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Titolo	Refractories for the Cement Industry // by Prasunjit Sengupta
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-21340-4
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (246 pages)
Disciplina	620.143 620.135
Soggetti	Manufactures Building materials Ceramics Glass Composite materials Manufacturing, Machines, Tools, Processes Building Materials Ceramics, Glass, Composites, Natural Materials Structural Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Characterization of Refractories -- Classification and features of different Refractory materials -- Manufacturing and properties of refractories -- Cement manufacturing and process control -- Selection of Refractories -- Refractory design, Installation and Maintenance -- Refractory performances and mechanism of damage -- Coating and burnability of clinker -- Heat transfer -- Quality and inspection.
Sommario/riassunto	This book provides process engineers with all of the information necessary for installation, maintenance and management of refractory in a cement industry. It describes how to characterize the refractory material and select refractories for various equipments in the cement plant. The author explains refractory installation, in general, and the rotary kiln specifically, as it is distinct from static furnaces used in metallurgical or process industries. It also details the chemical and

physical factors that influence refractory performance and has discussed the mechanism of degradation of refractories with special emphasis on thermo-chemical and thermo-mechanical aspects. The heat transfer calculation and energy loss from the equipment surfaces has been addressed. A chapter in the book is dedicated for the management of refractory quality and the installation quality at the site. Maximizes reader understanding of the operating conditions in different equipments and how those are related to selection of refractories; Details the process variables and their influences on the performance of the refractories; Elucidates subtle points of refractory installation to ensure optimal performance; Presents heat transfer calculations and quality management protocols of refractory installation. Reinforces the concepts with many illustrations and tables.

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