



Weigh-in-Motion by Kistler

Gerd Simons, 2017-08-30

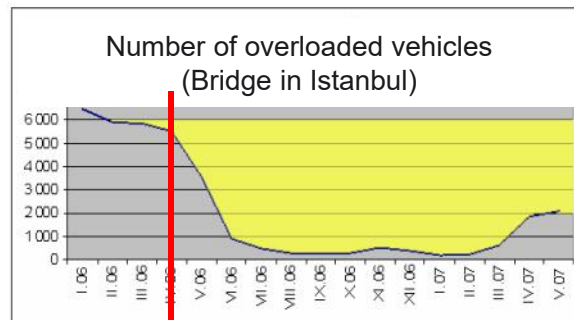
Introduction to Weigh-in-Motion (WIM)



KISTLER
measure. analyze. innovate.

Purpose of WIM

- **Overloaded vehicles** are the main cause for damaged roads
- Purpose of high speed WIM:
 - Reduce number of overloaded vehicles (enforcement)
 - Reduce damage of roads (damage is proportional to 4th power of axle weight)
 - Enhance safety (overloaded vehicles are more dangerous)
 - Charge by weight
 - Fair road charging (tolling - heavier vehicles pay more for road usage)
 - Efficient weighing (load of truck is weighed when entering and exiting e.g. a coal mine)
 - Gather statistical data
 - Make road maintenance and road planning more efficient



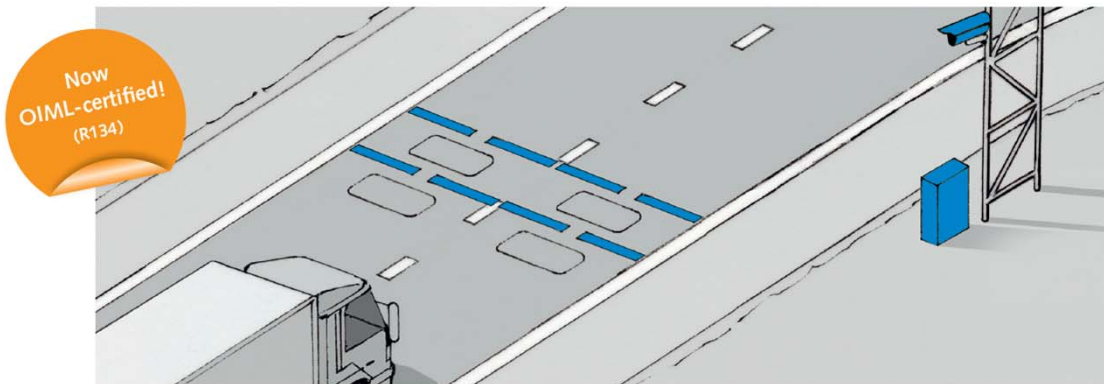
WIM Installation



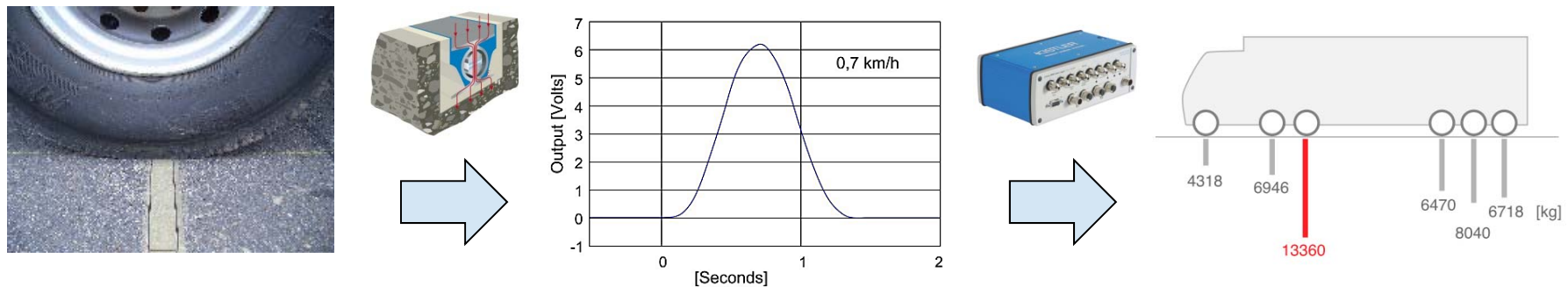
How Does Kistler WIM Work?

High Speed WIM

- Kistler Lineas[®] sensors based on piezo quartz technology measure the weight of a passing vehicle at virtually any speed (high speed WIM).
- WIM is much more efficient than static weight bridge as vehicle do not have to slow down.



- The Kistler datalogger evaluates the sensor signals and computes axle weights.



Kistler Offering for WIM

- Lineas[®] sensors (9195)
 - Fast installation (minimal time of road closure)
 - High measurement accuracy
 - Low maintenance costs (long term stability)
- WIM System (9835)
 - Highest accuracy up to +/-2.5% for GVW
 - OIML R134 certified (accuracy class 5)
 - Able to monitor up to 4 traffic lanes
 - Wide speed range (0 ... 250 km/h)
 - Measuring range up to 50 tons axle load
- Services
 - Extended warranty options for up to 5 years
 - On-site installation support and training
 - Calibration support

