TINPENG

VEHICLE-MOUNTED ROAD SURFACE PROFILOMETER

This equipment can detect the dynamic mechanical response of the longitudinal roughness change of the road surface to the detected vehicle in real time, and convert the measured dynamic mechanical response into various roughness indexes through mathematical models (international roughness index IRI, roughness standard deviation σ, bump accumulation value VBI, ride quality index RQI, etc.). It can evaluate the roughness of various roads and airport runways under normal vehicle speed, and can be used for road maintenance management evaluation and roughness index acceptance of road construction. This equipment is easy to install and cost-effective.

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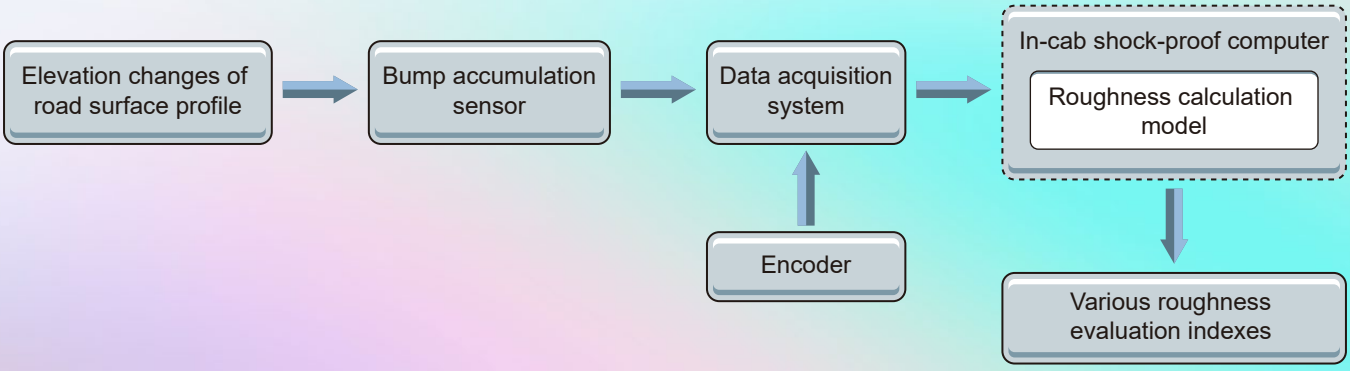
TINENG

VEHICLE-MOUNTED ROAD SURFACE PROFILOMETER

FEATURES

- All analysis and evaluation results can be "one-click generated reports" in user formats.
- Can be matched with road management system to realize detection data platformization and visual management.
- No limit to the detection mileage. Using real-time data saving mode, detection results can be analyzed in real time.
- During the detection process, function keys are used to label special states to facilitate verification during data analysis.
- Highly cost-effective, suitable for long-distance road maintenance evaluation and rural road roughness evaluation.
- Easy to install, no mechanical modifications to the inspection vehicle are required. Just place the detection box at the footrest of the seat in front of the car, and it is easy to operate.



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VEHICLE-MOUNTED ROAD SURFACE PROFILOMETER

TECHNICAL SPECIFICATIONS

Roughness indexes	International roughness index IRI, roughness standard deviation σ, bump accumulation value VBI, ride quality index RQI
Correlation with reference results	R>0.95
Detection repeatability deviation coefficient	Cv < 5%
Vertical vibration detection range of inspection vehicle	±5 G
Detection speed	10 km/h-110 km/h
Longitudinal distance sensor error	≤ 0.05%
Continuously measurable distance	No limit
Measurable longitudinal profile wavelength range	0.1-50 m
Minimum data acquisition spacing for roughness	1 cm – 20 cm (can be selected as needed)
Reporting intervals for various indexes	Any length above 5 m
Operators (including driver)	1-2
Environment temperature	-20℃ to 50℃
Power supply	12V DC power supply equipped with the inspection vehicle
On-site output	Data can be analyzed on-site
Detection probe installation position	Interior front of the inspection vehicle

CONFIGURATIONS

Bump accumulation sensor
Computer data acquisition system
In-cab computer
Detection probe
Photoelectric encoder DMI

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