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
Advantages

- High testing reliability due to objective, simultaneous evaluation of the signals from multiple sensors
- Cognitive quality evaluation without explicit calibration
- Versatile application, e.g., for final assembly inspection or for permanent quality monitoring
- Fast online evaluation: Instant detection of irregular products
- Individualized system setup: Customized testing hardware design and evaluation algorithms
- Option for integrating the evaluation algorithms into existing testing systems
- Onsite feasibility studies using a portable sensor system
- User-friendly and customer-specific adapted operator software:
  - User-friendly display of test results in the operator and evaluation software
  - Standard results display by means of traffic light indicators; no need for comprehensive training
  - Versatile software functions: Automated generation of customer-specific test protocols, sensor function monitoring support, integration of individual customer requests regarding the software interface

Applications

- Final assembly inspection of machines or systems in which, e.g., rotating components are in sliding contact with each other
- Monitoring operations at regular time intervals, or permanent quality monitoring: Monitoring large, autonomously operating machines and systems
- Evaluating the quality of individual assemblies being operated, e.g., on test benches

Situation

During operation, machines or systems generate characteristic vibrations, and thus, noises. These provide information on quality, as assembly errors or other defects often cause a change in these operating noises.

Human hearing is limited in its capability to detect these changes, and such “checks” are also subject to a certain amount of subjectivity as well as disadvantages, such as personnel fatigue, or interference from ambient noise.

In contrast, acoustic testing systems available on the market allow objective detection of products having unusual vibrations or noises. Such systems do, however, have to often be carefully and explicitly calibrated using representative parts. In addition, the acoustic and vibratory behavior is generally limited to few acoustical parameters such as frequencies or amplitudes. Even minor design adjustments will require recalibration to prevent a negative impact on testing reliability.