DTEC® GmbH

For a Safer and Smarter Railway

INSPECTION SOLUTION FOR ROLLING STOCK

ABOUT US

DTEC GmbH is an international system integrator providing customized inspection solutions for railway. Focusing on the application of mature and advanced technology to the railway industry, DTEC GmbH offers turnkey solutions to customers worldwide with specialized teams in railway marketing, R&D, production and engineering.

In Germany, we have our own labs, workshops and test facilities for product development and production. Together with our long-term partners in research, development and marketing, we combine advanced technology with rich railway experience to strongly support our customers.


TÜV PROFI CERT

ZERTIFIKAT

für das Managementsystem nach

DIN EN ISO 9001:2015

Der Nachweis der regelkonformen Anwendung wurde erbracht.

DTEC GmbH

For a Safer and Smarter Railway

DTEC GmbH
Siemensstr. 9
61191 Rosbach v. d. Höhe

Geltungsbereich:

Entwicklung, Produktion, Prüfung, Vertrieb sowie Wartung von Geräten und Systemen für die Inspektion. Diagnose und Instandhaltung im Schienenverkehr

Zertifikat-Registrier-Nr. 73 100 7976 Zertifikat gültig von 2023-01-10 bis 2026-01-09

Auditbericht-Nr. 4406 4839


TÜV PROFI CERT

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TÜV PROFI CERT

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DIN ISO 45001:2018

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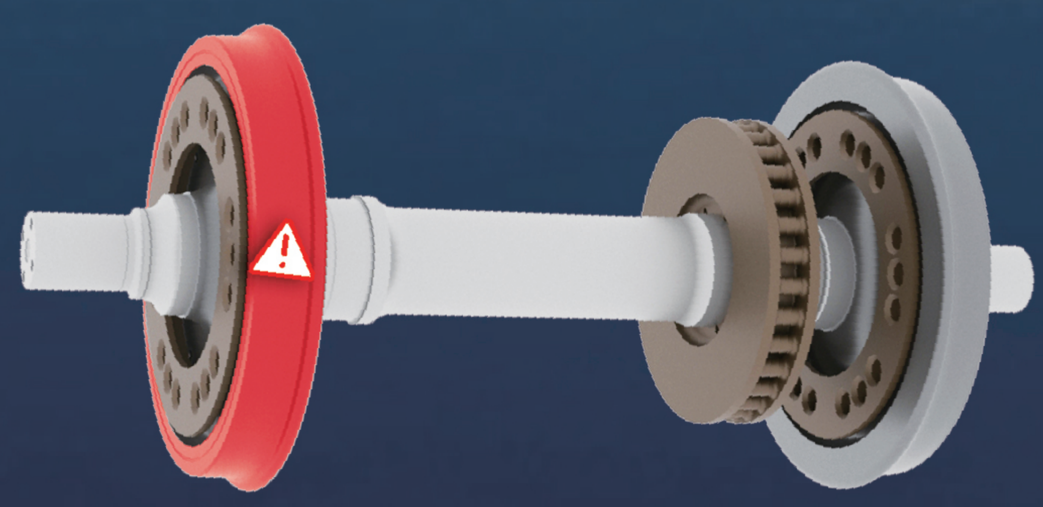
OUR SOLUTIONS

DTEC CAM360®

DTEC WHEEL DOCTOR®



YOUR BENEFITS

Full Automation & Digitization

- Reduce heavy labor
- Minimize human factor

Condition-based Maintenance

- Improve efficiency
- Reduce cost

High Performance Operation

- Safety
- Reliability
- Availbility

Maintenance Optimization

- Cost-effectiveness
- Predictive Maintenance
- Lifecycle Management

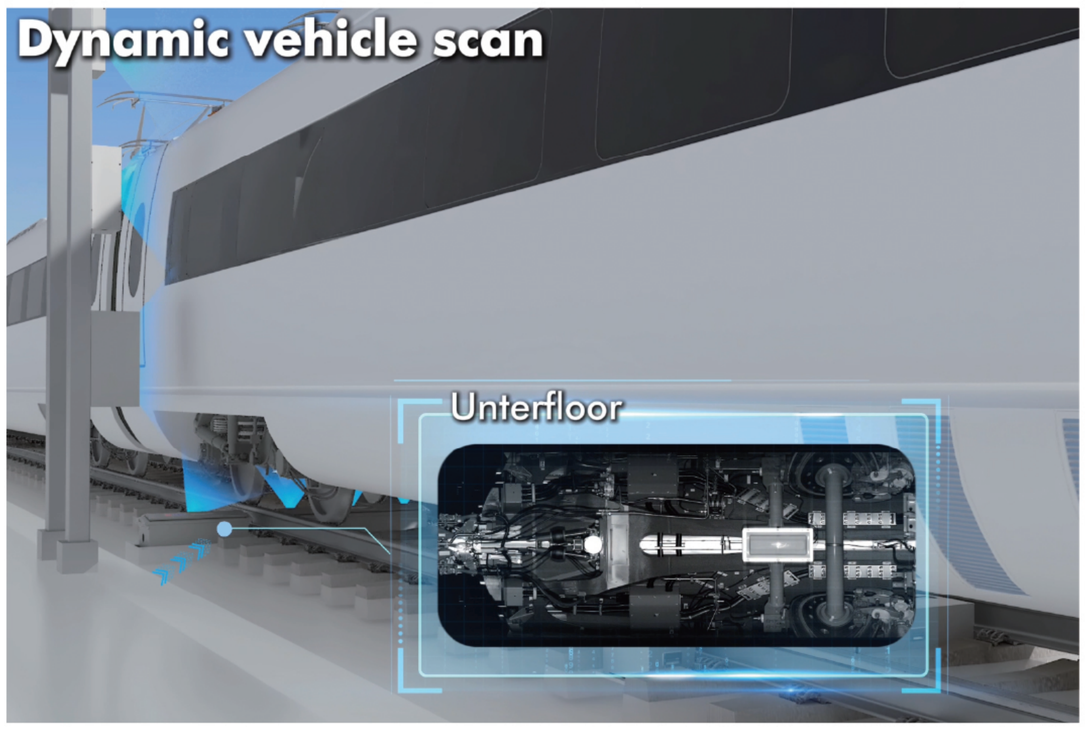
DTEC CAM360®

Vehicle Visual Inspection

- AI support
- Reduce heavy labor
- Release workshop capacity

DTEC CAM360® is a solution designed for the visual inspection of rolling stock. It is configurable with various products to scan the entire vehicle during operation. All products can be deployed completely outdoors in various scenarios (main line, depot area, etc.) with good adaptability to existing infrastructure. Supported by software & AI, repetitive visual checking and measuring tasks are done automatically.

