



Rapid.Tech + FabCon 3.D
25 - 27 June 2019
Messe Erfurt

Green laser for red copper, and the right gas mixture for the process
Metal forum at Rapid.Tech + FabCon 3.D to address the entire production chain for metal 3D printing
UK technology analysts predict 23 per cent annual growth between now and 2030

(Erfurt, 28 May 2019). The additive manufacturing (AM) market is forecast to grow by 18 per cent per year between now and 2030, according to technology analysts at UK consultancy IDTechEx. Growth in metal 3D printing will be even more dynamic: here, annual increases averaging 23 per cent are predicted.

The current state of the art and future developments in this field will be the focus of the Metal forum on 27 June 2019, the final day of the three-day Rapid.Tech + FabCon 3.D trade fair at Messe Erfurt. "Whereas in previous years we primarily discussed the range of printing technologies and applications, this year we are addressing the entire process chain and considering upstream and downstream areas, such as new material combinations and methods for surface finishing, as well as the effects of various parameters on process design. At the same time, we will demonstrate the leaps towards industrial series production that have been made in metal 3D printing," explains Daniel Hund, Head of Marketing at Rösler Oberflächentechnik GmbH, based in Memmelsdorf, Bavaria. Hund developed the concept for the forum together with Dr Sabine Sändig, Project Manager in the Technology Promotion department at Thüringer Aufbaubank, the development bank for the state of Thuringia.

Dr Uwe Lohse, CEO of XERION BERLIN LABORATORIES GmbH, will report on innovative technical developments in the manufacture of 3D-printed multi-material components. The company has developed a system that allows for synchronous additive manufacturing of metals and ceramics. New possibilities for 3D printing of copper parts, which are increasingly required in power electronics for electric vehicle drives, are opened up by the use of a "green" laser. TRUMPF Laser- und Systemtechnik GmbH has developed a laser source in the green wavelength range that is especially well suited to processing copper. The innovation will be presented by TRUMPF employee Dr Philipp Wagenblast. The gas mixtures used in the process play a crucial role in ensuring that 3D-printed products fulfil the quality requirements placed on them. The talk by Pierre Forêt, Head of Additive Manufacturing at Linde AG, will discuss the effect of different atmospheric gases on the results of powder-bed-based laser melting.

Dr Eric Wycisk, Managing Partner of Ampower GmbH & Co. KG, Hamburg, will shed light on the current state of the art in sinter-based metal AM technologies. The additive manufacturing consultancy has conducted a broad-based study on the properties of the technologies and will discuss the current possibilities and limits of binder jetting and fused deposition modelling using metallic materials. Only limited information has been available on these topics to date.

Among the various steps in the additive chain, the post-processing of AM metal parts is a crucial element for quality and productivity in industrial processes, but this area often does not receive the attention that it deserves. Dr Wolfgang Hansal, CEO of Hirtenberger Engineered Surfaces GmbH, based in Hirtenberg, Austria, will present possibilities for automated surface finishing of 3D-printed metal components as an enabler for series production.



The benefits of using additive manufacturing to produce Inconel lattice structures for innovative applications in gas turbine construction will be outlined by Lena Farahbod-Sternahl, Project Engineer in the Gas and Power Division of Siemens AG.

The Metal forum is one of 14 sector- and subject-specific forums on the conference programme for Rapid.Tech + FabCon 3.D. Three forums – Software & Processes, Plastics, and Standardisation & EHS – are appearing on the agenda for the first time. Alongside these new additions, the programme will feature the established forums on the Automotive Industry; Aviation; Medical, Dental and Orthopaedic Technology; Contract Additive Manufacturing; 3D Printed Electronics & Functions; Design; Tool, Mould & Jig Construction; and Law, as well as a session by the Fraunhofer Additive Manufacturing Alliance and the two-day AM Science forum. Overall, over the three days of the conference, there will be more than 100 lectures presenting the latest developments, trends and findings relating to additive technologies and applications in theory and practice.

The 3D Printing Conference and the redesigned presentation spaces and networking opportunities at the exhibition will also help attendees to share their knowledge and experiences and to build and maintain their networks.

For their 16th edition, Rapid.Tech + FabCon 3.D are yet again expecting over 200 exhibitors from Germany and abroad, as well as more than 5,000 international trade visitors and conference delegates.

Further information: www.rapidtech-fabcon.com

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