

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CEN/TR 15874:2009	Railway applications – Noise emission – Road test of standard for rail roughness measurement EN 15610:2009			
CEN/TS 45545-1:2009	Railway applications – Fire protection on railway vehicles Part 1: General			
CEN/TS 45545-2:2009	Railway applications – Fire protection on railway vehicles Part 2: Requirements for fire behaviour of materials and components			
CEN/TS 45545-3:2009	Railway applications – Fire protection on railway vehicles Part 3: Fire resistance requirements for fire barriers			
CEN/TS 45545-4:2009	Railway applications – Fire protection on railway vehicles Part 4: Fire safety requirements for railway rolling stock design			
CEN/TS 45545-5:2009	Railway applications – Fire protection on railway vehicles Part 5: Fire safety requirements for electrical equipment including that of trolley buses, track guided buses and magnetic levitation vehicles			

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CEN/TS 45545-6:2009	Railway applications – Fire protection on railway vehicles Part 6: Fire control and management systems			
CEN/TS 45545-7:2009	Railway applications – Fire protection on railway vehicles Part 7: Fire safety requirements for flammable liquid and flammable gas installations			
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	TC 9X		
CLC/TR 50126-3:2008	Railway applications – The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS) Part 3: Guide to the application of EN 50126-1 for rolling stock RAM	SC 9XB		
CLC/TR 50451:2007	Railway applications – Systematic allocation of safety integrity requirements	SC 9XA		
CLC/TR 50452:2007	Railway applications – Radio remote control system of traction vehicle for freight traffic in multiple traction operation	SC 9XA		

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TS 50238-2:2010	Railway applications – Compatibility between rolling stock and train detection systems Part 2: Compatibility with track circuits	SC 9XA		
CLC/TS 50238-3:2010	Railway applications – Compatibility between rolling stock and train detection systems Part 3: Compatibility with axle counters	SC 9XA		
CLC/TS 50459-1:2005	Railway applications – Communication, signalling and processing systems – European Rail Traffic Management System – Driver-Machine Interface Part 1: Ergonomic principles for the presentation of ERTMS/ETCS/GSM-R information	SC 9XA		
CLC/TS 50459-2:2005	Railway applications – Communication, signalling and processing systems – European Rail Traffic Management System – Driver-Machine Interface Part 2: Ergonomic arrangements of ERTMS/ETCS information	SC 9XA		
CLC/TS 50459-3:2005	Railway applications – Communication, signalling and processing systems – European Rail Traffic Management System – Driver-Machine Interface Part 3: Ergonomic arrangements of ERTMS/ETCS/GSM-R information	SC 9XA		

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TS 50459-4:2005	Railway applications – Communication, signalling and processing systems – European Rail Traffic Management System – Driver-Machine Interface Part 4: Data entry for the ERTMS/ETCS/GSM-R systems	SC 9XA		
CLC/TS 50459-5:2005	Railway applications – Communication, signalling and processing systems – European Rail Traffic Management System – Driver-Machine Interface Part 5: Symbols	SC 9XA		
CLC/TS 50459-6:2005	Railway applications – Communication, signalling and processing systems – European Rail Traffic Management System – Driver-Machine Interface Part 6: Audible Information	SC 9XA		
CLC/TS 50459-7:2007	Railway applications – Communication, signalling and processing systems – European Rail Traffic Management System – Driver-Machine Interface Part 7: Specific Transmission Modules	SC 9XA		
CLC/TS 50467:2008 + Corrigenda Maio 2008	Railway applications – Rolling stock – Electrical connectors, requirements and test methods	SC 9XB		

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TS 50488:2006	Railway applications – Safety measures for the personnel working on or near overhead contact lines	SC 9XC		
CLC/TR 50501-1:2007	Rolling stock – Intercommunication between vehicles and train/wayside Part 1: Data dictionary and rules for functional standardisation	SC 9XB		
CLC/TR 50502:2008	Railway applications – Rolling stock – Electric equipment in trolley buses – Safety requirements and connection systems	SC 9XB		
CLC/TR 50506-1:2007	Railway applications – Communications, signalling and processing systems – Application Guide for EN 50129 Part 1: Cross-acceptance	SC 9XA		
CLC/TR 50506-2:2009	Railway applications – Communications, signalling and processing systems – Application Guide for EN 50129 Part 1: Safety assurance	SC 9XA		
CLC/TR 50507:2007	Railway applications – Interference limits of existing track circuits used on European railways	SC 9XA		

