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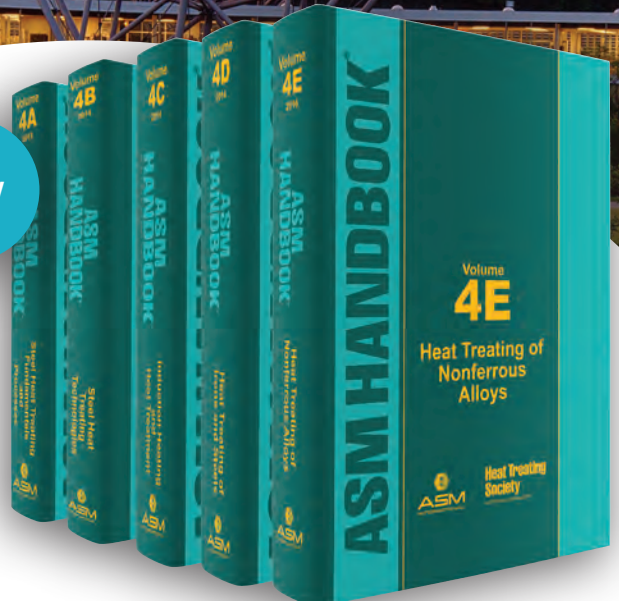
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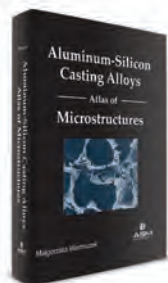
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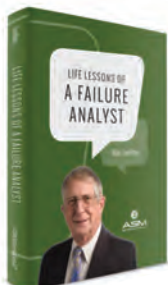
ASM Handbook,
Volume 4E:
Heat Treating of
Nonferrous Alloys

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Aluminum-Silicon Casting
Alloys: Atlas of
Microstructures

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Life Lessons of a
Failure Analyst

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ASM Handbook, Volume 3:
Alloy Phase Diagrams

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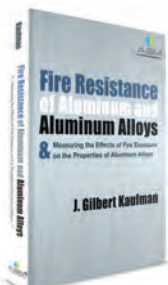
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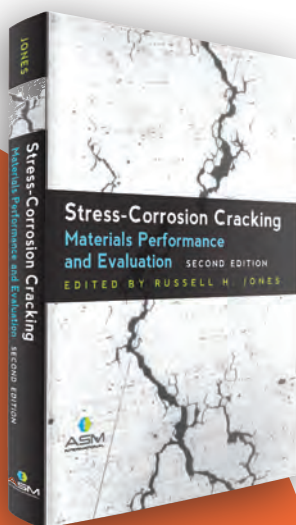
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Alloys & Measuring the
Effects of Fire Exposure
on the Properties of
Aluminum Alloys

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ISTFA™ 2016
Proceedings from the 42nd
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Stress-Corrosion Cracking:
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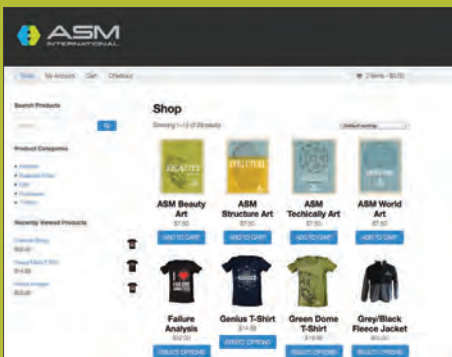
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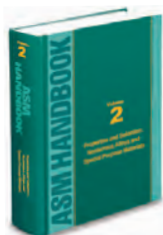
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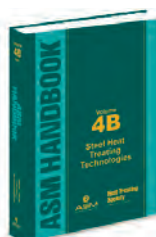
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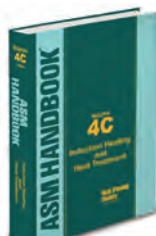
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Volume 4C: Induction Heating and Heat Treatment

Edited by Valery Rudnev and George E. Totten

2014 • 820 pages

ISBN: 978-1-62708-012-5

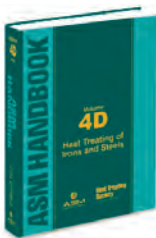
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2014 • 730 pages
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Packed with information and knowledge for anyone who uses or works with heat treated steels or cast

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Volume 4E: Heat Treating of Nonferrous Alloys

