



Hardfacing of Metals and Alloys

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Message from the Guest Editor

Dear Colleagues,

Hardfacing is the process of surfacing with implementation of welding techniques (methods) for the deposition of harder or tougher materials on the base metal. Hardfacing is a widely used method to protect the surfaces of tools or machine parts against severe wear, corrosion, or oxidation. The methods of hardfacing are important in the application of welding techniques and technological development for the manufacturing of new components, their repair, and extension of their service life for most industries.

The progress in welding methods and material engineering over recent years demands systematic studies of welding methods and consumables applied to hardfacing. The optimization of hardfacing processes require characterization of the relevant welding parameters, such as, e.g., heat input, shielding gases, and preheating temperature.

The purpose of this Special Issue is to present the latest developments in the research on hardfacing technologies of metals and alloys.





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Message from the Editor-in-Chief

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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