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TR 50511:2007	Railway applications – Communications, signalling and processing systems – ERTMS/ETCS – External signalling for lines equipped with ERTMS/ETCS Level 2	SC 9XA		
<p>This document provides guidance on applying the RAM requirements in EN 50126-1 to rolling stock and for dealing with RAM activities during the system life cycle phases from invitation to tender to demonstration in operation only. All references to EN 50126-1 concern the version of 1998.</p> <p>The guide is aimed at the customers/operators and main suppliers of rolling stock. The main purpose of the guide is to:</p> <ul style="list-style-type: none"> • Enable a customer/operator of rolling stock: <ul style="list-style-type: none"> - to specify the RAM requirements addressing the type of operation in terms of the end customer needs, considering service availability and economic considerations; - to evaluate different tenders, in terms of RAM requirements, on a common basis with the aid of specific RAM documents; - to gain assurance, during design/development phase, that the rolling stock being offered is likely to satisfy the RAM contractual requirements by examining step by step detailed and specific RAM documents as na output of the RAM activities performed during the development phase; - to validate that the rolling stock, as delivered, satisfies the specific RAM requirements • to enable the main supplier of rolling stock <ul style="list-style-type: none"> - to understand the customers/operators RAM requirements; - to provide substantive information/visibility in a tender to show that the product offered is likely to satisfy the RAM requirements by performing preliminary RAM analysis; - to provide substantive information during design/development phase to show that the product offered is likely to satisfy the RAM requirements by performing detailed RAM analysis; - to demonstrate that the product delivered satisfies the RAM requirements; <p>Regarding LCC, this application guide is restricted to providing only the key RAM parameters necessary to be incorporated into na LCC Model.</p> <p>This application guide excludes:</p> <ul style="list-style-type: none"> • RAM values connected to the different RAM requirements (however, it contains a simple guide line of actions for supporting the decision making process and choosing appropriate values, see 5.4) • Specific RAM documents to be produced and activities to be performed. However, it provides, only as na example, typical data and document templates for recordingthe output of a RAM analysis). 				

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TR 50451:2007	<p>Railway applications – Systematic allocation of safety integrity requirements</p> <p>(...) is to define a method to determine the required Safety Integrity Level of railway signalling equipment taking in consideration</p> <ul style="list-style-type: none"> • the operational conditions of the railway, and • the architecture of the sugnalling system. <p>(...)</p> <p>From a mechanistic point of view the task of this Technical Report is to define a method of calculation, which determines the integrity requirements (qualitatively and quantitatively) from the inputs stated above.</p>	SC 9XA		
CLC/TR 50452:2007	<p>Railway applications – Radio remote control system of traction vehicle for freight traffic in multiple traction operation</p> <p>(...) is to serve as a guideline for the application of radio remote control system of traction vehicles for multitraction operation.</p> <p>(...) EN 50239 is applicable for the radio remote control system of traction vehicles for freight traffic. This standard sets out 14 application examples. It does not include an example of multitraction operation; it only includes an example whereby a traction vehicle is controlled by an appropriate driving trailer in a train consist (example 13 of EN 50239).</p> <p>(...) is based on EN 50239 and provides an indication of the additional requirements relevant for the multitraction application.</p>	SC 9XA		

