

## Underfloor Inspection System – UFPE

### Ultrasonic Wheel set inspection

UFPE ensures a high safety level combined with low personnel effort, reliable robustness and 24/7 customer support.

#### Challenge

High speed train traffic demands high requirements on the wheel material. Thus the requirements for surveillance and testing intervals concerning mileage are high. Only by innovative inspection systems optimum results, high reliability and short testing periods are achieved.

#### Solution

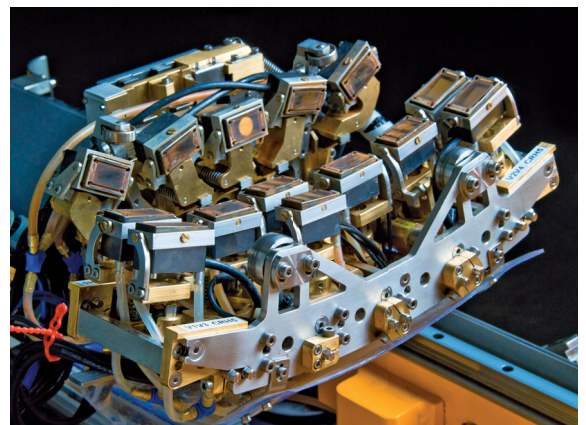
The fully automated underfloor testing system UFPE is a stationary ultrasonic inspection system that operates fast and dependable. Patented ultrasonic techniques provide a high reproducibility of measurement data and detect even the smallest defects – for various wheel geometries.

#### Customer benefits

- Short testing periods (15 minutes per wheel set)
- Highly developed phased array technology for optimal defect detection
- Quick and easy evaluation of test results by advanced and customized software
- Reduction of the human factor by means of integrated evaluation routines
- High-quality components ensure high availability and reduces maintenance effort



Underfloor Inspection System UFPE



Probe system

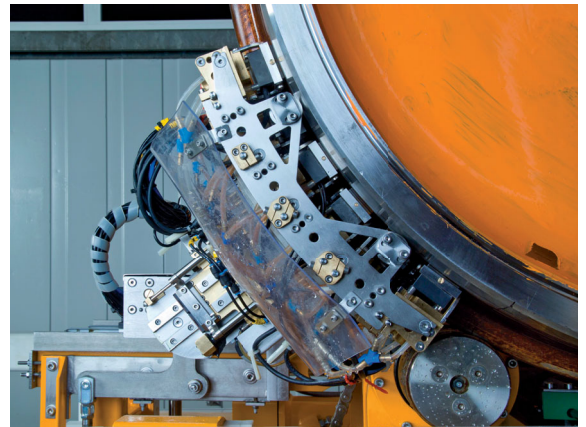
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is **our** everyday **commitment**

## Technical information

- Lifting of the train to rotate the wheels
- Shorter testing periods compared to previous inspection system generations
- Full traceability of all inspections
- Detection of defects in wheel discs, rims and flange
- V-path and pulse echo technology for detection of variably oriented defects in wheel discs
- Horizontal and vertical swiveling of incidence angles for complete coverage of the inspection area
- UT system SAPHIR<sup>quantum</sup> with up to 256 channels
- Compact inspection system for all wheel profiles
- Reliable detection of all verifiable defects (according to regulations and customer specifications)
- Tomographic imaging and many other recording options for optimum traceability
- Remote controllable operation of the system along the cavity
- Automatic positioning, lifting and slow rotation of wheel sets for inspection

## Features

- Maximum 16 probes, thereof 8 phased array probes
- Vertical and horizontal swivel of incidence angles
- Patented V-path technology for the inspection of wheel discs
- Adjustable probe positioning
- Tomographic display of all data
- Traceable defects:
  - Surface defects of 1 mm depth and 5 mm length
  - Volume defects 2 mm FBH



Probe system

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