Vehicle Vision Gate (VG)



Vision Gate (VG) is a wayside visual inspection system for railway vehicles. It automatically identifies and scans each passing vehicle from different perspectives. High-resolution images of the complete vehicle are archived orderly and can be used for inspection of anomalies and defects, which can be supported additionally by image processing software & AI algorithms to realize automated failure recognition and alert.

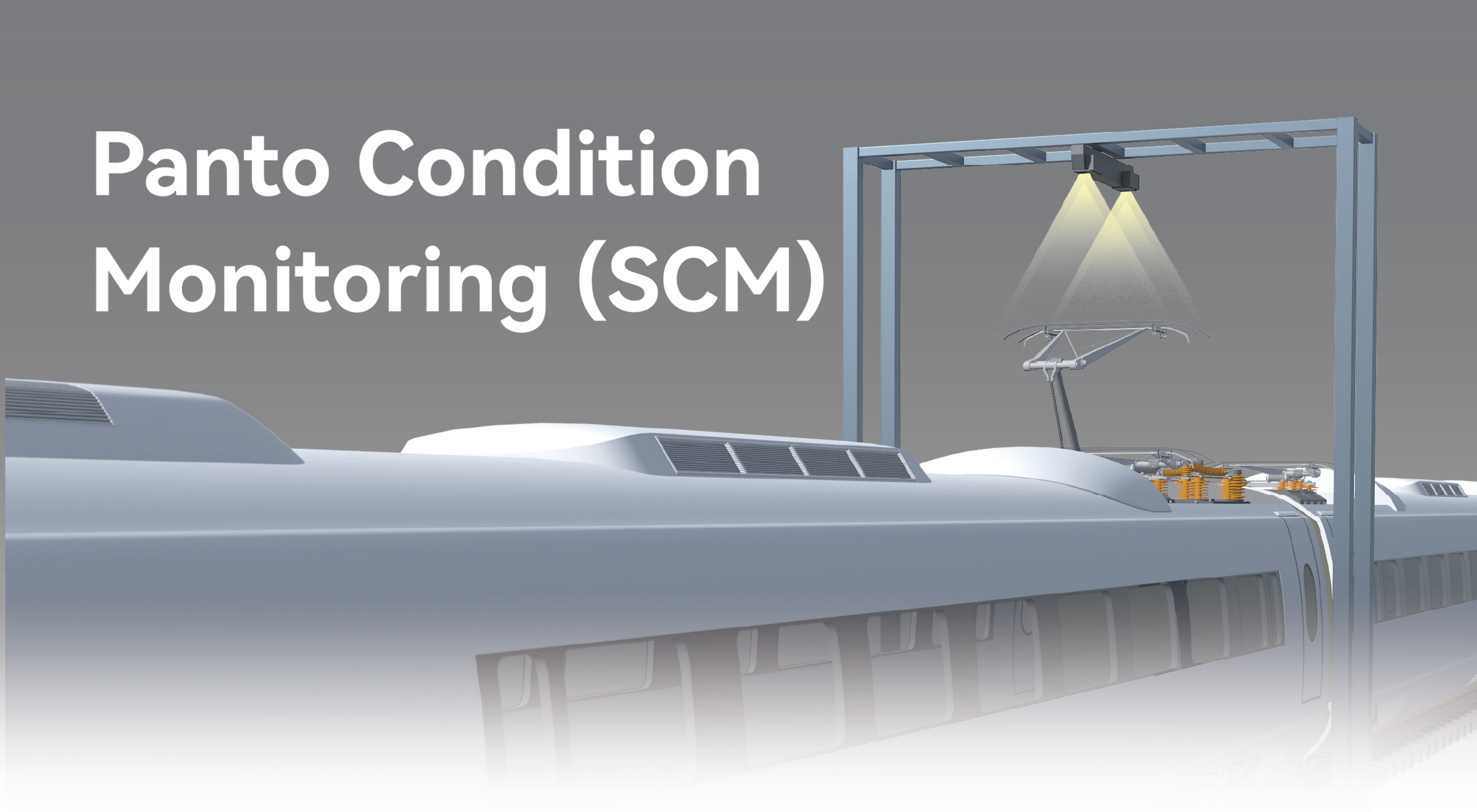
Features

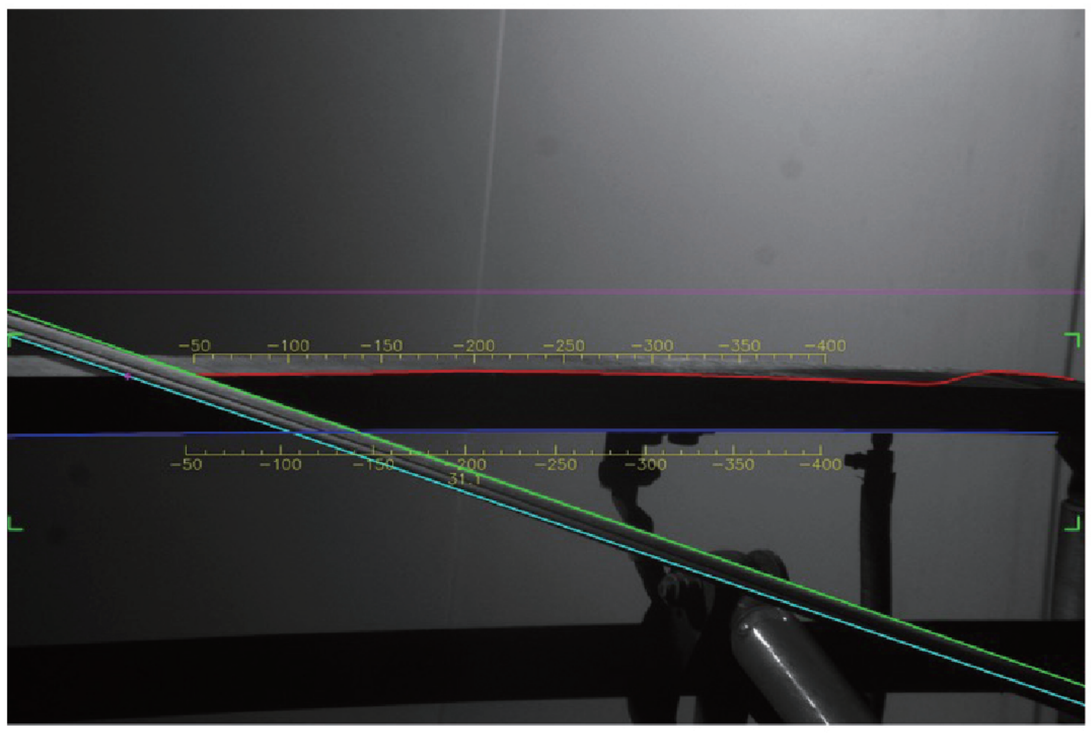
- 360° scan passing vehicles up to 60km/h
- Operation outdoors in depot area & main line
- Configurable perspectives & image accuracy
