with solidification, welding, heat treating, and surface engineering being primary steps.



Practical Nitriding and Ferritic Nitrocarburizing

By David Pye

2003 • 256 pages

ISBN: 978-0-87170-791-8

Product Code: 06950G

Price: \$207 / ASM Member: \$155

Nitriding and ferritic nitrocarburizing offer unique advantages over other surface hardening heat treatments. This book will help you to understand these processes, select the appropriate process and process parameters, control the process, evaluate results, and troubleshoot.

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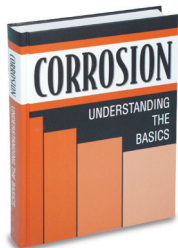
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Corrosion: Understanding the Basics

Edited by J.R. Davis
2000 • 563 pages
ISBN: 978-0-87170-641-6
Product Code: 06691G

Price: \$197 / ASM Member: \$145

A "how to" approach to understanding and solving the problems of corrosion of structural materials. Written for those with limited technical background. Provides more experienced engineers with a useful overview of the principles of corrosion and can be used as a general guide for developing a corrosion-control program.



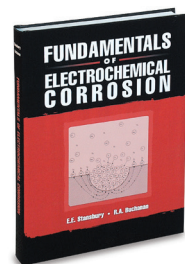
Handbook of Corrosion Data, 2nd Edition

Edited by B. Craig and D. Anderson
1995 • 998 pages
ISBN: 978-0-87170-518-1
Product Code: 06407G

Price: \$307 / ASM Member: \$231

Includes "Corrosion of Metals and Alloys" and "Corrosion Media." The first part contains summaries on the general corrosion characteristics of major metals and alloys in

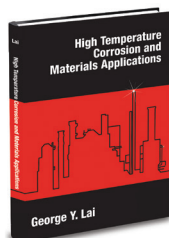
various corrosion environments. The second part is organized alphabetically by chemical compound and the data for each corrosive agent/compound are in tabular form.



Fundamentals of Electrochemical Corrosion

By E.E. Stansbury and R.A. Buchanan
2000 • 487 pages
ISBN: 978-0-87170-676-8
Product Code: 06594G

Price: \$157 / ASM Member: \$115

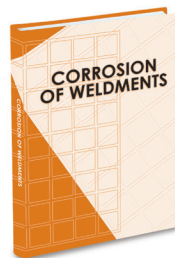


High-Temperature Corrosion and Materials Applications

By George Y. Lai
2007 • 480 pages
ISBN: 978-0-87170-853-3
Product Code: 05208G

Price: \$237 / ASM Member: \$175

Covers oxidation, nitridation, carburization and metal dusting, corrosion by halogen and halides, sulfidation, erosion and erosion-corrosion, hot corrosion in gas turbines, boilers and furnaces, stress-assisted corrosion and cracking, molten salt corrosion, liquid metal corrosion and embrittlement, and hydrogen attack.

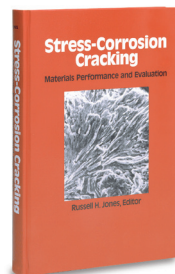


Corrosion of Weldments

Edited by J.R. Davis
2006 • 236 pages
ISBN: 978-0-87170-841-0
Product Code: 05182G

Price: \$207 / ASM Member: \$155

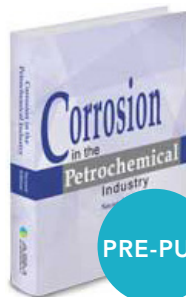
Details the many forms of weld corrosion and the methods used to minimize weld corrosion.



Stress-Corrosion Cracking: Materials Performance and Evaluation

Edited by R.H. Jones
1992 • 448 pages
ISBN: 978-0-87170-441-2
Product Code: 06355G

Price: \$207 / ASM Member: \$155



Corrosion in the Petrochemical Industry, Second Edition

Edited by Victoria Burt
2015 • Approx. 500 pages
ISBN: 978-1-62708-094-1
Product Code: 05503G

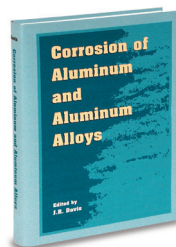
A comprehensive guide to understanding and preventing corrosion in the petrochemical industry. Written for engineers, production managers and technicians, this book explains how to select the best material for a corrosion-sensitive petrochemical application, and how to choose among various prevention methods.

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Prepublication Price: \$199 / ASM Member: \$149

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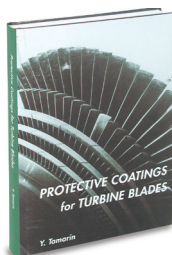


Corrosion of Aluminum and Aluminum Alloys

Edited by J.R. Davis
1999 • 313 pages
ISBN: 978-0-87170-629-4
Product Code: 06787G

Price: \$167 / ASM Member: \$125

COATINGS & SURFACE ENGINEERING



Protective Coatings for Turbine Blades

By Y. Tamarin
2002 • 244 pages
ISBN: 978-0-87170-759-8
Product Code: 06738G

Price: \$53 / ASM Member: \$42

Addresses the problem of surface protection for aircraft engine turbine blades. Based on the author's 30+ years of work on the development and application of coatings to protect against oxidation and hot corrosion. Describes and details a methodology for optimizing turbine blade surface protection.

