

1. Record Nr.	UNINA9910829581403321
Autore	Stroud Dean <1968->
Titolo	Industry 4.0 and the Road to Sustainable Steelmaking in Europe : Recasting the Future // edited by Dean Stroud, Antonius Johannes Schröder, Luca Antonazzo, Clara Behrend, Valentina Colla, Aitor Goti, Martin Weinel
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2024
ISBN	3-031-35479-6
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (238 pages)
Collana	Topics in Mining, Metallurgy and Materials Engineering, , 2364-3307
Altri autori (Persone)	SchröderAntonius Johannes AntonazzoLuca BehrendClara CollaValentina GotiAitor WeinelMartin
Disciplina	620.16
Soggetti	Metals Metals and Alloys
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Social and Technological Transformation of the European Steel Industry -- European Steel Industry – A Trade Union Perspective -- Effects of Industry 4.0 on workforce and employment: a novel strategy to identify new skills requirements of the steel sector -- Steel Industry Automation and Incremental Change -- Robotic systems in the European Steel Industry: state-of-art and use cases -- Digitalisation - impacts on the workforce, challenges and current status of projects from the perspective of the cold rolling industry -- The impact of the new technologies on the workforce in the steel industry -- Combining technological and social innovation -- Attracting talents to the steel industry -- Development of Skills Adjustment and Training within a Social Innovation Process -- Recruitment and training: the 'effect' of digitalisation -- Preparing for a Digital Steel Industry -- Conclusion.

Sommario/riassunto

This open access book gathers original contributions focused on the transition of the European steel industry to Industry 4.0. It not only investigates how Industry 4.0 can enhance productivity, cost-saving, and sustainability in the steel industry but also helps to comprehend its broad consequences on employment, education and training, human resources, economic resilience and decarbonisation. The content engages with the international debate on Industry 4.0 through the lens of the steel industry from a multidisciplinary perspective. It encourages a scientifically grounded critical approach and includes contributions from humanities and technical disciplines, with a focus on the social dimensions of the phenomenon. This book draws strength from up-to-date international research projects and adopts a strong industry-based perspective, providing a thorough description and analysis of the state of the art of the European steel industry. It also analyzes the trends, outcomes, opportunities, and criticalities arising with the transition to the Industry 4.0 paradigm. The book is primarily based on the results of the European Steel Skills Agenda (ESSA) skills alliance project co-funded by the Erasmus+ programme of the European Union and supported by the European Steel Technology Platform (ESTEP). This is an open access book.
