

About this organisation

Machine translation

This organisation has been machine-translated based on data provided in German.

One aim of pmd is to develop methods that help developers to better utilise the potential of additive manufacturing as early as the concept phase. This is intended to promote "additive thinking" so that the advantages of additive manufacturing can be optimally utilised and the higher costs can be offset by greater functional added value. The aim is also to open up new application possibilities for the technology.

pmd's expertise in the field of lightweight construction focuses on the research and development of innovative methods for additive manufacturing. These technologies enable the production of highly individualised, functionally optimised components by applying material layer by layer, which surpasses conventional manufacturing processes in terms of flexibility and efficiency. We analyse the specific requirements and limitations of additive processes and, based on this, develop design guidelines that allow developers to fully exploit the lightweight construction potential. In particular, we investigate the optimisation of the micro- and mesostructures of components in order to specifically improve rigidity and force transmission. By integrating new manufacturing techniques and developing customised design methods, we are continuously expanding the field of application of additive manufacturing in lightweight construction.

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🌐 www.pmd.tu-darmstadt.de/pmd/index.de.jsp



Organisation type

University or higher education institution

Sectors

No specific sector

Employees

10 up to 49

Turnover

n/a

Funding

n/a

About this organisation

Main areas covered	Additive manufacturing, Sensing machine elements, Impedance measurement on rolling and plain bearings
Infrastructure	L-PBF systems, Rolling bearing test rigs, Modern measuring equipment
Certifications	
Keywords	
Memberships	

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Software & databases, Materials	✓	✓	
Services & consulting Consulting, Testing and trials, Engineering, Prototyping	✓	✓	
Field of technology			
<i>Design & layout</i>			
<i>Functional integration</i>			
<i>Measuring and testing technology</i>			
<i>Modelling and simulation</i>			
<i>Plant construction & automation</i>			
<i>Recycling technologies</i>			

Overview of lightweighting expertise

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**Research Development Manufacturing
 & Supply**

Manufacturing process

Additive manufacturing

Coating (surface engineering)

Fibre composite technology

Forming

Joining

Material property alteration

Primary forming

Processing and separating

Textile technology

Material

Biogenic materials

Cellular materials (foam materials)

Composites

Fibres

Functional materials

Metals

Plastics

Structural ceramics

(Technical) textiles

Contacts

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