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Volume 5B: Protective Organic Coatings

Edited by Kenneth B. Tator

2015 • Approx. 590 pages
ISBN: 978-1-62708-081-1
Product Code: 05437G

Price: \$297 / ASM Member: \$225

This completely new volume addresses a need for comprehensive information on organic coatings, including coating materials, surface preparation, application processes, industrial uses, and coating evaluation and analysis methods. This volume is essential for industrial coating users, specifiers, and contractors. The content in this volume has been written and reviewed by leading industry experts, making this latest ASM Handbook the definitive resource on this important topic. Plus, Volume 5B is the first volume in the ASM Handbook series to be printed in full color.



Surface Engineering for Corrosion and Wear Resistance

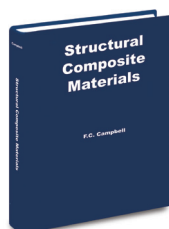
Edited by J.R. Davis

2001 • 279 pages
Co-published by IOM Communications and ASM International
ISBN: 978-0-87170-700-0
Product Code: 06835G

Price: \$107 / ASM Member: \$75

Provides practical information to help engineers select the best possible surface treatment for a specific corrosion or wear application. Covers process comparisons, and dozens of useful tables and figures compare surface treatment thickness and hardness ranges; abrasion and corrosion resistance; processing time, temperature, and pressure; costs; distortion tendencies; and other critical process factors and coating characteristics.

PLASTICS, COMPOSITES & CERAMICS



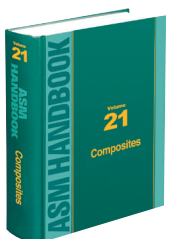
Structural Composite Materials

By F.C. Campbell

2010 • 630 pages
ISBN: 978-1-61503-037-8
Product Code: 05287G

Price: \$167 / ASM Member: \$125

All aspects of continuous and discontinuous fiber-reinforced polymer, metal, and ceramic composites are described in terms of fabrication, properties, design, analysis, and in-service performance.



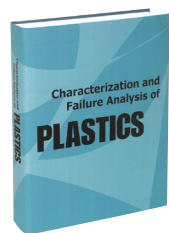
Volume 21: Composites

Edited by D.B. Miracle and S.L. Donaldson

2001 • 1201 pages
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Product Code: 06781G

Price: \$297 / ASM Member: \$225

See page 4 for more information.



Characterization and Failure Analysis of Plastics

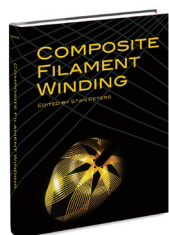
2003 • 482 pages

ISBN: 978-0-87170-789-5
Product Code: 06978G

Price: \$247 / ASM Member: \$185

Covers the performance of plastics and how it is characterized during design, property testing, and failure analysis. Selected by *Choice* magazine for its excellence in scholarship and presentation, the

significance of its contribution to the field, and value as an important treatment of the subject.



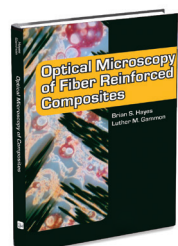
Composite Filament Winding

Edited by S.T. Peters

2011 • 174 pages
ISBN: 978-1-61503-722-3
Product Code: 05286G

Price: \$167 / ASM Member: \$125

Topics include capabilities and limitations of filament winding, practical issues such as fiber and resin handling, winding theory, software and numerical control, history of the process, and more.



Optical Microscopy of Fiber-Reinforced Composites

By Brian S. Hayes and Luther M. Gammon

2010 • 284 pages
ISBN: 978-1-61503-044-6
Product Code: 05303G

Price: \$177 / ASM Member: \$135

Optical microscopy is one of the most valuable but under-utilized tools for analyzing fiber-reinforced polymer matrix composites. Covers sample preparation, microscopic techniques, and applications. The power to study the microstructure of heterogeneous, anisotropic materials is illustrated with over 180 full color images.

