



an Open Access Journal by MDPI

Net-Shape Die Casting of Semi-solid Alloys

Guest Editor:

Dr. Plato Kapranos

Department of Materials Science & Engineering, the University of Sheffield, Sir Robert Hadfield Building, Mappin Street, Sheffield, S1 3JD, UK

Deadline for manuscript submissions: closed (31 December 2019)

Message from the Guest Editor

Dear Colleagues,

In the last few years a new technology has entered the arena of near net-shape of alloys; Additive Manufacturing (AM). This 3D printing technology shows promise and even though it still proving itself, its potential is tremendous. Nevertheless, as all technologies, AM provides us with one more tool to deliver what customers require in competition with existing near net-shape technologies, such as casting and thixoforming.

To date, successful industrial applications of semi-solid processing are using mainly non-ferrous alloys such as aluminum, magnesium and zinc in direct competition with die-casting. On the research side, over the years, ferrous alloys, copper-based alloys, super alloys and composites have all been demonstrated as potential candidates but as yet they have not found their commercial niche.

This Special Issue on "Net-Shape Die Casting of Semi-Solid Alloys" intends to bring you up to date with developments in this exciting manufacturing technology, current applications and possible future trends.









an Open Access Journal by MDPI

Editors-in-Chief

Prof. Dr. Hugo F. Lopez

Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang

Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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 metallurgical field the 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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions. **High Visibility:** indexed within Scopus, SCIE (Web of Science), Inspec, CAPlus / SciFinder, and other databases. **Journal Rank:** JCR - Q2 (*Metallurgy & Metallurgical Engineering*) / CiteScore - Q1 (*Metals and Alloys*)

Contact Us

Metals Editorial Office MDPI, St. Alban-Anlage 66 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/metals metals@mdpi.com X@Metals_MDPI