

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Record Nr.           | UNINA9910786506003321                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Autore                  | Rodriguez-Ibabe J. M.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Titolo                  | Thin slab direct rolling of microalloyed steels / / J.M. Rodriguez-Ibabe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Pubbl/distr/stampa      | Stafa-Zuerich ; ; United Kingdom : , : Trans Tech, , [2007]<br>©2007                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| ISBN                    | 3-03813-162-8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Descrizione fisica      | 1 online resource (154 p.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Collana                 | Materials science foundations, , 1422-3597 ; ; volume 33                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Disciplina              | 672.32                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Soggetti                | Steel alloys<br>Rolling (Metal-work)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Nota di contenuto       | Thin Slab Direct Rolling of Microalloyed Steel; Preface; Table of Contents; Table of Contents; 1. Introduction; 1.1. Different Types of TSDR Industrial Routes; 1.2. Economical and Ecological Benefits; 1.3. Metallurgical Differences between Conventional Rolling and TSDR; 1.4. Scope; 2. Strength and Toughness: Relationships with Microstructure; 2.1. Introduction; 2.2. Strength (in Low Carbon Steels); 2.3. Toughness; 2.4. Microstructural Homogeneity and Toughness (in the Ductile-Brittle Regime); 3. Microstructural Control during and after Hot Rolling 3.1. Microstructural Changes during Hot Working3.2. Conventional Controlled Rolling; 3.3. Recrystallisation Controlled Rolling. Effect of Titanium; 3.4. Mean Flow Stress; 3.5. Phase Transformation during Cooling. Precipitation Hardening; 4. TSDR: Continuous Casting and Tunnel Furnace; 4.1. Continuous Casting; 4.2. Tunnel Furnace; 5. TSDR: Rolling of Plain Carbon and Microalloyed Steels; 5.1. As-Cast Austenite Refinement; 5.2. Austenite Conditioning; 5.3. Processing Maps; 5.4. Optimisation of Rolling Schedules; 5.3. Phase Transformation; 6. Industrial Applications 6.1. Structural and HSLA Steels6.2. Development of API Grades; 6.3. Dual Phase Steels; 6.4. Concluding Remarks; 7. References |
| Sommario/riassunto      | Thin slab casting and direct rolling (TSDR) technologies are nowadays one of the most promising processing routes to maintain steel as a leading material in technological applications. Initially, this process was                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

exclusively for the production of mild steels. As industrial experience and knowledge improved, a rapid expansion of the range of products took place with higher strength grades becoming an important part of the overall production. Actually, it is widely accepted as a route to produce high value grades and it can be considered as a technology which has reached a high degree of maturit

---