Press Release

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M&H relies on innovative depowdering system SFM-AT1000-S by Solukon

New standards in the cleaning and post-processing of 3D-printed metal components: With the SFM-AT1000-S from Solukon, the Austrian 3D printing pioneer frees internal channels and cavities of the most complex parts from powder residues. The system recently went into operation at the company's headquarters in Austria.

The next step for M&H towards becoming one of the Central European innovation leaders in the field of additive manufacturing: With the SFM-AT1000-S depowdering system from the German quality manufacturer Solukon, the Styria-based 3D printing pioneer is setting the next qualitative exclamation mark. The automatic powder removal system is specially designed for cleaning and post-processing 3D-printed parts. In particular, large and heavy metal components with a height of up to 1,000 mm and a maximum weight of 800 kg as well as tasks with particularly high post-processing requirements can be freed from powder residues particularly efficiently on the powder removal system.

Removing powder residue from complex geometries

For M&H-CEO Patrick Herzig, the key benefit lies in the precision of the system: "With the Solukon system, we can efficiently and thoroughly remove powder residue from complex parts with internal channels and cavities. This feature is a decisive advantage, as such complex geometries often present a challenge in post-processing and powder residues in the components could mean a loss of performance. With the introduction of the SFM-AT1000-S, we are setting new standards in the post-processing of 3D-printed parts in titanium, aluminum, stainless steel and materials such as Scalmalloy and Inconel. This technology enables us to further increase the quality of our products and make our production processes more efficient and even safer through series cleaning." Technologically, this is realized by two endlessly rotating axes with servo drive - the component thus moves along the programmable path. A built-in high-frequency knocker also loosens powder clumps in particularly narrow channels. For reactive materials, the Solukon SFM-AT1000-S can be inerted with inert gas - the process offers maximum explosion and health protection.

"The SFM-AT1000-S, sets new standards in the manufacturing industry - also thanks to its compatibility with our innovative SPR-Pathfinder® software. With this unique software, individual motion patterns can be calculated automatically for each component based on the CAD file. By optimizing and automating their post-processing procedures, we offer

our customers - like M&H - a clear competitive advantage. With the Digital-Factory-Tool, a sensor and interface kit, our partners also have maximum transparency over the depowdering process," explains Andreas Hartmann, CEO and CTO of Solukon.

Post-processing for Formula 1 components

At M&H, the SFM-AT1000-S is used to post-process components for the aerospace and international racing industries in particular - especially Formula 1: "The ability to clean components with extreme precision enables us to meet the specific and stringent requirements of these industries, where precision and reliability are particularly crucial. Using the SFM-AT1000-S from Solukon ensures that even the finest geometries can be reworked without compromising on quality," emphasizes M&H-CEO Herzig. Especially in combination with the SLM 800 3D metal printer (build volume: 500 x 280 x 850), which is also new, M&H is now "particularly well positioned for the production of complex components in large dimensions", says Herzig.

Figures:

Figure 1: Patrick Herzig, CEO and Philipp Schwemberger, Head of Additive Manufacturing at M&H CNC-Technik

About Solukon

Solukon Maschinenbau GmbH is a German high-quality supplier of powder removal and processing systems for metal and polymer additive manufacturing. Founded in 2015 by Andreas Hartmann and Dominik Schmid, the company, located in Augsburg, has extensive experience in the development of AM systems and related peripheral equipment, and offers a full range of industrial powder processing systems. Since 2022 Solukon offers an intelligent software for automated depowdering of laser-melted metal parts as exclusive licensee, the SPR-Pathfinder®. Solukon products meet the highest functionality and safety standards and are approved for safe and reliable removal of tough-to-handle and reactive materials such as titanium and aluminum.
Solukon is present on four continents. The systems are trusted by leading manufacturers of 3D-printing systems, like EOS, SLM Solutions and AMCM, by institutions like NASA and Cern as well as by companies like Siemens and Ariane Group.

Solukon Maschinenbau GmbH

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