TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

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CLC/TS 50562

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English version

Railway applications - Fixed installations - Process, measures and demonstration of safety for electric traction systems

Applications ferroviaires - Installations fixes - Processus, mesures et démonstration de la sécurité pour les installations fixes de traction électrique

Bahnanwendungen - Ortsfeste Anlagen - Prozess, Maßnahmen und Nachweisführung für die Sicherheit in der Bahnstromversorgung

This Technical Specification was approved by CENELEC on 2011-05-24.

CENELEC members are required to announce the existence of this TS in the same way as for an EN and to make the TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This Technical Specification was prepared by SC 9XC, Electric supply and earthing systems for public transport equipment and ancillary apparatus (Fixed installations), of Technical Committee CENELEC TC 9X, Electrical and electronic applications for railways.

It was circulated for vote in accordance with the Internal Regulations, Part 2, Subclause 11.3.3.3 and was approved by CENELEC as CLC/TS 50562 on 2011-05-24.

The following date is proposed:

– latest date by which the existence of the CLC/TS has to be announced at national level (doa) 2011-11-24

1 Scope

This Technical Specification defines the process, measures and demonstration of safety for the electric traction systems of

– railways,
– guided mass transport systems,
– trolleybus systems.

The systems can be elevated, at-grade and underground.

It does not apply to

– underground mine traction systems,
– cranes, transportable platforms and similar transportation equipment on rails, temporary structures (e.g. exhibition structures) in so far as these are not supplied directly or via transformers from the contact line system and are not endangered by the traction power supply system,
– suspended cable cars,
– funicular railways,
– magnetic levitated systems,
– railways with inductive power supply without contact system,
– railways with buried contact system that is required to be energised only below the train to ensure safety,

but it can support the safety considerations of such systems as far as applicable.

This Technical Specification refers to standards and common practice to demonstrate safety including the functional aspects.

This Technical Specification applies to the erecting of new lines and to all significant changes of existing lines.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50110 (all parts), *Operation of electrical installations*

EN 50119:2009, *Railway applications – Fixed installations – Electric traction overhead contact lines*

EN 50122 (all parts), *Railway applications – Fixed installations – Electrical safety, earthing and the return circuit*

EN 50122-1:2011, *Railway applications – Fixed installations – Electrical safety, earthing and the return circuit – Part 1: Protective provisions against electric shock*

EN 50123 (all parts), *Railway applications – Fixed installations – D.C. switchgear*

EN 50124 (all parts), *Railway applications – Insulation coordination*

CLC/TR / EN 50126 (all parts), *Railway applications – The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS)*

CLC/TR 50126-2:2007, *Railway applications – The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS) – Part 2: Guide to the application of EN 50126-1 for safety*

EN 50152 (all parts), *Railway applications – Fixed installations – Particular requirements for a.c. switchgear*

EN 50153, *Railway applications – Rolling stock – Protective provisions relating to electrical hazards*

EN 50163, *Railway applications – Supply voltages of traction systems*

EN 50367, *Railway applications – Current collection systems – Technical criteria for the interaction between pantograph and overhead line (to achieve free access)*

EN 50388, *Railway applications – Power supply and rolling stock – Technical criteria for the coordination between power supply (substation) and rolling stock to achieve interoperability*

CLC/TR 50488, *Railway applications – Safety measures for personnel working on or near overhead contact lines*

EN 60255 (all parts), *Measuring relays and protection equipment* (IEC 60255, all parts)

EN 60664 (all parts), *Insulation coordination for equipment within low-voltage systems* (IEC 60664, all parts)

EN 62271-1:2008, *High- voltage switchgear and controlgear – Part 1: Common specifications* (IEC 62271-1:2007)

EN 62305 (all parts), *Protection against lightning* (IEC 62305, all parts)