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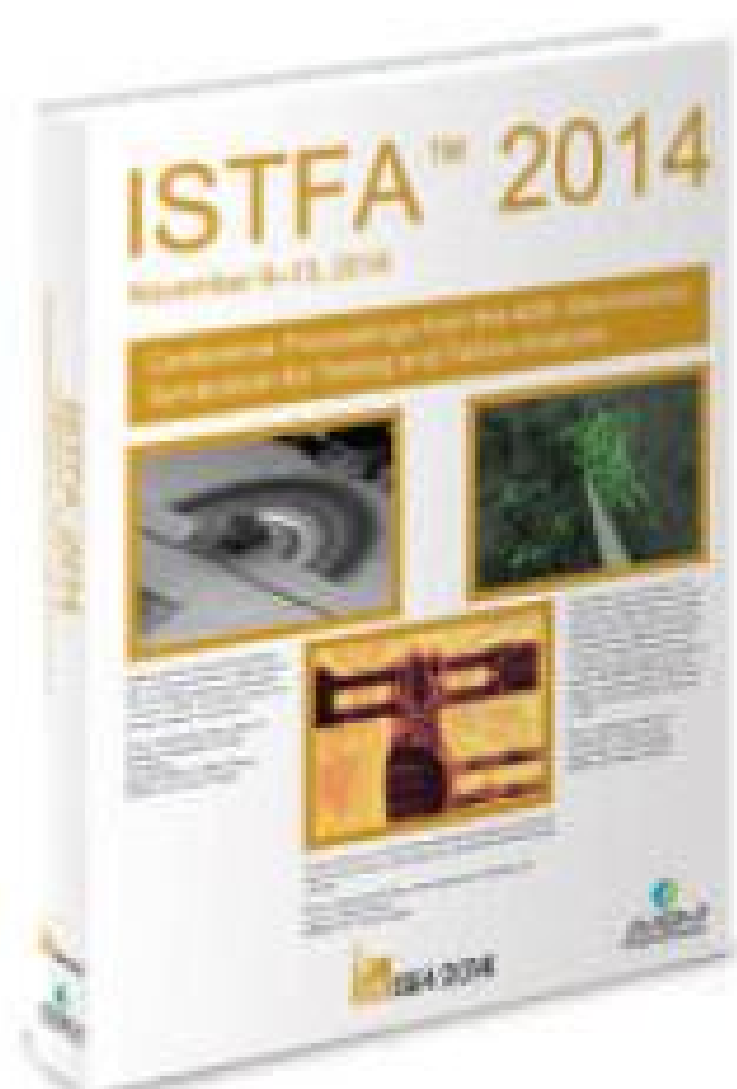
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Proceedings from the 41st International Symposium for Testing and Failure Analysis

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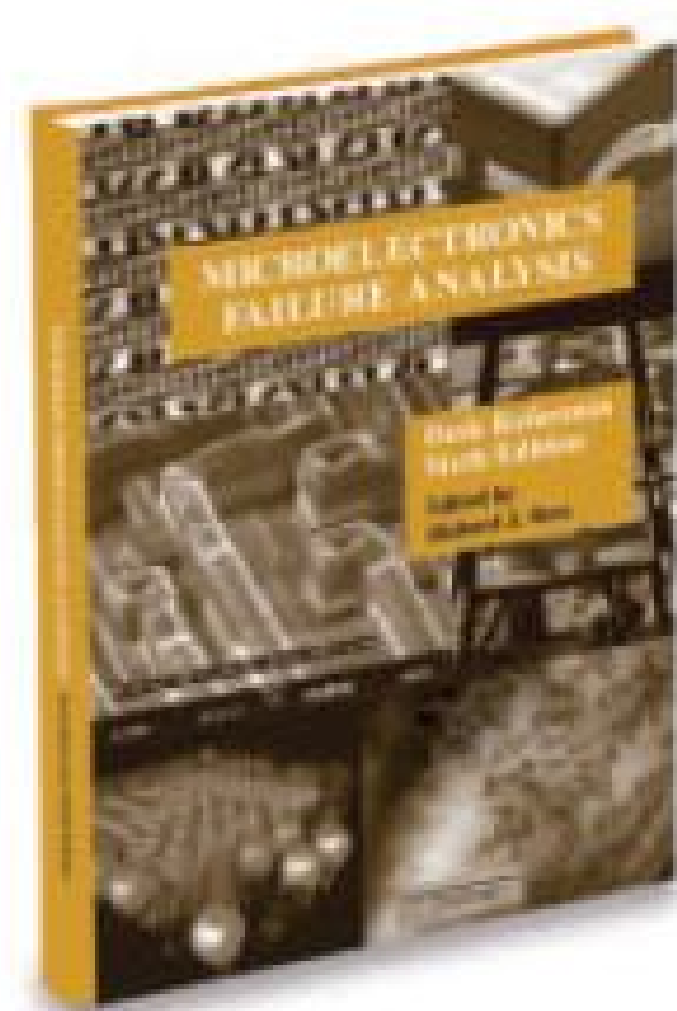
ISTFA™ 2014

Proceedings from the 40th International Symposium for Testing and Failure Analysis

2014 • 560 pages
ISBN: 978-1-62708-074-3
Product Code: 02216G

Price: \$167 / ASM or EDFASSM Member: \$125

This volume features the latest research and practical data from the premier event for the microelectronics failure analysis community. The papers address the symposium's theme, Exploring the Many Facets of Failure Analysis.

