| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN ISO 3095:2013 | **Railway applications – Acoustics – Measurement of noise emitted by railbound vehicles (ISO 3095:2005)** | CEN/TC 256 | 2013-11-22 | |
| EN ISO 3381:2011 | **Railway applications – Acoustics – Measurement of noise inside railbound vehicles (ISO 3095:2005)** | CEN/TC 256 | 2013-01-08 | *A Norma Portuguesa NP EN ISO 3381:2013 "Aplicações ferroviárias – Acústica – Medição do ruído no interior de veículos que circulam sobre carris (ISO 3381:2005)" foi editada em janeiro de 2013* |
| EN 12080:2017 | **Railway applications – Axleboxes – Rolling bearings** | CEN/TC 256 | 2017-11-10 | |
| EN 12081:2017 | **Railway applications – Axleboxes – Lubricating greases** | CEN/TC 256 | 2017-11-10 | |
| EN 12082:2017 | **Railway applications – Axleboxes – Performance testing** | CEN/TC 256 | 2017-11-10 | |
| EN 12299:2009 | **Railway applications – Ride comfort for passengers – Measurement and evaluation** | CEN/TC 256 | 2009-08-20 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 12561-1:2011 | **Railway applications – Tank wagons**<br>**Part 1: Marking of tank wagons for the carriage of dangerous goods** | CEN/TC 256 | 2011-10-25 | |
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| EN 12561-2:2011 | **Railway applications – Tank wagons**<br>**Part 2: Bottom emptying devices for liquid products including vapour return** | CEN/TC 256 | 2011-10-25 | |
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| EN 12561-3:2011* | **Railway applications – Tank wagons**<br>**Part 3: Bottom filling and emptying devices for gases liquefied under pressure** | CEN/TC 256 | 2011-10-25 | *Foi publicada uma Corrigenda em novembro de 2014. |
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| EN 12561-4:2011 | **Railway applications – Tank wagons**<br>**Part 4: Top devices for top emptying and filling of liquid products** | CEN/TC 256 | 2011-10-25 | |
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| EN 12561-5:2011 | **Railway applications – Tank wagons**<br>**Part 5: Top devices for bottom emptying and top filling of liquid products** | CEN/TC 256 | 2011-10-25 | |
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| EN 12561-6:2011 | **Railway applications – Tank wagons**<br>**Part 6: Manholes** | CEN/TC 256 | 2011-10-25 | |
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| EN 12561-7:2011 | **Railway applications – Tank wagons**<br>**Part 7: Platforms and ladders** | CEN/TC 256 | 2011-10-25 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 12561-8:2011 | **Railway applications – Tank wagons**<br>**Part 8: Heating connections** | CEN/TC 256 | 2011-10-25 | |
| EN 12663-1:2010+A1:2014 | **Railway applications – Structural requirements of railway vehicle bodies**<br>**Part 1: Locomotives and passenger rolling stock (and alternative method for freight wagons)** | CEN/TC 256 | 2015-04-09 | |
| EN 12663-2:2010 | **Railway applications – Structural requirements of railway vehicle bodies**<br>**Part 2: Freight wagons** | CEN/TC 256 | 2010-05-27 | |
| EN 13103-1:2017 | **Railway applications – Wheelsets and bogies**<br>**Part 1: Design method for axles with external journals** | CEN/TC 256 | 2018-04-02 | |
| EN 13129:2016 | **Railway applications – Air conditioning for main line rolling stock - Comfort parameters and type tests** | CEN/TC 256 | 2016-12-12 | |
| EN 13145:2001 +A1:2011 | **Railway applications – Track – Wood sleepers and bearers** | CEN/TC 256 | 2012-01-31 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13146-1:2012+A1: 2014 | **Railway applications – Track – Test methods for fastening systems**<br>**Part 1: Determination of longitudinal rail restraint** | CEN/TC 256 | 2015-01-13 | |
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| EN 13146-1:2019 | **Railway applications – Track – Test methods for fastening systems**<br>**Part 1: Determination of longitudinal rail restraint** | CEN/TC 256 | | *Data limite de implementação: 2019-07-31* |
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| EN 13146-2:2012 | **Railway applications – Track – Test methods for fastening systems**<br>**Part 2: Determination of torsional resistance** | CEN/TC 256 | 2012-08-13 | |
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| EN 13146-3:2012 | **Railway applications – Track – Test methods for fastening systems**<br>**Part 3: Determination of attenuation of impact loads** | CEN/TC 256 | 2012-08-13 | |
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| EN 13146-4:2012+A1: 2014 | **Railway applications – Track – Test methods for fastening systems**<br>**Part 4: Effect of repeated loading** | CEN/TC 256 | 2015-01-13 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13146-5:2012 | **Railway applications – Track – Test methods for fastening systems**<br>**Part 5: Determination of electrical resistance** | CEN/TC 256 | 2012-08-13 | *Foi publicada uma Corrigenda em maio de 2017* |
| EN 13146-6:2012 | **Railway applications – Track – Test methods for fastening systems**<br>**Part 6: Effect of severe environmental conditions** | CEN/TC 256 | 2012-08-13 | |
| EN 13146-7:2019 | **Railway applications – Track – Test methods for fastening systems**<br>**Part 7: Determination od clamping force** | CEN/TC 256 | 2019-05-13 | |
| EN 13146-8:2012 | **Railway applications – Track – Test methods for fastening systems**<br>**Part 8: In service testing** | CEN/TC 256 | 2012-08-13 | |
| EN 13146-9:2009 +A1:2011 | **Railway applications – Track – Test methods for fastening systems**<br>**Part 9: Determination of stiffness** | CEN/TC 256 | 2012-01-31 | |
| EN 13146-10:2017 | **Railway applications – Track – Test methods for fastening systems**<br>**Part 10: Proof load test for pullout resistance** | CEN/TC 256 | 2017-05-10 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13230-1:2016 | **Railway applications – Track – Concrete sleepers and bearers**<br>**Part 1: General requirements** | CEN/TC 256 | 2016-07-11 | |
| EN 13230-2:2016 | **Railway applications – Track – Concrete sleepers and bearers**<br>**Part 2: Prestressed monoblock sleepers** | CEN/TC 256 | 2016-07-11 | |
| EN 13230-3:2016 | **Railway applications – Track – Concrete sleepers and bearers**<br>**Part 3: Twin-block reinforced sleepers** | CEN/TC 256 | 2016-07-11 | |
| EN 13230-4:2016 | **Railway applications – Track – Concrete sleepers and bearers**<br>**Part 4: Prestressed bearers for switches and crossings** | CEN/TC 256 | 2016-07-11 | |
