Fraunhofer IGCV

Fraunhofer Institute for Casting, Composite and Processing Technology IGCV

Multi-step additive manufacturing (iAM)

Materials for binder jetting
© Fraunhofer IGCV / Andreas Heddergott

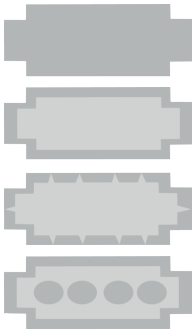
The iAM processes are used to create tools for components. The advantage of this multi-stage approach lies in the fact that the material of the component is not bound to the layered construction method. Thus, it is possible to combine conventional techniques such as metal casting with the advantages of additive production. In this way large components as well as larger series can be produced economically and in the target material.

As with direct additive manufacturing, the process is »fully-digital«. This means that there is the possibility of rapid variant production, targeted production and digital warehousing.

At the Fraunhofer IGCV, the topic iAM is intensively examined. Our focus is on new materials and processes in combination with the binder jetting process. For example, the study of the properties of inorganic binders is a key aspect in the field of metallic casting processes.

The process and automation of the binder jetting process is also the focus of intensive investigations. The aim here is to set the course for large-scale economic production.

Last but not least, the casted components are scientifically analyzed. The findings are transferred back to the entire process chain.



Print strategy for easy decoring of iAM-castings

Kontakt

Dr.-Ing. Daniel Günther
+49 (0) 89 350946 120
daniel.guenther
@igcv.fraunhofer.de

Fraunhofer Institute for Casting, Composite and Processing Technology IGCV
Lichtenbergstraße 15
85748 Garching | Germany

www.igcv.fraunhofer.de/en

gtm München Gießereitechnik
Fraunhofer IGCV | TUM UTG