- 2D & 3D integrated scan
- Detection of reference profile violation
- AI-supported anomaly recognition & alert

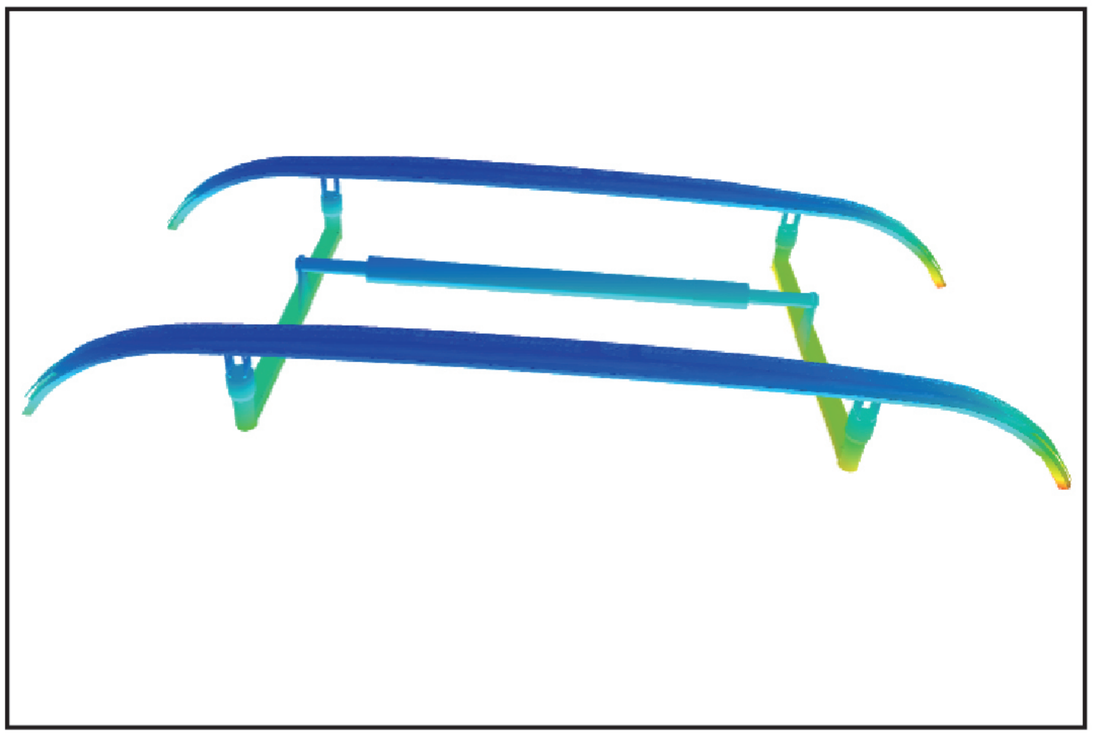
Your Benefits

- Reduce manual heavy labor
- Release workshop capacity
- Reduce vehicle downtime

Panto Condition Monitoring (SCM)







Pantograph condition monitoring (SCM) is a wayside pantograph inspection system. It automatically inspects key parameter of pantograph and measures carbon contact strip when a vehicle is passing. SCM can not only be installed on existing infrastructure but also together with a Vision Gate, which shares all necessary information with SCM to match inspection data of one passing vehicle together.

