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FRAUNHOFER IAPT AND POSTPROCESS LAUNCH ONGOING PARTNERSHIP TO FURTHER RESEARCH IN OPTIMIZED ADDITIVE MANUFACTURING APPLICATIONS

Press release / July 2021

Fraunhofer IAPT and PostProcess join forces to innovate the future of Additive Manufacturing with Automated Support Removal & Surface Finishing

July 2021, Fraunhofer IAPT, Research Institution for Additive Manufacturing Technologies, as part of the world's leading applied research organization Fraunhofer partners with the US company PostProcess Technologies Inc., the first and only provider of automated and intelligent post-printing solutions for industrial 3D printing, to collaborate to further advance additive manufacturing (AM) for production scalability. For this reason, Fraunhofer IAPT recently installed a PostProcess® DECI™ support removal solution in order to advance the end-to-end systemized digitization of their fused deposition modeling (FDM) processes.

The use of soluble support structures is necessary for a majority of FDM parts that must be removed in a subsequent process step. This comes with the significant disadvantages such as unpredictable processing times, extended dry times and inconsistent results. To address these drawbacks, PostProcess Technologies developed the volumetric velocity dispersion (VVD) technology and demonstrated a significant reduction of the FDM workflow with soluble supports. The ultimate goal of the new collaboration is to design a fully integrated and automated production line to produce FDM parts with a seamless support removal process.

Speaking to the new partnership, Dr. Philipp Imgrund at Fraunhofer IAPT, said, "Based on our converging views regarding the industrialization of additive manufacturing, for which post-processing is a crucial element, we are certain that the digitization of the FDM process chain is a decisive step."

Fraunhofer IAPT is additionally collaborating with PostProcess Technologies on surface finishing technology for metal parts in the PostProcess® DECIDUO™ by printing high precision test specimens in a multitude of materials and providing highly accurate measurements and analysis of the finished parts. This is just the beginning of what will be an ongoing partnership, dedicated to advancing additive as a full-fledged Industry 4.0 solution.

"We are proud to be collaborating with such a well-respected pioneer in additive manufacturing research and look forward to continually develop new data-driven innovations for additive with the help of this new partnership." said Florian J. Künne, General Manager for DACH & APAC, PostProcess Technologies.

About Fraunhofer IAPT:

Fraunhofer IAPT is one of the leading institutions in the field of additive manufacturing with the core competencies AM design, AM processes and AM systems. The focus is on the industrialization of additive technologies and the associated technology transfer to enable completely new and resource-efficient products.

Fraunhofer IAPT stands for sustainable innovation in the field of additive production. This ranges from developments on the process and material level, the development of novel component designs and system technologies to factory planning and digitization.

The range of services in the area of contract research is aimed at business and industry as well as society and covers the entire process chain.

Industrial and service companies of all sizes benefit from many years of experience in additive manufacturing technologies. Fraunhofer IAPT develops and optimizes customized technologies, processes and products up to the production of prototypes and small series.

About PostProcess Technologies:

PostProcess Technologies is the only provider of automated and intelligent post-printing solutions for 3D-printed parts. Founded in 2014 and headquartered in Buffalo, NY, USA, with international operations in Sophia-Antipolis, France, PostProcess removes the bottleneck in the third step of 3D printing – post-printing – through patent-pending software, hardware, and chemistry technologies. The company's solutions automate industrial 3D printing's most common post-printing processes with a software-based approach, including support, resin, and powder removal, as well as surface finishing, resulting in "customer-ready" 3D printed parts. Additionally, as an innovator of software-based 3D post-printing, PostProcess solutions will enable the full digitization of AM through the post-print step for the Industry 4.0 factory floor. The PostProcess portfolio has been proven across all major industrial 3D printing technologies and is in use daily in every imaginable manufacturing sector.