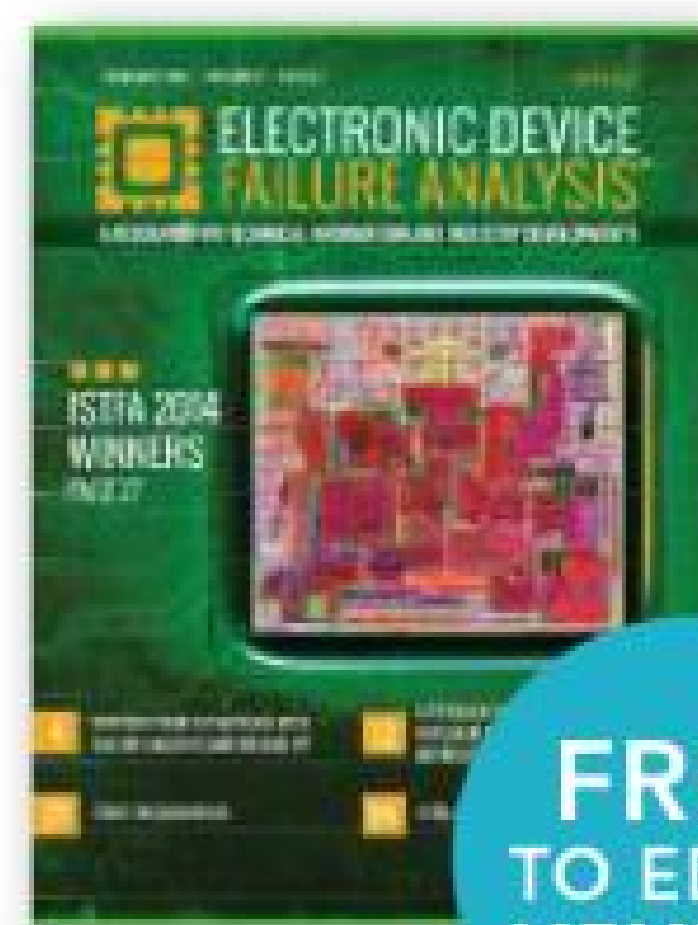


Microelectronics Failure Analysis Desk Reference, 6th Edition (Book + CD)

Edited by Richard J. Ross
2011 • 674 pages
ISBN: 978-1-61503-725-4
Product Code: 09110Z

Price: \$207 / ASM or EDFASSM Member: \$155

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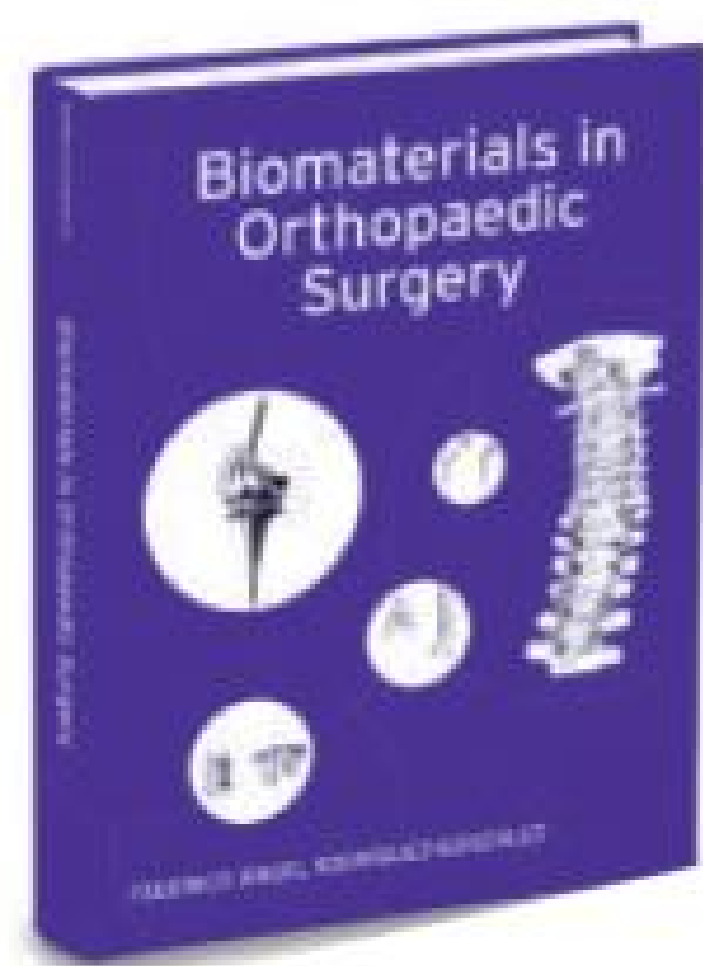
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MEDICAL DEVICE MATERIALS



Biomaterials in Orthopaedic Surgery

By Federico Ángel Rodríguez-González
2009 • 236 pages
ISBN: 978-1-61503-009-5
Product Code: 05233G

Price: \$137 / ASM Member: \$105

Biomaterials (metallic, nonmetallic, and bone allografts) used for orthopaedic applications and the engineering and clinical aspects of their use and performance. Case studies and specific applications include internal and external bone fracture fixation, hip and knee joint replacements, spine implants and disc prostheses, and the application of structural bone allografts for patients with bone tumors.