| EN 13230-5:2016 | **Railway applications – Track – Concrete sleepers and bearers**<br>**Part 5: Special elements** | CEN/TC 256 | 2016-07-11 | |
| EN 13231-1:2013 | **Railway applications – Track – Acceptance of works**<br>**Part 1: Works on ballasted track – Plain line, switches and crossings** | CEN/TC 256 | 2013-08-26 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13231-3:2012 | **Railway applications – Track – Acceptance of works**<br>**Part 3: Acceptance of rail grinding, milling and planing work in track** | CEN/TC 256 | 2012-05-02 | |
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| EN 13231-4:2013 | **Railway applications – Track – Acceptance of works**<br>**Part 4: Acceptance of reprofiling rails in switches and crossings** | CEN/TC 256 | 2013-07-15 | |
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| EN 13231-5:2018 | **Railway applications – Track – Acceptance of works**<br>**Part 5: Procedures for rail reprofiling in plain line, switches, crossings and expansion devices** | CEN/TC 256 | 2018-11-08 | |
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| EN 13232-1:2003 | **Railway applications – Track – Switches and crossings**<br>**Part 1: Definitions** | CEN/TC 256 | 2003-11-04 | |
| | (…) provides na eccepted "terminology" for switch and crossing work. With the assistance of diagrams, the various components are given definitions, and these specific names are regarded as obligatory.<br>The definitions cover the constituent parts and design geometry of switch and crossing work, and include the movement of switches. Additional terminology of a more specific nature will be defined in the relevant part of the series.<br>The present definitions set out the terms most generally used for the geometrical form and the construction of switches and crossings, omitting those of too special a nature. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13232-2:2003 +A1:2011 | **Railway applications – Track – Switches and crossings**<br>**Part 2: Requirements for geometric design** | CEN/TC 256 | 2012-01-31 | |
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| EN 13232-3:2003 +A1:2011 | **Railway applications – Track – Switches and crossings**<br>**Part 3: Requirements for wheel/rail interaction** | CEN/TC 256 | 2012-01-31 | |
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| EN 13232-4:2005 +A1:2011 | **Railway applications – Track – Switches and crossings**<br>**Part 4: Actuations, locking and detection** | CEN/TC 256 | 2012-01-31 | |
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| EN 13232-5:2005 +A1:2011 | **Railway applications – Track – Switches and crossings**<br>**Part 5: Switches** | CEN/TC 256 | 2012-01-31 | |
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| EN 13232-6:2005 +A1:2011 | **Railway applications – Track – Switches and crossings**<br>**Part 6: Fixed common and obtuse crossings** | CEN/TC 256 | 2012-01-31 | |
| | | | | |
| EN 13232-7:2006 +A1:2011 | **Railway applications – Track – Switches Expected and crossing**<br>**Part 7: Crossings with moveable patrs** | CEN/TC 256 | 2012-01-31 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13232-8:2007 +A1:2011 | **Railway applications – Track – Switches and crossings**<br>**Part 7: Crossings with moveable parts** | CEN/TC 256 | 2012-01-31 | |
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| EN 13232-9:2006 +A1:2011 | **Railway applications – Track – Switches Expected and crossing**<br>**Part 9: Layouts** | CEN/TC 256 | 2012-01-31 | |
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| EN 13260:2009+A1:2010 | **Railway applications – Wheelsets and bogies – Wheelsets – Product requirements** | CEN/TC 256 | 2010-12-27 | |
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| EN 13261:2009+A1:2010 | **Railway applications – Wheelsets and bogies – Axles – Product requirements** | CEN/TC 256 | 2010-12-27 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13262:2004+A2:2011 | **Railway applications – Wheelsets and bogies – Wheels – Product requirement** | CEN/TC 256 | 2011-07-14 | |
| | (...) specifies the characteristics of railway wheels for use on European networks.<br>Four steel grades, ER6, ER7, ER8 and ER9 are defined in this standard.<br>Some characteristics are defined according to a category 1 or a category 2. Category 1 is generally chosen when the train speed is higher than 200 Km/h.<br>These categories can sometimes be subdivided, depending upon the characteristics.<br>(...) is applicable to solid forged and rolled wheels which are made from vacuum degassed steel and have a chilled rim. They are to have already been used in commercial conditions on a European network in a significant quantity, or to have satisfied a technical approval procedure according to EN 13979-1 for their design.<br>*NOTE 1 The definition of other wheels may be found in other documents, such as UIC leaflets or ISO standards.*<br>*NOTE 2 The technical approval procedure is not within the scope of this standard.*<br>*NOTE 3 "Rim-chilled"describes heat treatment of the rim, the aim of which is to harden the rim and to create compressive residual stresses in the rim.* | | | |
| EN 13272:2012 | **Railway applications – Electrical lighting for rolling stock in public transport systems** | CEN/TC 256 | 2012-05-24 | |
| | | | | |
| EN 13298:2003 | **Railway applications – Suspension components – Helical suspension springs, steel** | CEN/TC 256 | 2003-05-12 | |
| | (…) is applicable to helical steel suspension springs used in the suspension of rail vehicles.<br>It deals especially with cylindrical compression springs made from round section steel bars of constant diameter and with constant inclination of coiling.<br>It deals also with helical springs with different shapes (e.g. conical and/or steel bar with other cross sections, etc.).<br>This standard gives guidance for:<br>- designs;<br>- specification of technical and quality requirements;<br>- the approval procedure and quality assurance of production methods;<br>- the examinations and tests to be carried out;<br>- the delivery conditions. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13452-1:2003 | **Railway applications – Braking – Mass transit brake systems**<br>**Part 1: Performance requirements** | CEN/TC 256 | 2003-05-12 | |
