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Mechanical Properties Assessment of Alloys during Welding Process

Guest Editor:

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Deadline for manuscript submissions:
closed (31 January 2022)

Message from the Guest Editor

Welding is a joining process used to weld similar and/or dissimilar metallic materials. Due to the multi-disciplines involved in welding, this research area has become attractive and very active. For instance, the weld thermal cycle (heating and cooling rates) induces microstructural transformations that modifies the mechanical performance of the welded joints. This especial issue of the journal Metals is devoted to publish original works based on mechanical properties assessment of metallic materials (ferrous and nonferrous alloys) welded by the different processes, i.e. arc welding, resistance welding, laser beam welding, solid state welding, electron beam welding, etc. Research articles that report original contributions in terms of quasi-static loading, fatigue and fracture behavior, as well as thermo-mechanical and strain rate effects in welded joints are invited.

Papers based on experimental and numerical approaches are welcome for this special issue.

- welding
- alloys
- mechanical behavior
- welding metallurgy
- experimental and numerical approaches

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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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