cleansort GmbH

About this organisation

Machine translation

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

In 2014, the idea of transferring the laser-induced plasma spectroscopy method, which has been known for decades and used in the laboratory and on Mars, into a measurement technology for analysing large streams of recyclable materials matured. Even back then, the aim was the direct recycling of recyclable materials. Clean-Lasersysteme GmbH and two other project partners started at the end of 2014.

Laser-induced plasma spectroscopy (LIBS) can be used to quickly and reliably determine the characteristic fingerprint of the material. A high-intensity laser beam is focussed on the surface and vaporises a small amount of the metal near the surface. During vaporisation, a plasma glow is created, which signals the concentration distribution of the alloy components with its characteristic spectrum. The turnkey system technology offered by cleansort includes sophisticated and maintenance-free laser technology based on state-of-the-art diode-pumped solid-state lasers from cleanLASER. This includes the complete technology for material conveying and separation as well as the technology for recognising component geometry and sorting using powerful parallel air pulse technology.

Nussbaumweg 27
51503 Rösrath
North Rhine-Westphalia
Germany
www.cleansort.de

Organisation type
Small or medium-sized enterprise

Sectors

Employees
Up to 9

Turnover
€2m - €10m

Funding

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About this organisation

Main areas covered	Laser-induced plasma spectroscopy, Circular economy, Laser process
Infrastructure	
Certifications	
Keywords	Laser process, Plasma spectroscopy, Environmentally friendly, Recycling
Memberships	

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products Machines and plants	✓	✓	✓
Services & consulting			

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Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Field of technology			
Design & layout			
Functional integration 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 Life-cycle analysis, Optimisation, Processes, Materials, Reliability validation		✓	✓
Plant construction & automation Plant construction, Automation technology, Handling technology		✓	✓
Recycling technologies Material separation, Recycling	✓	✓	✓

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Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing			
Coating (surface engineering)			
Fibre composite technology			
Forming			
Joining			
Material property alteration			
Primary forming			
Processing and separating			
Textile technology			
Material			
Biogenic materials			
Cellular materials (foam materials)			
Composites			
Fibres			
Functional materials			
Metals Aluminium, Magnesium, Steel	✓	✓	
Plastics			
Structural ceramics			
(Technical) textiles			

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Contacts

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