Special Issue

TRIP Steels

Message from the Guest Editors

TRIP steels are one of the most attractive materials developed in the last few decades by the steel industry. TRIP steels can be used to produce more complicated parts than other AHSS and they offer, with thinner panel thickness, superior mechanical response. Moreover, their high energy absorption capacity and fatigue strength make them particularly suitable for safety parts, such as bumper bars, impact beams, B-pillars and reinforcements. Therefore, these advanced steels allow automotive designers to optimize weight and structural performance. The Special Issue will include (but will not be limited to) the following topics: Influence of alloying elements, comprising standard and innovative grades; microstructures and their development, including phase equilibrium and transformations, thermo-mechanical stability, and heat treatments; mechanical performance, with strength, toughness, impact, and fatigue behavior; formability, covering rolling, stamping, and welding.

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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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