Günter-Köhler-Institute for Joining Technology and Materials Testing GmbH

About this organisation

Machine translation

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

Manufacturing technology and materials technology are at the centre of the research activities of the ifw Jena | Günter-Köhler-Institute for Joining Technology and Materials Testing. Together with partners from industry and trade, universities and other research institutions, our scientists, engineers and technicians develop innovative product and technology solutions in a wide range of research areas

Our lightweight construction expertise includes production and processing technologies such as laser material processing, additive manufacturing and diffusion bonding. In addition, we develop and offer solutions for simulation and design, destructive and non-destructive material testing and quality assurance.

Otto-Schott-Straße 13
07745 Jena
Thuringia
Germany
www.ifw-jena.de

Organisation type
Non-university research institution

Sectors
No specific sector

Employees
50 up to 249

Turnover
n/a

Funding
n/a

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About this organisation

Main areas covered	Laser material processing, Additive manufacturing, Diffusion bonding, Materials testing, Simulation and design
Infrastructure	Extensive system technology, Many years of research experience, Up-to-date materials testing laboratory
Certifications	
Keywords	Powder bed process, Selective laser beam melting, Hybrid production, CAD, FEM
Memberships	Zuse community

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Semi-finished parts, Materials	✓	✓	✓
Services & consulting Consulting, Testing and trials, Engineering, Prototyping, Validation, Simulation, Technology transfer	✓	✓	✓

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Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Field of technology			
Design & layout Lightweight manufacturing, Lightweight design, Hybrid structures	✓	✓	✓
Functional integration Sensor technology	✓	✓	✓
Measuring and testing technology Visual analysis (e.g. microscopy, metallography), Materials analysis, Destructive analysis, Non-destructive analysis	✓	✓	✓
Modelling and simulation Life-cycle analysis, Materials	✓	✓	✓
Plant construction & automation			
Recycling technologies			

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Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing, Deposition welding, Laminated object manufacturing (LOM), Selective laser melting (SLM, LPBF, ...)	✓	✓	✓
Coating (surface engineering)			
Fibre composite technology			
Forming			
Joining Hybrid joining, Adhesive bonding, Soldering, Welding	✓	✓	✓
Material property alteration Heat treatment	✓	✓	✓
Primary forming			
Processing and separating Drilling, Milling, Sawing, Shearing/punching, Cutting, Others (Comprehensive laser material processing)	✓	✓	✓
Textile technology			

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Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Material			
Biogenic materials			
Cellular materials (foam materials)			
Composites Glass-fiber reinforced plastics (GFRP), Carbon-fiber reinforced plastics (CFRP), Metal-ceramic composite	✓	✓	✓
Fibres			
Functional materials			
Metals Aluminium, Intermetallic alloys, Steel, Titanium	✓	✓	✓
Plastics			
Structural ceramics			
(Technical) textiles			

Contacts

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Contacts

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Research documentation and transfer

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