Special Issue

Post-Processing Improvements for Mechanical, Microstructure, and Surface Properties of Steel

Message from the Guest Editor

Post-processing treatments of metallic materials play a key role in the achievement of high mechanical and surface properties of the final components and in the optimization of their behaviour in service conditions. Thermal or finishing processes determine the development of specific microstructures, influencing material properties but also cost and time for industrial production. New technologies for steel forming often require the set up and the optimization of post-processing treatments, understanding their influence on microstructural, mechanical and surface properties. Optimized post-processed components having improved mechanical and functional behaviors can be exploited for innovative applications, for moulds, aerospace, automotive, transportation, energy, oil and gas, tools, etc. This Special Issue aims to present the latest research related to post-processing treatments for steel parts realized through innovative forming and manufacturing technologies. Reviews focused on innovative post-processing treatments of steel are also welcome.

Guest Editor

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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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