Special Issue

Gas Metal Arc Welding

Message from the Guest Editors

Gas metal arc welding (GMAW) is the most widely used fusion joint process, such as its suitability for most commercial metals and all weld positions, high quality weld, high welding speed, and suitability for automation. GMAW is also a complex process, which involves interactions of arc plasma, metal transfer, weld pool dynamics and solidification, with simultaneous interaction of materials at the plasma, gaseous, and solid states. With the advancement of the numerical modeling of the GMAW process, and the sensing and control of the welding process, real-time control of the GMAW process can be realized. GMAW has also been extended for more complex applications through digitally controlled power supplies, wire feeders, and gas regulation. The Special Issue aims to cover recent advances in the development of numerical modeling and experimental study of GMAW processes, sensing and control of GMAW processes, process optimization, and new applications of GMAW.

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Message from the Editor-in-Chief

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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