



Wheel slide protection: Stationary and mobile WSP test rig

DB Systemtechnik operates a modern hardware-in-the-loop test rig for optimization and certification of WSP systems and components.

The WSP test rig of DB Systemtechnik is

- accredited as test laboratory according to DIN EN ISO 17025
- validated according to UIC leaflet 541-05, EN 15595:2011 und EN 15595:2018
- based on a physical model for the wheel rail contact simulation
- modular and applicable as test rig of classes 1, 2 and 3

We offer:

- Certification of WSP systems according to UIC leaflet 541-05
- TSI conformity tests of WSP systems according to EN 15595
- Qualification of WSP components like speed sensors and dump valves
- Regression tests due to changes in WSP parameters or algorithms
- Optimization of WSP algorithms under realistic and reproducible test conditions
- Testing of wheel rotation monitoring systems

Technical details:

- Vehicle categories to be tested: passenger coach, locomotive, multiple unit
- Velocity up to 560 km/h
- Up to 6 axles
- Simulated brake systems: pneumatic brake (indirect und direct systems), electrodynamic brake, retarder, magnetic track brake

The mobile WSP test rig combines the established simulation model of the stationary test rig with mobile test units, which connect the test rig with the real vehicle.

The speed sensors of the vehicle are replaced by the mobile test units to transmit the necessary speed signals from the test rig to the WSP device of the vehicle. Simulated WSP tests can be performed on a standing vehicle using the real brake systems.

We offer:

- Substitution of specific track tests by simulation tests (e.g. „500 m of oil“)
- Regression tests instead of repeated track tests due to parameters changes in WSP device
- WSP optimization
- Testing of wheel rotation monitoring systems

Advantages:

- Combination of track tests and simulation tests to save time and costs during commissioning test campaigns

Technical details:

- Vehicle categories to be tested: passenger coach, locomotive, multiple unit
- Velocity up to 560 km/h
- Up to 20 axles can be tested simultaneously
- Either the brake system of the real vehicle or a simulated brake system can be used

Our knowledge: **Your success**

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