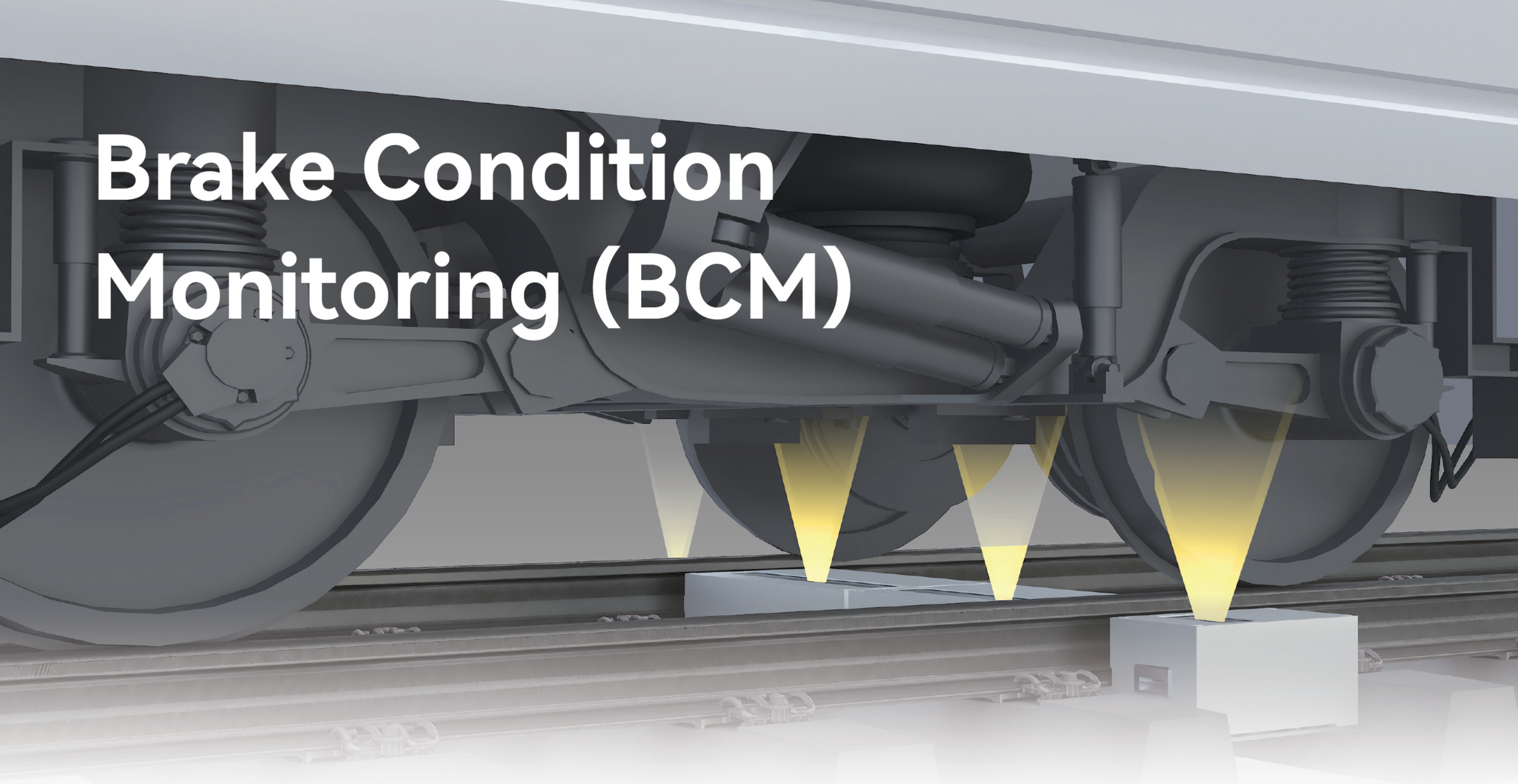
Features

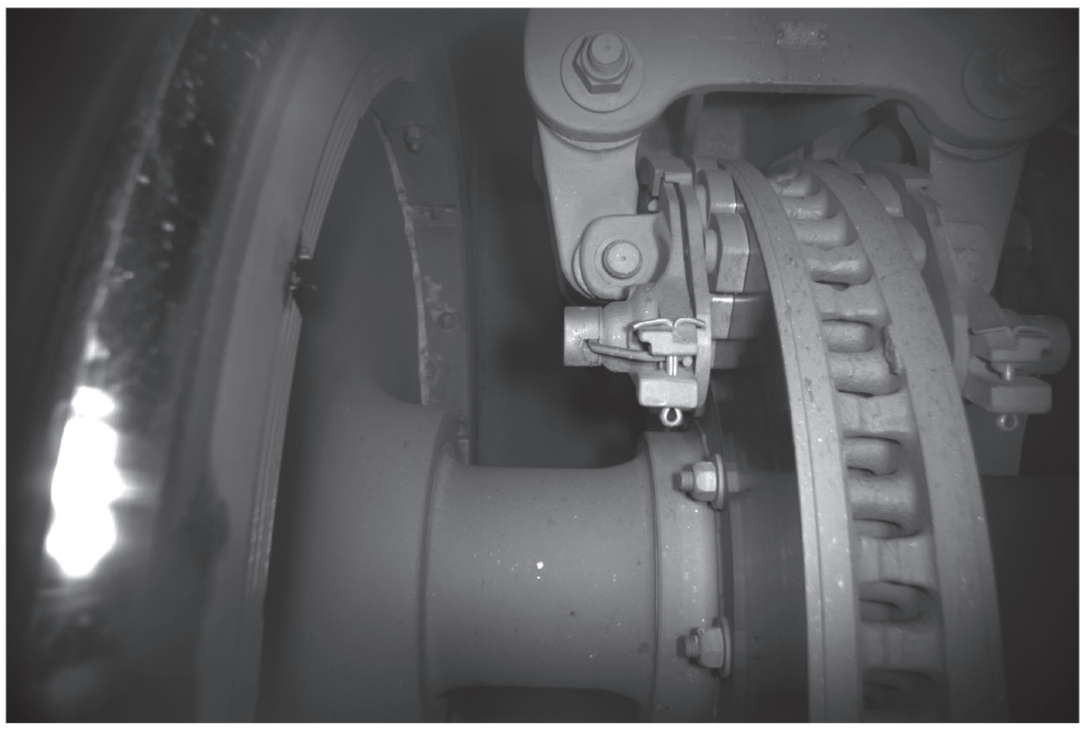
- Fully automated image scan of pantograph
- Vmax: 60km/h (2D version, 2D&3D version)
- Vmax: 300km/h (3D version)
- Measurement of contact strip
- Measurement accuracy: up to ± 0.5mm
- Visual condition monitoring of pantograph
- Automated anomaly recognition & alert

