

BrakeView

| Shoe

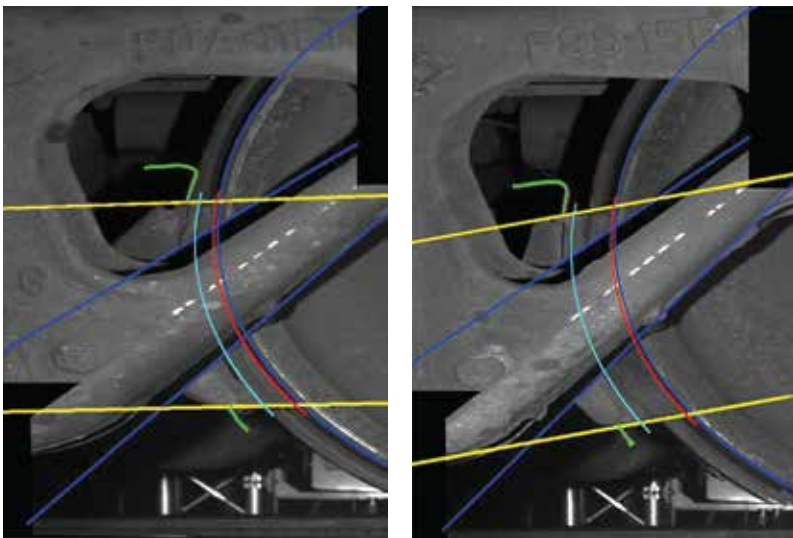
Automatic Wayside
Brake Shoe (*Block*)
Inspection System



BrakeView-Shoe is a wayside brake shoe (Block) Measurement system designed to inspect brake shoes at track speeds. This system is vision-based and uses a multi-camera high speed imaging unit to take multiple images of every brake shoe for inspection and measurement.

BrakeView enclosures are installed on two short towers, one in each side of track, mounted on two concrete or steel footings. Cameras and illumination systems are installed in a safe distance from the center of the track. Since the brake shoe is viewed by two cameras, a complete and reliable assessment of the brake shoe condition is provided.





Measurements

- › Shoe Detection
- › Shoe Thickness in Top And Bottom Positions
- › Shoe Wear Profile
- › Shoe Position With Respect to the Wheel Surface
- › Shoe Key Existence and Height
- › Obvious Shoe Cracks and Breakage
- › Brake Application Status with Thermal Imaging of Brake Shoe & Wheel Contact Area (Optional)

Features

- › Speeds up to 85mph (140 km/h)
- › Capable of Operating in Extreme Environments
- › Operating Temperature: -40°C to 55°C
- › No Track Structure Modification
- › Easy Installation
- › Easy Maintenance
- › Remote Monitoring/Control Capability
- › Automatic Report Generation
- › Automatic Alarm Generation for Various Conditions

Software Features

- › Monitoring/Control Software
- › System Management Software
- › Digital Image Acquisition/Processing
- › Calibration Software
- › Web-based Database/Data Search Software
- › Database Interface Software
- › Automated Reporting Software
- › AEI (AVI) Integration

Brake shoes are viewed from top and bottom perspectives. Acquired images are processed by a set of sophisticated image processing algorithms. The imaging system and processing algorithms are designed to be insensitive to ambient light conditions and can operate in both day and night time conditions.

Brake shoe data is integrated into TrainDB database system with possible web-based data access, including images. This data can be used in ECP train monitoring where brake shoe and wheel profile data are both needed.