| | (…) specifies minimum limiting requirements for braking systems and performance. The Transport Authority defines the particular parameters where required in this European Standard and specifies any additional braking requirements to the vehicle builder/braking system supplier. (...) specifies requirements and performances for the braking of vehicles for urban transport systems, running on steel or rubber tyred wheels and guided by steel rails or other equivalent means. (...) applies to vehicles operating on:<br>- tramways;<br>- light railways;<br>- metros on steel wheels;<br>- Commuter/Regional railways;<br>and is applicable to:<br>- all newly designed vehicles;<br>- all major refurbishments, if these include either redesign or extensive modifications to the brake system;<br>- any new builds of existing designs of vehicles. For this type of vehicle, the Transport Authority may specify performance values different from those defined in this European Standard. (...).Transport Authorities shall ensure that specifications include this European Standard as part of the brake system requirements. Suppliers shall identify, at the time of tendering, any non-compliances against this European Standard. Compliance with the functional and performance requirements defined in this European Standard is verified by testing in accordance with EN 13452-2. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13452-2:2003 | **Railway applications – Braking – Mass transit brake systems**<br>**Part 2: Methods of test** | CEN/TC 256 | 2003-05-12 | |
| | (...) specifies test requirements for the braking of vehicles for urban transport systems, running on steel or rubber tyred wheels and guided by steel rails orother equivalent means. (...) applies to vehicles operating on:<br>- tramways;<br>- light railways;<br>- metros on steel wheels;<br>- Commuter/Regional railways;<br>and is applicable to:<br>- all newly designed vehicles;<br>- all major refurbishments, if these include either redesign or extensive modifications to the brake system;<br>- any new builds of existing designs of vehicles.<br>(...). Transport Authorities shall ensure that specifications include this European Standard as part of the brake system requirements. Suppliers shall identify, at the time of tendering, any non-compliances against this European Standard. | | | |
| EN 13481-1:2012 | **Railway applications – Track – Performance requirements for fastening systems**<br>**Part 1: Definitions** | CEN/TC 256 | 2012-09-26 | |
| | | | | |
| EN 13481-2:2012+ A1:2017 | **Railway applications – Track – Performance requirements for fastening systems**<br>**Part 2: Fastening systems for concrete sleepers** | CEN/TC 256 | 2012-09-26 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13481-3:2012 | **Railway applications – Track – Performance requirements for fastening systems**<br>**Part 3: Fastening systems for wood sleepers** | CEN/TC 256 | 2012-08-13 | |
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| EN 13481-4:2012 | **Railway applications – Track – Performance requirements for fastening systems**<br>**Part 4: Fastening systems for stell sleepers** | CEN/TC 256 | 2012-09-26 | |
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| EN 13481-5:2012+ A1:2017 | **Railway applications – Track – Performance requirements for fastening systems**<br>**Part 5: Fastening systems for slab track** | CEN/TC 256 | 2017-03-09 | |
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| EN 13481-7:2012 | **Railway applications – Track – Performance requirements for fastening systems**<br>**Part 7: Special fastening systems for switches and crossings and check rails** | CEN/TC 256 | 2012-09-26 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13597:2003 | **Railway applications – Rubber suspension components – Rubber diaphgrams for pneumatic suspension springs** | CEN/TC 256 | 2003-02-26 | |
| | (…) specifies:<br>- characteristics that suspension diaphrams achieves, together with applicable inspection and test methods to be carried out for verification;<br>- approval procedure to be implemented by the customer;<br>- guidelines for qualification of the product with specified requirements;<br>- quality monitoring of diaphragms in manufacture;<br>- supply requirements.<br>(...) applies to suspension diaphragms designed to be fitted on railway vehicles and similar vehicles running on dedicated tracks with permanent guide systems, whatever the type of rail and the running surface.<br>(...) does not detail the other components of pneumatic suspension assemblies or control systems such as air reservoirs, frames, stiffeners, emergency suspension systems or elastic supports (such as series springs), etc., which will affect the diaphragm performance. | | | |
| EN 13674-1:2011+ A1:2017 | **Railway applications – Track – Rail**<br>**Part 1: Vignole railway rails 46 Kg/m and above** | CEN/TC 256 | 2017-07-10 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13674-2:2006 +A1:2010 | **Railway applications – Track – Rail**<br>**Part 2: Switch and crossing rails used in conjunction with Vignole railway rails 46Kg/m and above** | CEN/TC 256 | 2010-09-28 | |
| | (...) specifies switch and crossing rails that carry railway wheels. These are used in conjunction with Vignole railway rails.<br>(...) is not applicable for the check rails that do not carry railway wheels.<br>Eight pearlitic steel grades are specified covering a hardness range of 200 HBW to 390 HBW and include non heat treated non-alloy steels, non heat treated alloy steels, heat treated non-alloy steels and heat treated low alloy steels.<br>There are 30 rail profiles specified in this standard, but they may not all be available in all steel grades.<br>Rails specified in EN 13674-1 may also be used as switch and crossing rails and if so used they shall comply with the requirements of EN 13674-1. | | | |
| EN 13674-3:2006 +A1:2010 | **Railway applications – Track – Rail**<br>**Part 3: Check rails** | CEN/TC 256 | 2010-09-28 | |
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| EN 13674-4:2006 +A1:2009 | **Railway applications – Track – Rail**<br>**Part 4: Vignole railway rails from 27Kg/m to, but excluding 46Kg/m** | CEN/TC 256 | 2010-03-05 | |
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| EN 13674-4:2019 | **Railway applications – Track – Rail**<br>**Part 4: Vignole railway rails from 27Kg/m to, but excluding 46Kg/m** | CEN/TC 256 | | *Data limite de implementação: 2019-10-31* |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13715:2006 +A1:2010 | **Railway applications – Wheelsets and bogies – Wheels – Wheels tread** | CEN/TC 256 | 2010-12-27 | *A Norma Portuguesa NP EN 13715:2006+A1:2013 "Aplicações ferroviárias – Rodados e bogies – Rodas – Perfil da mesa de rolamento" foi editada em fevereiro de 2013* |
