RICARDO

REAL-TIME MONITORING OF RAIL HEADS, TRACK GEOMETRY AND RIDE COMFORT

InfraMon is an asset monitoring technology from Ricardo that provides real-time information on the condition of rail heads, track geometry and overall ride comfort.
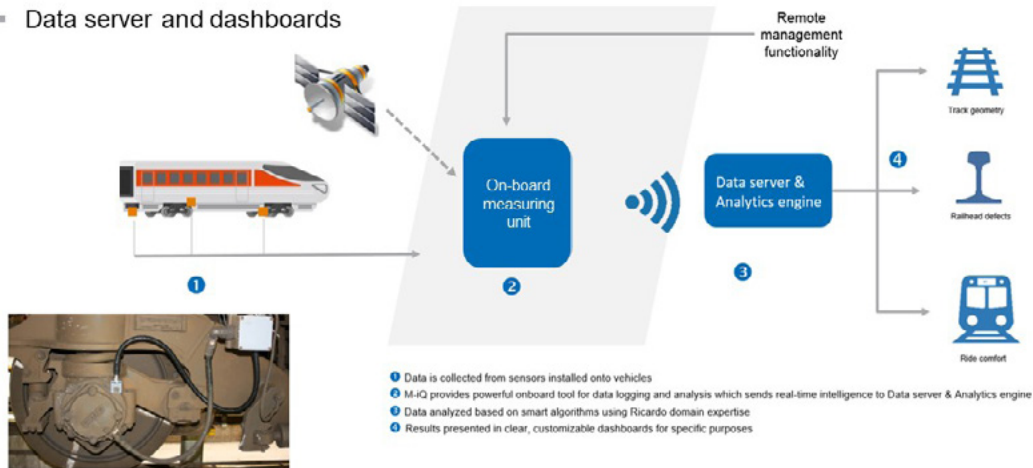
By installing sensors and data-loggers onboard regular passenger traffic, InfraMon accumulates track condition data throughout the operational day and reports the findings directly to maintenance teams via customised dashboards. Through continual monitoring of components, any degradation is identified long before maintenance or safety limits are exceeded.

It also frees routine maintenance regimes from relying on access to dedicated measurements vehicles and removes the risk of minor defects developing into major faults during lengthy intervals between surveys.

Instead, engineering teams gain continuous round-the-clock reports of track conditions, allowing them to monitor trends and respond to emerging concerns that would otherwise go unreported.

HOW IT WORKS

- Unmanned on-board measuring unit installed in passenger train
- Remote access and management
- Data server and dashboards

TRACK GEOMETRY: Based on axle box accelerations, the track geometry is determined. Level, cant and 'dynamic' alignment is measured in wavelengths ranging from 10cm up to 150m.

RAIL HEAD DEFECTS: The geometric quality of assets, such as insulations, rail joints and switch points can be monitored. Also locations with railhead defects, such as rail corrugation and squats, are identified and assessed.

RIDE COMFORT: Evaluated by means of car body accelerations measured in the passenger areas. The method of evaluation is compliant with standards EN12299 and ISO2631-1.

BENEFITS

- Frequent condition monitoring surveys
- Condition Based Maintenance monitoring solution
- Perform track inspection tasks based on location alerts
- Validate track maintenance performance
- Optimise track maintenance intervals based on trends
- Very low monitoring costs
- Unintrusive method, meaning higher track availability

For more information:
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