

ISO TC 204/WG14 - ISO AWI PAS 19486

Intelligent transport systems – Acceleration Control for Pedal Error (ACPE) – Performance Requirements and Test Procedures

Take aways:

- VRUs as target obstacles will be developed for next step.

Normative reference to

ISO 19206-1, Road vehicles — Test devices for target vehicles, vulnerable road users and other obstacles, for assessment of active safety functions —Part 1: Requirements for passenger vehicle rear-end targets

ISO 19206-3, Road vehicles — Test devices for target vehicles, vulnerable road users and other obstacles, for assessment of active safety functions —Part 3: Requirements for passenger vehicle 3D targets

Acceleration Control for Pedal Error per definition, a system with an obstacle in front or behind the stationary subject vehicle

Test

- The target placed 0,8 m to 1,0 m away from the test vehicle (specified distance by the manufacturer).
- Accelerator shall be pressed from zero to full stroke within 0,25 sec
- Virtual collision speed case that the system is inactivated shall be measured
- Collision speed V_C m/s with target is less than 70 % against the virtual collision speed, the test satisfies the pass criteria.

Working Draft in Review

ISO/TC 22/SC 33/WG 3- ISO/AWI PAS 21779

Road vehicles - Test method to evaluate the performance of Acceleration Control for Pedal Error

Take aways:

Relates to ISO AWI PAS 19486

Testing

Much more intensive requirements for test preparation and application of the test, (e.g. to prepare the brakes, documentation, measurements)

To demonstrate the “collision avoidability“ a relative metric is in discussion:

$$\text{Rate of speed change} = \frac{\text{Speed w/o the system} - \text{Speed with the system}}{\text{Speed w/o the system}}$$

Recorded description	Rate of speed change
Avoidance	1.0
(Value of the rate)	Between 0.3 and 1.0
No effects	Less than 0.3

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