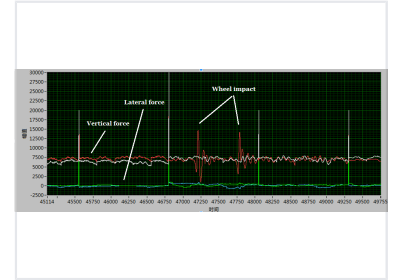


# Trackside Wheel Impact Load Detector

The trackside wheel impact load detector operates unattended to detect wheel impacts and load conditions. It evaluates train running performance as trains pass by at line speed.



## ADDITIONAL IMAGES



## Overview

## System Description

The Wheel Impact Load Detector (WILD) is an advanced, unattended wayside system designed to monitor wheel-rail interaction forces in real-time. By utilizing high-precision shear force and two-dimensional sensors, it accurately detects wheel impacts, load imbalances, and hunting movements as trains pass at line speed. This data-driven approach facilitates proactive condition-based maintenance, helps prevent potential rail damage or derailments, and ensures overall operational safety across various railway environments.

## Technical Specifications

### Operational Limits

- Supported Train Speed: 30-120 km/h
- Capacity: Up to 256 vehicles
- Train Fleet Types: Freight, high-speed, passenger, and mixed
- Operation Environment: Tropical, freezing, or desert climates

### Connectivity & Power

- Power Supply: AC220V/50Hz
- Communication: Built-in TCP/IP
- Line Compatibility: Electrified and non-electrified lines
- Alert Methods: Real-time SMS, email, or automated messaging

### Quality & Compliance

ISO 9001, CE, GB, IP65 Rated Hardware

## Performance Monitoring



### Measured Metrics

**1 Measured**

Vertical Forces

**1 Measured**

Lateral Forces

**1 Detected**

Wheel Impact