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Treatment of Liquid Metal and Its Relationship with Cast Properties

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Deadline for manuscript submissions:
closed (31 July 2019)

Message from the Guest Editors

Casting is an effective method for producing components in many industrial sectors, including automotive, aerospace, and other attractive industries. However, if the quality of a melt is not properly controlled, then the result is defect-containing cast parts. Further improvements could be obtained via process control, alloy development, and numerical simulation.

Recent trends in metal casting and the requirement for enhanced qualities suggest that additional developments are desired. Demands for answering the foundry concerns encourage researchers to offer a comprehensive outlook on the metal casting industry and to contribute extensively.

The aim of this Special Issue is to highlight recent innovations introduced in the fields of treatment of liquid metal and, from a wider perspective, on its relationship with cast properties. Scholars are thus encouraged to submit research papers dealing on specific aspects of treatment of molten metal or describing the response of metals and alloys by experimental techniques and/or modelling/numerical simulation. Submissions of works that correlate process parameters with final casting properties are strongly encouraged.

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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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