

Foundry Institute in Aachen Develops Novel Material Systems with LUNOVU LMD

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The renowned Foundry Institute at the RWTH Aachen in Germany has put a new LUNOVU LMD system into operation. Sited at its new premises, Research Center for Digital Photonics Production (RCPPP), the Laser Material Deposition (LMD) system is designed to suit the special requirements of the foundry institute. A hermetically sealed inert gas chamber (glove box) is used for contamination free processes. Additionally, it combines powder and wire-based laser cladding processes. This way, almost any type of starting materials can be used for research purposes, minimizing the impact of the ambient atmosphere even on high-oxygen sensitive materials.



“The new LMD system is ideal for our research applications. We are now in a position to produce metal powder with our in-house atomization system, which can be immediately used in the LMD system to produce material samples”, states Dr. Iris Rafféis, head of the research group for Additive Manufacturing. “This approach opens up completely new perspectives for the development and optimization of material systems in additive manufacturing. At the same time, we use a production compatible LMD technology which is already in use in the industry.”

Dr. Rainer Beccard, Managing Director at LUNOVU GmbH adds: „A special focus was put on the large number of potential applications. The combination of wire and powder-based processes in an inert gas system offers maximum flexibility and makes the system ideal for complex research tasks. “

LUNOVU develops and manufactures Laser Material deposition (LMD) machine systems for industrial applications and research and development. The product portfolio includes CNC machines and robot-based systems. A special focus is on machine intelligence and sensor technology which facilitates processes on complex free form geometries without manual programming.

The Foundry Institute at the RWTH Aachen has expanded its traditional casting competence with the new research area of additive manufacturing. In this area, research is performed primarily on the coupling of complex component structures with optimized material systems and microstructures.

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