By the way, are you familiar with our industrial-scale accredited 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 complete 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
**Computed Tomography**

Computed tomography (CT) is a modern nondestructive inspection method to provide insight into the volume of objects. Depending on object’s size and material, resolutions up to a few microns can be achieved by this technique.

Typical applications concern materials characterization or the inspection of components to find defects such as cracks, joint defects, pores or inclusions. Further fields of application pertain to functional tests and to the control of geometrical dimensions including analysis of hidden surfaces.

Furthermore, use of digital volume image processing enables quantitative analysis such as determination of pore or grain size allocations or fiber orientations.

**Computed Laminography**

Computed laminography (CL) is a X-ray inspection method especially suited for inspection of flat objects which can’t be inspected by CT. Sectional parts of the object can be examined with highest resolution without need for cutting out the respective volume as it is necessary for CT. Typical applications concern the inspection of fiber-reinforced plastics in aerospace or board inspection in electronics. Porosities, cracks or fiber distributions in components can be reliably verified using CL.

Fraunhofer IZFP has over 30 years experience in the field of X-ray-based NDT. Among our customers global players from aerospace, automotive, and electronics industry, as well as numerous small and medium-sized enterprises from the European Union can be found. Our inspection lab is equipped with X-ray scanners covering a wide range of inspection tasks. Computed tomography and radiography are part of Fraunhofer IZFP’s accredited inspection lab which complies with DIN EN ISO / IEC 17025.

**Service Portfolio**

Our services include both, two-/three-dimensional X-ray image representation / processing and a subsequent evaluation by certified experts. Our possibilities comprise

- **Computed Tomography and Radiography**
  - Components up to 50 cm (~19.7”) in diameter and up to a weight of 40 kg (~88.2 lbs)
  - Geometrical resolution up to 3 microns (depending on dimension)
  - X-ray tube up to 250 kV, 250 W
  - CT in helix pattern

- **Computed Laminography**
  - Flat components up to 1,5 m in diameter (~59”) and up to a weight of 300 kg (~661.4 lbs)
  - Geometrical resolution up to 20 microns, in case of smaller components (< 40×40 cm², < ~15.5×15.5 sqr inch) up to 1 micron
  - X-ray tube up to 250 kV, 250 W
  - Optimized a priori reconstruction in case of given CAD data

- **Special Services**
  - Materials characterization (pores, grain size, et al.)
  - Function check
  - Determination of geometrical parameters (diameter, position, size, et al.)
  - Feasibility studies for inspection methods
  - Combination of inspection methods, (CT, ultrasound, thermography, eddy current)

*Inspection lab +49 681 9302 5013*