

Testing laboratory for railway vehicle.

SBB Passenger Services Production – your partner for braking system matters.

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SBB Passenger Services Production.

The centre of excellence for braking system testing.

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For both new accreditations of railway vehicles and changes to existing braking systems, extensive testing is required to ensure safe operation. This is why we work to compile expert reports on braking systems and offer you the necessary measurement and testing services.

Our services.

Brake testing is essential for the accreditation of railway vehicles or in the event of major upgrades to existing braking systems.

We determine the brake performance using specially adapted testing methods, taking into account the various specific circumstances, and document the measurement results in a test report. We measure the braking force, the pneumatic and thermal behaviour of the braking system and the behaviour of the anti-slide system under a variety of load and environmental conditions. We conduct our tests from a completely objective standpoint and call on other specialists if necessary in order to provide expert assessments – including some that are independent of system suppliers.

How you benefit.

As a rail operator and maintenance provider, we know the requirements imposed by the accreditation authorities and are qualified to assess operational safety and functionality.

- We can manage the entire official process for you – from vehicle accreditation through to safety certification of individual components.
- We will support you in any matters concerning bra-

king systems that arise during vehicle accreditations.

- We will create the testing specifications for you based on the specific requirements.
- We will compile a test report for you on the brake components or braking systems, taking into consideration the regulations and standards that are currently in force.

Your reliable partner.

- Engineering expertise combined with comprehensive knowledge of inspection and testing
- Specialised employees with excellent technical knowledge
- Accredited by the SAS as a testing laboratory for static brake testing, dynamic braking power measurements and anti-slide system measurements under number STS 0636 in accordance with SN EN ISO/IEC 17025
- In-depth knowledge covering a variety of rolling stock, vehicle types and components
- Quality management system certified to ISO 9001
- Environmental management system certified to ISO 14001
- OHSAS 18001 (Occupational Health and Safety Management System) certification
- ISO 31000 and ONR 49001 risk management system certification



Testing laboratory for railway vehicle. An overview of our range of services.

Our range of services.

- Formulation of testing specifications
- Bench testing of braking systems and brake components, including efficiency and pressure booster characteristic curves (accredited*)
- Dynamic braking power measurements in accordance with UIC 544-1, EN 16834, EN 16185-2 and EN 15734-2 (accredited*)
- Dynamic testing of anti-slide systems in accordance with UIC 541-05 and EN 15595 (accredited*)
- Formulation of test reports
- Commentary on test reports
- Evaluation of the thermal behaviour of braking systems
- Measurement and optimisation of slippage behaviour
- Testing of the immobilisation protection using holding force measurements (accredited*)
- Planning, execution and evaluation of operational tests
- Vibration measurements: Whole-body vibration as per ISO 2631 and ride comfort as per EN 12299 (simplified procedure)

* Measurements according to accredited test procedures

Our know-how.

Our testing laboratory for railway vehicle boasts decades of experience in braking systems testing. We constantly keep up to date with the latest technology and actively follow the developments in this area. We are also represented in the major standardisation bodies (CEN, UIC), where we are able to exercise our influence accordingly.

Soapy water dosing device for influencing the coefficient of adhesion



Integrated solutions.

We carry out the complete planning and execution of the test programme. This includes, among other things, selecting suitable test routes, providing rolling stock and locomotive crew, obtaining permits, organising measurement runs, managing vehicle loading and more.

Brake testing wagon: Fully equipped for dynamic brake and anti-slide system testing, special coupling for stopping distance tests.

Influencing the coefficient of adhesion: System for influencing the coefficient of adhesion between the wheel and track. Throughput quantity and soap concentration can be regulated dynamically during the test.

Brake control: Complete mobile UIC braking system for vehicle brake control.

Measurement technology: Scalable, battery-operated high-speed measurement systems. This permits synchronous high-frequency data recording that is distributed via a fibre-optic cable connection on long trains, with several hundred measuring channels.

Odometry: Optical measurement system that is independent of the coefficient of adhesion, for high-precision distance and speed measurement.

Sensors: Extensive measurement technology for pressure, temperature, distance, speed, position, force, acceleration, wheelset speed, control technology and anti-slide parameters. Development of specific sensors that are tailored to your requirements.

Stopping distance testing with individual wagons



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