Edited by George E. Totten
2016 • 712 pages
978-1-62708-112-2
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2013 • 412 pages
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Co-published by the Thermal Spray Society and ASM International. Replaces the *Handbook of Thermal Spray Technology*, edited by J.R. Davis

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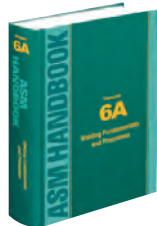
application processes, industrial uses, and coating evaluation and analysis methods. This volume is essential for industrial coating users, specifiers, and contractors. The content in this volume has been written and reviewed by leading industry experts, making this latest ASM Handbook the definitive 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
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Practical advice on consumable selection and procedure development, as well as joining fundamentals, processes, assemblies and selection. More than 500 illustrations and 400 tables.



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2011 • 936 pages
ISBN: 978-1-61503-133-7
Product Code: 05264G

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A focused revision of the welding process information in Volume 6: *Welding, Brazing and Soldering* (1993). Updated and expanded articles on the fundamental principles of welding, including heat transfer, solidification, residual stress, and distortion. Workhorse methods of arc and resistance welding, friction stir welding, laser beam welding, explosive welding, and ultrasonic welding.



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.

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Edited by Prasan K. Samal and Joseph W. Newkirk
2015 • 907 pages
ISBN: 978-1-62708-089-3
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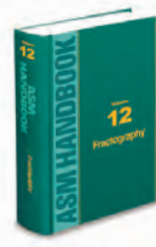
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Edited by R.J. Shipley and W.T. Becker
2002 • 1164 pages
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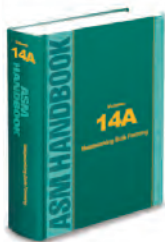
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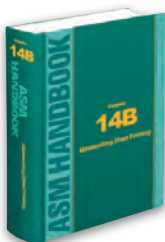
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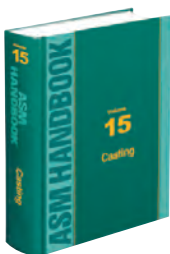
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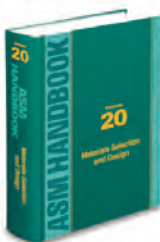


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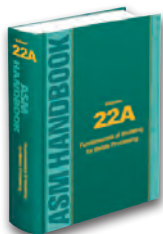
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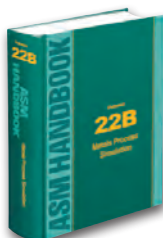
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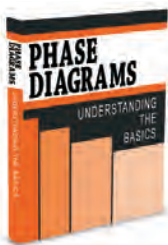
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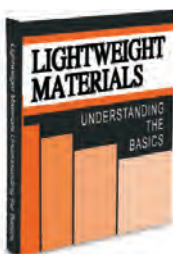
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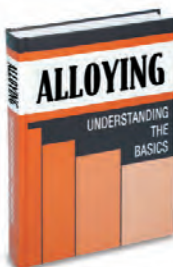
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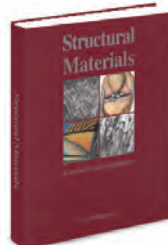


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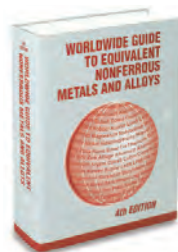
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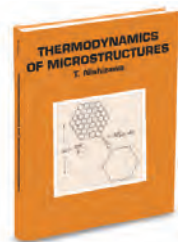


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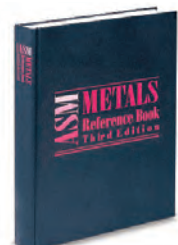


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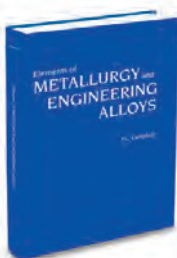
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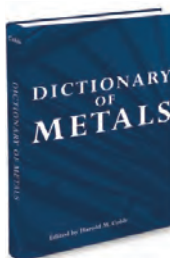
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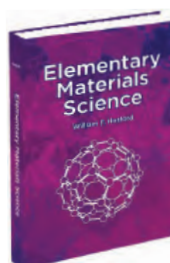
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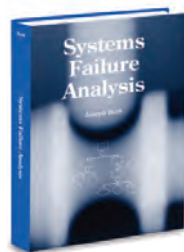
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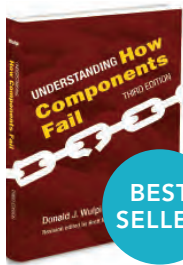
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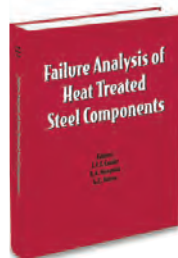