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TS 50459-1:2005	Railway applications – Communication, signalling and processing systems – European Rail Traffic Management System – Driver-Machine Interface Part 1: Ergonomic principles for the presentation of ERTMS/ETCS/GSM-R information	SC 9XA		
<p>(...) describes from an ergonomic point of view how ERTMS information shall be arranged and displayed. (...) describes more ergonomic details than currently provide by the ERTMS/ETCS/GSM-R specifications.</p> <p>(...) defines the ergonomics for the Driver-Machine Interface (DMI) for the ERTMS/ETCS Train Control System, and for the integrated ERTMS/GSM-R Train Control and Train Radio Systems, and for the stand alone ERTMS/GSM-R Train Radio Systems and for other technical systems currently provides on the rolling stock.</p> <p>The ergonomics covers the</p> <ul style="list-style-type: none"> - general arrangements (dialogue structure, sequences, layout philisophy, colour philisophy), - symbols, - audible information, - data entry arrangements. <p>The aims of the ERTMS/ETCS/GSM-R Train Control and Train Radio Systems are standardised systems facilitating interoperable movement of trains and permitting economies of scale in procurement and operations. The objective (...) is to define the minimum requirements on the DMI that are necessary to enable these objectives to be achieved. Hence the Technical Specification is limited to ergonomic considerations and does not define the technology to be used for the implementation.</p> <p>The reasons for defining the ergonomics of the DMI are as follows:</p> <ul style="list-style-type: none"> - achieving harminised and coherent presentation for the ERTMS/ETCS and STM information. Given the large number of STM's requiring the use the ERTMS/ETCS DMI, only a harmonised approach is feasible, - defining Driver-Machine Interface ergonomics that is compatible with agreed interoperable ERTMS specifications; - to reduce the risk of incorrect operation by a driver working with different trains fitted with ERTMS/ETCS and ERTMS/GSM-R; - facilitating train operation with a unified ergonomics, hence reducing the cost of driver training. <p>(...) is applicable on all trains fitted with the ERTMS/ETCS and also for trains fitted with train radio (GSM-R) DMI.</p> <p>The scope of Part 1 of the Technical Specification CLC/TS 50459 series is to define ergonomic principles for the interface between the driver and ERTMS/ETCS/GSM-R.</p> <p>(...) gives guidelines how to implement different technology (soft keys, touch screen device, LCD, cathode tube, etc.).</p>				

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TS 50459-2:2005	Railway applications – Communication, signalling and processing systems – European Rail Traffic Management System – Driver-Machine Interface Part 2: Ergonomic arrangements of ERTMS/ETCS information	SC 9XA		
<p>(...) describes from an ergonomic point of view how ERTMS information shall be arranged and displayed. (...) describes more ergonomic details than currently provide by the ERTMS/ETCS/GSM-R specifications.</p> <p>(...) defines the ergonomics for the Driver-Machine Interface (DMI) for the ERTMS/ETCS Train Control System, and for the integrated ERTMS/GSM-R Train Control and Train Radio Systems, and for the stand alone ERTMS/GSM-R Train Radio Systems and for other technical systems currently provides on the engines.</p> <p>The ergonomics covers the</p> <ul style="list-style-type: none"> - general arrangements (dialogue structure, sequences, layout philisophy, colour philisophy), - symbols, - audible information, - data entry arrangements. <p>The aims of the ERTMS/ETCS/GSM-R Train Control and Train Radio Systems are standardised systems facilitating interoperable movement of trains and permitting economies of scale in procurement and operations. The objective (...) is to define the minimum requirements on the DMI that are necessary to enable these objectives to be achieved. Hence the Technical Specification is limited to ergonomic considerations and does not define the technology to be used for the implementation.</p> <p>The reasons for defining the ergonomics of the DMI are as follows:</p> <ul style="list-style-type: none"> - achieving harminised and coherent presentation for the ERTMS/ETCS and STM information. Given the large number of STM's requiring the use the ERTMS/ETCS DMI, only a harmonised approach is feasible, - defining Driver-Machine Interface ergonomics that is compatible with agreed interoperable ERTMS specifications; - to reduce the risk of incorrect operation by a driver working with different trains fitted with ERTMS/ETCS and ERTMS/GSM-R; - facilitating train operation with a unified ergonomics, hence reducing the cost of driver training. <p>(...) is applicable on all trains fitted with the ERTMS/ETCS and also for trains fitted with train radio (GSM-R) DMI.</p> <p>The scope of Part 2 of the Technical Specification CLC/TS 50459 series is to define ergonomic arrangements of ERTMS/ETCS information.</p> <p>(...) gives guidelines how to implement different technology (soft keys, touch screen device, LCD, cathode tube, etc.).</p>				

