



Materialise Brings Simulation for Additive Manufacturing to the Production Floor

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Easy-to-manage solution increases access to simulation

Birmingham, UK – September 25, 2018. At the TCT Show in Birmingham (UK) Materialise has launched its simulation software for metal 3D printing. In combination with the Materialise Magics 3D Print Suite, this software will bring simulation for additive manufacturing (AM) to the production floor by providing easy-to-manage simulation capabilities at lower price points.

Today, 3D printing service bureaus are operating in an increasingly cost-competitive environment and are constantly looking for ways to increase productivity and efficiency. In a typical process of CAD to printed part, the actual printing, including machine and material costs, accounts for more than 75 percent of the total cost. As a result, running multiple test prints and printing failed or unsuitable parts is very costly. This is especially the case for metal 3D printing and the production of high-value, customizable metal components with complex geometries. On average 15 percent of these metal parts fail. With simulation, operators can predict and analyze the behavior of a part during physical production by creating a virtual prototype, helping optimize their build preparation and reduce the number of costly reprints and fails.

Simulation for 3D printing, however, usually requires the intervention of highly skilled and experienced engineers. To reduce the number of expensive test prints, they work closely with the designers to provide valuable feedback on aspects such as optimal part orientation and support structure design. This can make the design and engineering process complex and time-consuming. The new Materialise simulation module is focused on optimizing the production process without the need for expert knowledge. In combination with Materialise's data preparation software Magics, it brings high-end simulation capabilities for 3D printing to the production floor, freeing up time of highly skilled engineers.

With the introduction of the software, available as a Materialise Magics module, Materialise aims to make simulation easy to manage and accessible to a wider audience. Users can apply simulation results directly to the support generation and orientation tools in their trusted Materialise Magics environment. It supports fast reruns on a standard workstation without the need for high-end processing power, and can also be used in combination with other computer-aided engineering (CAE) solutions for highly certified metal production. The module also includes an integrated calibration feature which guides users to the correct simulation settings for their metal machine.

"As more companies adopt 3D Printing as an alternative manufacturing technology, service bureaus are operating in a more cost-competitive environment than ever. As a result, they are looking for ways to scale their operations, increase productivity and reduce overall costs", said Stefaan Motte, Vice President and General Manager of the Materialise software division. "Software, and especially simulation software, will help drive down the primary cost. Our software suite will enable greater access to simulation capabilities and help increase productivity and efficiency."

The Materialise simulation module for 3D printing is based on an OEM version of the Simufact Additive Solver. Simufact Additive is a powerful and scalable software tool for the simulation of metal-based AM processes. The combination of Simufact's simulation expertise with Materialise's data and build preparation software will allow users to better control the pre-build process within their familiar data preparation environment. Materialise's simulation module is available immediately. In combination with Materialise's upcoming Magics 23 software, available later this year, it will provide more integrated capabilities and automated support for metal 3D printing. For more information on Materialise Magics Simulation, please visit: <http://mtls.me/simulation>

About Materialise

Materialise incorporates nearly three decades of 3D printing experience into a range of software solutions and 3D printing services, which together form the backbone of the 3D printing industry. Materialise's open and flexible solutions enable players in a wide variety of industries, including healthcare, automotive, aerospace, art and design, and consumer goods, to build innovative 3D printing applications that aim to make the world a better and healthier place. Headquartered in Belgium, with branches worldwide, Materialise combines the largest group of software developers in the industry with one of the largest 3D printing facilities in the world. For additional information, please visit: www.materialise.com.

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