

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

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

Machine translation

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

Overview of lightweighting expertise

Machine translation

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| | Research | Development | Manufacturing & Supply |
|--|----------|-------------|---------------------------|
| Field of technology | | | |
| <i>Design & layout</i> | | | |
| 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 | ✓ | ✓ | ✓ |

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 | | | |

Contacts

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

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Managing Partner

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