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TS 50459-3:2005	Railway applications – Communication, signalling and processing systems – European Rail Traffic Management System – Driver-Machine Interface Part 3: Ergonomic arrangements of ERTMS/GSM-R information	SC 9XA		
<p>(...) describes from an ergonomic point of view how ERTMS information shall be arranged and displayed. (...) describes more ergonomic details than currently provide by the ERTMS/ETCS/GSM-R specifications.</p> <p>(...) defines the ergonomics for the Driver-Machine Interface (DMI) for the ERTMS/ETCS Train Control System, and for the integrated ERTMS/GSM-R Train Control and Train Radio Systems, and for the stand alone ERTMS/GSM-R Train Radio Systems and for other technical systems currently provides on the engines.</p> <p>The ergonomics covers the</p> <ul style="list-style-type: none"> - general arrangements (dialogue structure, sequences, layout philisophy, colour philisophy), - symbols, - audible information, - data entry arrangements. <p>The aims of the ERTMS/ETCS/GSM-R Train Control and Train Radio Systems are standardised systems facilitating interoperable movement of trains and permitting economies of scale in procurement and operations. The objective (...) is to define the minimum requirements on the DMI that are necessary to enable these objectives to be achieved. Hence the Technical Specification is limited to ergonomic considerations and does not define the technology to be used for the implementation.</p> <p>The reasons for defining the ergonomics of the DMI are as follows:</p> <ul style="list-style-type: none"> - achieving harminised and coherent presentation for the ERTMS/ETCS and STM information. Given the large number of STM's requiring the use the ERTMS/ETCS DMI, only a harmonised approach is feasible, - defining Driver-Machine Interface ergonomics that is compatible with agreed interoperable ERTMS specifications; - to reduce the risk of incorrect operation by a driver working with different trains fitted with ERTMS/ETCS and ERTMS/GSM-R; - facilitating train operation with a unified ergonomics, hence reducing the cost of driver training. <p>(...) is applicable on all trains fitted with the ERTMS/ETCS and also for trains fitted with train radio (GSM-R) DMI.</p> <p>The scope of Part 3 of the Technical Specification CLC/TS 50459 series is to define ergonomic arrangements of ERTMS/ETCS information only.</p>				

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TS 50459-4:2005	Railway applications – Communication, signalling and processing systems – European Rail Traffic Management System – Driver-Machine Interface Part 4: Data entry for the ERTMS/ETCS/GSM-R systems	SC 9XA		
<p>(...) describes from an ergonomic point of view how ERTMS information shall be arranged and displayed. (...) describes more ergonomic details than currently provide by the ERTMS/ETCS/GSM-R specifications.</p> <p>(...) defines the ergonomics for the Driver-Machine Interface (DMI) for the ERTMS/ETCS Train Control System, and for the integrated ERTMS/GSM-R Train Control and Train Radio Systems, and for the stand alone ERTMS/GSM-R Train Radio Systems and for other technical systems currently provides on the engines.</p> <p>The ergonomics covers the</p> <ul style="list-style-type: none"> - general arrangements (dialogue structure, sequences, layout philisophy, colour philisophy), - symbols, - audible information, - data entry arrangements. <p>The aims of the ERTMS/ETCS/GSM-R Train Control and Train Radio Systems are standardised systems facilitating interoperable movement of trains and permitting economies of scale in procurement and operations. The objective (...) is to define the minimum requirements on the DMI that are necessary to enable these objectives to be achieved. Hence the Technical Specification is limited to ergonomic considerations and does not define the technology to be used for the implementation.</p> <p>The reasons for defining the ergonomics of the DMI are as follows:</p> <ul style="list-style-type: none"> - achieving harminised and coherent presentation for the ERTMS/ETCS and STM information. Given the large number of STM's requiring the use the ERTMS/ETCS DMI, only a harmonised approach is feasible, - defining Driver-Machine Interface ergonomics that is compatible with agreed interoperable ERTMS specifications; - to reduce the risk of incorrect operation by a driver working with different trains fitted with ERTMS/ETCS and ERTMS/GSM-R; - facilitating train operation with a unified ergonomics, hence reducing the cost of driver training. <p>(...) is applicable on all trains fitted with the ERTMS/ETCS and also for trains fitted with train radio (GSM-R) DMI.</p> <p>The scope of Part 4 of the Technical Specification CLC/TS 50459 series is to define data entry principles for the interface between the driver and ERTMS/ETCS/GSM-R.</p> <p>(...) gives guidelines how to implement different technology (soft keys, touch screen device, LCD, cathode tube, etc.).</p>				

