



Measuring deflection in road beds and pavements

The falling weight deflectometer provides readings on structural capacity and overall rigidity of road beds and pavements. Euroconsult Nuevas Tecnologías S.A. has two Ministry of Infrastructure approved heavy weight deflectometers (HWD).



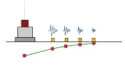
This equipment can be used on any type of road, with no geometrical constraints in regard to layout, and on flexible, semi-flexible, semi-rigid and rigid pavements.

The parameters obtained are:

- **Maximum deflection**
- **Deflection basin**

The equipment provides acoustic structural analysis for planning and prioritising reinforcement work, pavement managing systems for determining optimum conservation strategies, calculating reinforcements, monitoring and controlling quality at the construction stage, assessing adhesion between pavement layers, analysing airport runway pavements and railway track beds and subgrades, establishing zero point deflection so as to monitor changes over time and calculate remaining useful lifetime, working out expected layer-by-layer deflection at the project stage, monitoring consistency in platform stabilisation treatments during construction, transferring loads between concrete slabs and detecting gaps beneath slabs.

Operation



The Deflectometer Impact consists of a mass, the fall has an impact on an elastic cushioning system . This

system consists
of a set of
rubber pads
, the number and
elastic characteristics
modulate the
charge
pulse shape
produced,
along with the
contact time.

This system, which
is mounted on
a plate,
to generate a
wave
load on the
firm
that simulates
the passage of a
heavy
moving
axis
.

This equipment has commissioned a series of sensors to measure vertical deflections produced in t

he strong
wave
load generated
both in
the center of
the load plate
as various
radial positions

at different
distances from the center
of it.

It also has
a front camera
panning with
coordinates
x, y
, z,
for carrying
inventory.