Laser SDP

The Laser SDP is a longitudinal profile measurement system that provides road profile data capture and real-time roughness index calculation using a combination of high-speed lasers and accelerometers.

Laser Longitudinal Profiling System

The Laser SDP samples as low as 12.5 mm (1/2 in) intervals and measures bumps as short as 100 mm (4 in) at variable speeds up to 100 km/h (60 mph) without loss of accuracy.

Two lasers, one over each wheel path, measure the vehicle's height above the road. Accelerometers monitor the vertical forces caused by surface deformities. This profile data is used to calculate the low-speed roughness (riding comfort) of the road surface.

The International Roughness Index (IRI) and other indices are calculated in real-time, a feature which saves significant office data processing time and effort. Data is also recorded for further processing if desired. Faulting of concrete pavements is also measured and reported using special fault detection software.

The Laser SDP meets US FHWA specifications for a Class II HPMS profiler, the highest level for automated data collection. The Laser SDP also meets or exceeds specifications for the ASTM E950 Class I profiler, again the highest performance level possible.

The excellent accuracy and repeatability of measurements made by the Laser SDP make this subsystem an excellent choice for project-level applications such as monitoring project acceptance, enforcement of "end-result" specifications, etc.

Features

- Lasers and accelerometers measure roughness in each wheel path
- Integrated with Distance Measuring Instrument (DMI) for precise location information
- Develops a complete longitudinal profile
- Measures concrete joint faulting accurately
- Not affected by surface texture as are some ultrasonic sensors
- Samples surface at 12.5 mm (1/2 in) intervals and reports bumps as short as 100 mm (4 in) or as long as 100 m (328 ft)
- RoLine system provides a 100 mm (4 in) footprint in each wheel path, improving repeatability analysis of concrete faulting
- Measures at variable highway speeds up to 100 km/h (60 mph) without loss of accuracy
- Calculates IRI or other specified indices in real-time
- Reports roughness for each wheel path or combined as required
- Generates graphs and tabular reports
- Meets Class II FHWA profiler specifications
- Meets or exceeds ASTM (E950) Class I profiler specifications

Fugro Roadware
2505 Meadowvale Boulevard
Mississauga, ON, Canada L5N 5S2
North America Toll Free: +1-800-828-ARAN (2726)
Phone: +1-905-567-2870
roadware@fugro.com