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Characterization of Copper Slag; Recovery of Zinc and Iron from Steel Mill Dusts by the Use of a TBRC: A Possible Mini-Mill Solution?; Secondary Processors and Landfills-Partnerships that Work; Material and Energy Beneficiation of the Automobile Shredder Residues; ISASMELTTM for Recycling of Valuable Elements Contributing to a More Sustainable Society; Enabling Sustainability through Process Design, Modeling & Simulation; Moving Equipment and Workers to a Mine Construction Site at a Logistically Challenged Area
Preparation and Characterization of Fibrous Copper Powder Used for Conductive Filler Silver Selenide Thermodynamics for Copper Anode Slime Refining; Measurement of Thermodynamic Properties of Tellurium in Molten Iron by Transpiration Method; Thermodynamic Model for Acidic Metal Sulfate from Solubility Data; Practical Thermodynamic Model for Acidic Sulfate Solutions; Thermodynamic Analysis of Lead-Fluoride Ion-Water System; Enabling Sustainability through Life Cycle Management, LCA and Industrial Ecology; Stock Dynamics and Emission Pathways of the Global Aluminum Cycle
Enabling Sustainability through Systems Modelling and Design, Life Cycle Management, LCA and Industrial EcologyA Green Urban Mobility System Solution from the EU Ingrid Project; Recycling-Oriented Product Characterization for Electric and Electronic Equipment as a Tool to Enable Recycling of Critical Metals; Critical Analysis of Existing Recyclability Assessment Methods for New Products in Order to Define a Reference Method; Rock Smelting of Copper Ores with Waste Heat Recovery; Re-Processing of Mining Waste: An Alternative Way to Secure Metal Supplies of European Union
Potential of Steelmaking Slag as New Phosphorous Resource in Terms of Total Materials Requirement Assessing a Reclaimed Concrete Up-Cycling Scheme through Life-Cycle Analysis; Battery Recycling; Modeling of Synergistic Effect of Cyanex 302 and D2EHPA on Separation of Nickel and Cadmium from Sulfate Leach Liquors of Spent Ni-Cd Batteries; Recycling of Exhaust Batteries in Lead-Foam Electrodes; Technical Status and Progress of Lead Recycling of Battery; Enabling Sustainability through the Physics of Metals & Materials Processing
Cyanide and Copper Recovery from Barren Solution of the Merrill Crowe Process

Sommario/riassunto

This volume compiles topics from the REWAS 2013 symposium at the TMS Annual Meeting, focusing on different aspects of sustainability. It discusses how to realize sustainability in such areas as transportation, the built environment, electrical and electronic equipment and infrastructure, energy production, and water systems. Enabling sustainability topics include the use of metals and materials processing, recycling and recovery, as well as process design and modeling. The book focuses on understanding sustainability through life cycle management and analysis, systems modeling and design, and education and consumer awareness.