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| EN 13749:2011 | **Railway applications – Wheelsets and bogies – Methods of specifying structural requirements of bogies frames** | CEN/TC 256 | 2011-07-14 | |
| | (...) specifies the method to be followed to achieve a satisfactory design of bogie frames and includes design procedures, assessment methods, verification and manufacturing quality requirements.<br>It is limited to the structural requirements of bogie frames including bolsters and axlebox housings. For the purpose of this European Standard, these terms are taken to include all functional attachments, e.g. damper brackets. | | | |
| EN 13775-1:2003 | **Railway applications – Measuring of new and modified freight wagons**<br>**Part 1: Measuring principles** | CEN/TC 256 | 2003-11-04 | |
| | (…) specifies requirements for measuring freight wagons and bogies. This ensures that the measuring methods are applied in accordance with uniform criteria. It applies to new and modified freight wagons and bogies. Provisions going beyong the scope of these requirements ought to be agreed upon by the contracting parties involved.<br>The measuring methods relate to the whole or parts of the underframes with or without add-ons if the geometrical structure does not permit anything else. Where appropriate, other measuring methods not specified here are necessary and ought to be specified in each individual case. This applies as appropriate to bogies. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13775-2:2003 | **Railway applications – Measuring of new and modified freight wagons**<br>**Part 2: Freight wagons with bogies** | CEN/TC 256 | 2003-11-04 | |
| | (…) specifies requirements for measuring freight wagons and bogies. This ensures that the measuring processes are applied in accordance with uniform criteria. It applies to new and modified freight wagons and bogies. Provisions going beyong the scope of these requirements ought to be agreed upon by the contracting parties involved.<br>The measuring processes relate to the whole or parts of the underframes with or without add-ons if the geometrical structure does not permit anything else. Where appropriate, other measuring methods not specified here are necessary and ought to be specified in each individual case. This applies as appropriate to bogies. | | | |
| EN 13775-3:2003 | **Railway applications – Measuring of new and modified freight wagons**<br>**Part 3: Freight wagons with e wheelsets** | CEN/TC 256 | 2003-11-04 | |
| | (…) specifies requirements for measuring freight wagons with 2 wheesets. This ensures that the measuring processes are applied in accordance with uniform criteria. It applies to new and modified freight wagons with 2 wheesets. Provisions going beyong the scope of these requirements ought to be agreed upon by the contracting parties involved.<br>The measuring processes relate to the whole or parts of the underframes with or without add-ons if the geometrical structure does not permit anything else. Where appropriate, other measuring methods not specified here are necessary and ought to be specified in each individual case. This applies as appropriate to bogies. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13775-4:2004 | **Railway applications – Measuring of new and modified freight wagons**<br>**Part 4: Bogies with 2 wheelsets** | CEN/TC 256 | 2004-09-06 | |
| | (...) specifies principles and requirements for measuring bogies with 2 wheelsets. This ensures that the measuring processes are applied in accordance with uniform criteria.It applies to new and modified bogies with 2 wheelsets.<br>Provisions going beyond the scope of these requirements are generally agreed between the contracting parties involved.<br>The measuring processes relate to the bogies with or without add-ons in their entirety or just part of them if the geometrical structure does not permit anything else. Where appropriate, other measuring processes not specified here are necessary and are specified in each individual case. | | | |
| EN 13775-5:2004 | **Railway applications – Measuring of new and modified freight wagons**<br>**Part 5: Bogies with 3 wheelsets** | CEN/TC 256 | 2004-09-06 | |
| | (…) specifies principles and requirements for measuring bogies with 3 wheelsets. This ensures that the measuring processes are applied in accordance with uniform criteria. It applies to new and modified bogies with 3 wheelsets.<br>Provisions going beyond the scope of these requirements are generally agreed between the contracting parties involved.<br>The measuring processes relate to the bogies with or without add-ons in their entirety or just part of them if the geometrical structure does not permit anything else. Where appropriate, other measuring processes not specified here are necessary and are specified in each individual case. | | | |
| EN 13775-6:2004 | **Railway applications – Measuring of new and modified freight wagons**<br>**Part 6: Multiple and articulated freight wagons** | CEN/TC 256 | 2004-09-06 | |
| | (…) specifies principles and requirements for measuring multiple and articulated freigh wagons. This ensures that the measuring processes are applied in accordance with uniform criteria. It applies to new and modified multiple and articulated freigh wagons.<br>Provisions going beyond the scope of these requirements are generally agreed between the contracting parties involved.<br>The measuring processes relate to multiple and articulated freigh wagons with or without add-ons in their entirety or just part of them if the geometrical structure does not permit anything else. Where appropriate, other measuring processes not specified here are necessary and are specified in each individual case. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13802:2013 | **Railway applications – Suspension components – Hydraulic dampers** | CEN/TC 256 | 2014-04-07 | |
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| EN 13803:2017 | **Railway applications – Track alignment design parameters – Track gauges 1435 mm and wider** | CEN/TC 256 | 2017-09-13 | |
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| EN 13848-1:2003 +A1:2008 | **Railway applications – Track – Track geometry quality**<br>**Part 1: Characterisation of track geometry** | CEN/TC 256 | 2008-11-28 | |
