

About this organisation

Machine translation

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

Aalen University - Foundry Technology in the Faculty of Mechanical and Materials Engineering

The core competencies of the foundry laboratory at Aalen University lie in the die casting of aluminium and magnesium light metal alloys. This includes the development of new process variants for lightweight construction, such as the production of thin-walled, hollow die-cast parts using salt cores or gas injection. Extremely rigid parts can be produced in this way. In addition, the development of composite materials made from carbon fibre and die casting for car body structures is an area in which research is being carried out as part of the federal government's SmartPro project. Thanks to the use of 4 production-related die casting machines, the results can be quickly applied in near-series processes. In addition, prototypes can be produced using sand or permanent mould casting or the lost foam process. The production of small series is also possible. The Steinbeis Transfer Centre GTA - Foundry Technology Aalen and GTA GmbH are connected to the university laboratory.

Beethovenstraße 1
73430 Aalen
Baden-Württemberg
Germany
www.htw-aalen.de

Main areas covered

Sand and permanent mould casting, die casting

Infrastructure

Computer tomography, tensile testing, Fatigue strength

Certifications

University laboratory

Keywords

Magnesium aluminium die casting, Salt cores Gas injection

Memberships



Organisation type

University or higher education institution

Sectors



Employees

Up to 9

Turnover

n/a

Funding

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Semi-finished parts	✓		
Services & consulting Training, Consulting	✓		
Field of technology			
Design & layout Lightweight manufacturing, Lightweight design, Hybrid structures, Lightweight construction concepts, Lightweight material construction	✓	✓	
<i>Functional integration</i>			
Measuring and testing technology Materials analysis, Destructive analysis, Non- destructive analysis	✓	✓	✓
<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			
Others (CFRP cast hybrid)	✓		
Forming			
Joining			
Material property alteration			
Primary forming			
Casting	✓	✓	✓
Processing and separating			
Textile technology			

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Material			
<i>Biogenic materials</i>			
<i>Cellular materials (foam materials)</i>			
<i>Composites</i>			
Fibres			
Carbon fibres	✓		
<i>Functional materials</i>			
Metals			
Aluminium, Magnesium	✓	✓	✓
<i>Plastics</i>			
<i>Structural ceramics</i>			
<i>(Technical) textiles</i>			

Contacts

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Contacts

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