

RAIL MEASURING TECHNOLOGY
WHEN ACCURATE MEASUREMENTS MATTER



BI-CAT

*BI-CAT dual rail Corrugation Analysis Trolley
Rail corrugation and acoustic roughness
measuring trolley for tracks and switches,
Suitable for vignola and grooved rails*

Product description:

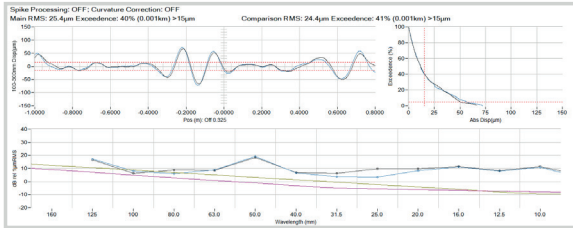
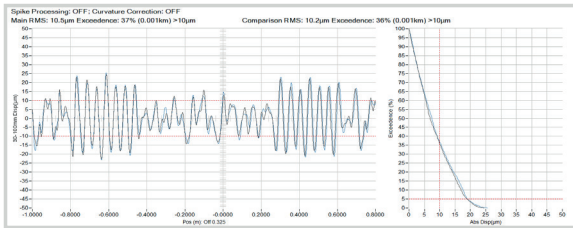
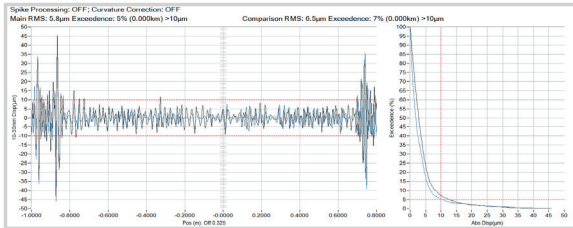
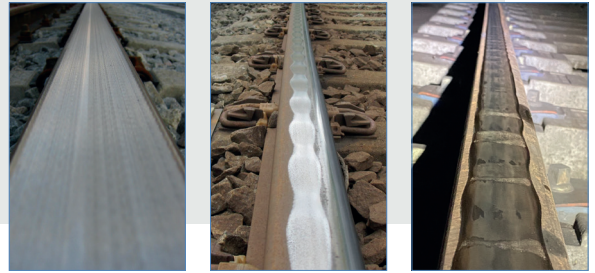
Rail surface irregularities of the order of microns (0.001mm) in amplitude are important in the generation of wheel/rail rolling noise and vibrations. The BI-CAT portable dual rail measuring trolleys are easy to carry and set-up and are suitable for obtaining continuous longitudinal measurements of irregularities on the rail surface.

Applications:

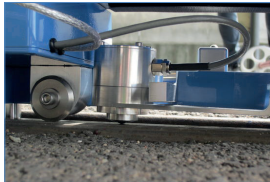
- Monitoring of rail quality
- Detection of corrugation and acoustic roughness
- Detection and classification of both short and long waves
- Assessment of mobile rail treatment results e.g. rail grinding and milling

Main characteristics:

- Measurements that are highly accurate and repeatable
- Relatively simple installation and setup
- Contact measurement system using inertial sensors
- Suitable for any track gauge
- User-friendly software for acquisition and review of measurement data
- Operation through notebook or tablet-pc
- Robust yet light weight design
- Extensive product support



Typical calibration curves: CAT and CMM measurements of a 1.8m section of a calibration beam.



TECHNICAL DATA BI-CAT TROLLEY

Interval at which data are saved	1 or 2 mm	
Measuring speed	3 - 4 kph	Walking speed
Precision of measurements	0.01 µm (0.00001 mm)	Displacement
Accuracy	0.2 µm RMS 10 - 30 mm 0.5 µm RMS 30 - 100 mm 2 µm RMS 100 - 300 mm	
Data storage requirements	~2MB per KM of rail	
Output compatibility	EN 13231-2 2020 and equivalents EN ISO 3095:2013 EN 15610	
Output	Raw and filtered displacements, moving average amplitudes, percentage exceedances, one third octave spectra	
Wavelength filters	10 - 30, 30 - 100, 100 - 300, 300 - 1000, 1000 - 3000, 30 - 300, 300 - 3000 mm	
Weight	BI-CAT: 23 kg in carrying case	