

Test bench for administrative dynamic vehicle weighing systems WIM



Technical description:

The stand consists of two subsystems:

- Comprehensive measurement system (LS-WIM dynamic free-weight scale - 1 unit, WIM system with plate sensors - 1 unit, meteo station - 1 unit),
- WIM system with quartz sensors - 1 unit.

Trade name: Test bench for administrative dynamic vehicle weighing systems WIM

More details: </equipment/stanowisko-do-badania-administracyjnych-systemow-d/>

Access type: External

Type of accreditation / certificate: Not applicable

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Responsible body: Department of Measurement and Electronics

Group / laboratory / team: Prof. Janusz Gajda, dr hab. inż. Ryszard Sroka
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Last update date: Aug. 30, 2023, 1:51 p.m.

Year of commissioning: 2020

IDUB research areas:

(PRA 4) Technical solutions: from fundamental research, through modelling and design, to prototypes. The application of mathematical, information technology, and electronics tools to macro-, micro-, and nanoscale problems

Research capabilities:

The infrastructure built will be used primarily for research. The aim is to determine the influence of environmental factors on the accuracy of WIM systems equipped with load cells made using different technologies, to test new methods of calibrating WIM systems and to test different algorithms to increase the robustness of WIM systems to changing operating conditions and changes in the speed of the vehicles being weighed.

Measurement capabilities:

The following measurements are possible:

- analysis of vehicle traffic structure and volume,
- measurement of basic traffic parameters,
- dynamic weighing of vehicles (total weight, static axle load),
- analysis of environmental factors (air, surface, road temperature, wind speed and direction, precipitation, icing) on vehicle weighing errors, divided into two pressure sensor technologies.

Conditions for providing infrastructure:

The stand can be made available on site, once the research programme has been agreed with the stand supervisors. Material conditions are negotiated on an individual basis.