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| EN 13848-1:2019 | **Railway applications – Track – Track geometry quality**<br>**Part 1: Characterisation of track geometry** | CEN/TC 256 | | *Data limite de implementação: 2019-09-30* |
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| EN 13848-2:2006 | **Railway applications – Track – Track geometry quality**<br>**Part 2: Measuring systems – Track recording vehicles** | CEN/TC 256 | 2006-10-23 | |
| | (...)specifies the minimum requirements for measuring principles and systems in order to produce comparable results. It applies to all measuring equipment fitted on dedicated recording vehicles, or on vehicles specifically modified for the same purpose, after the coming into force of the standard. It also defines the requirements of measurement | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13848-3:2009 | **Railway applications – Track – Track geometry quality**<br>**Part 3: Measuring systems – Track construction and maintenance machines** | CEN/TC 256 | 2009-08-20 | |
| EN 13848-4:2011 | **Railway applications – Track – Track geometry quality**<br>Part 4: Measuring systems – Manual and lightweight devices | CEN/TC 256 | 2012-03-29 | |
| EN 13848-5:2017 | **Railway applications – Track – Track geometry quality**<br>**Part 5: Geometric quality levels – Plain line, switches and crossings** | CEN/TC 256 | 2017-12-13 | |
| EN 13848-6:2014 | **Railway applications – Track – Track geometry quality**<br>Part 6: Characterisation of track geometry quality | CEN/TC 256 | 2014-09-11 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13913:2003 | **Railway applications – Rubber suspension components – Elastomer-based mechanical parts** | CEN/TC 256 | 2003-05-12 | |
| | (…) defines:<br>- characteristics that elastomer-based mechanical parts shall achieve together with applicable inspection and test methods to be carried out for verification;<br>- approval procedure to be implemented by the customer;<br>- guidelines for qualification of the product with specified requirements;<br>- quality monitoring of elastomer-based mechanical parts in manufactured.<br>(...) applies to elastomer-based mechanical parts designed to be fitted on railway vehicles and similar vehicles running on dedicated tracks with permanent guide systems, whatever the type of rails and the running surface.<br>Typical applications of elastomer-based mechanical parts include:<br>- vehicle suspension systems;<br>- equipment mounting systems;<br>- joints (e.g.: end-mountings of dampers, elastomer-based bearings, elastomer-based parts used on mechanical couplings);<br>- limit stops.<br>These parts can be:<br>- made entirely of elastomer, operating on their own or in combination with other elastic parts;<br>made up of elastomer and other materials, adherent together or not. | | | |
| EN 13977:2011 | **Railway applications – Track - Safety requirements for portable machines and trolleys for construction and maintenance** | CEN/TC 256 | 2011-05-31 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 13979-1:2003 +A2:2011 | **Railway applications – Wheelsets and bogies – Monobloc wheels – Technical approval procedure Part 1: Forged and rolled wheels** | CEN/TC 256 | 2011-07-14 | |
| | (…) define the requirements that a monobloc Wheel of a freight of passenger railway vehicle non-powered axle shall meet in order to be able to be used on a European network.<br>For wheels of powered axles or wheels with noise dampers, the requirements may be amended or supplemented.<br>For light vehicles and tramways, other standards or documents accepted by the customer and supplier may be used.<br>This European Standard only applies to wheels of new design.<br>These requirements are intended to assess the validaty of the design choise for the proposed use.<br>The assessment of these requirements is the technical approval procedure.<br>(...) is applicableto forged and rolled wheels for which the quality requirements are defined in prEN 13262. | | | |
| EN 14033-1:2017 | **Railway applications – Track – Railbound construction and maintenance machines Part 1: Technical requirements for running** | CEN/TC 256 | 2017-09-13 | |
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| EN 14033-2:2017 | **Railway applications – Track – Railbound construction and maintenance machines Part 2: Technical requirements for travelling and working** | CEN/TC 256 | 2017-09-13 | |
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| EN 14033-3:2017 | **Railway applications – Track – Railbound construction and maintenance machines Part 3: General safety requirements** | CEN/TC 256 | 2017-07-10 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 14033-4:2019 | **Railway applications – Track – Railbound construction and maintenance machines**<br>**Part 3: General safety requirements** | CEN/TC 256 | 2019-05-13 | |
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| EN 14067-1:2003 | **Railway applications – Aerodynamics**<br>**Part 1: Symbols and units** | CEN/TC 256 | 2003-07-15 | |
| | (...) applies to aerodynamics for railway applications.<br>It defines symbols and units used in formulae and calculations in the field of aerodynamics. The definitions given in this European Standard explain the symbols and classify the units.<br>Further to usual symbols, this document contains symbols which are used for calculations. It should be noted, however that these symbols may not have the same signifcance in a different field of application.<br>Additional symbols should be defined according to the application.. | | | |
| EN 14067-2:2003 | **Railway applications – Aerodynamics**<br>**Part 3: Aerodynamics on open track** | CEN/TC 256 | 2003-07-15 | |
| | | | | |
| EN 14067-3:2003 | **Railway applications – Aerodynamics**<br>**Part 3: Aerodynamics in tunnels** | CEN/TC 256 | 2003-07-15 | |
| | (...) describes physical phenomena of railway-specific aerodynamics and gives recommendations for the documentation of tests. | | | |
| EN 14067-4:2013+A1:2018 | **Railway applications – Aerodynamics**<br>**Part 4: Requirements and test procedures for aerodynamics on open track** | CEN/TC 256 | 2019-01-30 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 14067-5:2006 +A1:2010 | **Railway applications – Aerodynamics**<br>**Part 5: Requirements and test procedures for aerodynamics in tunnels** | CEN/TC 256 | 2011-02-07 | |