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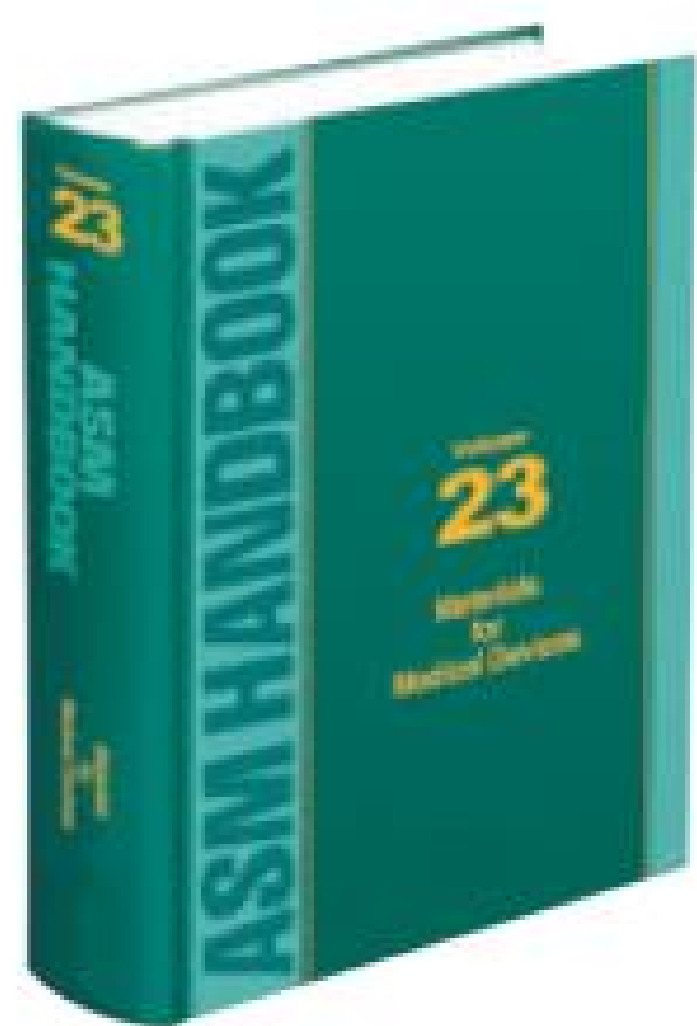
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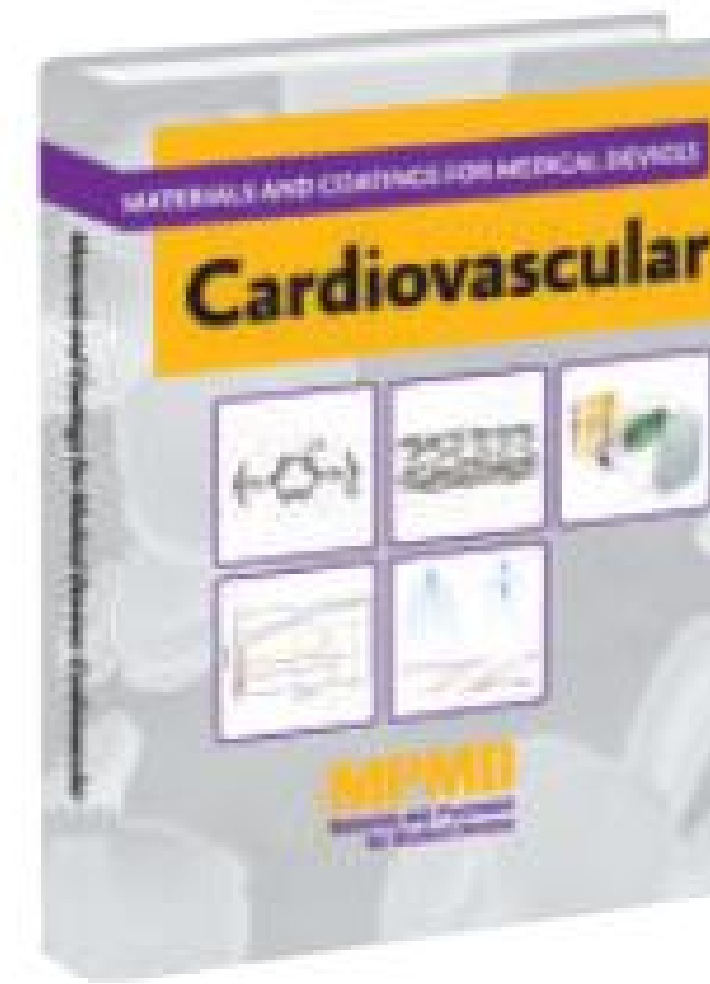
Volume 23: Materials for Medical Devices

