Thermoset Processes and Preforming Division

About this organisation

Machine translation

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The specialist group "Thermoset Processes and Preforming" at the Institute of Lightweight Engineering and Polymer Technology at TU Dresden deals with the characterisation, modelling and simulation of reactive processes, plant and process development for innovative preform concepts as well as the development and research of novel materials, semi-finished products and associated processing technologies.

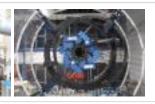
At the Institute of Lightweight Engineering and Polymer Technology at TU Dresden, nine specialist groups focus on different areas of lightweight construction. The Thermoset Processes and Preforming group deals with the characterisation, modelling and simulation of reactive processes, plant and process development for innovative preform concepts as well as the development and research of new materials, semi-finished products and associated processing technologies. The production of active composite structures is another research focus in which the moderate process conditions in the processing of thermoset matrix systems and polyurethanes in particular are utilised in a targeted manner. Thanks to comprehensive technological equipment, a large number of both prototype and production-ready processing technologies can be utilised. The main areas of specialisation are prepreg processing, infusion and injection processes, braiding and polyurethane processing.

Holbeinstr. 3 01307 Dresden Saxony Germany

☑ tu-dresden.de/ing/maschinenwesen/ilk/forschung/fachgruppe-duroplastverfahren-und-preforming









Organisation type

University or higher education institution

Sectors



Employees

Up to 9

Turnover

Up to €2m

Funding

n/a

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Thermoset Processes and Preforming Division

Main areas covered	Plant and process development, Material characterisation, Fibre composite processing, Modelling and simulation
Infrastructure	Autoclave, High-pressure RTM system, Polyureathan processing centre, Braiding and winding system, Multifunctional quick-lift press
Certifications	
Keywords	Preforming, Fibre composite, Thermoset, Process development, Polyurethanes

verview of lightweighting expertise						
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his organisation has been machine-translated based on data provided in German.						
	Research	N Development	Manufacturin & Supply			
Offer						
Products Parts and components, Semi-finished parts, Machines and plants, Systems and end products, Materials, Tools and moulds	✓	✓				
Services & consulting Testing and trials, Engineering, Standardisation, Prototyping, Validation, Simulation, Technology	~	✓				

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Overview of lightweighting expertise					
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Field of technology					
Design & layout Lightweight manufacturing, Lightweight design, Hybrid structures, Lightweight construction concepts, Lightweight material construction	~	✓			
Functional integration Actuator technology, Media conductivity, Sensor technology, Thermal activation, 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 Processes, Materials	✓	✓			
Plant construction & automation Plant construction, Automation technology, Handling technology	✓	✓			
Recycling technologies Recycling	✓	✓			

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Thermoset Processes and Preforming Division

Overview of lightweighting exper	tise		
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	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing			
Coating (surface engineering)			
Fibre composite technology Fibre spraying, Filament winding, Manual lamination, Resin infusion process, Resin transfer moulding, Pre-preg processing, Vacuum infusion	✓	✓	
Forming Impact extrusion, Compression moulding Thermal converting	<u>,</u>	~	
Joining			
Material property alteration			
Primary forming Casting	✓	✓	
Processing and separating			
Textile technology Braiding, Preforming	✓	✓	

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Thermoset Processes and Preforming Division

data provid	led in German.	
Research	M Development	lanufacturin & Supply
✓	✓	
✓	✓	
✓	✓	
~	✓	
✓	~	
✓	✓	
	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	

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Thermoset Processes and Preforming Division

Contacts

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