



Forming and Heat Treatment of Steel

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Message from the Guest Editor

Although steel is cheap in price, it is not cheap in quality, and it is used widely due to its flexible performance in strength, formability, and function via structure control using plastic deformation or heat treatment. Multimaterial construction is an attractive potential solution to the issue of weight reduction; however, steel is still considered the most appropriate and useful type of material. The development of ultrahigh-strength steel sheets is thus being accelerated and leading to a continuous improvement of their strength and formability. The tensile strength of ultrahigh-strength steel sheets for cold stamping has reached 1450 MPa. Hot stamping through combined press forming and heat treatment quenching not only improves strength but also reduces springback. Moreover, it is becoming standard practice to produce ultrahigh-strength components, with steel being used not only for structural but also for functional parts.

In this Special Issue, research related to steel, such as forming, heat treatment, and thermomechanical processing, is invited.





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Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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