mapl-e

Rail condition and maintenance visualization app

vossloh
enabling green mobility

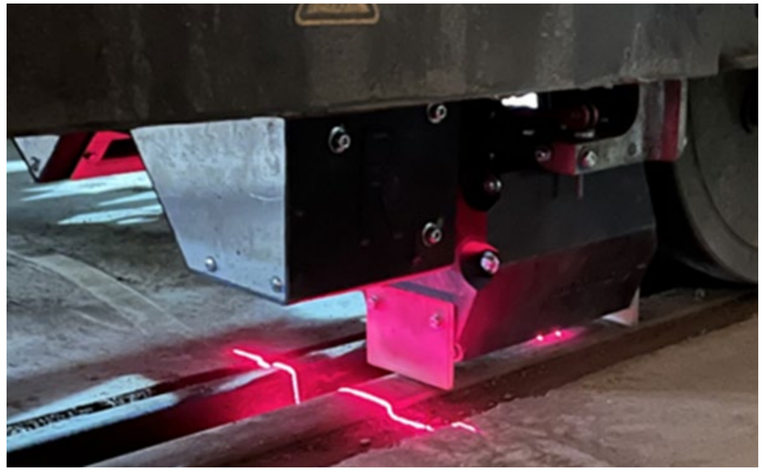
Problem description

Track availability requires considerable increases in efficiency in rail and switch maintenance.

Solution description

Reactive and time-based maintenance

mapl-e is an innovative solution to efficiently improve your rail condition. It combines laser measurement and other technologies, as well as powerful data processing, to enable optimized maintenance while savings costs through combined grinding and measurement. It allows continuous data collection even during high-traffic periods, providing rapid access to valuable information. With mapl-e, you can make informed decisions and plan maintenance efficiently based on real-time data, all in one integrated platform.



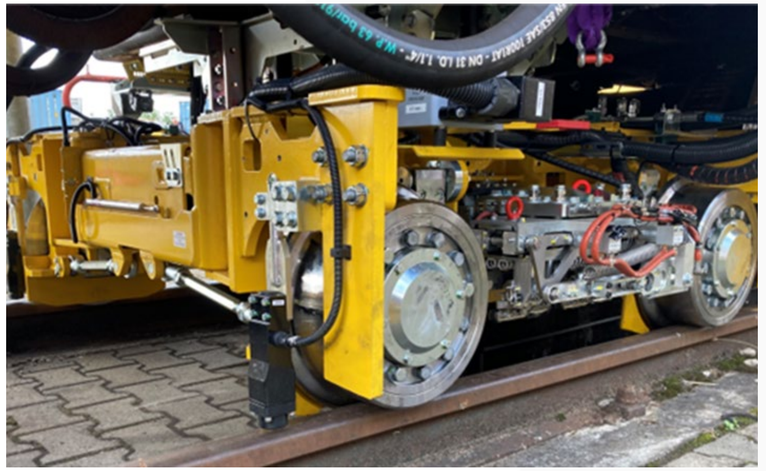
How it works

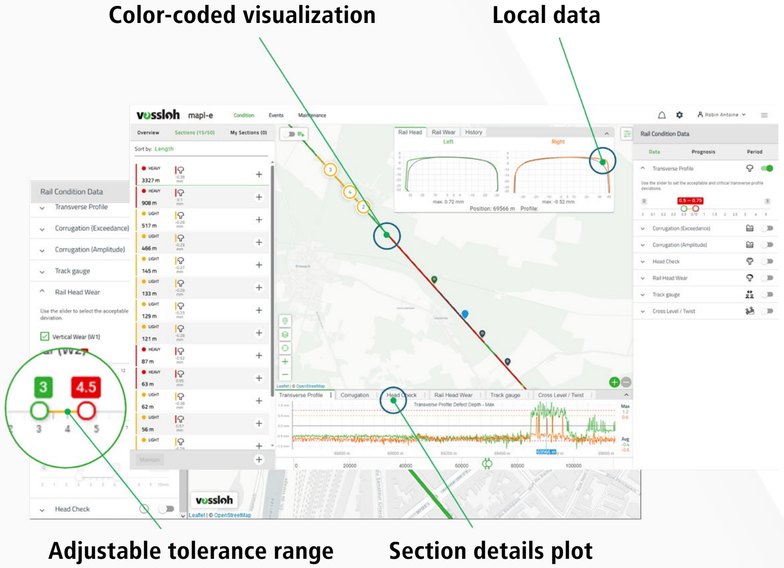
Web-App on Vossloh connect

- Powerful yet flexible data visualization & analysis
- Several level of information at every scale
- Measurement event management
- Rail maintenance simulation with machine and shift breakdown

Laser Rail Scanning

Our Laser Rail Scanning is a non-contact optical rail and track measurement system, specifically designed for the yellow machines. The system enables high-speed measurement and real time processing.





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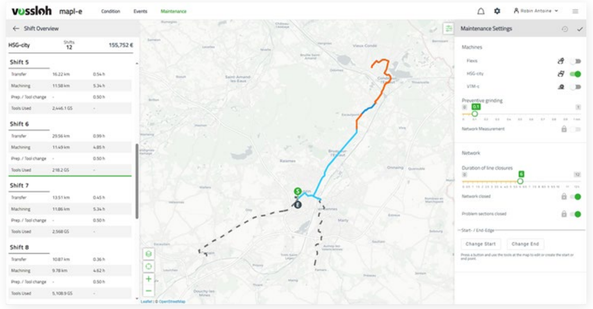
Additional Features

- Multiple rail & track geometry metrics implemented. More can be added on request
- Measurement comparison, past evolution or prognosis of rail condition
- Simulation of maintenance shifts with Vossloh's machine pool
- Easy data import thanks to track matching algorithm. Import in tunnels possible in the import assistant.



Laser Rail scanning

High speed, non-contact rail & track geometry measurement system

Operating parameters	
Direction of operation	In both directions
Maximum speed	60 km/h
Rail type	Free-standing flange rails; recessed or free-standing grooved rails (optional); all track categories
Curve radii	≥ 25 m
Clearance gauge	Same as the maintenance machine
Ambient temperature	In operation: 0 °C to +40 °C Standby: -25 °C to +50 °C
Humidity	Max. 85 %
Altitude	< 2,000 m
Rain, storm, dust	Measurements taken during rainfall, storms or in dusty conditions may be interrupted or limited in scope
Snow	Snowfall or snow on the track can damage the optical measuring components

Features	
Communication	WLAN, LTE (4G)
Localization	**GPS/Galileo:** Accurate to 5 m **Position encoder:** Accurate to ± 0.1 mm/m
Longitudinal profile sensor	**1 measurement/mm:** Accurate to ± 8 µm
Transverse profile sensor	1 measurement/mm: Rail head: Accurate to ± 0.1 mm Groove, groove rail head: Accurate to ± 0.3 mm Track gauge: Accurate to ± 1 mm
Software	Measuring software LRS-control LRS-insight

Other features
1 operator for the measuring technology
Wireless operation