KIT Steel and Lightweight Construction

Research centre for steel, wood and stone

About this organisation

Machine translation

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

During its 100 years of existence, the research centre has achieved a leading position as a nationally and internationally renowned research and testing institute as well as a powerful partner for industry. This is demonstrated by the numerous scientific publications and dissertations that have emerged from its circle, as well as its involvement in numerous national and international committees.

The service area of KIT Steel and Lightweight Construction covers all tasks that focus on thin-walled components made of steel and aluminium alloys. The interaction between the fasteners and the component often plays an important role. The load-bearing and fatigue behaviour of the following components, structural elements and construction systems can be investigated: - Trapezoidal profiles and cassettes - Cold-formed lightweight profiles - Mullion-transom constructions - Solar fasteners - Cable tension members - Tension rod systems - Fasteners (mechanical and in the form of bonds)

Otto-Ammann-Platz 1
76131 Karlsruhe
Baden-Württemberg
Germany
stahl.vaka.kit.edu

KARLSRUHER INSTITUT FÜR TECHNOLOGIE

VERSUCHSANSTALT
FÜR STAHL, HOLZ & STEINE
WWW.VERSUCHSANSTALT.DE

Organisation type
University or higher education institution

Sectors

Employees
50 up to 249

Turnover
€2m - €10m

Funding
n/a

KIT Steel and Lightweight Construction

Research centre for steel, wood and stone

About this organisation

Main areas covered	Building products, Lightweight components, Adhesive bonds, Mechanical fasteners, Tension members
Infrastructure	Testing machines (up to 26 MN pressure), Testing machines (up to 15 MN tension)
Certifications	DIN EN 17025, Certification body (CE) 0769, Recognised body (LBO) BWU02, Accreditation (DAkkS)
Keywords	
Memberships	

Overview of lightweighting expertise

Machine translation

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

	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Software & databases, Materials	✓	✓	
Services & consulting Training, Consulting, Testing and trials, Standardisation, Validation, Simulation, Technology transfer, Approval	✓	✓	

KIT Steel and Lightweight Construction

Research centre for steel, wood and stone

Overview of lightweighting expertise

Machine translation

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

	Research	Development	Manufacturing & Supply
Field of technology			
Design & layout Hybrid structures, Lightweight material construction	✓	✓	
Functional integration Material functionalisation	✓	✓	
Measuring and testing technology Component and part analysis, Visual analysis (e.g. microscopy, metallography), System analysis, Materials analysis, Destructive analysis, Non-destructive analysis	✓	✓	
Modelling and simulation Loads & stress, Life-cycle analysis, Optimisation, Structural mechanics, Materials	✓	✓	
Plant construction & automation			
Recycling technologies Downcycling, Upcycling	✓	✓	

KIT Steel and Lightweight Construction

Research centre for steel, wood and stone

Overview of lightweighting expertise

Machine translation

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

	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing, Deposition welding	✓	✓	
Coating (surface engineering)			
Fibre composite technology			
Forming			
Joining Adhesive bonding, Screwing, Welding	✓	✓	
Material property alteration Mechanical treatment	✓	✓	
Primary forming			
Processing and separating			
Textile technology			

KIT Steel and Lightweight Construction

Research centre for steel, wood and stone

Overview of lightweighting expertise

Machine translation

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

	Research	Development	Manufacturing & Supply
Material			
Biogenic materials Wood	✓	✓	
Cellular materials (foam materials) Closed-pore	✓	✓	
Composites Glass-fiber reinforced plastics (GFRP), Carbon-fiber reinforced plastics (CFRP)	✓	✓	
Fibres Glass fibres, Carbon fibres	✓	✓	
Functional materials			
Metals Aluminium, Steel	✓	✓	
Plastics Thermoset plastics, Elastomers, Thermoplastics	✓	✓	
Structural ceramics			
(Technical) textiles			

Contacts

Machine translation

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

KIT Steel and Lightweight Construction

Research centre for steel, wood and stone

Contacts

Mr Dr.-Ing. Daniel Ruff	Mr Dr.-Ing. Philipp Weidner
Managing Director / Head of Department	*Head of department*
daniel.ruff@kit.edu	philipp.weidner@kit.edu