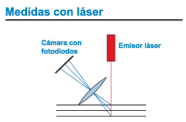
Monitoring pavement roughness and texture

Laserprof measures the surface roughness of pavements at traffic speeds of up to 150 km per hour, enabling pavement layers to be acoustically analysed both at the construction stage and on operational highways and other roads without interfering with traffic.



The unit has two portable laser sensors, a magnetised odometer on the vehicle wheel to guarantee precision in distance measurements and continuous IRI analysis software. It also has a system for measuring texture and a front-mounted wide-screen camera with x, y a co-ordinates for inventory purposes.

The following parameters are obtained:

- Longitudinal profile in both wheel tracks.
- Surface roughness in each of the two wheel tracks (I.R.I.).
- Texture measurement.

Operation

One or two laser sensors are mounted at the rear of the vehicle and connected to a laptop computer that receives the readings and processes them in real-time. The odometer is mounted on the vehicle wheel to ensure the precision of the distance measurements taken.

The technical office of EUROSONSULT NUEVAS TECNOLOGÍAS S.A. has developed IT programs for processing the measurements taken that enable data to be displayed, analysed (continuous calculation of IRI) and printed, and can display profiles on screen. The resulting graphs can be presented in 2-D or 3-D.

All the information obtained with these units can be input into existing pavement management systems.