

About this organisation

ISPT is an engineering service provider based in Dortmund and was founded in 2010 as a spin-off from the Institute for Forming Technology and Lightweight Construction at the Technical University of Dortmund. ISPT specialises in particular in the development, design, testing and optimisation of complex manufacturing processes.

ISPT GmbH & Co. KG specialises in the field of manufacturing technology and has placed a main focus on work in the area of massive forming. ISPT has been involved in numerous research and development projects, particularly in the field of extrusion moulding. In particular, work has been carried out on the development, analysis and optimisation of extrusion processes. Furthermore, the commercial simulation software HyperXtrude and Inspire Extrude, which was specially developed for the simulation of the extrusion process, is distributed in this area. Other work carried out by the ISPT included the winding of stator coils, the stamping of gears, the forging of light alloy rims, the bending of profiles, electromagnetic forming and joining technology as well as structural and topological optimisation for additive processes.

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Main areas covered Process and product optimisation

Infrastructure

Certifications

Keywords

Memberships



Organisation type

Small or medium-sized enterprise

Sectors

No specific sector

Employees

Up to 9

Turnover

n/a

Funding

n/a

Overview of lightweighting expertise			
	Research	Development	Manufacturing & Supply
Offer			
<i>Products</i>			
Services & consulting Training, Consulting, Testing and trials, Funding, Prototyping, Validation, Simulation, Technology transfer			
	✓	✓	✓
Field of technology			
Design & layout Lightweight manufacturing, Lightweight design, Hybrid structures, Lightweight construction concepts, Lightweight material construction			
	✓	✓	✓
Functional integration Sensor technology, 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 Crash behaviour, Loads & stress, Life-cycle analysis, Multiphysics simulation, Optimisation, Processes, Structural mechanics, Materials, Reliability validation			
	✓	✓	✓
Plant construction & automation Others			
		✓	
Recycling technologies Recycling			
	✓	✓	✓

Overview of lightweighting expertise			
	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing, Selective laser melting (SLM, LPBF, ...)	✓	✓	✓
<i>Coating (surface engineering)</i>			
<i>Fibre composite technology</i>			
Forming Bending, Impact extrusion, Compression moulding, Forging, Extrusion moulding, Stretch forming, Deep-drawing, Fluid active media based forming, Rolling	✓	✓	✓
<i>Joining</i>			
<i>Material property alteration</i>			
Primary forming Extrusion, Casting, Injection moulding	✓	✓	
<i>Processing and separating</i>			
<i>Textile technology</i>			

Overview of lightweighting expertise

	Research	Development	Manufacturing & Supply
Material			
<i>Biogenic materials</i>			
<i>Cellular materials (foam materials)</i>			
Composites			
Metal matrix composite	✓	✓	
<i>Fibres</i>			
<i>Functional materials</i>			
Metals			
Aluminium, Intermetallic alloys, Magnesium, Steel, Titanium	✓	✓	✓
Plastics			
Thermoset plastics, Elastomers, Thermoplastics	✓	✓	
<i>Structural ceramics</i>			
<i>(Technical) textiles</i>			

Contacts

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