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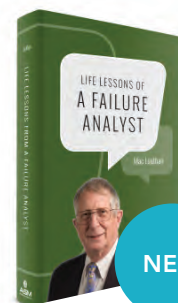
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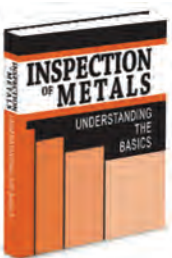
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METALLOGRAPHY & MATERIALS CHARACTERIZATION



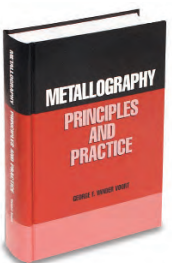
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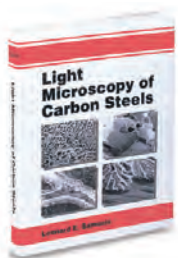


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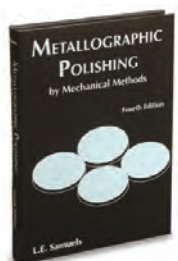


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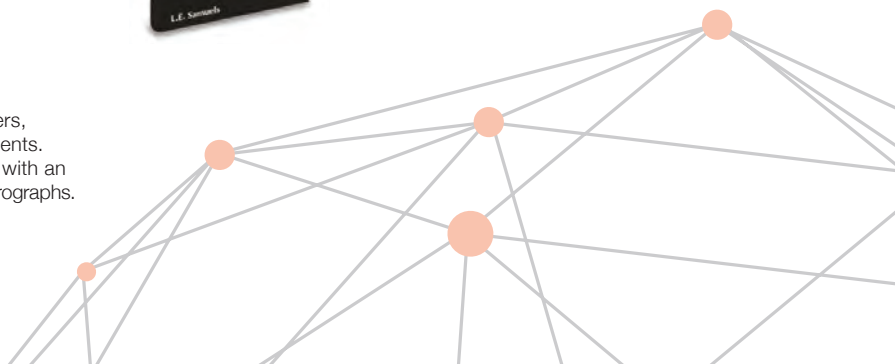
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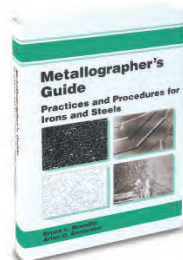


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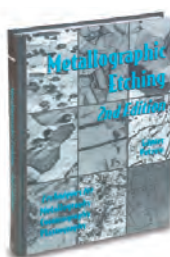
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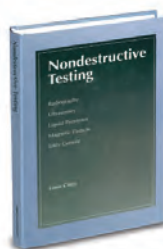
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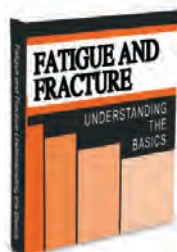
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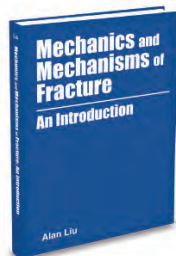
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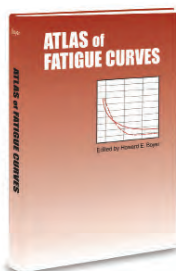
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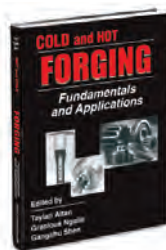
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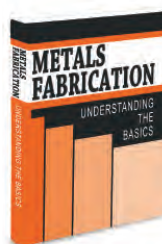


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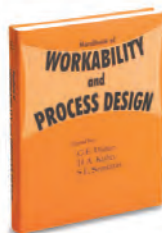


Gear Materials, Properties, and Manufacture

Edited by J.R. Davis
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ISBN: 978-0-87170-815-1
Product Code: 05125G

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Overview of gears, lubrication and wear; in-depth treatment of metallic alloys (ferrous and nonferrous) and plastic gear materials; gear manufacturing methods (including metal removal, casting, forming, and forging); heat treatment; and failure analysis, fatigue life prediction and mechanical testing.



