

1. Record Nr.	UNINA9910789585403321
Titolo	A century of stainless steels : selected, peer reviewed papers from the Stainless Steel Centenary Symposium (SSCS 2013), August 12-14, 2013, Mumbai, India // edited by Vivekanand Kain [and six others]
Pubbl/distr/stampa	Durnten-Zurich, Switzerland : , : Trans Tech Publications, , [2013] ©2013
ISBN	3-03826-220-X
Descrizione fisica	1 online resource (781 p.)
Collana	Advanced materials research ; ; v. 794
Altri autori (Persone)	KainVivekanand
Disciplina	620.16
Soggetti	Materials Stainless steel
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	A Century of Stainless Steels; Foreword, from the editors, Committees, Reviewers and Sponsors; Table of Contents; Chapter 1: Overview; Development of Stainless Steels in Nuclear Industry: With Emphasis on Sodium Cooled Fast Spectrum Reactors History, Technology and Foresight; Present Status of Stainless Steel Industry in India & it's Future Prospects; Chapter 2: Melting and Refining; SS Manufacture - Indian Practice and Electrical Perspective; Stainless Steel - A Versatile Engineering Material for Critical Applications; Dynamic On-Line Control of Stainless Steel Making in AOD Influence of Intrinsic Solidification Behaviour on Quality of Stainless Steel Cast and Rolled Products Evolution of Mould Fluxes; Manufacture of Specialty Stainless Steels through Triplex Route at Mukand; Characteristics, Distinctive Advantages & Wide Ranging Applications of Chrome-Manganese Stainless Steels; Influence of Composition and Processing on Properties of Stainless Steels; Energy Conservation Potential in Stainless Steel Making by use of Molten Pig Iron and Liquid Ferro-Chrome; Chapter 3: Forming and Fabrication; Stainless Steel Processing to Meet Advanced Applications Calandria - A Manufacturing Challenge Manufacturing and Critical Applications of Stainless Steel - An Overview; Comparison of Hot Extrusion and Hot Piercing Processes for Manufacturing Stainless Steel

Hot Finished Pipes/Tubes; Technological Challenges in Manufacturing of over Dimensional Stainless Steel Components of PFBR; Experiences in Manufacturing and Qualifying of Stainless Steel AISI 403 Grade Materials for PHWR Reactors of NPCIL; Improvement in Properties of 301LN Austenitic Stainless Steel for Metro Coach Manufacture Development of Heat Treatment Parameters to Enhance HAZ Impact Toughness of SS 430 Material Trans- Granular Stress Corrosion in Partially Fabricated Austenitic Stainless Steel Items and their Re-Conditioning to make them Suitable for Balance Fabrication; AFM Characterization of Structural Evolution and Roughness of AISI 304 Austenitic Stainless Steel under Severe Deformation by Wavy Rolling; Surface Engineering of Stainless Steels: Role of Surface Mechanical Attrition Treatment (SMAT) Performance of Multilayered PVD Coated Cemented Carbide Inserts during Dry Turning of AISI 304 Austenitic Stainless Steel Chapter 4: Welding and Joining; Landmark Events in the Welding of Stainless Steels; Metallurgy of Welding Stainless Steels; Microstructure and Mechanical Properties of 16Cr-2Ni Stainless Steel Fusion and Solid State Welds-Influence of Post Weld Treatments; Welding and Fabrication of Stainless Steel Equipment for 500MWe Prototype Fast Breeder Reactor; Challenging Experiences in the Usage of Stainless Steels in a Heavy Fabrication Industry Power Beam Processing of Stainless Steels

Sommario/riassunto

At the completion of one century of discovery of stainless steels, it is appropriate to take stock of the latest trends in wide ranging fields that relate to stainless steels. The book covers advances in all the major aspects related to stainless steels namely melting & refining, fabrication & forming, welding & joining, physical metallurgy, corrosion and its control and experience from use of stainless steels in various industries including newer varieties of stainless steels. The book will be a good source of information regarding various aspects of stainless steels.