Edited by Roger Narayan
 2012 • 396 pages
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 Product Code: 05285G

Price: \$297 / ASM Member: \$225

State-of-the-art reference for implant materials including stainless steels, cobalt-base alloys, titanium, shape memory alloys, noble metals, ceramics, and polymers. Examples of materials- and mechanical-based failures of medical devices. Covers biotribology, implant wear, clinical wear, and biological aspects. Corrosion effects, corrosion products, mechanically assisted corrosion, and corrosion fatigue. Biocompatibility of ceramics and polymers.

Volume 23 is a replacement for the *Handbook of Materials for Medical Devices* edited by J.R. Davis (ASM, 2003). It features new content that greatly expands the scope and depth of coverage, including a more in-depth discussion of materials and focus on applications.



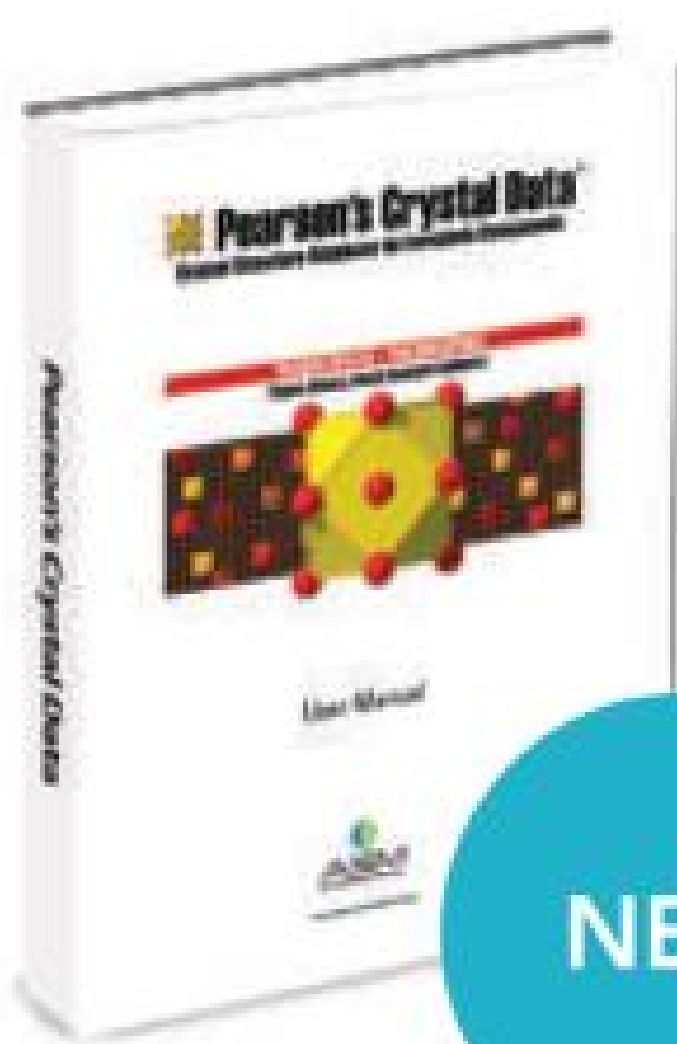
Materials and Coatings for Medical Devices: Cardiovascular