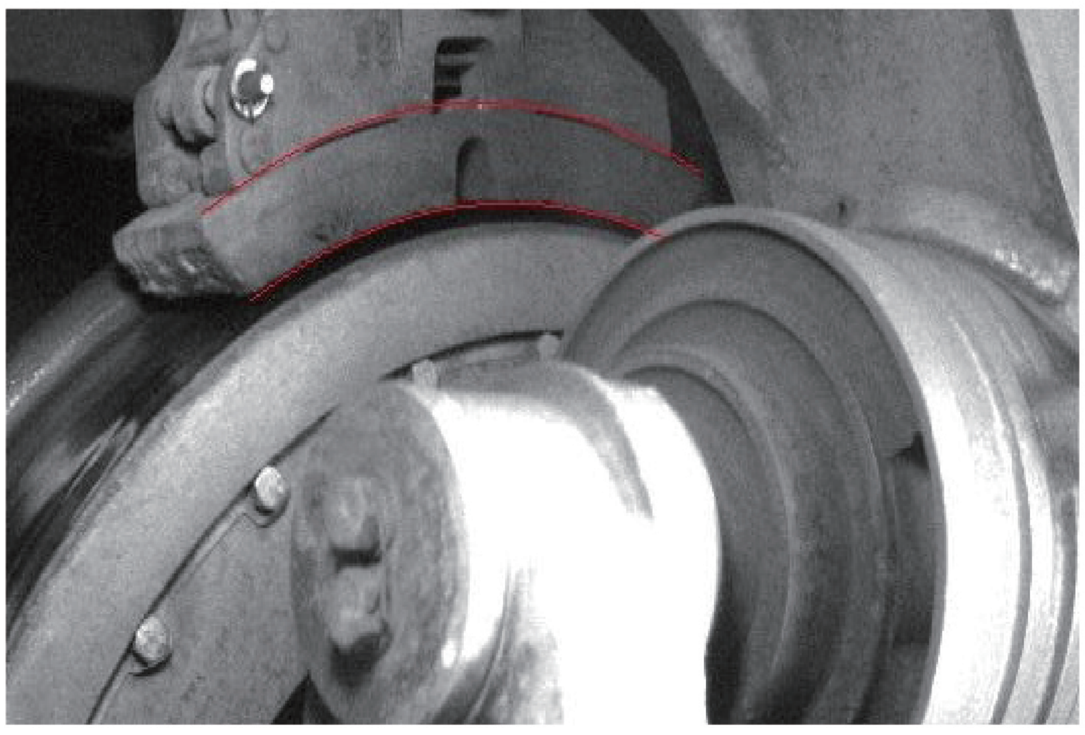
Your Benefits

- Replace manual measurement
- Release workshop capacity
- Reduce vehicle downtime
- Support CBM & predictive maintenance

Brake Condition Monitoring (BCM)







Brake Condition Monitoring (BCM) is a wayside brake inspection system. It automatically inspects every brake and measure each brake pad or brake shoe block when a vehicle is passing. BCM can also be installed and operated together with a Vision Gate, which shares all necessary information with BCM to match inspection data of one passing vehicle together.