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| EN 14067-6:2018 | **Railway applications – Aerodynamics**<br>**Part 6: Requirements and test procedures for wind assessment** | CEN/TC 256 | 2018-12-10 | |
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| EN 14198:2016+A1:2018 | **Railway applications – Braking – Requirements for the brake system of trains hauled by a locomotive** | CEN/TC 256 | 2019-01-30 | |
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| EN 14200:2004 | **Railway applications – Suspension components – Parabolic springs, steel** | CEN/TC 256 | 2004-03-08 | |
| | (…) applies to parabolic springs as spring elements for rail vehicles.<br>(...) is a guide to the following subjects:<br>- design;<br>- specification of technical and qualitative requirements;<br>- approval procedures and quality assurance of production methods;<br>- tests and inspections to be carried out;<br>- delivery conditions. | | | |
| EN 14363:2016+A1:2018 | **Railway applications – Testing for the acceptance of running characteristics of railway vehicles – Testing of running behaviour and stationary tests** | CEN/TC 256 | 2019-02-11 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 14478:2017 | **Railway applications – Braking - Generic vocabulary** | CEN/TC 256 | 2018-04-02 | |
| EN 14531-1:2015 +A1:2018 | **Railway applications – Methods for calculation of stopping distances, slowing distances and immobilization braking**<br>**Part 1: General algorithms** | CEN/TC 256 | 2019-01-15 | |
| EN 14531-2:2015 | **Railway applications – Methods for calculation of stopping distances, slowing distances and immobilization braking**<br>**Part 2: Step by step calculations for train sets or single vehicles** | CEN/TC 256 | 2016-04-14 | |
| EN 14535-1:2005 +A1:2011 | **Railway applications – Brake discs for railway rolling stock**<br>**Part 1: Brake discs~pressed or shrunk onto the axle or drive shaft, dimensions and quality requirements** | CEN/TC 256 | 2011-08-24 | |
| EN 14535-1:2019 | **Railway applications – Brake discs for railway rolling stock**<br>**Part 1: Brake discs~pressed or shrunk onto the axle or drive shaft, dimensions and quality requirements** | CEN/TC 256 | | *Data limite de implementação: 2019-09-30* |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 14535-2:2011 | **Railway applications – Brake discs for railway rolling stock**<br>**Part 2: Brake discs mounted onto the wheel, dimensions and quality requirements** | CEN/TC 256 | 2011-10-25 | |
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| EN 14535-2:2019 | **Railway applications – Brake discs for railway rolling stock**<br>**Part 2: Brake discs mounted onto the wheel, dimensions and quality requirements** | CEN/TC 256 | | *Data limite de implementação: 2019-09-30* |
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| EN 14535-3:2015 | **Railway applications – Brake discs for railway rolling stock**<br>**Part 3: Brake discs, performance of the disc and the friction couple, classification** | CEN/TC 256 | 2016-04-14 | |
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| EN 14587-1:2018 | **Railway applications – Track – Flash butt welding of rails**<br>**Part 1: New R220, R260, R260Mn and R350HT grade rails in a fixed plant** | CEN/TC 256 | 2019-04-11 | |
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| EN 14587-2:2009 | **Railway applications – Track – Flash butt welding of rails**<br>**Part 2: New R220, R260, R260Mn and R350HT grade rails by mobile welding machines at sites other than a fixed plant** | CEN/TC 256 | 2012-12-18 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 14587-3:2012 | **Railway applications – Track – Flash butt welding of rails**<br>**Part 3: Welding in association with crossing construction** | CEN/TC 256 | 2012-12-18 | |
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| EN 14601:2005+A1:2010 | **Railway applications – Straight and angled end cooks for brake pipe and main reservoir pipe** | CEN/TC 256 | 2010-12-27 | |
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| EN 14730-1:2017 | **Railway applications – Track – Aluminothermic welding of rails**<br>**Part 1: Approval of welding processes** | CEN/TC 256 | 2017-05-10 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 14730-2:2006 | **Railway applications – Track – Aluminothermic welding of rails**<br>**Part 2: Qualification of Aluminothermic welders, approval of contractors and acceptance of welds** | CEN/TC 256 | 2006-11-24 | |
| | (...) applies to aluminothermic welds made on Vignole rails of 46 kg/m and above as contained in EN 13674-1:<br>(...) specifies:<br>- the system for training, testing and maintaining the skills of aluminothermic welders. It applies to these aluminothermic welding process compliant with the requirements of EN 14730-1 "Railway applications - Track - Aluminothermic welding of rails - Part 1: Approval of welding processes". It requires that the system for training and testing of welders shall be approved by the relevant railway authority;<br>- the systems and requirements for the approval of aluminothermic welding contractors. It applies to those contractors using aluminothermic welding process compliant with the requirements of EN 14730-1 "Railway applications - Track - Aluminothermic welding of rails - Part 1: Approval of welding processes" and whoemploy welders who are in possession of a valid Permit to Weld as defined in Clause 4 of this standard;<br>- the acceptance requirements for aluminothermic welds. It requires that weld inspectors are competent in aluminothermic weld inspection and are approved by the relevant railway authority. It covers the final inspection of aluminothermic welds for acceptance in track. It does not cover any previous inspections by welders or others. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 14750-1:2006 | **Railway applications – Air conditioning for urban and suburban rolling stock**<br>**Part 1: Comfort parameters** | CEN/TC 256 | 2006-11-24 | |
| | (...) is applicable to suburban and/or regional vehicles and also metro and tramway vehicles equipped with cooling and/or heating/ventilation systems. (...) excludes main line vehicles and driving cabs which are considered in separate European Standards.<br>(...) specifies the comfort parameters for compartment or saloon (single level or double-decker).<br>These comfort parameters apply in a similar way to the areas reserved for train staff, with the exception of the catering service areas.<br>The conditions under which the physical parameters mentioned in this European Standard shall be measured are defined in EN 14750-2. | | | |
