

| | |
|-------------------------|--|
| 1. Record Nr. | UNINA9910806193803321 |
| Autore | Huang Yongxian |
| Titolo | Friction Stir Welding and Processing [[electronic resource] /] / by Yongxian Huang, Yuming Xie, Xiangchen Meng |
| Pubbl/distr/stampa | Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024 |
| ISBN | 981-9986-88-5 |
| Edizione | [1st ed. 2024.] |
| Descrizione fisica | 1 online resource (474 pages) |
| Collana | Materials Forming, Machining and Tribology, , 2195-092X |
| Altri autori (Persone) | XieYuming MengXiangchen |
| Disciplina | 670 |
| Soggetti | Manufactures Metals Building materials Mechanics, Applied Solids Materials science Machines, Tools, Processes Metals and Alloys Structural Materials Solid Mechanics Materials Science |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | Introduction -- Inherent issues of friction stir welding -- Self-supporting friction stir welding -- Non-weld thinning friction stir welding -- Dissimilar metals friction stir welding -- Thermoplastic polymer matrix composites friction stir welding -- Mechanical bonding behavior of friction stir welding -- Modeling of friction stir welding -- Friction stir processing. |
| Sommario/riassunto | This book introduces the principles and characteristics of friction stir welding and processing. Based on the inherent issues of friction stir welding, such as back support, weld thinning, and keyhole defects, the book summarizes innovative technologies related to solution strategies and presents a wide range of examples. It introduces the advantages |

and joining mechanism of friction stir welding in the joining of dissimilar materials and explains the importance of combining metallurgical bonding and mechanical joining. It also includes the characteristics of friction stir processing in terms of microstructure refinement, mechanical properties, surface modification, and the preparation of composites. This book is of interest to a broad readership in various fields of materials science and engineering.
