Intercomp Weigh-in-Motion Strip Sensors increase service productivity and transportation safety at large power utility

The service fleet of a major power utility includes numerous vehicle classes and payloads subject to gross vehicle and gross axle weighing for transportation and safety requirements. Intercomp's Weigh-In-Motion (WIM) System helps keep this fleet in compliance and responsive.

Background

Relied upon by millions of customers, one of the country's largest electric delivery and gas service utilities employs Intercomp's Weigh-In-Motion (WIM) systems to keep its service fleet moving. Rapid response to power outages, along with routine maintenance and repairs of the power grid is a critical, and continuous aspect of providing the electrical needs to one of the largest metropolitan areas in the United States.

Challenges

The urgent nature of servicing the power grid creates a number of challenges not only for utility field workers, but those responsible for operations and safety. Virtually every day, the company's large fleet of service vehicles, ranging from utility and bucket trucks to large service vehicles, are dispatched from numerous sites across the company's large service area. Depending on vehicle type, configuration and payloads, the gross vehicle weight and gross axle weights of these trucks can vary widely on every deployment, potentially creating employee and road safety issues, roadway access restrictions, or overweight conditions that violate local, state or federal transportation laws.

With routine demands for nearly continuous operations, including critical emergency services during power outages, as well as goals for productivity, weight compliance and worker safety, the company's lack of accurate vehicle weighing systems at their facilities was compromising numerous aspects of their operations. The solution to this vehicle weighing challenge was further complicated by a mandated deadline and lengthy requirements for civil works approval and permits across the company's satellite service locations.

Solution

With the rapid deployment of Intercomp WIM Strip Sensors, the company was able to overcome a number of obstacles to their vehicle weighing challenges.

Strain Gauge-based Strip Sensors offer improved accuracies for Gross Vehicle Weights and Axle Weights.

Foremost, accuracy and dependability is essential in any system investment. The Intercomp WIM is a strain gauge-based load cell sensor technology that delivers robust performance and exceptional accuracy while eliminating the operational downtime required for many conventional truck scales. The solid-state load cell requires only minimal maintenance and calibration, and its long-term sensor stability and internal temperature compensation delivers improved accuracy and consistency of output across a wide range of seasonal environmental conditions when compared to other technologies.

With the company's Midwest U.S. operational geography, seasonal temperature extremes can vary up to a 150°F. To meet requirements for sensor calibration and operational accuracy in these rugged environments, Intercomp delivered customized software and a ruggedized PC to ensure reliable operation under any conditions.

From an installation standpoint, the Intercomp WIM System also checked numerous boxes in the company's requirements. Their commitment to rapidly deploy weighing systems at 22 sites within a period of months presented many significant obstacles for in-ground scale systems, including the need for costly and extensive excavation for frames and drains, likely delays and construction permitting at each site – not to mention the unrealized costs of time-consuming installation that disrupts operations.

Installation is simple, flush-mounting the Strip Sensors into shallow cuts, reducing costs and operational disruptions.

A major advantage of the Intercomp WIM Strip Sensor system is the simplicity, ease and speed of system installation. Flush-mount WIM Strip Sensors are easily installed into pavement surfaces with a shallow 4-inch surface cut. WIM installation can be performed in a single day versus weeks of costly site excavation, construction and installation required by frame-based scale systems.

Results

To serve its fleet of utility service trucks, Intercomp WIM Strip Sensors are in the process of being installed at 22 remote sites across the company's wide service area. With the WIM System, drivers are able to quickly verify gross vehicle weight and gross axle

The Intercomp WIM System can display real-time, in-motion weigh data and pass/ no-pass indications for GVWR and GAWR.

weight while in motion, through a simple “green light / red light” indicator enabled by real-time weight data acquisition driven by the Intercomp WIM sensors. This simple validation ensures GVWR (gross vehicle weight rating) and GAWR (gross axle weight rating) compliance before vehicles leave the yard. This visual and data logged verification helps ensure worker and road safety, eliminates the potential for costly overload violations, and helps deliver higher levels of productivity, accessibility and critical service response.

The Intercomp solution has proven to be an extremely attractive solution to this customer, addressing many of their goals including:

- Weighing accuracy and verification with changing payloads
- Robust operation and uptime in demanding environment
- Low maintenance and calibration requirements
- Simple installation with greatly reduced costs
- Rapid system installation and deployment
- Minimized operational disruptions and infrastructure requirements
- Simple, intuitive and in-motion operation for drivers
- Reduced overloads and violations
- Improved safety and worker satisfaction
- Enhanced operation response times and productivity
- Low acquisition, implementation and ownership costs

Intercomp Technology Overview

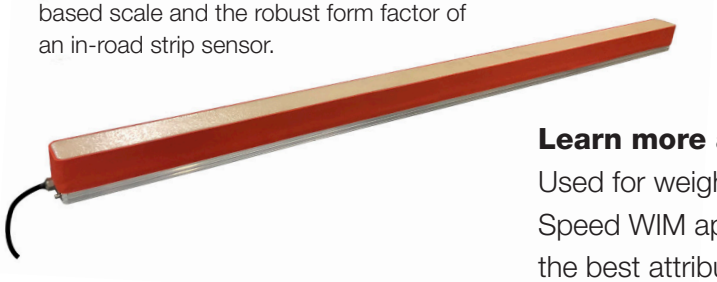
Designed from NTEP/OIML approved scale technology, Intercomp Strip Sensors measure the magnitude of mechanical quantities such as force, torque, load and pressure to provide the system requirements specified with precision scale technology. This turnkey solution enables compliance with accepted metrology, standarization, testing, certification and accreditation used by legal metrology authorities and industries worldwide. Intercomp Strip Sensors are capable of meeting or exceeding ASTM E1318-09 Type III and COST 323 A(5) performance requirements, and certified to the OIML R134 WEIGH-IN-MOTION standard.

WIM systems driven by Intercomp Strip Sensors can automatically record and display wheel-load weights, axle weights, gross vehicle weights and other parameters as needed, at a wide range of speeds. Violation codes and definitions can be customized by the user, enabling streamlined screening of traffic. The system is well suited for weight verification, weight enforcement screening, direct

enforcement, monitoring bridge loads, traffic data collection and conducting road research.

Intercomp Strip Sensors are available in three standard lengths of 59", 69" and 79" (1.5m, 1.75m, and 2m). Custom lengths are also available. Installation consists of 1-4 pairs (2-8 strips) per lane.

Durable, dependable and accurate Intercomp WIM Strip Sensors combine the best attributes of a precision strain gauge-based scale and the robust form factor of an in-road strip sensor.



Learn more about Intercomp WIM Strip Sensors

Used for weight verification, tolling and various other Low- and High-Speed WIM applications, Intercomp WIM Strip Sensors combine the best attributes of a precision strain gauge-based scale and the robust form factor of an in-road strip sensor.

More information is available at **intercompcompany.com**, or contact Intercomp directly for application assistance.

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