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TS 50459-5:2005	Railway applications – Communication, signalling and processing systems – European Rail Traffic Management System – Driver-Machine Interface Part 5: Symbols	SC 9XA		
<p>(...) describes from an ergonomic point of view how ERTMS information shall be arranged and displayed. (...) describes more ergonomic details than currently provide by the ERTMS/ETCS/GSM-R specifications.</p> <p>(...) defines the ergonomics for the Driver-Machine Interface (DMI) for the ERTMS/ETCS Train Control System, and for the integrated ERTMS/GSM-R Train Control and Train Radio Systems, and for the stand alone ERTMS/GSM-R Train Radio Systems and for other technical systems currently provides on the engines.</p> <p>The ergonomics covers the</p> <ul style="list-style-type: none"> - general arrangements (dialogue structure, sequences, layout philisophy, colour philisophy), - symbols, - audible information, - data entry arrangements. <p>The aims of the ERTMS/ETCS/GSM-R Train Control and Train Radio Systems are standardised systems facilitating interoperable movement of trains and permitting economies of scale in procurement and operations. The objective (...) is to define the minimum requirements on the DMI that are necessary to enable these objectives to be achieved. Hence the Technical Specification is limited to ergonomic considerations and does not define the technology to be used for the implementation.</p> <p>The reasons for defining the ergonomics of the DMI are as follows:</p> <ul style="list-style-type: none"> - achieving harminised and coherent presentation for the ERTMS/ETCS and STM information. Given the large number of STM's requiring the use the ERTMS/ETCS DMI, only a harmonised approach is feasible, - defining Driver-Machine Interface ergonomics that is compatible with agreed interoperable ERTMS specifications; - to reduce the risk of incorrect operation by a driver working with different trains fitted with ERTMS/ETCS and ERTMS/GSM-R; - facilitating train operation with a unified ergonomics, hence reducing the cost of driver training. <p>(...) is applicable on all trains fitted with the ERTMS/ETCS and also for trains fitted with train radio (GSM-R) DMI.</p> <p>The scope of this part of the Technical Specification CLC/TS 50459 series is to define the symbols used with the ERTMS/ETCS and the ERTMS/GSM-R DMI. The actual use of the symbols is depending on the availability of the function addressing the symbol.</p>				

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TS 50459-6:2005	Railway applications – Communication, signalling and processing systems – European Rail Traffic Management System – Driver-Machine Interface Part 6: Audible information	SC 9XA		
<p>(...) describes from an ergonomic point of view how ERTMS information shall be arranged and displayed. (...) describes more ergonomic details than currently provide by the ERTMS/ETCS/GSM-R specifications.</p> <p>(...) defines the ergonomics for the Driver-Machine Interface (DMI) for the ERTMS/ETCS Train Control System, and for the integrated ERTMS/GSM-R Train Control and Train Radio Systems, and for the stand alone ERTMS/GSM-R Train Radio Systems and for other technical systems currently provides on the engines.</p> <p>The ergonomics covers the</p> <ul style="list-style-type: none"> - general arrangements (dialogue structure, sequences, layout philisophy, colour philisophy), - symbols, - audible information, - data entry arrangements. <p>The aims of the ERTMS/ETCS/GSM-R Train Control and Train Radio Systems are standardised systems facilitating interoperable movement of trains and permitting economies of scale in procurement and operations. The objective (...) is to define the minimum requirements on the DMI that are necessary to enable these objectives to be achieved. Hence the Technical Specification is limited to ergonomic considerations and does not define the technology to be used for the implementation.</p> <p>The reasons for defining the ergonomics of the DMI are as follows:</p> <ul style="list-style-type: none"> - achieving harminised and coherent presentation for the ERTMS/ETCS and STM information. Given the large number of STM's requiring the use the ERTMS/ETCS DMI, only a harmonised approach is feasible, - defining Driver-Machine Interface ergonomics that is compatible with agreed interoperable ERTMS specifications; - to reduce the risk of incorrect operation by a driver working with different trains fitted with ERTMS/ETCS and ERTMS/GSM-R; - facilitating train operation with a unified ergonomics, hence reducing the cost of driver training. <p>(...) is applicable on all trains fitted with the ERTMS/ETCS and also for trains fitted with train radio (GSM-R) DMI.</p> <p>The scope of Part 6 of the Technical Specification CLC/TS 50459 series is to define the audible information used with the ERTMS/ETCS DMI and with the ERTMS/GSM-R DMI.</p> <p>The operational procedures for the GSM-R radio are out of acope of this document.</p>				

