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Automated depowdering of extra-large components: AMCM acquires SFM-AT1500-S system from Solukon

At Formnext 2024, Solukon unveiled the new SFM-AT1500-S, designed for exceptionally large metal parts weighing up to 2,100 kg, and is proud to announce AMCM GmbH as one of its first customers.

SFM-AT1500-S is currently the largest metal depowdering system from Solukon. It can accommodate parts with dimensions 600 x 600 x 1500 mm or 820 x 820 x 1300 mm with a maximum weight of 2100 kg, including build plate – an immense intake weight for depowdering systems. This makes SFM-AT1500-S the ideal depowdering system for heavy-duty requirements and dimensions. Despite its enormous capacity, the SFM-AT1500-S is extremely compact and does not require an external work platform or stairs. The M 8K from special machine manufacturer AMCM in Starnberg pushes the limits of what is currently printable. The M 8K can print components up to 820 x 820 x 1200 mm. In the search for an ideal peripheral device for depowdering, AMCM has once again opted for the market-leading technology from Solukon and the SFM-AT1500-S. AMCM will be commissioning the new Solukon depowdering system at its Starnberg facility soon.

Why AMCM relies on Solukon's market leading depowdering technology

As with the SFM-AT1000-S, which was the largest depowdering system of its time, Solukon worked closely with AMCM throughout the development phase of the new system. This collaboration allowed the ideas and requirements of Martin Bullemer, Managing Director at AMCM, and his team to be directly integrated into the design. The result is the SFM-AT1500-S, a machine perfectly tailored to requirements of the AMCM M 8K printer.

Intelligent depowdering of extra-large parts

The difficulty in cleaning massive and extra-large metal parts is not only the extremely high weight of the components (up to 2,100 kg). Complex internal structures also make powder removal a challenge. To address these challenges, Solukon's largest metal depowdering system to date is equipped with the SPR-Pathfinder®. This innovative software eliminates the need for manual programming during powder removal by using the CAD file to calculate the optimal movements for the component within the Solukon system. Users can also use the SPR-Pathfinder during the design process to check whether their complex components will be cleaned. This capability offers a unique opportunity to save substantial time and costs throughout the entire production process while significantly reducing the risk of production errors.

“SPR-Pathfinder is a tool that every customer would certainly like to have, and so do we. The software is indispensable for complex components because the exact movement pattern for very complex geometries cannot be generated using human imagination alone. The software eliminates

the need for any human programming effort,” says Martin Bullemer, Managing Director of AMCM. In his video statement, he explains why AMCM chose the SFM-AT1500-S from Solukon.

OEM collaboration as guiding principle

Andreas Hartmann, CEO/CTO of Solukon emphasizes: “The exchange with our OEM partners is one of our guiding principles. With AMCM, we have always shared the approach of pushing the boundaries of what is possible for our customers. This has enabled us to launch a depowdering system for components weighing up to 2,100 kg in record time.”

In addition to the M 8K, the SFM-AT1500-S is also compatible with all other printers of a comparable size and has been available to order since Formnext 2024. In the coming months, Solukon will introduce other companies that have already purchased a new SFM-AT1500-S.

Figures

Figure 1: Martin Bullemer, Managing Director AMCM and Andreas Hartmann, CEO/CTO of Solukon in front of the SFM-AT1500-S at Formnext 2024

Figure 2: The SFM-AT1500-S can accommodate a component such as this copper rocket engine in the middle.

About Solukon

Solukon Maschinenbau GmbH is a German high-quality supplier of powder removal and processing systems for metal and polymer additive manufacturing. In 2015, Solukon presented the world's first system for automated depowdering. Founded by Andreas Hartmann and Dominik Schmid, the Augsburg-based company 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 has also been offering the world's first and unique intelligent software for automated simulation and (pre-)calculation of the depowdering of laser-melted metal parts, 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 has established itself as the market leader in the field of industrial powder removal with its powder removal systems for metal.