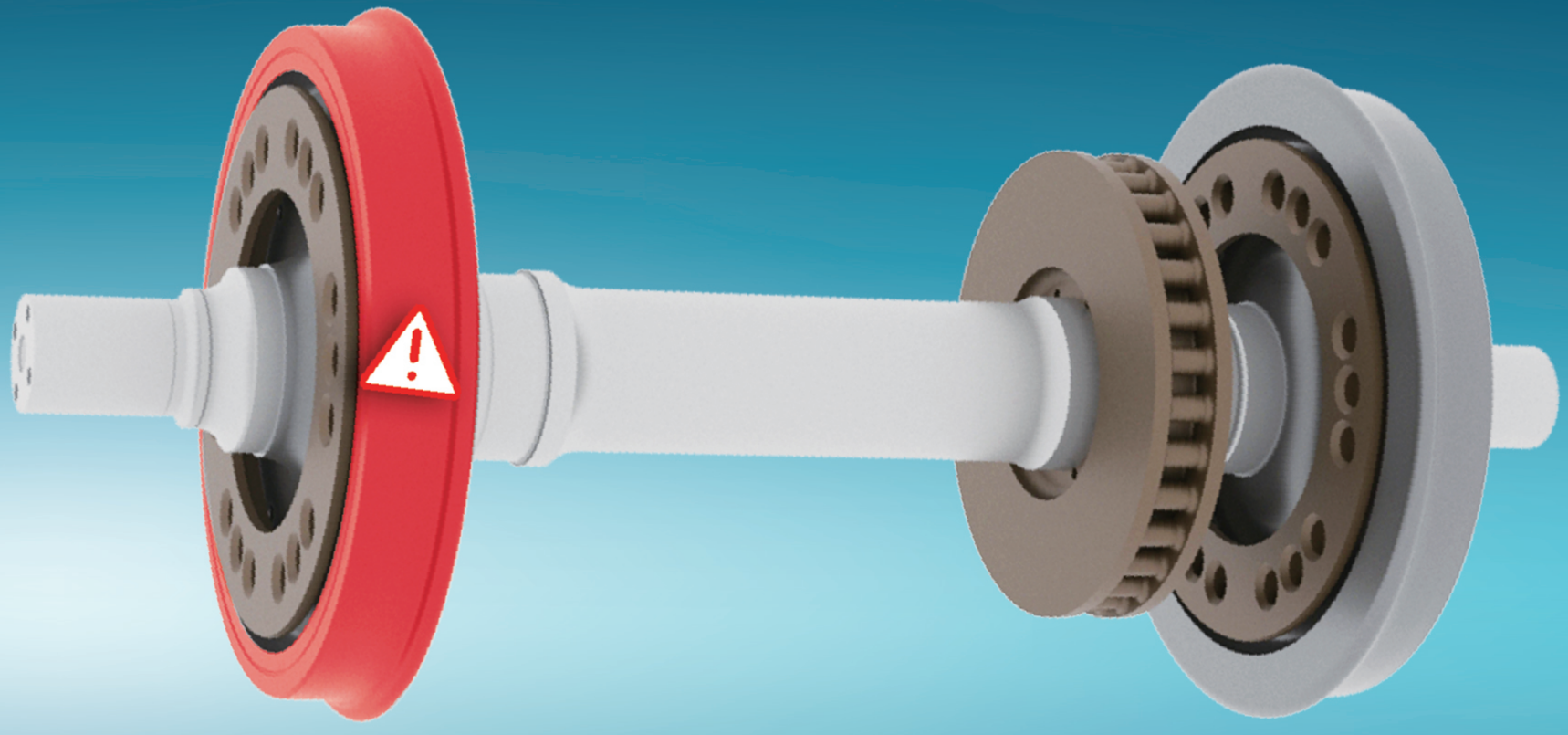
Features

- Fully automated scan brake pad/block
- Vmax: 60km/h
- Brake pad/block thickness measurement
- Measurement accuracy: up to ± 1mm
- Visual condition monitoring of brake system
- AI-supported anomaly recognition & alert

Your Benefits

- Reduce manual heavy labor
- Release workshop capacity
- Reduce vehicle downtime
- Support CBM & predictive maintenance

DTEC WHEEL DOCTOR®



Wheelset Condition Monitoring & Testing

- Full automation & Digitization
- Safety control for entire lifecycle
- Support CBM & Predictive maintenance

DTEC Wheel Doctor® is a solution designed for monitoring of wheelset geometric and material condition. It is configurable with various products to measure, detect and test a wheelset during operation or in a workshop with good adaptability to existing infrastructure.

Wheel Profile Measurement (PCM)

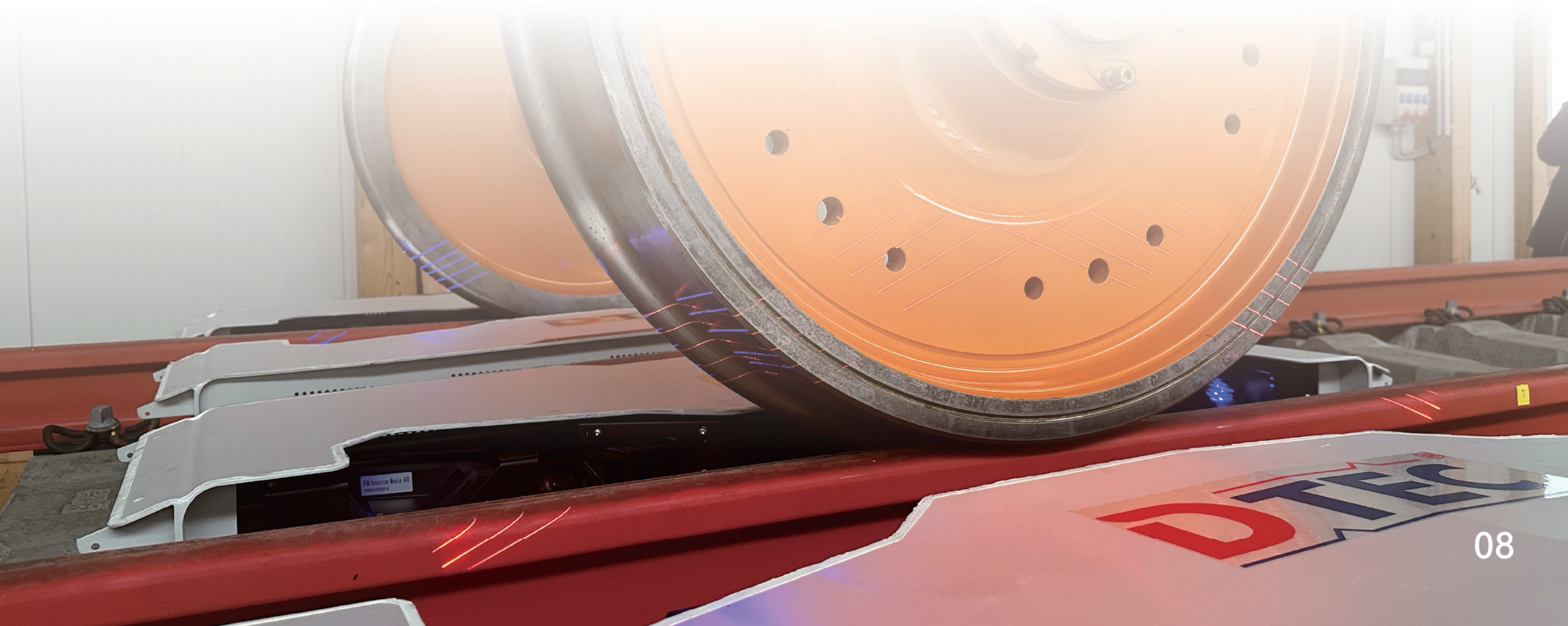
Wheel Profile Measurement (PCM) is a wayside automated measurement system for geometric parameters of wheelset. Based on multi-laser triangulation, wheel geometry is scanned and determined contactless while a train passing. It can be deployed completely outdoors (main line, depot area, etc.) with good adaptability to existing infrastructure.

