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Formnext 2018: TRUMPF digitalizes 3D printing

Frankfurt was the place to be last week for practically everyone with a stake in 3D printing. The city hosted Formnext, the leading international trade fair for additive manufacturing, for the fourth time. A global contingent of 630 exhibitors made the most of nearly 30,000 square meters of sprawling space to showcase their offerings from November 13 through 16. TRUMPF was among their number.

Its exhibition stand was hard to miss, and not just because it occupied a sizable 680 square meters. There was much for international visitors to discover here, especially about digitalized, automated 3D printing.

The large-format TruPrint 5000 system featuring auto-start was an eye-catcher. This solution speeds up 3D printing to boost productivity. The Formnext demo showed visitors how the substrate plate with a zero-point clamping system automatically slides into the proper position. Speaking at the press conference, Tobias Baur, General Manager of TRUMPF Additive Manufacturing, said that automated in-machine solutions like this are the first step toward the longer-term goal of automating upstream and downstream stages in 3D printing.

The TruPrint 5000 featuring auto-start

It was not the only highlight at the TRUMPF booth. The company also showcased applications demonstrating the benefits of an all-digital 3D printing process chain. To this end, TRUMPF connected all 3D printers at the stand to a manufacturing execution system (MES) and a smart ordering platform. As soon as the component data has been uploaded, users instantly

learn how much it will cost to produce the component and how long delivery will take. On top of that, the manufacturer can access the printers and the pending jobs' process data from anywhere in real time.

All 3D printers at the exhibition stand were connected to a digital MES

For another first at Formnext, TRUMPF printed pure copper and gold using a green laser. The company's developers achieved this by linking the new TruDisk 1020 disk laser and TruPrint 1000 3D printer. The former's wavelength is in the green spectral region, and unlike infrared lasers, it is able to weld highly reflective materials such as pure copper and gold. None of the expensive material goes to waste, which the jewelry industry is sure to appreciate. And the electronics and automotive industries benefit from components made of pure copper, an excellent conductor of electricity and heat.

TRUMPF prints copper and gold with a new green laser

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