

MULTIRAIL® WheelScan



- **Wheel diagnosis for safety check**
- **Acquisition of wheel flats during travel**
- **Check of all track loads**
- **Installation without foundation / no rail gaps required**
- **Installation in main and secondary lines**

Application

MULTIRAIL® WheelScan is designed as a unique and innovative diagnostic system for rail vehicles.

The early recognition of excessive track loads and adequate vehicle maintenance offers enormous saving potentials in track utilization and servicing.

The high-precision MULTIRAIL measuring technology enables the forces between wheel and rail to be acquired quickly and accurately. The results are used to determine location and size of imperfections by single wheels, or wagons.

In addition, the wheel, axle and wagon weights can be acquired at high speeds for checking purposes.

The diagnostic system safely identifies vehicles which have the potential to damage the track through dynamic forces or overload.

Equipment

Specially developed for MULTIRAIL, the concrete weighing sleeper is equipped with high-precision strain-gauge weighing sensors. Designed to transmit all forces and moments (caused by track guidance), these weighing sensors measure the vertical force component with a high degree of accuracy.

For the application in question, the MULTIRAIL system is integrated into the rail without a gap and is thus able to operate in a speed range of 10 to 240 km/hr.

Diagnostic values and associated data are acquired and processed on a PC.

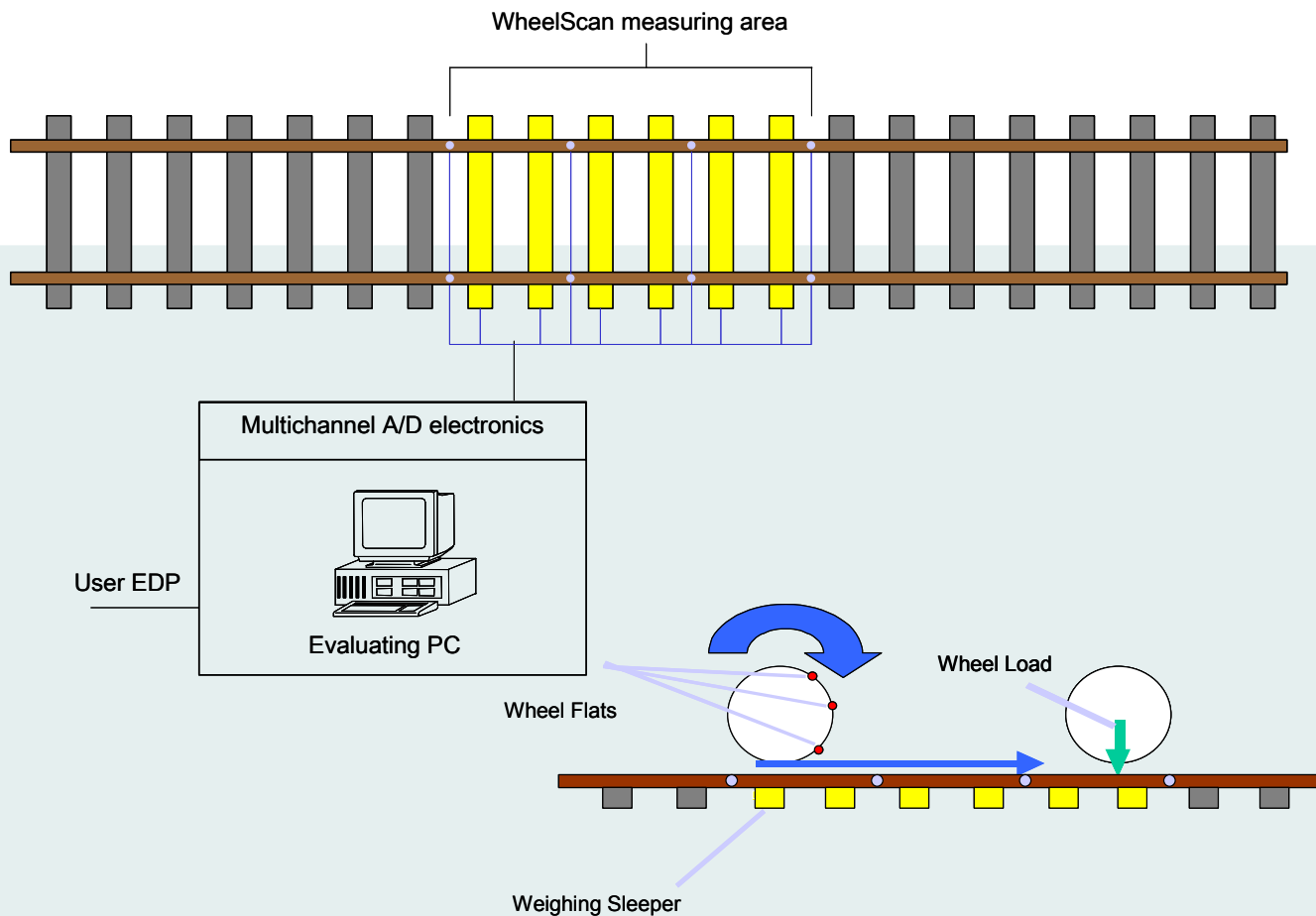
Function

MULTIRAIL comprises the following basic functions:

- Recognition and localization of wheel flats
- Assignment of results to individual wheels or wagons
- Recognition of wagon type
- Storage and printout of diagnostic data
- Display

Optionally, further functions are available:

- Monitoring of wheel, axle, and wagon loads
- Side to side check and front/rear check
- EDP/BDE system interfacing
- Integration of external systems for wagon identification



Technical Data

Diagnostic rail profile, track width and sleeper spacing	As used in the existing track section
Diagnostic system length	Typ. approx. 5 m measuring span ^{*)}
Admissible load	Typ. 100 – 150 t
Diagnostic accuracy	approx. 95% from 0.2 mm at 30-80 km/hr
Weighing accuracy	Wagon weight: 2% at 10 km/hr to 60 km/hr
Diagnostic speed range	10 km/h to 240 km/hr ^{*)}
Transit speed	Unlimited
Temperature range	Scale mechanics: -40 to +70°C Weighing electronics +5°C to +30°C
Approvals	EBA, DB-AG, Banverket, RENFE
^{*)} depending on individual application	

Schenck Process GmbH
Pallaswiesenstr. 100
64293 Darmstadt, Germany
Phone: +49 6151 1531-2448
Fax: +49 6151 1531-1369
transport@schenckprocess.com
www.schenckprocess.com