Record Nr. UNINA9910366602003321 Autore Wu Min **Titolo** Intelligent Optimization and Control of Complex Metallurgical Processes // by Min Wu, Weihua Cao, Xin Chen, Jinhua She Singapore:,: Springer Singapore:,: Imprint: Springer,, 2020 Pubbl/distr/stampa 981-15-1145-4 **ISBN** Edizione [1st ed. 2020.] 1 online resource (XVIII, 274 p. 125 illus., 10 illus. in color.) Descrizione fisica Collana Engineering Applications of Computational Methods, , 2662-3366; ; 3 Disciplina 658.56 Soggetti Quality control Reliability Industrial safety Control engineering Metals Robotics Automation System theory Manufactures Quality Control, Reliability, Safety and Risk Control and Systems Theory Metallic Materials Robotics and Automation **Complex Systems** Manufacturing, Machines, Tools, Processes Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Introduction -- Intelligent Optimization and Control of Raw Material Proportioning Processes -- Intelligent Optimization and Control of Coking Process -- Intelligent Control of Thermal State Parameters in Sintering Process -- Intelligent Decoupling Control of Gas Collection and Mixing-and-Pressurization Processes -- Intelligent Optimization

and Control for Reheating Furnace.

Sommario/riassunto

This book discusses the intelligent optimization and control of complex

metallurgical processes, including intelligent optimization and control of raw-material proportioning processes, coking process, and reheating furnaces; intelligent control of thermal state parameters in sintering processes; and intelligent decoupling control of gas collection and mixing-and-pressurization processes. The intelligent control and optimization methods presented were originally applied to complex metallurgical processes by the authors, and their eectiveness and their advantages have been theoretically proven and demonstrated practically. This book offers an up-to-date overview of this active research area, and provides readers with state-of-the-art methods for the control of complex metallurgical processes.