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TR 50459-7:2005	Railway applications - Communication, signalling and processing systems – European Rail Traffic Management System – Driver-Machine Interface Part 7: Specific Transmission Modules	SC 9XA		
	<p>(...) is to define the ERTMS DMI in STM mode for each system include in Annex B of STI CC.</p> <p>(...) defines the ergonomics for the Specific Transmission Module integrated in the Driver-Machine Interface (DMI) for the ERTMS/ETCS Train Control System, and for the integrated ERTMS/GSM-R Train Control and Train Radio Systems.</p> <p>The ergonomics covers the</p> <ul style="list-style-type: none"> - general arrangements (dialogue structure, sequences, layout philisophy, colour philisophy), - symbols, - audible information, - data entry arrangements. <p>The reasons for defining the ergonomics of the DMI are as follows:</p> <ul style="list-style-type: none"> - achieving harminised and coherent presentation for the ERTMS/ETCS and STM information.Given the large number of STM's requiring the use the ERTMS/ETCS DMI, only a harmonised approach is feasible, - defining Driver-Machine Interface ergonomics that is compatible with agreed interoperable ERTMS specifications; - to reduce the risk of incorrect operation by a driver working with different trains fitted with ERTMS/ETCS and ERTMS/GSM-R; - facilating train operation with a unified ergonomics, hence reducing the cost of driver training. <p>(...) is applicable on all trains fitted with the ERTMS/ETCS.</p>			
CLC/TS 50467:2008 + Corrigenda Maio 2008	Railway applications – Rolling stock – Electrical connectors, requirements and test methods	SC 9XB		

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TR 50488:2006	Railway applications – Safety measures for the personnel working on or near overhead contact lines	SC 9XC		
	<p>(...) is applicable to all work activity on or near the overhead contact line [IEC 60050-811, definition 811-33-02] of railway installations with supply voltage values as described in Table 1, derived from EN 50163. (...)</p> <p>(...) applies to requirements for safe working and maintenance procedures. It applies to all electrical work activities as well as non-electrical work activities.</p> <p>(...) deals with the electrical hazard only. Risks coming from train traffic are not covered in this document.</p> <p>(...) does not apply to:</p> <ul style="list-style-type: none"> - guided mass transport systems such as tramways, elevated and underground metro railways, mountain railways, trolley bus and other conductor rail systems; - mine or other internal industrial material transportation railways; - railway installations with supply voltage values below 1 500 V; - experimental electrical research work. 			

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TR 50501-1:2007	<p>Rolling stock – Intercommunication between vehicles and train/wayside Part 1: Data dictionary and rules for functional standardisation</p> <p>(...) will define</p> <ul style="list-style-type: none"> - requirements for the methods to be used for functional standardisation, in the standards to be prepared for data exchange involving railway vehicles, in two contexts <ul style="list-style-type: none"> 1) inter-consists communication, within a train formation, 2) communication with ground based installations. - the Reference Architecture defining the essential functional interfaces, - the concept of a Central Data Dictionary/repository to be applied to freight and passenger traffic functions. In this context, data are to be limited to basic information elements, which are necessary to define standard messages required for interoperability, and displayed on the interfaces of the communicating entities. Entering Data Dictionary will provide full definition of a data element, along with the essential attributes at conceptual level. <p>The purpose, in the perspective of the standards to be prepared, is to document the data element pertinent to the functional area systems, and facilitate data interchange among the systems.</p> <p><i>NOTE Data Dictionary shall be designed to provide a structural framework that enables continued growth the enhancement of the scope of defined data. Rationale for this requirement is that it is difficult, when defining the scope of a proposed system to fully define the application domain and all included interoperability related data. In addition over time, functional requirements will expand.</i></p>	SC 9XC		
CLC/TS 50502:2007	<p>Railway applications – Rolling stock – Electric equipment in trolley buses – Safety requirements and connection systems</p>	SC 9XB		

