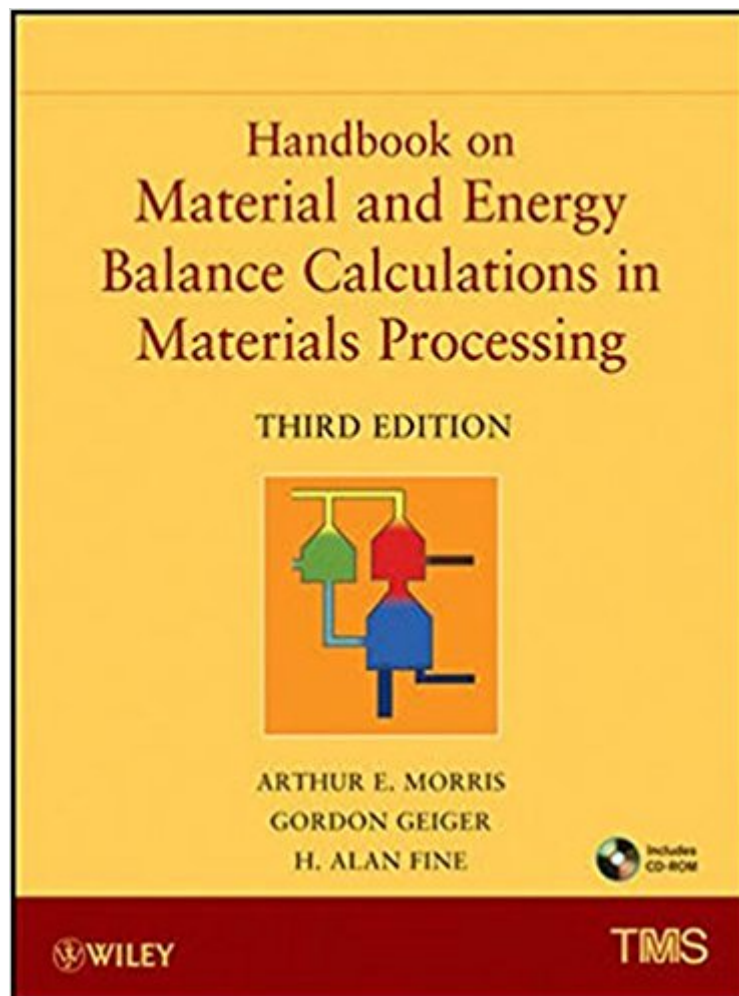




The book was found

Handbook On Material And Energy Balance Calculations In Material Processing, Includes CD-ROM



Synopsis

Lately, there has been a renewed push to minimize the waste of materials and energy that accompany the production and processing of various materials. This third edition of this reference emphasizes the fundamental principles of the conservation of mass and energy, and their consequences as they relate to materials and energy. New to this edition are numerous worked examples, illustrating conventional and novel problem-solving techniques in applications such as semiconductor processing, environmental engineering, the production and processing of advanced and exotic materials for aerospace, electronic, and structural applications.

Book Information

Hardcover: 640 pages

Publisher: Wiley-TMS; 3 edition (September 6, 2011)

Language: English

ISBN-10: 1118065654

ISBN-13: 978-1118065655

Product Dimensions: 8.8 x 1.5 x 11.3 inches

Shipping Weight: 3.2 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #1,299,045 in Books (See Top 100 in Books) #103 in [Books > Engineering & Transportation > Engineering > Materials & Material Science > Extraction & Processing](#) #321 in [Books > Engineering & Transportation > Engineering > Materials & Material Science > Metallurgy](#) #793 in [Books > Textbooks > Engineering > Chemical Engineering](#)

Customer Reviews

"Authored by Arthur E. Morris, Gordon Geiger, and H. Alan Fine, this completely revised third edition provides a clear, comprehensive treatment of the use of mass balance and stoichiometry techniques, and the application of the First Law of Thermodynamics, to the production and processing of mineral, metallic, and ceramic materials. The text comes with a CD containing an extensive thermodynamic database, specially-developed software to carry out more complex calculations, and a bonus set of flowsheeting notes by Dr. Eric Grimsey of Curtin University, Australia." (TMS News, 1 August 2011)

