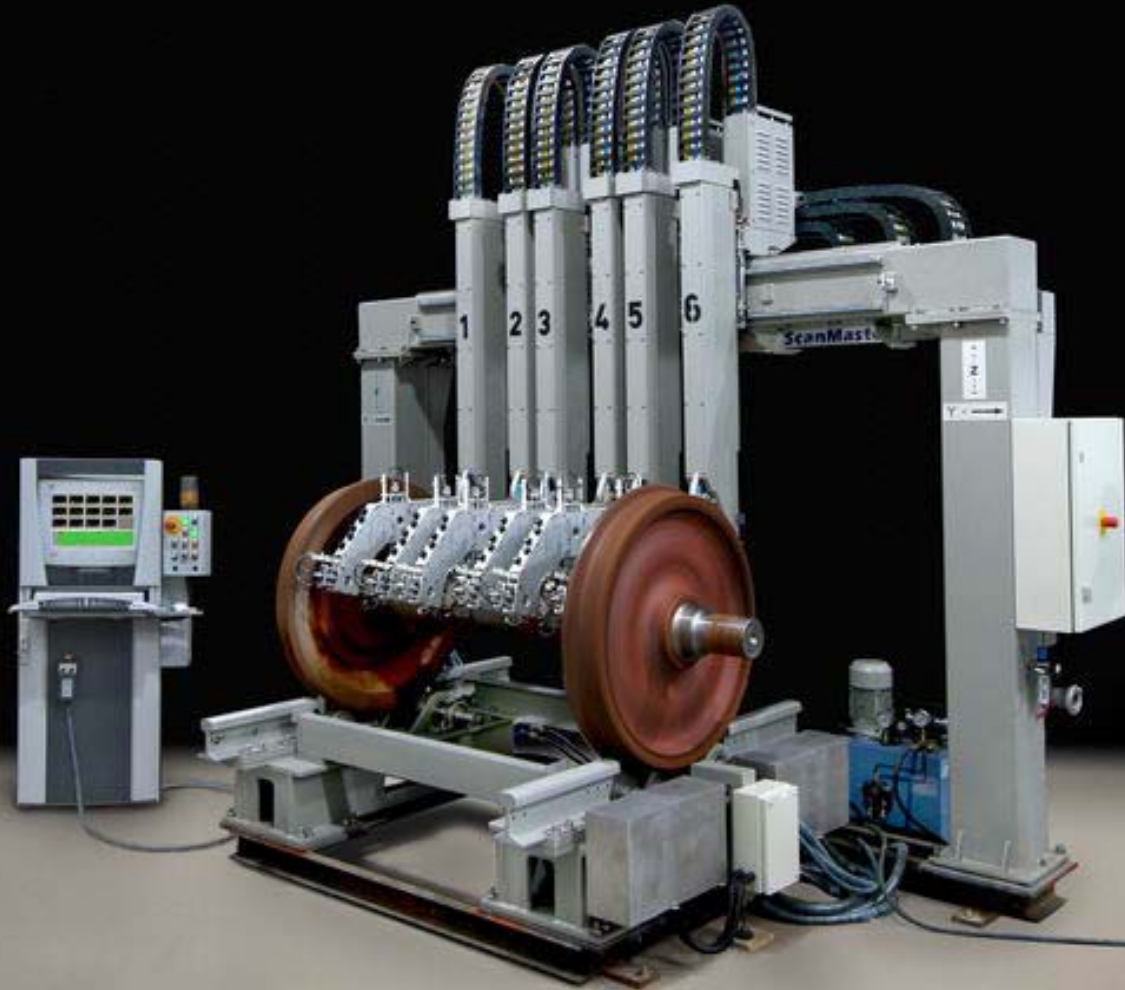


ScanMaster

Train Axle Inspection Systems

AS-220a SERIES



*Fully computerized ultrasonic inspection systems
for in-service refurbishment shop inspections*

SYSTEM HIGHLIGHTS

- *Fully integrated, computerized customized train axle testing solutions*
- *Automatic, on-the-fly adjustments for different axle types*
- *Simple to use, single-screen operator control console*
- *Real-time flaw evaluation from B-scan images*
- *Detailed test result documentation for reporting and archiving*

