

We energize the world of mobility

KEMA Transportation Systems



With more than 100 specialists worldwide, KEMA Transportation Systems (TNS) offers consulting and engineering, certification and assessment services for all kinds of land mass and cargo transportation systems. This includes innovation and implementation in the fields of Operations Control and E-Mobility.

Detailed knowledge and experiences are the basis for Rail consulting and engineering services, that KEMA offers on traction power supply systems, contact lines, signalling, auxiliaries, earthing and the return circuit and SCADA. The activities cover the full portfolio from systems approach down to detailed engineering. KEMA has own special simulation and design tools.

KEMA's Rail Transport & Certification branch is a Notified Body for Interoperability, providing the expertise and authorization, conduct tests and assessments for all parts of the Technical Specifications for Interoperability (TSI).

KEMAs competencies cover operations analysis including business process re-engineering, design of operations control centers, train control systems, power and facility SCADA systems, fleet management systems and the supporting telecommunications infrastructure.

KEMA e-mobility stands for the extensive use of electricity for transportation, in both individual and public electrical vehicles. The goal is to reduce air and noise pollution especially in densely populated areas. To enable to use of electricity as main energy source, developments in infrastructure (charging), vehicle technology (storage) and energy accounting are required. Through e-mobility the use of green energy in transportation systems is enabled.

Brief description

Rail Engineering and Consulting

Fields of expertise:

- > Rail power supply
- > Contact line systems
- > Signalling
- > Earthing, the return circuit and EMC
- > Auxiliaries
- > SCADA
- > Control Centres

Services:

- > Engineering (preliminary design, detailed design)
- > Supervision of construction works
- > Consulting
- > Concept studies
- > Expertises
- > Approvals and acceptances
- > Design reviews
- > Measurements
- > Studies

Special Software:

- > Train simulation and network calculation: ELBAS-SINANET® (d.c. railways), ELBAS-WEBANET (a.c. railways)
- > Electric and electromagnetic fields, impedances: ELBAS-IMAFEB/ELEFEB
- > Contact line design: ELBAS-OLACAD

Rail Certification and Assessments (Notified Body Interoperability)

Fields of expertise:

- > Energy
- > Infrastructure
- > Rolling stock
- > Command, control and signalling
- > Environment
- > Operation and maintenance

Services:

- > Licensing of rolling stock
- > Certification of components
- > Certification and safety assessments for ERTMS/ETCS interoperability components and subassemblies
- > Studies commissioned by the European Railway Agency and the European Commission
- > Development of international guidelines for certification

Operations control

Fields of expertise:

- > Operations
- > Operation control centers
- > Fleet management
- > Telecommunications
- > Maintenance

Services:

- > Consulting
- > Design
- > Supervision
- > Commissioning

E-Mobility

Fields of expertise:

- > Infrastructure: Charging stations, smart grid solutions
- > Electric vehicle technology: Energy storage and traction system
- > Energy accounting procedures and systems

Services:

- > Consulting
- > Expertises
- > Solutions
- > Project control

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