USING CONTINUOUS CALIBRATION TO IMPROVE WIM ACCURACY IN COMMERCIAL VEHICLE OPERATIONS

B EZEANOWI[1*] and T HAICHERT[1]**

[1]International Road Dynamics, 702-43rd Street East, Saskatoon, SK S7K 3T9 Canada
*Tel: +1 306 653-9728; Email: Brendan.Ezeanowi@irdinc.com
**Tel: +1 306 653-9730; Email: Tyler.Haichert@irdinc.com

ABSTRACT

This paper describes an innovative approach to tyre pressure and condition measurement using an automated system that is capable of checking tyres in a non-invasive, non-stop manner. In addition, real-world examples of work being conducted in the United States and the Netherlands are described, and the potential impact of improper tyre inflation and anomalous tyre conditions is explained. The tyre anomaly and classification system are becoming widely accepted by North American enforcement agencies for screening commercial vehicles for unsafe tyres. Much like earlier pre-screening technologies such as Weigh-in-Motion and e-screening, tyre anomaly and classification systems enable high throughput of commercial vehicles at inspection facilities while improving safety. As underinflated tyres negatively affect fuel economy, the system may also be used to identify vehicles that are not operating at maximum fuel efficiency. What about road surface condition? This has been a significant focus for European agencies seeking to reduce fuel consumption and emissions. Tyre anomaly and classification technology is being integrated with smart mobility and smart city transportation systems that have environmental and congestion reduction goals at the centre of their focus.