PRODUCT DESCRIPTION

Application	Adaptable, fully computerized ultrasonic inspection systems for fast and accurate in-service refurbishment shop inspections.
System architecture	ScanMaster upi-100 multi-channel ultrasonic instrument. ScanMaster RPP3 square wave pulser-preamplifiers. Inspection robot with 13-axes precision servo motion control for each axis. ScanMaster AS-200a software with part setup, scan, data analysis, part archiving and servo control functionalities.
Axle range	Handles combined axle and wheel set assemblies with wheel diameters from 600 mm (23") to 1,200 mm (47").
Load capacity	Up to 2,000 Kilograms (4,400 Lbs).
Inspection coverage	Full coverage of all types of axle.
System mechanics	Y-axes gantries (from 2 to 6 gantries may be supported) each contain a Z-axis column that holds a mechanically controlled, pneumatic driven, multi-configuration transducer inspection head. Wheel rotation assembly consists of a drive and idler roller plus a hydraulic mechanism for loading and unloading parts. Water and filtration unit for coupling supply.
Multi-transducer inspection head	Automatically fine tunes to the detected axle diameter and shape for simultaneous inspection from tread to rim. Stainless steel bubbler and wear shoe for each transducer ensures smooth contact of all axle sizes and profiles.
Ultrasonics	Rack mounted ultrasonic instrument expandable from 1 to 32 channels. One remotely Z-axis mounted pulser-preamplifier per channel. Up to 16 hardware gates is also supported per channel.
Inspection technique	Contact type with forced water coupling and re-circulation.

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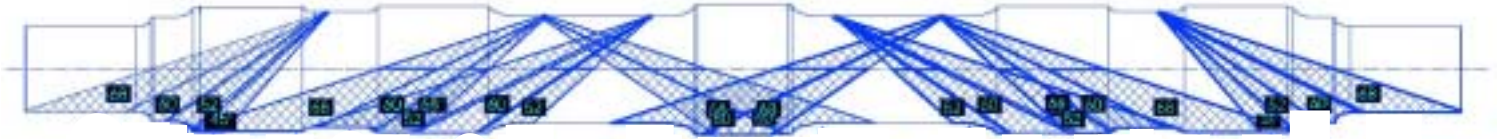
Control console	Environmental hardened rack-mounted operator console with 19" TFT monitor and pull out tray for keyboard and mouse.
Resolution	1.6mm FBH flaw detection.
Software	ScanMaster AS-200a software with part setup, scan, data analysis, part archiving and servo control functionalities. Includes Wizards for easy programming.
Transducers	Different angles and normal contact transducers.

PRODUCT FEATURES

Operating system	Windows NT/2000.
Language	Multi-language support.
Multiple part set-ups	Virtually, unlimited file storage and retrieval of key part data including mechanical configurations and ultrasonic setups.
Auto diameter adjustment logic	Automatically detects and adjusts to different wheel sets. Instrument logic enables defect definitions and representations plus coupling and priorities.
Remote control	Remote control of motion control and channel selection functionalities.
Display	Per-channel real-time displays of scan position and A-scan.
I/O interface	Programmable digital outputs of audiovisual alarms, paint spray and process control.
Safety	Automatic collision avoidance through programmable homing procedure. Programmable sequence movements of axes during scan.
Scan sequence	Programmable scripting of scan sequences and motion control. Supports informal Instructional messaging in scan plans.
Reporting	Pass/fail reports exportable in RTF format. Customized reporting available.
Security	Security database wizard for supervising up to 5 levels of access privileges and unlimited users.
Water supply	Automatic control of water supply.



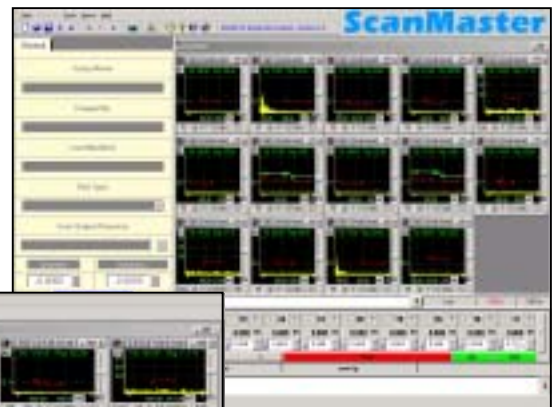
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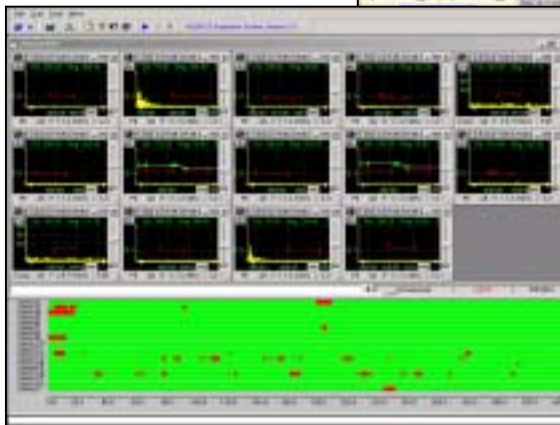
Ultrasonic Beam Profile – Train



Multi-probe Head



Set-up Mode



Scan Mode

* Specifications are subject to change without notice.

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