Special Issue

Gas Tungsten Arc Welding

Message from the Guest Editors

Gas Tungsten arc welding (GTAW) is an arc welding process that uses a non-consumable tungsten electrode to produce an arc and form a weld. It is widely used in joining thin sheet metals because of its high weld quality and its suitability for most commercial metals. GTAW is also a complex process, which involves interaction of arc plasma, weld pool dynamics and solidification, with simultaneous interaction of materials at the plasma, gaseous, and solid states. Extensive experimental and numerical studies have been carried out to study a large number of phenomena in a GTAW process, including electromagnetics, heat transfer, fluid flow, metal transfer, microstructure evolution, and thermal mechanical effects. The Special Issue "Gas Tungsten Arc Welding" aims to cover recent advances in the development of numerical modeling and experimental study of GTAW processes, sensing and control of GTAW processes, process optimization, and new applications of GTAW.

Guest Editors

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Deadline for manuscript submissions

closed (31 May 2017)

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/7778

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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