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Nota di contenuto	Part 1. Pyrometallurgy Keynotes -- Role of Research in Non-ferrous Metallurgy Development - Peter Hayes Contributions To Modern Pyrometallurgy -- The Role of Research in Pyrometallurgy Technology Development - From Fundamentals to Process Improvements - Future Opportunities -- Sulfide Smelting: Thirty-Five Years of Continuous Efforts to Find New Value Adding Solutions -- The Changing World of Metallurgy Education -- Part 2. 7th International Symposium on

Advances in Sulfide Smelting -- Sulfide Smelting Development in Japan during the Past Half Century -- Review of Boliden Harjavalta Nickel Smelter -- Redesign and Rebuild of the Pan Pacific Copper Flash Smelting Furnace -- From Fundamentals to Furnace Control - Making the Most of Modern Technologies -- Pyrometallurgical Processing of Desulphurization Slags -- High Temperature Phase Formation at the Slag/Refractory Interphase at Ferronickel Production -- ISASMELT™ Technology for Sulfide Smelting -- Refractory Design and the Role of Numerical Simulations -- Wear Phenomena in Non-ferrous Metal Furnaces -- A Scientific Roadmap for Refractory Corrosion Testwork -- Investigation of Refractory Failure in a Nickel Smelting Furnace -- Mathematical Modeling of Waterless Matte Granulator for Debottlenecking of Conventional Sulfide Smelters -- Desulfurization of the Non-Ferrous Smelter Flue Gases Based on Scrubbing with a Carbonate Eutectic Melt and Natural Gas Regeneration -- Advanced Thermochemical Fundamental and Applied Research to Improve Integrity of the Steel Water Jacketed Furnace at Port Pirie -- Sustainable Development Considerations in Primary Copper Smelting -- Influence of Arsenic on the Chemical Wear of Magnesia-chromite Refractories in Copper Smelting Furnaces -- Improved Copper Smelter and Converter Productivity through the Use of a Novel High-grade Feed -- Semi-discrete Dynamics and Simulation of Peirce-Smith Converting -- Development of Continuous Radar Level Measurement for Improved Furnace Feed Control -- Research on Recovery of Valuable Metals in Waste Acid from Copper Smelting Flue Gas Acid-making and Reduction and Harmless Treatment of Solid Wastes -- Fundamental Process Equilibria of Base and Trace Elements in the DON Smelting of Various Nickel Concentrates -- Challenges and Opportunities of a Lead Smelting Process for Complex Feed Mixture -- Application of MPE model to Nickel Smelting -- Practice on Exploration of Oxygen-enriched Converting Industrial Production by Kaldo furnace -- Ust-Kamenogorsk Metallurgical Complex : A Silent Achiever -- Trace Metal Distributions in Nickel Slag Cleaning Furnace -- Case Study on the Application of Research to Operations – Calcium Ferrite Slags -- Kinetics of Oxidation of Pyrrhotite -- Formation Mechanism of Ferronickel Alloy due to the Reaction Between Iron and Nickeliferous Pyrrhotite at 850–900 °C -- Two-step Copper Smelting Process at Dongying Fangyuan -- ISASMELT™ - Flexibility in Furnace Design -- Investigation of Oxygen Bottom Blown Copper Smelting Process -- Top Submerged Lance Furnace Lining Cooling System Upgrade -- Application Study on the Technology of Reducing Cu in Discarded Slag -- Thermodynamic Consideration of Copper Matte Smelting Conditions with Respect to Minor Element Removal and Slag Valorization Options -- Optimizing Smelter Uptime through Digital Asset Management -- Reducing Refining Cycle Times to Extend Anode Furnace Campaign Life at Kennecott Copper -- Smelting Mechanism in the Reaction Shaft of a Commercial Copper Flash Furnace -- Progressing Towards Furnace Modernization by Utilizing Comparative Analysis of Acousto Ultrasonic-Echo (AU-E) Monitoring: Case Studies -- Kinetics of Roasting of a Sphalerite Concentrate -- Thermodynamic Modeling of Oxygen Bottom-Blowing Continuous Converting Process -- Thermodynamic Considerations of Copper Complex Resources Smelting Process -- Part 3 -- Peter Hayes Symposium on Pyrometallurgical Processing -- Peter Charles Hayes' Contributions to Metallurgical Research: Brief Biography and List of Publications -- Integrated Pyrorefining of Lead at Teck's Trail Operations -- Relating Reported Carbon Dioxide Emissions to Iron and Steelmaking Process Details -- Process Zones Observed in a 48 MVA Submerged Arc Furnace Producing Silicomanganese According to

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Sommario/riassunto

This three volume set presents papers from the first collaborative global metallurgy conference focused exclusively on extractive topics, including business and economic issues. Contributions examine new developments in foundational extractive metallurgy topics and techniques, and present the latest research and insights on emerging technologies and issues that are shaping the global extractive metallurgy industry. The book is organized around the following main themes: hydrometallurgy, pyrometallurgy, sulfide flotation, and extractive metallurgy markets and economics.