| EN 14750-2:2006 | **Railway applications – Air conditioning for urban and suburban rolling stock**<br>**Part 2: Type tests** | CEN/TC 256 | 2006-11-24 | |
| | (...) is applicable to suburban and/or regional vehicles and also metro and tramway vehicles equipped with cooling and/or heating/ventilation systems. (...) excludes main line vehicles and driving cabs which are considered in separate European Standards.<br>(...) specifies the comfort parameter measurement methods for compartment or saloon (single level or double-decker).<br>The comfort parameters and their tolerances cited in this European Standard are defined in EN 14750-1. | | | |
| EN 14752:2015 | **Railway applications – Bodyside entrance system**s | CEN/TC 256 | 2015-07-07 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 14811:2006<br>+A1:2009 | **Railway applications – Track – Special purpose rail - Grooved and associated construction** | CEN/TC 256 | 2010-03-05 | |
| | (...) specifies requirements for grooved rails and associated construction rail profiles for grooved rail facilities with a linear mass of 42kg/m and upwards for use in tram transport systems.<br>NOTE Grooved rails are also used for harbour and industrial tracks.<br>Six pearlitic steel grades are specified in a hardness range between 200 HBW ans 390 HBW. The rails are either non-heat-treated and are made from non-alloyed (C-Mn) steel in both cases.<br>(...) specifies 18 specific grooved rail profiles and 7 specific construction rail profiles. The grooved rail profiles can also be used as construction elements in switches and crossings.<br>Two grooved rail classes are specified differing in requirements for profile tolerances. | | | |
| EN 14811:2019 | **Railway applications – Track – Special purpose rail - Grooved rails and associated construction profiles** | CEN/TC 256 | | *Data limite de implementação: 2019-09-30* |
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| EN 14813-1:2006<br>+A1:2010 | **Railway applications - Air conditioning for driving cabs**<br>**Part 1: Comfort parameters** | CEN/TC 256 | 2011-02-07 | |
| | (...) is applicable to railway vehicle driving cabs which are air-conditioned or heated/.ventilated. These include:<br>- locomotives;<br>- mainline, suburban or regional vehicles;<br>- urban vehicles such as metros and trams.<br>(...) does not consider the special operational requirements of shunt locomotives.<br>(...) specifies the comfort parameters for the driving cab to ensure driver comfort which helps safe operation.<br>The conditions under which the physical parameters mentioned in this European Standard shall be measured are defined in EN 14813-2. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 14813-2:2006 +A1:2010 | **Railway applications - Air conditioning for driving cabs**<br>**Part 2: Type tests** | CEN/TC 256 | 2011-02-07 | |
| | (...) is applicable to railway vehicle driving cabs which are air-conditioned or heated/.ventilated. These include:<br>- locomotives;<br>- mainline, suburban or regional vehicles;<br>- urban vehicles such as metros and trams.<br>(...) does not consider the special operational requirements of shunt locomotives.<br>(...) specifies the comfort parameter measurement methods for driving cabs.<br>The comfort parameters and their tolerances cited in this European Standard are defined in EN 14813-1. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 14817:2006 | **Railway applications – Suspension components – Air spring control elements** | CEN/TC 256 | 2006-09-18 | |
| | (...)specifies:<br>- the characteristics the air brake control elements shall have and the tests to be carried out;<br>- the guidelines for drafting the approval procedure applied by the customer;<br>- the guidelines for drafting the qualification procedure for the product based on the requirements specified.<br>The requirements (...) are applicable to air spring control elements having to equip rail vehicles operating on a reserved track under permanent guidance without any distinction between the nature or the route of the track.<br>It covers complete control elements. It is essential that the various components are defined by particular specifications.<br>(...)specifies:<br>- the differential valves;<br>- the filters;<br>- the levelling valves;<br>- the non-return valves;<br>- the minimum pressure valves;<br>- the end stop valves;<br>- the isolating valves.<br>(...) does not take into account the other air suspension control elements such as the installation of pipes, pipework elements and air production elements. | | | |
| EN 14865-1:2009 +A1:2010 | **Railway applications – Axlebox lubricating greases**<br>**Part 1: Method to test the ability to lubricate** | CEN/TC 256 | 2010-12-27 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 14865-2:2006 +A2:2010 | **Railway applications – Axlebox lubricating greases**<br>**Part 2: Method to test the mechanical stability to cover vehicle speeds up to 200 Km/h** | CEN/TC 256 | 2010-12-27 | |
| | (...) specifies a test method and sets the acceptance criteri for the determination of the mechanical stability of lubricating greases intended for the lubrication of axlebox bearings accordind to EN 12081. In the test, impacts are applied to the lubricating grease so that only very stable lubricating greases will perform acceptably. The method is used in a discrimination process for finding lubricating greases of such mechanical stability that they are considered accepted lubricating greases for more extensive performance tests according to EN 12082.<br>For purposes of quality assurance and quality control, this test method is also used for batch testing of lubricating greases. | | | |
| EN 14969:2006 | **Railway applications – Track – Qualification system for railway trackwork contractors** | CEN/TC 256 | 2006-11-24 | |
| | (...) specifies the definitions, procedures, criteria and their assessment as well as the respective documentation related to a qualification system of trackwork contractors, which relates to the Directive 2004/17/EC. This qualification system identifies trackwork contractors that can be invited for tendering trackwork contractors.<br>Evaluation of the contractors applying for parts of the contract, which are not trackwork, is not covered by this standard.<br>(...) may also be used for a qualification system of trackwork contractors applying for contracts with a value below the minimum limit as defined in the Directive 2004/17/EC. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 15016-1:2004 | **Technical drawings - Railway applications**<br>**Part 1: General Principles** | CEN/TC 256 | 2004-09-02 | |
