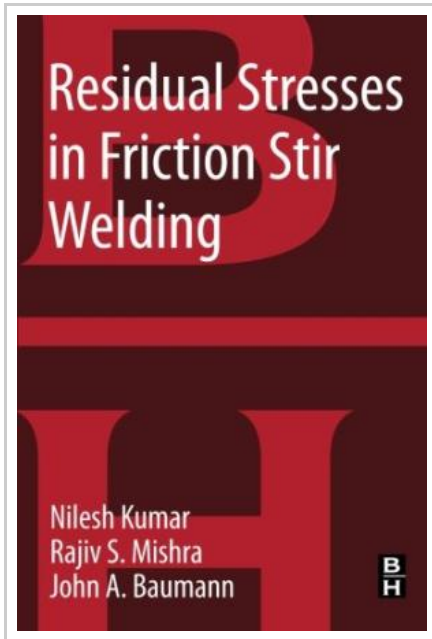




Residual Stresses in Friction Stir Welding: A Volume in the Friction Stir Welding and Processing Book Series (Paperback)

By Nilesh Kumar, Rajiv S Mishra, John A Baumann

ELSEVIER SCIENCE TECHNOLOGY, United Kingdom, 2013.
Paperback. Book Condition: New. 224 x 147 mm. Language: English . Brand New Book. This book describes the fundamentals of residual stresses in friction stir welding and reviews the data reported for various materials. Residual stresses produced during manufacturing processes lead to distortion of structures. It is critical to understand and mitigate residual stresses. From the onset of friction stir welding, claims have been made about the lower magnitude of residual stresses. The lower residual stresses are partly due to lower peak temperature and shorter time at temperature during friction stir welding. A review of residual stresses that result from the friction stir process and strategies to mitigate it have been presented. Friction stir welding can be combined with additional in-situ and ex-situ manufacturing steps to lower the final residual stresses. Modeling of residual stresses highlights the relationship between clamping constraint and development of distortion. For many applications, management of residual stresses can be critical for qualification of component/structure. It reviews magnitude of residual stresses in various metals and alloys. It discusses mitigation strategies for residual stresses during friction stir welding. It covers fundamental origin of residual stresses and distortion.



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Reviews

Very beneficial to all of class of people. I am quite late in start reading this one, but better then never. You may like just how the writer create this publication.

-- **Audra Klocko PhD**

Thorough information! Its this type of great go through. It is amongst the most incredible publication i actually have read through. It is extremely difficult to leave it before concluding, once you begin to read the book.

-- **Germaine Welch**