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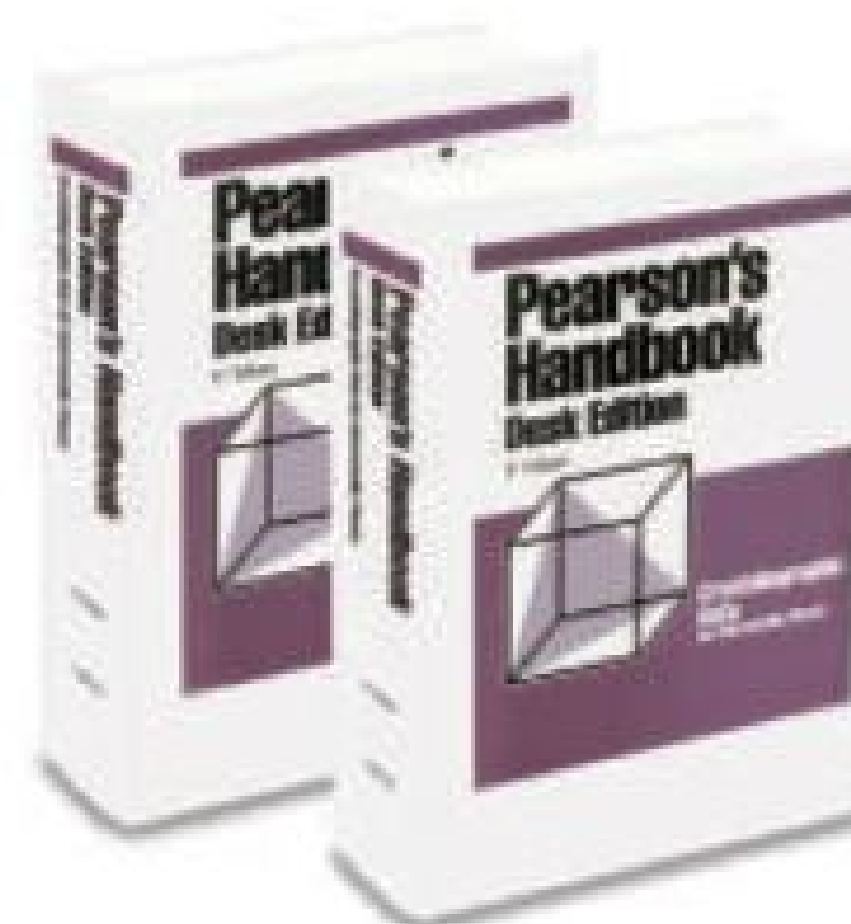


