



## PRESS RELEASE

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### **SAMSON Certified as Materials Manufacturer for Additive Manufacturing**

At the end of February, SAMSON achieved certification as a materials manufacturer for the additive manufacturing (AM) of parts in compliance with the Pressure Equipment Directive. By applying the laser beam powder bed fusion method for metals (LB-PBF-M), SAMSON is now capable of making pressurized valve parts of the stainless steels 1.4401/316 and 1.4404/316L. The 3D printer used, a TruPrint 3000 by TRUMPF GmbH + Co. KG, makes it possible to manufacture valves in sizes up to DN 100/NPS 4 that weigh max. 250 kg.

At the initial stage, production will focus on blanks for novel valve trims before moving on to printing order-specific parts for customers at the second stage. Additionally, SAMSON is planning to get certified for further metal powders to manufacture parts of other standard materials commonly used in the process industry, such as nickel-based and titanium alloys.

Powder bed fusion is a procedure where parts are built by fusing together metal powder particles layer by layer. A laser beam moves along certain paths to create the desired geometry by sintering together layer after layer of powder in an inert gas atmosphere. Contrary to other AM procedures, this is a generative method to create dense metal parts without fillers or binders. This 3D printing method makes it possible to quickly produce parts that have very complex shapes or geometries and cannot be manufactured using traditional methods. By implementing bionic design, the method will also enable SAMSON to create valve parts with novel, optimized topologies, flow paths and functions.

3D printing has major benefits, particularly when making parts in small numbers: less time needs to be spent on changing machinery setups so that small quantities or even tailor-made components can be produced, even for products that have already been discontinued. In addition, considerably less material is required than for the common subtractive manufacturing methods, such as lathing or milling.

Additive manufacturing was introduced at SAMSON under the lead of ROLF SANDVOSS INNOVATION CENTER (RSIC), which was opened in 2017 and is considered the most modern R&D and testing facility in the valve sector.

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