

# Nondestructive Examination Services

## Automated Train Axle In-service Inspection

### Background

**WesDyne™** has delivered leading systems for train axle in-service inspections in the Swedish market since the mid-1980s. The equipment has proven to be very robust and reliable; the first system delivered is still in operation.

The latest generation of WesDyne train axle inspection systems is automated and includes state-of-the-art data collection systems.



Current semi-automated inspection of train axle using WesDyne equipment

### Description

The Automated Axle Manipulator for In-service Inspections (Axman ISI) is the next generation of automated ultrasonic inspection systems for train axles, allowing for a full inspection of tangential cracks even under bearings and wheels of holed axles.

### Technical Data – Axman ISI

Weight (typical)	15 kg
Length (overall)	2,600 mm
Number of axis	2
Operating range (circ.)	No limit
Axial speed	0 – 90 mm/s*
Connections	110-230V/10A, 50/60 Hz
Operator interface	PC – standard type
Control software	WILMA**

\*: Governed by inspection procedure

\*\* : Proprietary WesDyne Sweden control software

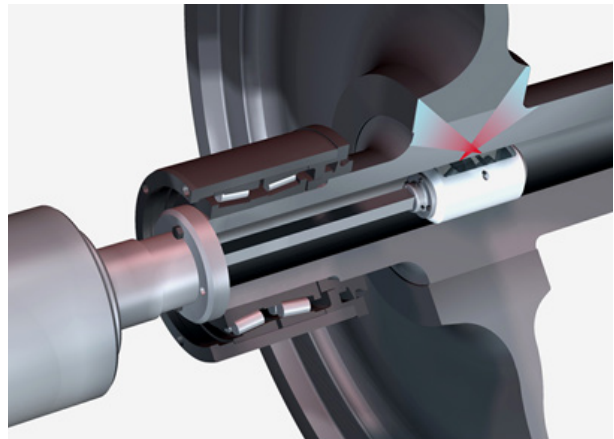
## Benefits

The Axman ISI system has a number of attractive features:

- Time saving, up to eight times faster than manual systems
- Multiple ultrasonic testing channels to be run simultaneously
- Storage of inspection data
- Integrated ultrasonic system with possibility for A-, B- and C-scan
- Compatible with all major ultrasonic data collection devices currently on the market
- Accurate indication/defect positioning
- Off-line evaluation possible
- Pre-programmed, motorized scan sequences
- Modular; different axle dimensions irrelevant
- Inspection under wheels and bearings possible
- Low weight and easy handling



Automated AxMan inspection system for train axles



Automated AxMan inspection system for train axles

*WesDyne is the nondestructive inspection branch of Westinghouse and a leading supplier of mechanized nondestructive examination (NDE) products for all inspection needs worldwide providing turnkey and one-off-type solutions with a focus on the nuclear market. WesDyne's expertise spans all aspects of remote and mechanized inspections, from problem analysis and solutions generation to development and manufacturing to field deployment of personnel and equipment. Inspection capabilities cover all key NDE areas such as ultrasonic, visual, eddy current, magnetic particle, dye penetrant and X-ray.*

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