

Are you familiar with our industrial-grade accredited inspection services?

- Accredited laboratory in line with DIN EN ISO / IEC 17025, to qualify and validate new non-destructive testing (NDT) processes for industrial applications
- Accelerated time-to-market and opportunity for qualified, norm-compliant deployment in industrial applications as well as for new in-house developments or custom adaptation of innovative NDT technologies, even in fields where norms have not been established
- Certification of the corresponding quality management system in accordance with DIN EN ISO 9001

Contact

Fraunhofer Institute for Nondestructive
Testing IZFP

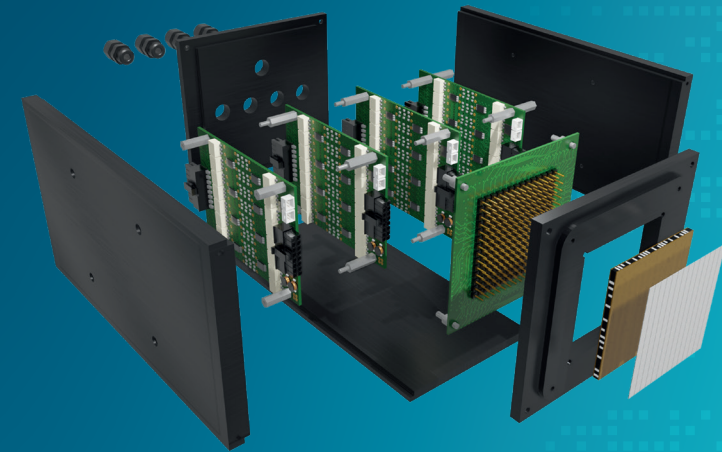
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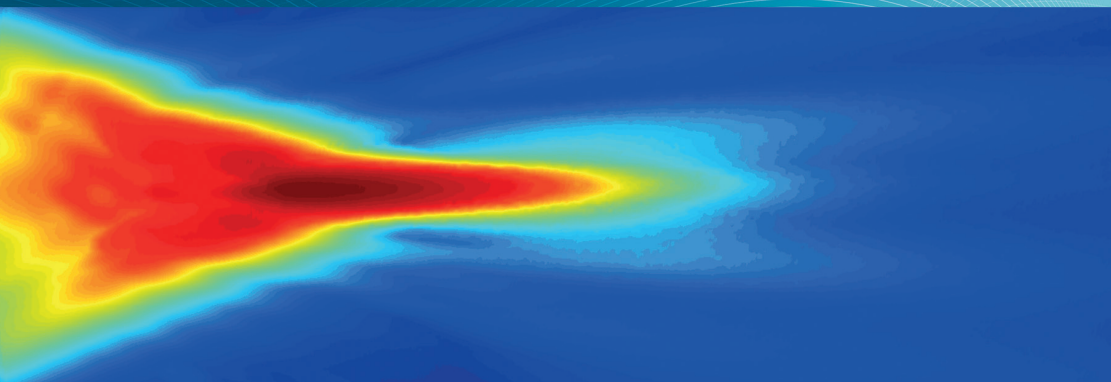


Sensor and Data Systems for Safety,
Sustainability and Efficiency

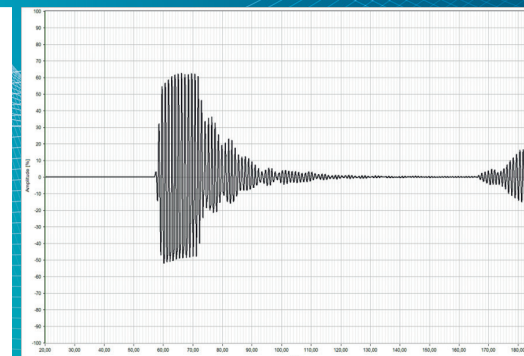
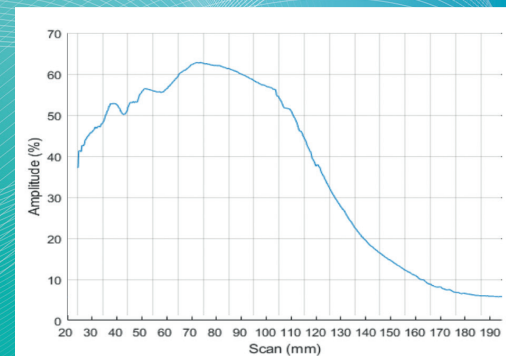


Air-coupled ultrasound array sensor

Ultrasound sensors – custom-made



Sound field measuring of an ultrasound test head



Left: Sound pressure curve along the acoustical axis; right: amplitude vs. offset curve

Ultrasound sensors – custom-made

Our services

Fraunhofer IZFP develops and manufactures ultrasound sensors for diverse applications. The Institute has developed, among others, ultrasound sensors for the Rosetta mission, which launched on 2 March 2004 and landed on the cometary surface in November 2014.

Typically, however, we develop ultrasound sensors for material and component testing, as well as for condition monitoring over the entire product lifecycle from raw material to recycling.

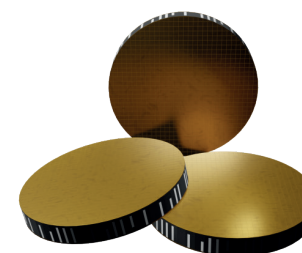
Ultrasound sensor systems

- Developing and building customer-specific ultrasound sensor systems for
 - Immersion technology
 - Contact technology
 - Air-coupled ultrasound inspection
- Test frequencies from 50 kHz to 10 MHz
- Manufacturing prototypes and smaller runs



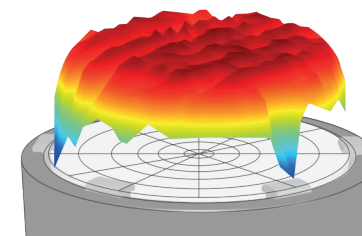
Manufacturing 1-3 piezocomposite materials

- Frequencies from 200 kHz to 8 MHz
- Mechanical impedances between 8 and 13 MRayl
- Max. dimensions up to 60 x 60 mm
- Machining to desired dimensions
- Choice of flat or focused transducers



Extended characterization

- Characterization of the test heads according to current standards
- Visualization of the real sound field based on laser vibrometer data



Benefits

- High degree of reproducibility of the ultrasound sensor systems
- Short response times
- Customization to customer requirements
- Documentation for each test head