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Edited by G.E. Dieter, H.A. Kuhn, and S.L. Semiatin
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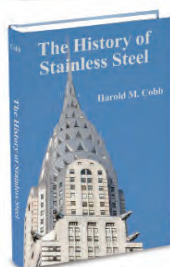
A practical primer on steel metallurgy for those who select, heat, forge, or machine steel.



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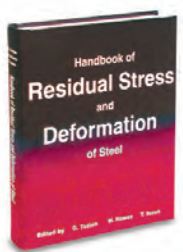


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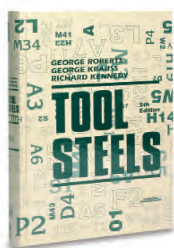


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Purchase, design, and manufacture of castings (including casting and molding, heat treatment, and quality assurance), materials selection for mechanical and chemical properties, and materials selection for processing properties.



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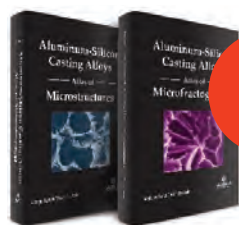
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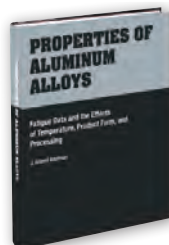
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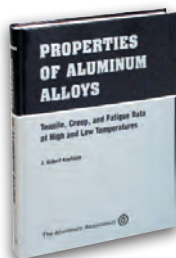
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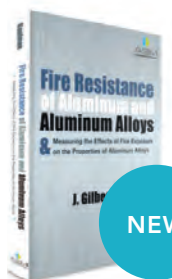


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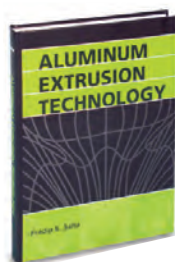
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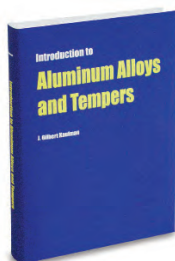
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Advantages and limitations of aluminum alloys and temper combinations in terms of the relationship of their composition, process history, and microstructure to service requirements.



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ASM Specialty Handbook® Nickel, Cobalt, and Their Alloys

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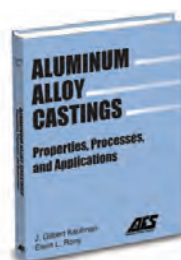
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The compositions, properties, processing, performance, and applications of nickel, cobalt, and their alloys.



Aluminum Alloy Castings: Properties, Processes, and Applications

By J.G. Kaufman and E.L. Rooy

2004 • 340 pages

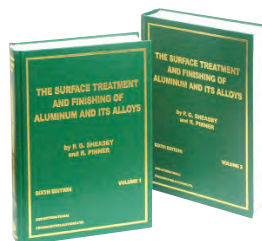
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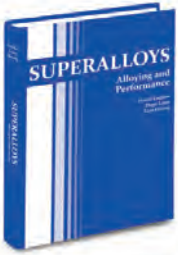
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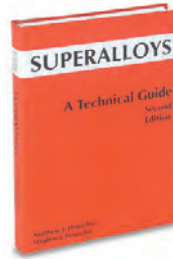


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An introduction for understanding the compositional complexity of superalloys and the wide range of alloys developed for specific applications. The basics of alloying, strengthening mechanisms, and structure of superalloys are explained in optimizing particular mechanical properties, oxidation/ corrosion resistance, and manufacturing characteristics such as castability, forgeability, and weldability.

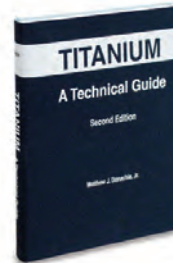


Superalloys: A Technical Guide, 2nd Edition

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The most comprehensive titanium data package ever assembled. Information on applications, physical properties, corrosion, mechanical properties, fatigue, fracture properties, and elevated temperature properties.



