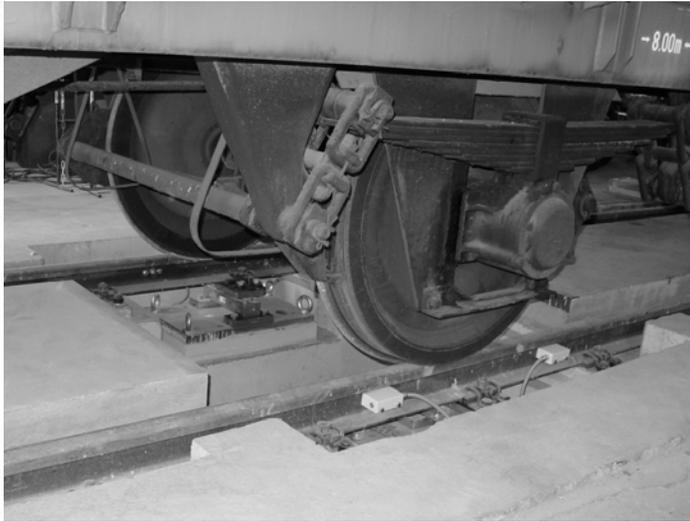# MULTIRAIL® Wheel Load – Axle Weighing

- ■ **Monitoring of wheel/axle loads and load distributions**

- ■ **Static and dynamic measurement**

- ■ **No spurious disruption of rails**

- ■ **Fully automatic weighing sequence**

- ■ **Availability at any time**

- ■ **Resistance to wear**

- ■ **Wide positioning range**

- ■ **No calibration weights required**

Application

The wheel load testing system is designed for static or dynamic acquisition of single wheel loads and wheel contact points on a rail vehicle axle in accordance with the set of technical vehicle guidelines (TRF.0014), or DIN 27201- 5. The wheel load testing system can be integrated into the existing track without cross cut. The accuracy is ± 0.25% of full scale value. Static weighing can be performed in a measuring cycle of some few minutes (max. 10 min./ measurement). Dynamic weighing takes place at a transit speed of max. 5 km/h. Typical applications for wheel load testing systems are rail vehicle construction and maintenance plants. In positioning area, the user has to ensure that certain track specifications are met.

Equipment

Weighing takes place with the use of weighbeams mounted on a solid concrete foundation under the track. On both sides of the weighbeam, measuring eyes are pressed into the rail to measure the shunt forces. Weigh data acquisition and processing as well as the computation of additional data is performed with the use of a DISOBOX weighing electronics and a PC or laptop.

Functions

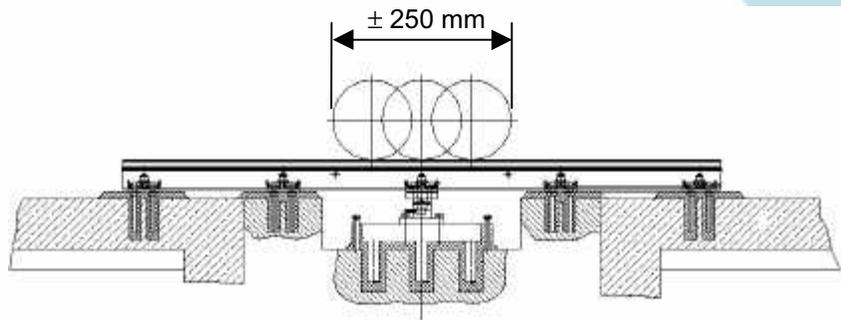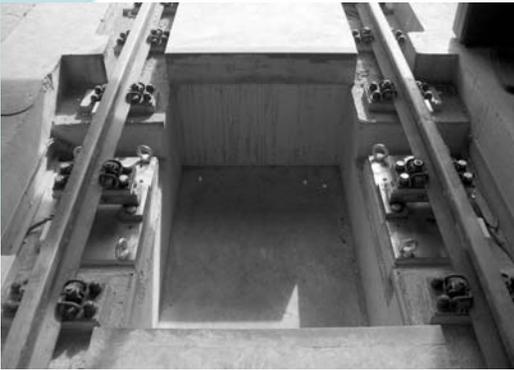The wheel load testing system comprises the following basic functions:

- Acquisition and output of wheel and axle loads
- Acquisition and output of axle weights and rail vehicle totals weight
- Fully automatic weighing sequence
- Automatic taring after each measurement

Optional functions:

- Hand-held terminal for waggon data acquisition
- EDP/ODP interface
- Wireless data transmission
- PC system

Technical Data

Scale segment length	Approx. 0.9m
Weighing range	0 to 15kN, or 0 to 30kN
Weighing mode	Static and dynamic
Weighing accuracy	± 0.25% related to full scale
Temperature range	Weighing mechanics: -30 to +70°C Weighing electronics: -30 to +40°C
Track width	1435mm
Transit speed	Unlimited (continuous rails)
Display resolution	100N
Positioning range	500mm (± 250mm)
Measurements, dynamic	Max. 5 km/h
Measurements, static	Retension time up to approx. 10min/axle

± 250 mm

The wheel load scale is calibrated with the use of a calibrating crossbeam (option), a reference load cell and a hydraulic force transducer.	User-friendly operator environment

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