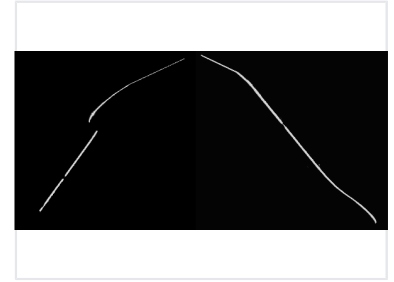
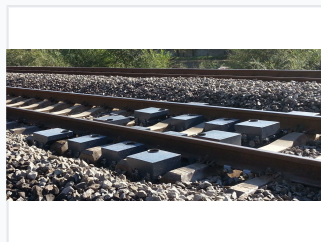
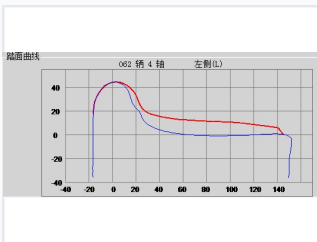


# Railway Wheel Profile Monitoring System

This system monitors railway wheel profile parameters using lasers and cameras as trains pass. It detects wheel defects and wear in real-time for proactive maintenance.



## ADDITIONAL IMAGES



## Overview

**TW16 Wheel Profile Monitoring System (WPMS)**

**Key Features:**

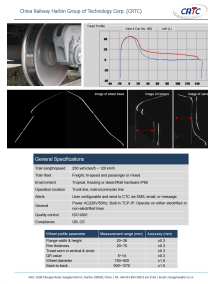
- Real-time monitoring of wheel profile parameters
- Accurate measurement of wheel profile parameters
- High precision and high accuracy
- Real-time data collection and storage
- Real-time data analysis and reporting
- Real-time data visualization
- Real-time data export and sharing
- Real-time data backup and recovery
- Real-time data security and protection
- Real-time data maintenance and support

Coordinated working of rail-bound lasers and cameras capturing wheel profiles.

## Real-time Wheel Profile Monitoring

The TW16 Wheel Profile Monitoring System (WPMS) provides wayside, free-attendance monitoring of wheel profile parameters for trains passing at line speed. By utilizing coordinated rail-bound laser and camera technology, the system accurately captures vital wheel data to determine wear patterns and identify anomalies. This enables proactive, condition-based maintenance, helping to enhance railway operational safety, optimize maintenance schedules, and reduce overall costs for mixed-traffic environments.

## Performance



System parameters and performance specifications overview.

## Measurement Parameters

Parameter	Range (mm)	Accuracy (mm)
Flange width & height	20~36	±0.3
Rim thickness	20~70	±0.3
Tread wear (vertical/circle)	-	±0.3
QR value	5~14	±0.3
Wheel diameter	750~920	±1.0
Back-to-back distance	900~1370	±1.0

## Supported Speed

**5 km/h**  
Min Speed

**120 km/h**  
Max Speed

## Compatibility

Applicable Train Types

Freight, High-speed, Passenger, Mixed Traffic

## System

### Environmental Resilience

- Tropical environments
- Freezing environments
- Desert environments
- Rail hardware IP65 protection

### Connectivity & Power

- AC220V/50Hz power supply
- Built-in TCP-IP
- Electrified line compatible
- Non-electrified line compatible

### Compliance & Quality

ISO 9001 • GB Compliance • CE Certified