

Vibrant GmbH

A Vibrant Corporation company in Germany

About this organisation

Machine translation

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

Vibrant works as a service provider for the global aerospace, power generation and automotive industries. Process Compensated Resonant Testing (PCRT) qualifies components based on their resonant behaviour in a non-destructive manner and only on the basis of their structural properties determined by material and process.

PCRT offers new possibilities for non-destructive qualification of series components. In lightweight construction, the life-saving safety reserves of conventional production will be reduced in future and the focus will be on the function of the component. Qualification and series testing of AM components - Comparison of FEM model and prototype (digital twin) - Process monitoring on the basis of qualified characteristic values (gold standard) - Correlation with the material properties - Correlation with known AM defects (LoF, keyhole, etc.) - No random sampling, 100% testing and cost reduction by eliminating other processes

Vor den Eichen 4
65604 Elz
Hesse
Germany
vibrantndt.com

Main areas covered PCRT testing technology, Measurement technology, Crack testing, Quality inspection, Digital twin

Infrastructure

Certifications AS9100D, ISO9001:2015

Keywords PCRT, Process Compensated, Resonance Testing, Resonance test

Memberships Fraunhofer Additive Alliance



Organisation type

Small or medium-sized enterprise

Sectors



Others: Luftfahrt

Employees

10 up to 49

Turnover

Up to €2m

Funding

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Overview of lightweighting expertise

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| | Research | Development | Manufacturing & Supply |
|--|----------|-------------|---------------------------|
| Offer | | | |
| <i>Products</i> | | | |
| Services & consulting Validation, Simulation, Others (PCRT as a service) | ✓ | ✓ | ✓ |
| Field of technology | | | |
| <i>Design & layout</i> | | | |
| <i>Functional integration</i> | | | |
| Measuring and testing technology Component and part analysis, Materials analysis, Non-destructive analysis | ✓ | ✓ | ✓ |
| Modelling and simulation Structural mechanics, Materials, Reliability validation | ✓ | ✓ | ✓ |
| Plant construction & automation Automation technology, Handling technology, Robotics | | ✓ | ✓ |
| <i>Recycling technologies</i> | | | |

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 | | | |
| Plastics | | | |
| Structural ceramics | | | |
| (Technical) textiles | | | |

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Contacts

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