Fraunhofer Research Institution for Additive Manufacturing Technologies

About this organisation

Machine translation

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

With around 100 employees, the Fraunhofer Research Institution for Additive Production Technologies IAPT is one of the leading institutions for scientific and industrial technology transfer in 3D printing. It specialises in the research and development of additive production technologies with a focus on design, process and system development.

The Fraunhofer IAPT develops innovative approaches for lightweight construction in the aerospace, automotive, shipbuilding and other high-tech industries using additive manufacturing processes. The developments include - topology-optimised design - Combination of conventional production technologies with additive manufacturing - functional integration

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Hamburg
Germany
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Fraunhofer IAPT

Organisation type
Non-university research institution

Sectors

Employees
50 up to 249

Turnover
n/a

Funding

Main areas covered	Additive manufacturing
Infrastructure	3D printing production systems, Welding systems, Material analysis laboratory
Certifications	
Keywords	3D printing, Additive manufacturing, Additive manufacturing
Memberships	Additive Alliance (Organiser), Mobility Goes Additive, Medical Goes Additive, Hanse Photonik

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Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components	✓	✓	✓
Services & consulting Training, Consulting, Testing and trials, Engineering, Standardisation, Prototyping, Validation, Simulation, Technology transfer	✓	✓	✓
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, Materials analysis, Destructive analysis, Non-destructive analysis	✓	✓	
Modelling and simulation Loads & stress, Life-cycle analysis, Multiphysics simulation, Optimisation, Processes, Materials	✓	✓	✓
Plant construction & automation Plant construction, Automation technology, Handling technology, Robotics	✓	✓	
Recycling technologies			

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Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing, Deposition welding, Electron beam melting, Laminated object manufacturing (LOM), Fused deposition modeling, Selective laser melting (SLM, LPBF, ...), Selective laser sintering (SLS)	✓	✓	
Coating (surface engineering)			
Fibre composite technology			
Forming			
Joining Soldering, Welding	✓	✓	
Material property alteration Mechanical treatment, Heat treatment	✓	✓	
Primary forming Sintering	✓	✓	✓
Processing and separating Drilling, Turning, Milling, Electrical discharge machining, Sawing, Grinding, Cutting	✓	✓	
Textile technology			

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Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Material			
Biogenic materials			
Cellular materials (foam materials)			
Composites Carbon-fiber reinforced plastics (CFRP)	✓	✓	
Fibres			
Functional materials Shape memory materials	✓	✓	
Metals Aluminium, Intermetallic alloys, Magnesium, Steel, Titanium	✓	✓	✓
Plastics Thermoset plastics, Elastomers, Thermoplastics	✓	✓	✓
Structural ceramics			
(Technical) textiles			

Contacts

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Contacts

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