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TR 50506-1:2007	Railway applications – Communication, signalling and processing systems – Application Guide for EN 50129 Part 1: Cross-acceptance	SC 9XA		
	<p>This application guide for cross-acceptance is a Technical Report about the basic standard. It is applicable to the same systems and addresses the same audience as the standard itself. It provides additional information on the application of EN 50129 to cross-acceptance. Therefore it deals with the acceptance by a safety authority of a previously accepted system or product in a different environment and/or context, often referred to as cross-acceptance. It is mainly dedicated to safety assessors, safety authorities, validators, and safety managers. In drafting this guide, it is assumed that reader is familiar with the basic structure on the standard.</p>			

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TR 50507:2007	Railway applications – Interference limits of existing track circuits used on European railways	SC 9XA		
<p>(...) has been written to define the interface limits of existing track circuits used on European railways. The purpose of this Technical Report is to provide an overview, a reference and a source of information for other specifications and specifications that are presently in preparation. As required by the CENELEC rules, it will be update as needed and will be finally replaced by a future specification or standard.</p> <p>According to CENELEC rules, the existing national specifications are not required to be replaced by this Technical Report. They will remain in use as the basis for approval of vehicles in the respective countries. Where available, the national specifications are referenced in Annex A of this Technical Report.</p> <p>The two main parts of this Technical Report are:</p> <ol style="list-style-type: none"> 1) the List of European track circuit equipment; 2) the National Annex. <p>The contents of these two parts have been provided by railway infrastructure representatives. Not all EU countries have provided information and in some cases the information may be incomplete.</p> <p>In 4.5, the track circuits are classified into preferred and non- preferred types 1) with regard to their future use in interoperable lines. This definition provides an indication which types of track circuits are preferred for new signalling projects.</p> <p>In Annex A the interference limits and test specifications are defined within a template prepared by CENELEC, which is intended to ensure a large degree of commoncontent and to facilitate comparisons between national specifications. The content of Annex A is based on existing national specifications.</p> <p>(...) will remain informative untill it is replaced by a specification. It may, however, be used as a basis for defining requirements, for example in improved national specifications. If the content is used in the TSI, the TSI document shall clearly define the consequences of the requirements. The vehicles have only to be made compatible with the track circuits used on the lines where they run, as defined in EN 50238. Normally an approval certificate will be restricted to these lines or countries.</p>				

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TR 50511:2007	<p>Railway applications – Communication, signalling and processing systems – ERTMS/ETCS – External signalling for lines equipped with ERTMS/ETCS Level 2</p> <p>(...) is to present the different line side information used in 2006 on the ERTMS/ETCS Level 2 lines and required for the application of the ERTMS/ETCS Level 2 operational rules.</p> <p>NOTE The signs described in this Technical Report are only referring to ERTMS/ETCS Level 2 operations. On lines equipped with ERTMS/ETCS Level 2 there may be some additional signs needed for maintenance, degraded modes, transition to and from other signalling systems and other operational rules. These signs are not necessarily described in this Technical Report.</p>	SC 9XA		
CLC/TS 50534-1:2010	<p>Railway applications – Generic systems architectures for onboard electric auxiliary power systems</p>	SC 9XB		
CLC/TS 50535:2010	<p>Railway applications – Onboard auxiliary power converter systems</p>	SC 9XB		
CLC/TS 50537-1:2010	<p>Railway applications – Mounted parts of the traction transformer and cooling system</p> <p>Part 1: HV bushing for traction transformers</p>	SC 9XB		
CLC/TS 50537-2:2010	<p>Railway applications – Mounted parts of the traction transformer and cooling system</p> <p>Part 2: Pump for insulating liquid for traction transformers and reactors</p>	SC 9XB		

Referência	Título / Campo de Aplicação	Emissor	Data de adoção	Observações
CLC/TS 50537-3:2010	Railway applications – Mounted parts of the traction transformer and cooling system Part 3: Water pump for traction converters	SC 9XB		
CLC/TS 50537-4:2010	Railway applications – Mounted parts of the traction transformer and cooling system Part 4: Gas and liquid actuated (Buchholz) relay for liquid immersed transformers and reactors with conservator for rail vehicles	SC 9XB		
CLC/TR 50542:2010	Railway applications – Communication means between safety equipment and man-machine interfaces (MMI)	TC 9X		