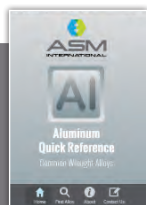
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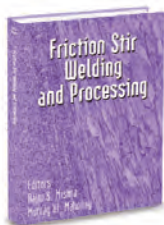
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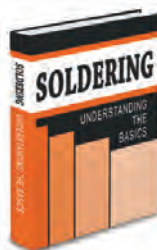
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By M.M. Schwartz
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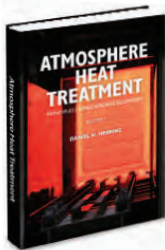
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Atmosphere Heat Treatment: Atmospheres, Quenching, Testing, Volume 2

By Daniel H. Herring • Publisher: BNP Media

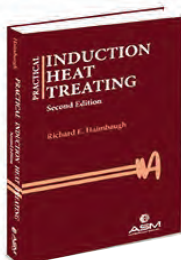
2015 • 824

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This second volume provides a comprehensive resource on the subject of atmosphere heat treatment and gives a wide range of useful information, both from a practical and a technical standpoint. Readers of this book will be able to make better and more informed decisions about their equipment, process, and service needs. Written specifically for the heat treater, engineer, and metallurgist by one of their own.



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

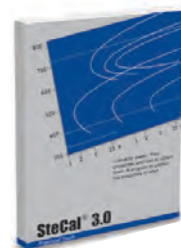
2000 • 209 pages

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

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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.

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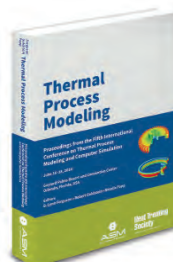
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Thermal Process Modeling: Proceedings of the 5th International Conference on Thermal Process Modeling and Computer Simulation

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

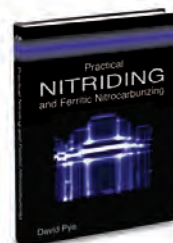
2014 • 329 pages

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

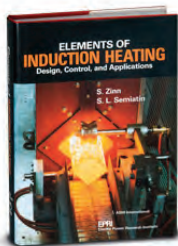
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Elements of Induction Heating: Design, Control, & Applications

By S. Zinn, S.L. Semiati
1988 • 335 pages
ISBN: 978-0-87170-308-8
Product Code: 06522G
Price: \$107 / ASM Member: \$75



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.

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.

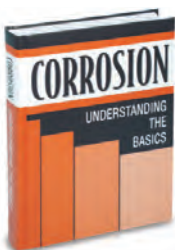
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CORROSION



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.

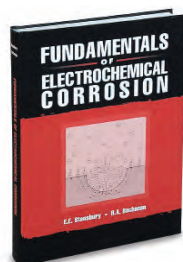


Handbook of Corrosion Data, 2nd Edition

Edited by B. Craig and D. Anderson
1995 • 998 pages
ISBN: 978-0-87170-518-1
Product Code: 06407G
Price: \$307 / ASM Member: \$231

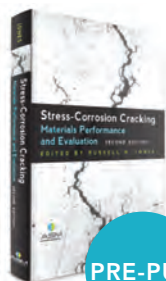
Includes "Corrosion of Metals and Alloys" and "Corrosion Media." The first part contains summaries on the general corrosion characteristics of major metals and alloys in

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

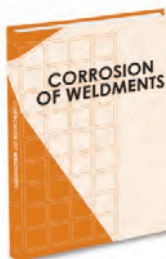


Stress-Corrosion Cracking: Materials Performance and Evaluation, Second Edition

Edited by Russell H. Jones
2016 • Approx. 500 pages
ISBN: 978-1-62708-118-4
Product Code: 05509G
Price: \$199 / ASM Member: \$149
Prepublication Price: \$179 / ASM Member: \$129
Prepublication price good through December 31, 2016!

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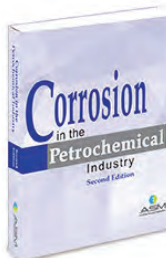
This new second edition serves as a go-to reference on the complex subject of stress-corrosion cracking (SCC), offering information to help metallurgists, materials scientists, and designers determine whether SCC will be an issue for their design or application; and for the failure analyst to help determine if SCC played a role in a failure under investigation.



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.



Corrosion in the Petrochemical Industry, Second Edition

Edited by Victoria Burt
2015 • 426 pages
ISBN: 978-1-62708-094-1
Product Code: 05503G
Price: \$219 / ASM Member: \$165

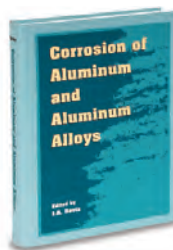
A comprehensive guide to understanding and preventing corrosion in the petrochemical industry. Written for engineers, production managers and technicians, this book explains how to select the best material for a corrosion-sensitive petrochemical application, and how to choose among various prevention methods. Included in the second edition are new articles on corrosion inhibitors and high-temperature environments.



