

About this organisation

The "Department of Foundry Technology" at the University of Kassel is one of the leading research and educational institutions for foundry technology worldwide. Through an ideal combination of scientific teaching with current research projects that are both fundamentally oriented and industrially oriented, students receive an engineering education that is equally well-founded in theory and practice.

The current and future focus of the scientific orientation in research and teaching at the Department of Foundry Technology is on the field of innovative lightweight casting with a focus on production technology. This includes the fundamentals of new energy-efficient casting and production technologies, new sensor applications and the digitalisation of the process chain.

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www.uni-kassel.de/maschinenbau/institute/produktionstechnik-und-logistik/fachgebiete/giessereitechnik



Organisation type

University or higher education institution

Sectors



Employees

10 up to 49

Turnover

n/a

Funding

n/a



About this organisation

Main areas covered	Aluminium die casting, Rheo casting, Thixomolding, Magnesium die casting, sand 3d printing
Infrastructure	Bühler Carat 140 Compact, Frech W 200 hot chamber, CompTech RheoMetall, Yizumi UN1250MGII Thixomolding, ExOne S-Max-Pro sand 3d printer
Certifications	
Keywords	die casting, Rheo casting, Thixomolding, sand 3d printing, lightweight casting
Memberships	

Overview of lightweighting expertise

	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Machines and plants, Materials, Tools and moulds	✓	✓	✓
Services & consulting Training, Consulting, Testing and trials, Funding, Engineering, Prototyping, Validation, Simulation, Technology transfer	✓	✓	✓

Overview of lightweighting expertise

	Research	Development	Manufacturing & Supply
Field of technology			
Design & layout Lightweight manufacturing, Lightweight design, Lightweight construction concepts, Lightweight material construction	✓	✓	✓
<i>Functional integration</i>			
Measuring and testing technology Component and part analysis, Visual analysis (e.g. microscopy, metallography), Materials analysis, Destructive analysis, Non-destructive analysis	✓	✓	
Modelling and simulation Loads & stress, Life-cycle analysis, Multiphysics simulation, Optimisation, Processes, Structural mechanics, Materials	✓	✓	
<i>Plant construction & automation</i>			
Recycling technologies Recycling	✓	✓	

Overview of lightweighting expertise

	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing, Others	✓	✓	✓
<i>Coating (surface engineering)</i>			
<i>Fibre composite technology</i>			
<i>Forming</i>			
<i>Joining</i>			
Material property alteration Mechanical treatment, Heat treatment	✓	✓	✓
Primary forming Casting	✓	✓	✓
Processing and separating Drilling, Turning, Milling, Sawing			✓
<i>Textile technology</i>			
Material			
<i>Biogenic materials</i>			
<i>Cellular materials (foam materials)</i>			
<i>Composites</i>			
<i>Fibres</i>			
<i>Functional materials</i>			
Metals Aluminium, Magnesium, Steel	✓	✓	
<i>Plastics</i>			
<i>Structural ceramics</i>			
<i>(Technical) textiles</i>			

Contacts

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