

• Application Note • STRIP SENSORS for DIRECT ENFORCEMENT

Strain Gauge Strip Sensor is the First Sensor to be Type-approved for HS-WIM Direct Enforcement in Brazil

In 2014, Intercomp Strain Gauge Strip Sensors were first introduced in Brazil to be used for screening vehicle weights at high speeds and for performance evaluation for future federal regulations. LabTrans, a leading research institute, would test and evaluate the Strip Sensors while developing proposed legal performance requirements for direct enforcement of overloaded commercial vehicles in Brazil.

“It is a fantastic achievement to have Intercomp’s Strip Sensors with strain gauge technology be type-approved for direct enforcement in Brazil,” explains Leonardo Guerson, WIM Product Manager and Application Engineer for Intercomp Company. “Our technology has been proven to provide the accuracy, stability and longevity required for HS-WIM weight enforcement systems.”



Strip Sensors were installed in 2014 to evaluate the strain gauge technology and develop legal requirements for direct weight enforcement in Brazil.



The site of the first HS-WIM system to be type-approved by the National Metrology Institute for direct enforcement of overloaded commercial vehicles in Brazil.

Intercomp Strip Sensors were chosen for their established ability to sustain calibration over time, lower positional sensitivity, and output consistency under harsh environmental conditions. In partnership with Fiscal Tech, a WIM systems integrator, 40 lanes of HS-WIM equipment were installed in roadways as test sites to allow for data collection and studies to consolidate the first step toward direct weight enforcement in Brazil. The use of Strain Gauge Strip Sensors has provided more reliable WIM data and lower life-cycle costs to integrators and end-users.

The performance of Strain Gauge Strip Sensors at these sites demonstrated Intercomp Strip Sensors’ accurate weight performance for various vehicle configurations and the consistent accuracy required for future direct enforcement applications. The HS-WIM system was certified for Class 2B, which means $\pm 3.5\%$ for Gross Vehicle Weight (GVW) and $\pm 8\%$ for axle/axle group weight measurements (on initial verification). The national requirements for certification of the HS-WIM systems were developed based on OIML recommendations.

In 2022, after technical developments and metrological certification, the Fiscal Tech solution with the use of Intercomp Strain Gauge Strip Sensors became the first HS-WIM system to be Type-approved by the National Metrology Institute (INMETRO) for direct enforcement in Brazil. The experience of Brazil can provide insight to other countries who wish to modernize their weight enforcement strategies.



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