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Editorial

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The Metal Additive Manufacturing Conference, MAMC2016, took place on 24-25 November, 2016, at voestalpine Stahlwelt in Linz, Austria. The two-day event was the second in the series organised by the Austrian Society for Metallurgy and Metals (ASMET) and attracted over 220 participants from more than 20 countries.

The technical programme consisted of 35 oral presentations and identified the latest trends and innovative developments along the entire Additive Manufacturing process chain as well as numerous novel applications. The opportunities connected with such a dynamic technology raises interest in the materials and equipment industries, and indication of the relevance of AM for Austrian industry was given in the opening presentation by Franz Rotter, Head of voestalpine's Special Steel Division and President of ASMET. Rotter discussed his clear focus on metal Additive Manufacturing (AM) not only with the installation of an AM centre in Düsseldorf in April 2016 but also by offering new AM metal powders to the market.

We have selected the following papers for this issue, BHM 5/2017 "MAMC2016":

- Thermo-fluid Dynamical Simulation of Layer Build-up by Selective Laser Melting of Molybdenum and Steel
- Correlation of the High Power SLM process with Resulting Material Properties for IN718
- Material Properties and Quality Considerations for Tool Steels Made with AM Technology
- Influence of Powder Bed Characteristics on Material Quality in Additive Manufacturing
- On the Impact of Additive Manufacturing on Microstructural and Mechanical Properties of Stainless Steel and Ni-base Alloys

When compared to the MAMC conference in 2014, it is clear that there has been significant progress regarding materials, understanding of the AM process, and exploitation of new applications. For lightweight applications, such as those in the aerospace and space sectors, there can be a clear argument for using metal AM. Topology optimisation, in combination with lattice structures, offers outstanding solutions for many lightweight constructions.

The final decision between conventional manufacturing processes and AM is for many still a matter of economics. However, as recent presentations show, there is a significant increase of effort in all fields to promote AM for many interesting applications.

Details of the presentations can found in the conference proceedings, which can be ordered from ASMET (please contact Yvonne.Dworak@asmet.at). The third MAMC conference will be from 20-22 November, 2018, in Wr. Neustadt, Austria.

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