



Rail

Choose certainty.  
Add value.

## EMC and Environmental Testing for the Railway Industry

Rail equipment has to perform safely in a variety of harsh environments that can be simulated effectively in laboratory conditions, complimented by in-situ testing.

TÜV SÜD provides UKAS accredited laboratory and in-situ testing services and has some of the most comprehensively equipped testing facilities in Europe.

Our facilities have been designed specifically to meet the demanding requirements of test standards including the EN 50121 series of Electromagnetic Compatibility (EMC) standards, RIA 12, 13 and 20, and Rolling Stock standards EN 50155 (Electronic Equipment) and EN 61373 (Shock and Vibration).

The data obtained from testing will provide the basis for demonstrating compliance, qualification and certification to the levels required by EU legislation, regulations and industry standards.

TÜV SÜD's EMC and Environmental test chambers and vibration test machines are capable of accommodating large-scale sub-assemblies, signalling equipment and platform information systems.

### **Mechanical Testing**

Our mechanical test laboratories are among the most extensive in Europe, and include vibration systems with interchangeable slip tables capable of up to 159kN, some with a displacement of up to 100mm. Our state-of-the-art controllers offer instant analysis of results, allowing for accurate and efficient problem solving and reporting. Our Fixture Design Service covers products of any size and complexity.

### **Climatic Testing**

Our 11 chambers can simulate either single environmental conditions or multiple conditions simultaneously. These chambers cover the extremes of temperature, altitude, humidity, temperature cycling, solar heating and corrosive atmospheres.

### **HALT / HASS Testing**

Highly Accelerated Life Testing (HALT) and Highly Accelerated Stress Screening (HASS) precipitate failures in electronic products and are used extensively by leading manufacturers as part of their design and production processes. HALT & HASS reduces the number of failures during the life of a product and can reduce the life cycle costs to the manufacturer by cutting the number of warranty claims.

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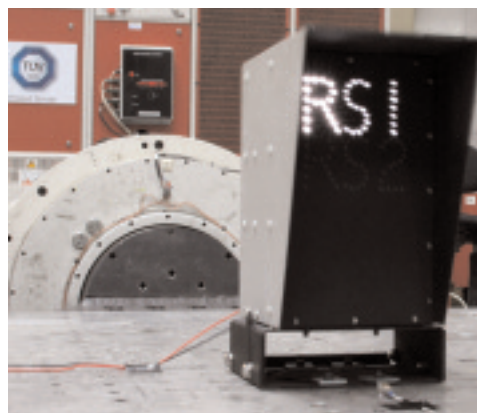
### EMC Testing

Our customers can run their product compliance programmes with the confidence that they are working with the UK's leading EMC test laboratory. Our test facilities in Fareham, Hampshire, and Bearley, near Stratford-upon-Avon, Warwickshire, have among the most comprehensively equipped EMC test facilities in Europe, incorporating 11 screened enclosures, 8 dedicated EMC laboratories and one Open Area Test Site (OATS).

TÜV SÜD's engineers have access to the latest test equipment and use logbook and reporting software that can reduce test report lead times to less than 7 days.

### In-Situ EMC Testing

In cases where logistics are an issue, large and/or complex equipment can be tested in-situ, either at the manufacturer's premises or the final point of installation. TÜV SÜD has a dedicated In-Situ team that has conducted EMC testing and Radio Frequency (RF) surveys at sites throughout the world. Our team plays key roles, completing testing where time and location have been critical issues for our customer.



They are backed by one of the largest EMC test facilities in the world and can therefore perform multiple testing projects if required.

Typical equipment that can be tested trackside includes:

- Rolling Stock
- Power supply, substations and switchgear
- Railway signalling and trackside equipment
- Road/Rail Vehicles (RRVs)
- Equipment Rooms

TÜV SÜD in-situ engineers hold all applicable safety permits and are well versed in performing whole vehicle emissions measurements as required by EN 50121-3-1 to determine if new or refurbished trains comply with rail specification requirements. Our teams have also conducted numerous Radio Frequency (RF) and Low Frequency (LF) electromagnetic field measurements to provide valuable information on the electromagnetic environment associated with a particular installation.

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