Features

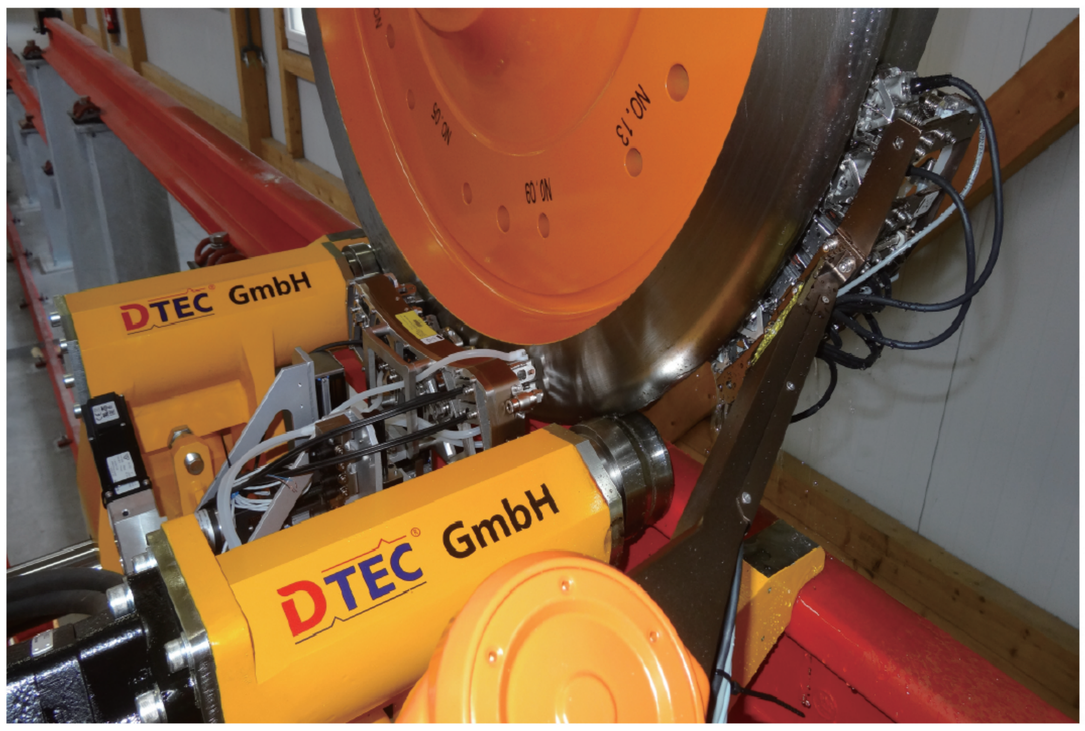
- Measurement speed: Max. 80km/h
- Wheel diameter range: 650mm ~ 1260mm
- Wheel flange height: ± 0.2mm
- Wheel flange thickness: ± 0.2mm
- QR: ± 0.4mm
- Back-to-Back: ± 0.6mm
- Wheel diameter: ± 0.5mm
- Equivalent conicity

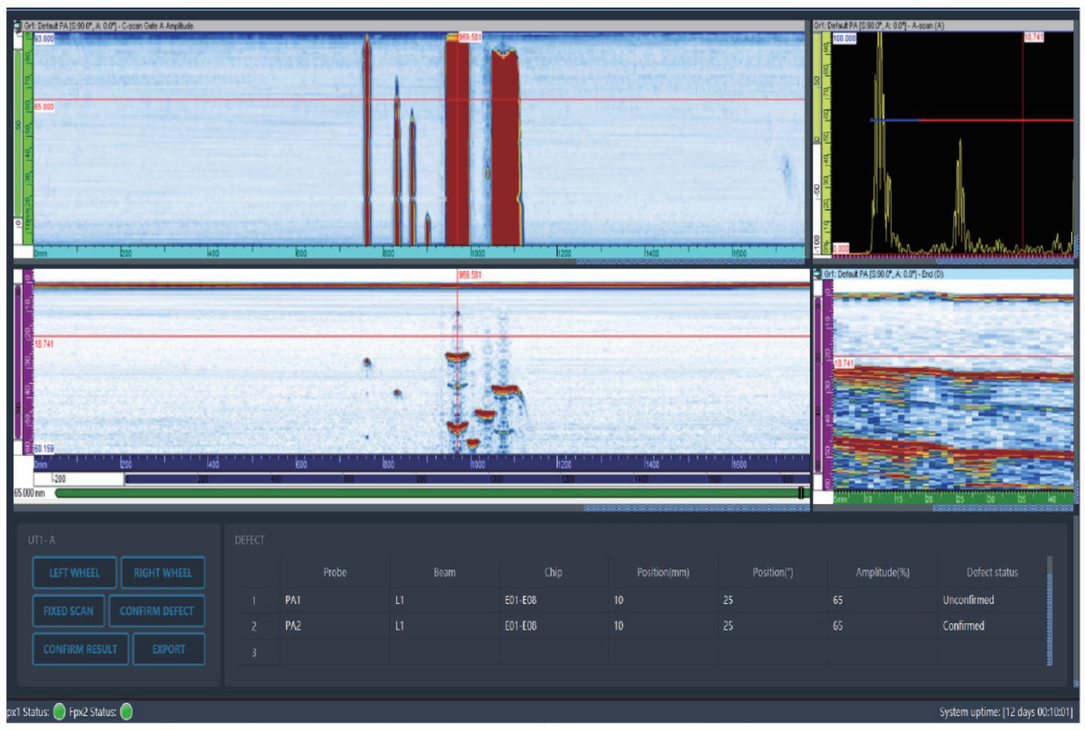
Your Benefits

- Safety control for wheelset
- Replace manual measurement
- Reduce vehicle downtime
- Support CBM & predictive maintenance



Underfloor Wheelset Ultrasonic Testing (UWT)





Underfloor Wheelset Ultrasonic Testing (UWT) is a mobile automated NDT testing system for wheelsets in service. It moves in a maintenance pit, locates itselfs under each wheelset and perform NDT testing simutaneously on one wheelset. It can parallel operate with underfloor wheel lathe in the same pit. Two UWTs can also collaborate to perform testing on wheelsets of a bogie.

