Special Issue

Mechanical Characteristics of Brazed Joints in Metallic Materials

Message from the Guest Editor

Manufacturing reliable brazed joints out of various materials is of great importance nowadays, especially in high-performance structures. According to the fundamentals of Materials Science, strength depends on the microstructure. High mechanical properties can be obtained in the absence of heterogeneity, which depends on the composition of the brazing alloy, brazing modes, and subsequent heat treatment. The selection of these parameters makes it possible to carry out precision brazing in order to obtain a microstructure without sharp interfaces, with the absence of large intermetallic compounds, which ultimately provides high mechanical properties and corrosion resistance. In the upcoming Issue of the journal, it is advisable to consider the relationship between the mechanical properties and microstructure of a brazed seam with the use of high-end methods. The application of computation assessment methods to predict the mechanical properties, microstructure, and corrosion resistance are also of great interest, however other potential topics are not limited.

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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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