SKZ - The Plastics Centre

About this organisation

Machine translation

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

As the largest plastics institute in Germany, the SKZ offers solutions for all issues relating to plastics. The SKZ develops materials and improves production processes and component properties. This is accompanied by targeted knowledge transfer. The SKZ also supports the industry with testing, consulting and certification services. The SKZ network comprises more than 400 members.

The aim of the SKZ - an institute of the Zuse Association - is the successful implementation of new technologies and processes in the plastics industry in operational practice. In the area of research, the SKZ deals with all processes along the value chain of the plastics processing industry as well as the necessary measuring and testing technologies for quality assurance. There are many examples - from materials, processing methods and component design to market-ready applications: Material development, composites, compounding, fibre-reinforced plastics, foaming, product and process design, injection moulding, additive manufacturing, joining, surface technology, hybrid connections, process measurement technology, non-destructive testing, sensor integration, service life prediction, repair, simulation, etc. This is accompanied by targeted knowledge transfer at conferences, workshops and in courses.

Organisation type
Non-university research institution

Sectors
No specific sector

Employees
250 up to 499

Turnover
€10m - €50m

Funding
n/a

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97076 Würzburg
Bavaria
Germany
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Main areas covered	Fibre-reinforced plastics, Injection moulding, additive manufacturing, Fügen, Testing, simulating, Training and further education
Infrastructure	Processing technology, Joining technology centre, Testing and analytical laboratories, Composite Competence Centre (Halle), Training and further education centres
Certifications	ISO 9001, DAkkS accred. Testing possibilities, DIN EN ISO 50001:2011, DVS 2212-1; 2212-3, DVS 2220; 2221
Keywords	Fibre-reinforced plastics, Injection moulding, Welding & bonding, Quality assurance, Simulation & service life prediction
Memberships	Zuse community, AiF, Carbon Composites e. V., Carbon Concrete Composite e.V., DVS

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Semi-finished parts, Machines and plants, Software & databases, Materials, Tools and moulds	✓	✓	
Services & consulting Training, Consulting, Testing and trials, Funding, Standardisation, Prototyping, Validation, Simulation, Technology transfer, Maintenance and repair, Approval	✓	✓	✓

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	Research	Development	Manufacturing & Supply
Field of technology			
Design & layout Lightweight manufacturing, Lightweight design, Hybrid structures, Lightweight construction concepts, Lightweight material construction	✓	✓	
Functional integration Actuator technology, Sensor technology, Thermal activation, Material functionalisation	✓	✓	
Measuring and testing technology Component and part analysis, Visual analysis (e.g. microscopy, metallography), System analysis, Environmental simulation, Materials analysis, Destructive analysis, Non-destructive analysis	✓	✓	✓
Modelling and simulation Loads & stress, Life-cycle analysis, Optimisation, Processes, Structural mechanics, Materials, Reliability validation	✓	✓	
Plant construction & automation Automation technology	✓	✓	
Recycling technologies Material separation, Recycling, Upcycling	✓	✓	

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	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing	✓	✓	✓
Coating (surface engineering) Plasma process, Others (Flame treatment, laser pre-treatment, vacuum suction blasting, priming)	✓	✓	
Fibre composite technology Fibre spraying, Casting (concrete), Manual lamination, Resin infusion process, Resin transfer moulding, Pre-preg processing, Vacuum infusion, Others (Other: repair processes, pressing technology, autoclave curing, continuous fibre reinforcement)	✓	✓	
Forming Compression moulding, Thermal converting	✓	✓	
Joining Hybrid joining, Adhesive bonding, Riveting, Screwing, Welding, Others	✓	✓	✓
Material property alteration Mechanical treatment, Thermochemical treatment, Thermomechanical treatment, Heat treatment	✓	✓	✓
Primary forming Extrusion, Injection moulding	✓	✓	✓
Processing and separating Drilling, Turning, Milling, Sawing, Shearing/ punching, Grinding, Cutting	✓	✓	✓
Textile technology Textile surface treatment and finishing	✓	✓	

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	Research	Development	Manufacturing & Supply
Material			
Biogenic materials Bioplastics, Biocomposites, Wood	✓	✓	
Cellular materials (foam materials) Closed-pore, Open-pore	✓	✓	
Composites Aramid fibre composites, Basalt fibre-reinforced plastic, Glass-fiber reinforced plastics (GFRP), Ceramic matrix composite (CMC), Carbon-fiber reinforced plastics (CFRP), Metal-fibre-polymer composite, Nanocomposites, Natural fibre reinforced plastics (NFRP), Laminates, Textile-reinforced concrete	✓	✓	
Fibres Aramid fibres, Basalt fibres, Glass fibres, Ceramic fibres, Carbon fibres, Metal fibres, Natural fibres	✓	✓	
Functional materials Shape memory materials	✓	✓	
Metals			
Plastics Thermoset plastics, Elastomers, Thermoplastics	✓	✓	✓
Structural ceramics			
(Technical) textiles Yarns, rovings, Meshes, Laid webs, Crocheted fabrics, Woven fabrics, Knitted fabrics, Nonwovens, mats	✓	✓	

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Contacts

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