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 Aluminum and Aluminum Alloys

Edited by J.R. Davis
1999 • 313 pages
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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.



Volume 5B: Protective Organic Coatings

Edited by Kenneth B. Tator
2015 • 545 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.

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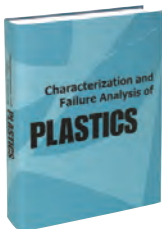


High Pressure Cold Spray: Principles and Applications

Edited by C.M. Kay and J. Karthikeyan
2016 • 324 pages
ISBN: 978-1-62708-096-5
Product Code: 05446G
Price: \$199 / ASM Member: \$179

A highly practical and useful "go-to" resource that presents an in-depth look at the high pressure cold spray process and describes applications in various industries. Applications of cold spray processes including protective coating production,

development of performance enhancing layers, repair and refurbishing of parts, and NNS fabrication are elaborated in each industry with illustrative case studies by cold sprayers actively involved in the field.

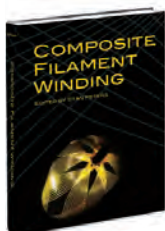


Characterization and Failure Analysis of Plastics

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.

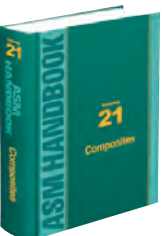


Optical Microscopy of Fiber-Reinforced Composites

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.



Volume 21: Composites

Edited by D.B. Miracle and S.L. Donaldson
2001 • 1201 pages
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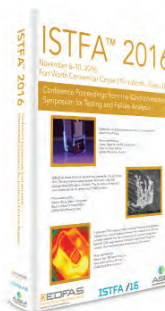
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By F.C. Campbell
2010 • 630 pages
ISBN: 978-1-61503-037-8
Product Code: 05287G

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.

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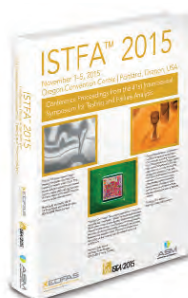


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Edited by Richard J. Ross
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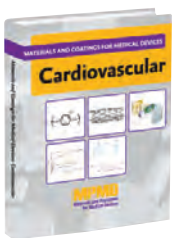
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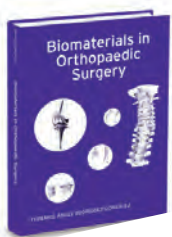
Volume 23: Materials for Medical Devices

Edited by Roger Narayan
2012 • 396 pages
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Biomaterials in Orthopaedic Surgery

By Federico Ángel Rodríguez-González
2009 • 236 pages
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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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Edited by Pierre Villars and Karin Cenzual
2016/17
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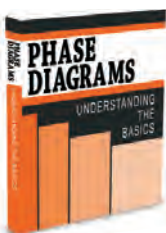


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1995
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2012 • 470 pages
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Edited by T.B. Massalski, H. Okamoto,
P.R. Subramanian, and L. Kacprzak
1990 • 3589 pages
ISBN: 978-0-87170-403-0 (3-Volume Set)
Product Code: 57718G

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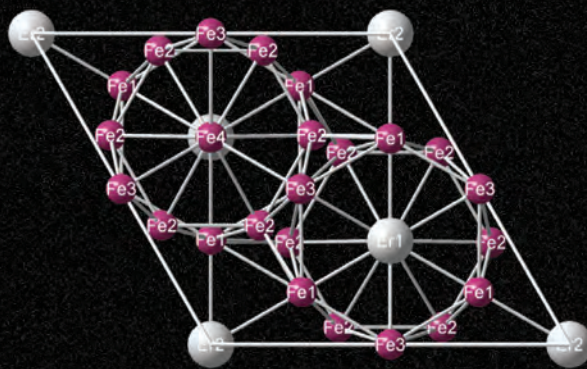
By Hiroaki Okamoto

2010 • 855 pages
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Evaluation	<ul style="list-style-type: none"> Space Groups Interatomic Distances Neutrality 	<ul style="list-style-type: none"> Space Groups Sym. Constraints ADP Interatomic Distances Neutrality
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