

## Intercomp Company

# Tackling overloading with high-speed WIM sensors

Using accurate data from high-speed weigh-in-motion systems can help road owners better understand vehicle overloading problems and design infrastructure that meets real life loading demands

It is well known that vehicle overloading can have a serious negative impact on road safety and on the longevity of road infrastructure. Like any other issue that involves the public well-being, this problem should be addressed based on accurate information. This information can be gathered using high-speed weigh-in-motion (HS-WIM) systems.

In an ideal situation, a road owner must understand where, when, and how an overloading problem occurs. Luckily, technology has reached a point where today we can collect highly accurate vehicle weight data without interfering with traffic flows. This powerful information comes from HS-WIM systems, such as Intercomp's strain gauge-based Strip Sensor.

## Understanding the problem

The Intercomp Strip Sensor has been certified by international standard-setting body OIML with an accuracy level within 5% for measuring the gross vehicle weights (GVW) of heavy vehicles at highway speeds. This robust strain gauge-based technology allows for consistent and uninterrupted weight measurements of all passing vehicles, even under harsh environmental conditions. These sensors offer an interesting balance of slim and yet resilient design for HS-WIM applications.

Deploying high-end HS-WIM technology like the Strip Sensor allows us to understand the regions where the overloading

1. Intercomp HS-WIM for vehicle overload control in Italy



2. Intercomp Strip Sensors for high-quality data collection in the Netherlands

problem is more significant. Also, we may assess the months of a year, the days of a week, and the hours of the day that overloading occurs more frequently and severely. Finally, the information provided by an HS-WIM system helps us understand what kinds of vehicles and what kind of overloads make up the problem.

## Control strategies

Today, most road owners are dealing with more vehicles to control, and diminishing resources to address the problem.

Technology plays an important role in this context because it can make the control actions more efficient and provide data to support an strategy for applying the existing tools.

Overload control strategies, such as fixed and mobile enforcement, can be better allocated based on accurate data about the overloading conditions. The cost for collecting highly accurate HS-WIM

data at highway speeds becomes marginal if compared to the costs of not knowing overloads.

Vehicle overloading is a serious issue that involves the public interest, so it should be addressed based on high-quality information. In any case, good solutions start with knowledge about the problem. It starts with understanding the traffic and the respective loads that are being carried over it. But an HS-WIM system is not only a tool for reactive work. It is a tool that allows you to design road infrastructure that is adequate to your real traffic demands.

Investing in high-quality HS-WIM data leads to savings, promotes safer roadways and protects resources. Therefore, it is safe to say that every road in the world can make good use of an HS-WIM system, not only for assessing vehicle overloading, but for planning the transportation system based on knowledge. ✕

±5%

The accuracy of Intercomp Strip Sensors for measuring gross vehicle weights at highways speeds, certified by OIML

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“ INVESTING IN HIGH-QUALITY HS-WIM DATA LEADS TO SAVINGS, PROMOTES SAFER ROADWAYS AND PROTECTS RESOURCES