The only material/heat balance book for materials processing applications This completely revised Third Edition provides a clear, comprehensive treatment of the use of mass balance and

stoichiometry techniques, and the application of the First Law of Thermodynamics, to the production and processing of mineral, metallic, and ceramic materials. The book covers the initial treatment of ores and scrap to the production of advanced materials, with extensive use of spreadsheet techniques for making material and heat balance calculations. The accompanying CD contains detailed notes on the construction and analysis of metallurgical flowsheets by Dr. Eric Grimsey of Curtin University, Australia. Given the current challenge to use materials and energy efficiently, it is an essential resource for everyone interested in materials processing. Key Features of the Third Edition: Treatment of the AES and SI system of units, including conversion software Construction of flowsheets, their presentation, and Degree of Freedom analysis The statistics of measurement and sampling, regression analysis of data, and experimental design Over 150 text and software examples worked out in detail and an in-depth analysis of five case studies The use, optimization, and conservation of energy in materials processing The equilibrium constant and reaction kinetics as process restrictions Spreadsheet templates for combustion, flame temperature, process control, and Wobbe index calculations The use of a thermodynamic database in the derivation of sensible heat, enthalpy of formation, and reaction equilibrium expressions A CD containing an extensive thermodynamics database, and specially-developed material and heat balance software capable of handling multi-reactor flowsheets with recycle and bypass streams, counter-current flow, heat exchangers, and time-dependent composition changes

[Download to continue reading...](#)

Handbook on Material and Energy Balance Calculations in Material Processing, Includes CD-ROM
Gut: Gut Balance Solution: 10 Steps on How You Can Restore Optimal Gut Health, Boost Metabolism and Heal Your Gut Effectively (4-Week Gut Balance Diet Plan, leaky gut, clean gut, Gut Balance Recipes) Pantry Stuffers Rehydration Calculations Made Easy: U.S. Measurements / Pantry Stuffers Rehydration Calculations Made Easy: Metric Measurements Demystifying Opioid Conversion Calculations: A Guide for Effective Dosing (McPherson, Demystifying Opioid Conversion Calculations) Reiki: The Healing Energy of Reiki - Beginner's Guide for Reiki Energy and Spiritual Healing: Reiki: Easy and Simple Energy Healing Techniques Using the ... Energy Healing for Beginners Book 1) CHAKRAS: Chakras For Beginners - How to Awaken And Balance Chakras, Radiate Positive Energy And Heal Yourself (Chakra Meditation, Balance Chakras, Mudras, Chakras Yoga) CHAKRAS: Chakras for Beginners - Awaken Your Internal Energy and Learn to Radiate Positive Energy and Start Healing (Chakra Meditation, Balance Chakras, Mudras, Chakras Yoga) Adrenal Fatigue: Combat Adrenal Fatigue Syndrome Naturally and Boost Your Energy Levels for Good! Reset Your Natural Balance Now! (Reduce Stress, Boost

Energy, Adreanl Reset Diet Book 1) Chakras: Awaken Your Internal Energy Æœ Balance
Chakras, Radiate Energy and Healing Through Meditation (Chakras, Spirituality, Serenity) Chakras:
Awaken Your Internal Energy - Balance Chakras, Radiate Energy and Healing Through Meditation
Fate/Complete Material Volume 2: Character Material Free Energy Calculations: Theory and
Applications in Chemistry and Biology (Springer Series in Chemical Physics) Dosage Calculations:
A Ratio-Proportion Approach (includes Premium Web Site Printed Access Card) Energy Harvesting:
Solar, Wind, and Ocean Energy Conversion Systems (Energy, Power Electronics, and Machines)
Rotational Molding: Design, Material, Tooling and Processing Renewable Energy Made Easy: Free
Energy from Solar, Wind, Hydropower, and Other Alternative Energy Sources Crystals: The
Ultimate Guide To: Energy Fields, Auras, Chakras and Emotional Healing (Aura, Healing Stones,
Crystal Energy, Crystal Healing, Energy Fields, Emotional Healing, Gemstone) 2007 Country Profile
and Guide to Eritrea - National Travel Guidebook and Handbook - Ethiopia and Eritrea,
Reconciliation, USAID and Food Aid, Agriculture, Energy (Two CD-ROM Set) Materials Processing:
A Unified Approach to Processing of Metals, Ceramics and Polymers Balance Your Hormones,
Balance Your Life: Achieving Optimal Health and Wellness through Ayurveda, Chinese Medicine,
and Western Science

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)