

## LAC AUTOMATIC ULTRASONIC INSPECTION SYSTEM FOR DISASSEMBLED WHEEL SETS



Wheel inspection configuration

### TECHNICAL SPECIFICATIONS

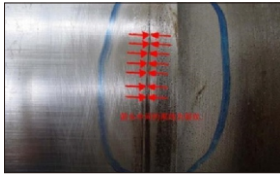
- Inspection time < 5 minutes per wheel set
- Ultrasonic probe sensitivity  $\geq \varphi 2\text{mm FBH}$
- Defects on reference wheel set
  - Wheel rim:  $\varphi 3 \times 100\text{mm SDH}$
  - Transverse crack at journal:  $\geq 0.5\text{mm}$  depth (EDM notch)
  - Transverse crack at wheel seat and brake seat:  $\geq 1\text{mm}$  depth (EDM notch)
  - Full axle penetrating detecting for material checking



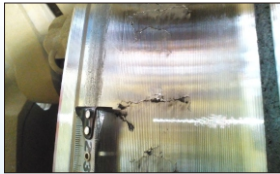
Axle inspection configuration



Wheel set inspection configuration



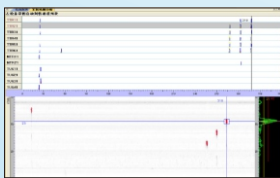
Transverse crack



Defect on tread



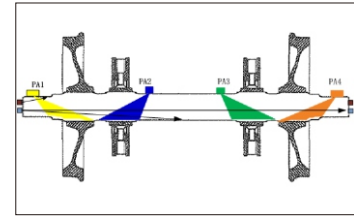
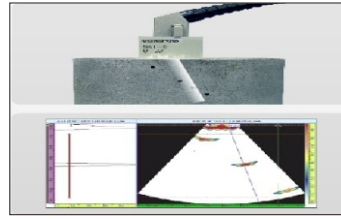
Circumferential crack



Automatic alarming

## KEY FEATURES

- Wheel and axle ultrasonic inspection
- Fully-automatic inspection
- High efficiency
- High precision and repeatability
- Phased array ultrasonic testing
- Suitable for all types of high-speed train, rolling stocks, locomotive and metro wheel set



Installed on the wheel set maintenance line in high-speed EMUs maintenance centres, rolling stock and locomotive depots or factories, the combination of phased array ultrasonic and conventional ultrasonic inspection technology is applied for the inspection of defects in the wheel and axle.

With periodic ultrasonic inspection with the LAC System, wheel set quality is monitored to achieve high fleet availability and safety performance.

## MAIN FUNCTIONS

- Automatic inspection for fatigue defects and volume defects in wheel and axle.
- Automatic reporting defects size and position over limits.
- Automatic positioning ultrasonic probes.
- Real-time monitoring of ultrasonic coupling condition.
- Automatic alarming and reporting.
- A-Scan real-time display, and A/B/C-Scan data storage, display and review.
- The management of inspection data and results is available.
- The system is compatible for different type of wheel set.
- The standard platform gantry is designed for three configuration, such as wheel, axle or in one unit.
- System self-diagnosis and remote diagnosis.