



- 1 *Optimized reamer*
- 2 *Lightweight, integral pinion-shaft design*
- 3 *Compensating shaft coupling*

ADDITIVE MANUFACTURING DESIGN UND DIMENSIONING

Fraunhofer Institute for Casting, Composite and Processing Technology IGCV

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Additive manufacturing (AM) offers significant potential to completely rethink component design. Complex structures can be produced without direct cost increases. In particular for metallic components, advantages are offered by function integration (e.g. increased life time by means of internal cooling or lubricant supply) and lightweight construction. Furthermore, sensor technology, filter and damping properties can be integrated by design and assembly costs reduced through component integration.

Using bionic examples or mathematical optimization algorithms, lightweight structures can be created, which are almost manufacturable to scale using laser-additive manufacturing. In order to realize lightweight structures in short development times, software solutions and methods are available at the Fraunhofer IGCV for these purposes. In addition to component

design, we offer workshops and training courses in which we develop your components together with you and give you an overview about the software tools available on the market and their possibilities.

The Fraunhofer IGCV is actively involved in standardization procedures for additive manufacturing and offers extensive expertise in design methods and reliable component design.

At a glance:

AM-manufacturable design, redesign, structural optimization, bionic design, functions integration, training

Are you interested in component development projects or are you looking for leading-edge design possibilities?

Contact us today!