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Titolo	Introduction to Refractories for Iron- and Steelmaking // by Subir Biswas, Debasish Sarkar
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ISBN	3-030-43807-4
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (469 pages)
Disciplina	620.143
Soggetti	Ceramics Glass Composites (Materials) Composite materials Metals Engineering—Materials Civil engineering Ceramics, Glass, Composites, Natural Materials Metallic Materials Materials Engineering Civil Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Steel Plant Refractories -- Iron and Steel Making Process -- Blast Furnace Refractory -- Hot stove and hot air carrying system -- Refractory practice in EAF -- Hot metal transport and de-sulphurisation -- BOF refractory -- Refractory for secondary refining -- Refractory in ladle flow control and purging system -- Refractory for casting -- Modern refractory practice to make clean steel -- Best practice in design and installation practice.
Sommario/riassunto	This book promotes understanding of the raw material selection, refractory design, tailor-made refractory developments, refractory properties, and methods of application. It provides a complete analysis of modern iron and steel refractories. It describes the daily demands on

modern refractories and describes how these needs can be addressed or improved upon to help achieve the cleanest and largest yields of iron and steel. The text contains end-of-chapter summaries to help reinforce difficult concepts. It also includes problems at the end of chapters to confirm the reader's understanding of topics such as hoop stress modeling in steel ladle and vessels, establishment of thermal gradient modeling, refractory corrosion dynamics, calculation of Blast furnace trough dimension based on thermal modeling, to name a few. Led by editors with backgrounds in both academia and industry, this book can be used in college courses, as a reference for industry professionals, and as an introduction to the technology for those making the transition to industry. Stands as a comprehensive introduction to the science and technology of modern steel and iron-making refractories that examines the processes, construction, and potential improvement of refractory performance and sustainability; Serves as a versatile resource appropriate for all levels, from the student to industry novices to professionals; Reinforces difficult-to-grasp concepts with end-of-chapter summaries; Maximizes reader understanding of key topics, such as refractory selection for steel ladle and vessels, and their corrosion dynamics, with real life problems.