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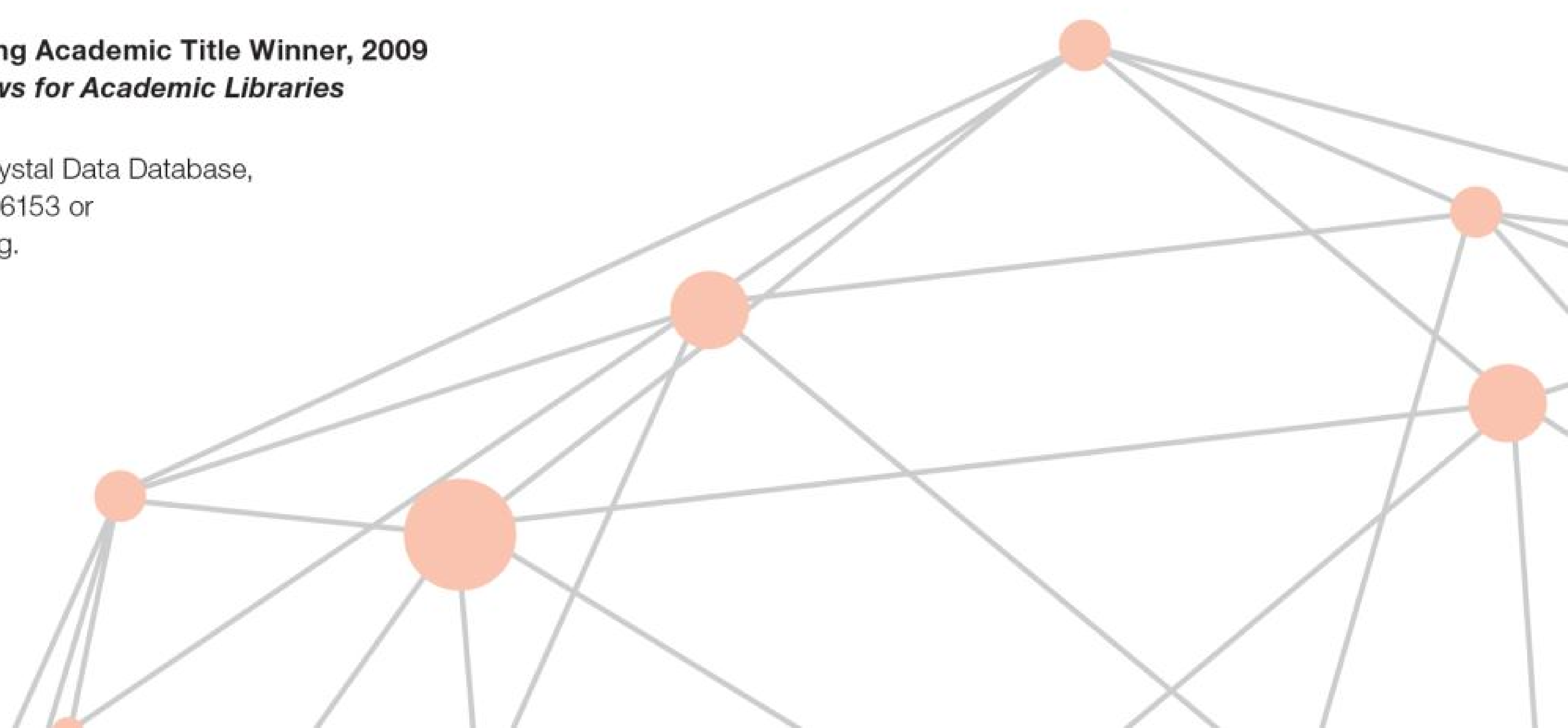
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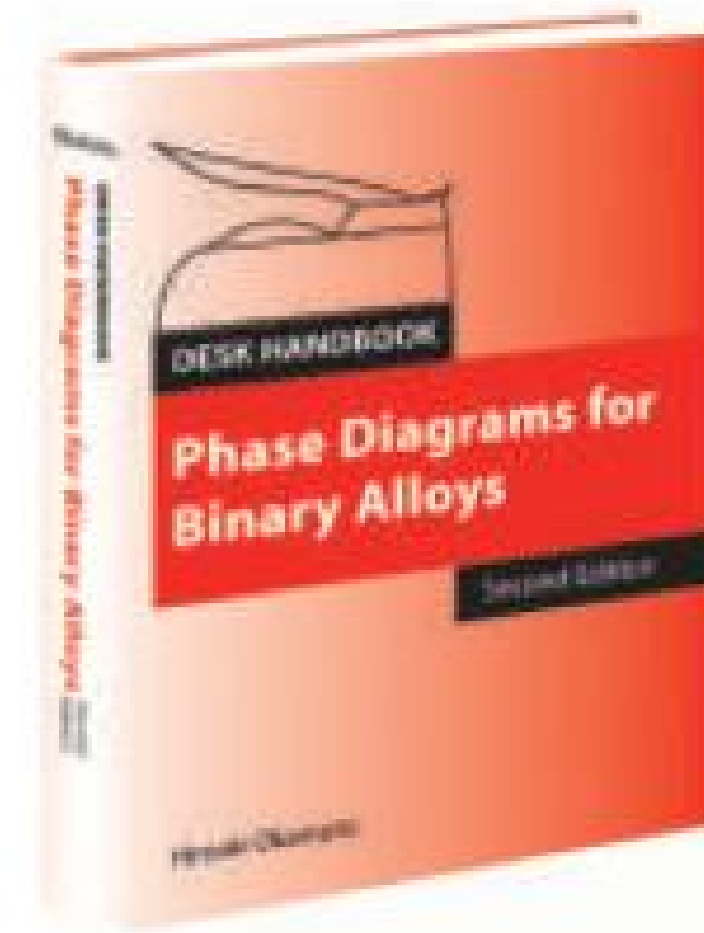
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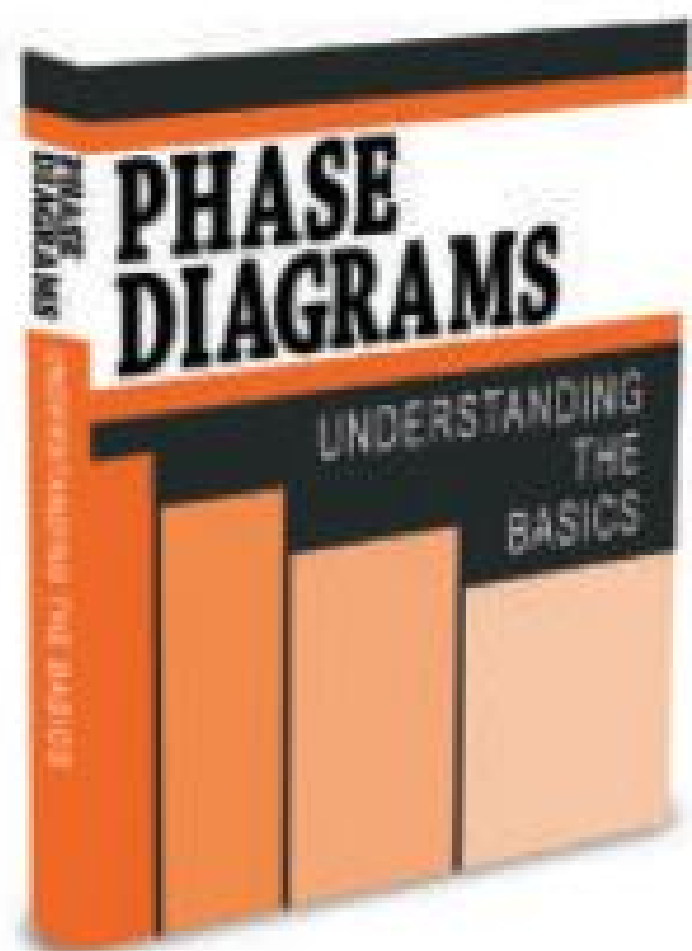
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