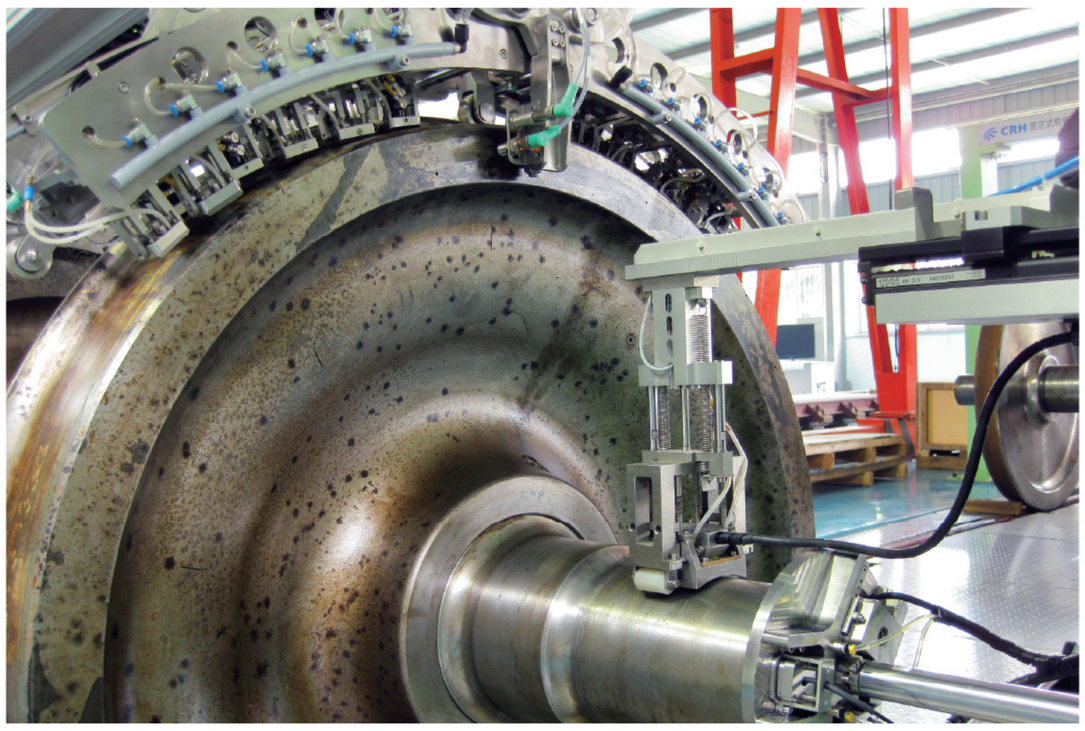
Features

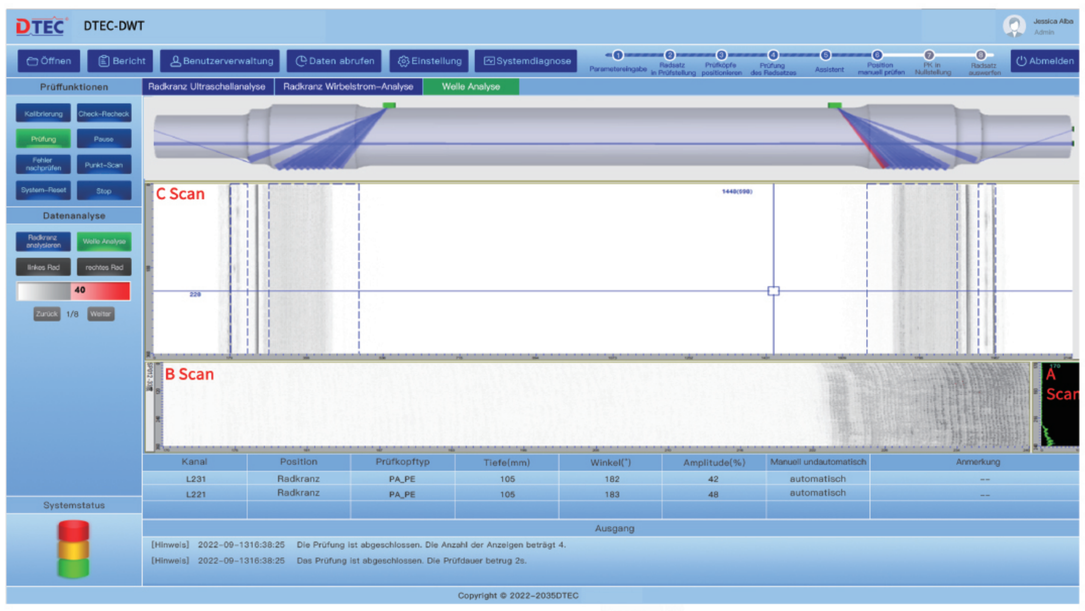
- Fully automated underfloor NDT testing
- Phased array ultrasonic testing
- Detection of defects in wheel flange, tread, rim and disc
- Flaw detectability: Φ2mm FBH
- Wheel diameter range: 750mm ~ 1300mm
- Inspection time: 8min/wheelset
- AI-supported flaw analysis
- Parallel operation with underfloor lathe in the same pit

Your Benefits

- Safety control of wheelset lifecycle
- Reduce manual heavy labor

Dismounted Wheelset Ultrasonic Testing (DWT)





Dismounted Wheelset Ultrasonic Testing (DWT) is a stationary system for automated NDT testing on dismounted wheelset. It is configurable with testing arms and NDT modules to adapt different wheel and axle types. The NDT testing on wheel and axle can be performed parallel or in serial.

Features

- Fully automated NDT testing on dismounted wheelset
- Phased array ultrasonic testing
- Detection of defects in wheel flange, tread, rim, disc and axle
- Flaw detectability: Φ2mm FBH
- Wheel diameter range: 500mm ~ 1300mm
- Inspection time: 3min/wheelset
- AI-supported flaw analysis

Your Benefits

- Safety control of wheelset lifecycle
- Reduce manual heavy labor

INNOVATION WITH PASSION

OUR PARTNERS

DB Systemtechnik

Fraunhofer IZFP

WINDHOFF

EVIDENT

SOCOMATE AN EKOSCAN COMPANY

CONTACT US

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