Special Issue

Plastic Deformation Behaviour in Steels during Metal Forming Processes

Message from the Guest Editors

Steel has been and still is the most commonly used construction material in many branches of the industry (e.g., building, automotive, mining, oil, and gas). The recent drive for the development of “green steel” brings about new steel grades, e.g., complex phase steels that show transformation-induced plasticity, twinning induced plasticity effects, or medium/high-entropy steels. The scope of this Special Issue is focused on the understanding of the plastic deformation behavior of steels in a wide range of metal forming processes. Papers on deformation behavior of steel during hot/warm/cold bulk forming (rolling, forging, extrusion, drawing, etc.) and sheet forming are of particular focus. Studies on deformation behavior during novel metal-forming techniques (e.g., incremental forming, metal forming using explosives, electricity) as well as fundamental studies on formability and rheology assessment of steels using state-of-the-art characterization methods are welcome. This Special Issue also targets the green manufacturing aspects in metal forming.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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