| | (…) lays down requirements for the preparation, administration and reproduction of technical drawings for railways applications. It complies with the requirements of EN, ISO or IEC Standards for technical drawings. It applies to technical drawings for railways, irrespective of technology i.e. mechanical, pneumatic, hydraulic, electronic etc.<br>(...) applies throughout the total life span of the drawings. It applies to all the railway organizations and parties concerned with technical drawings, and to suppliers preparing drawings for railways applications. This standard does not apply to the technical contents of the document. Neither does the standard apply to building documentation. | | | |
| EN 15016-2:2004 | **Technical drawings - Railway applications**<br>**Part 2: Parts lists** | CEN/TC 256 | 2004-09-02 | *Foi publicada Corrigenda Janeiro 2007* |
| | (...) specifies the requirements for the preparation and reproduction of design parts lists for railway applications.<br>(...) specifies the design parts list and describes the basic principles, their structure and the minimum requirements of a design parts list.<br>(...) applies throughout the total life span of the parts list. This standard applies to all the railway organisations and parterns concerned with the design parts list, and to suppliers preparing parts list on behalf of network users. | | | |
| EN 15016-3:2004 | **Technical drawings - Railway applications**<br>**Part 3: Handling of modifications of technical documents** | CEN/TC 256 | 2004-09-02 | |
| | (...) applies throughout the total life span of the documents. This standard applies to all the railway organisations and parterns concerned with the technical documents and to suppliers preparing documents on behalf of railway companies or railways network users.<br>(...) describes the basis of revising technical design documents for railways applications, without considering additional company requirements.<br>These basic requirements apply to all technical design documents independent of the material form: e.g. transparency originals, plotter drawings, aperture cards, computer readable data media, photoprints, COM-fiches etc., also for a computerised set of information. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 15016-4:2006 | **Technical drawings - Railway applications**<br>**Part 4: Data exchange** | CEN/TC 256 | 2005-05-10 | |
| | (...) specifies the basis of an administrative process for exchange of data such as technical drawings, design parts lists (see EN 15016-2) and other related technical documents for railway applications.<br>(...) applies to all railway organisations and parties concerned with the exchange of technical documents like drawings, parts lists and related technical documents that are officially numbered. Furthermore, it applies to suppliers preparing these documents on behalf of the railway companies or railway network users.<br>The basic requirements apply to all drawings, parts lists and related technical documents independently of the type of data e.g. graphical information (images), database types or types of data carriers.<br>These rules are applied by all railway companies or railway industry in the countries of the European Union (EU). Alternatively, the application of these rules can be agreed between contract partners who are settled in the EU and partners who are not settled in the EU by means of a contract and/or mutual agreement. | | | |
| EN 15020:2006+A1:2010 | **Railway applications – Rescue couplert – Performance requirements, specific interface geometry and tests methods** | CEN/TC 256 | 2011-02-07 | |
| | (...) specifies the requirements for the rescue coupler for train sets compliant with the Technical Specification for Interoperability High Speed Rolling Stock. It defines the interfaces to which it has to match during rescue operatins. It is suitable for locomotives fitted with UIC 520 pattern draw gear and buffers, i.e. moveable draw hook and draw gear capable of compressive loading. 3)<br>Provisions going beyond the scope of this European Standard need to be agreed upon by the contracting parties involved. | | | |
| EN 15049:2007 | **Railway applications – Suspension components – Torsion bar, steel** | CEN/TC 256 | 2007-10-02 | |
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| EN 15085-1:2007 | **Railway applications – Welding of railway vehicles and components**<br>**Part 1: General** | CEN/TC 256 | 2007-12-18 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 15085-1:2007 +A1:2013 | **Railway applications – Welding of railway vehicles and components**<br>**Part 1: General** | CEN/TC 256 | 2013-08-26 | |
| EN 15085-2:2007 | **Railway applications – Welding of railway vehicles and components**<br>**Part 2: Quality requirements and certification of welding manufacturer** | CEN/TC 256 | 2007-12-18 | |
| EN 15085-3:2007 | **Railway applications – Welding of railway vehicles and components**<br>**Part 3: Design requirements** | CEN/TC 256 | 2007-12-18 | Foi publicada uma Corrigenda em Dezembro de 2007 |
| EN 15085-4:2007 | **Railway applications – Welding of railway vehicles and components**<br>**Part 4: Production requirements** | CEN/TC 256 | 2007-12-18 | |
| EN 15085-5:2007 | **Railway applications – Welding of railway vehicles and components**<br>**Part 5: Inspection, testing and documentation** | CEN/TC 256 | 2007-12-18 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 15152:2007 | **Railway applications – Front windscreens for train cabs** | CEN/TC 256 | 2007-11-06 | |
| | (…) specifies the functional requirements for cab windscreens of high speed trains including testing and conformity assessment. The same requirements can be applied to the windscreens of other types of rolling stock if some of the performance criteria are adjusted to suit application. Such changes should be besed on national standards or infrastructure controller's regulations where they exist.<br>(…) does not specify all interfaces between the windscreens and the vehicle.<br>(…) does not apply to the renewal of windscreens of high speed rolling stock already in operation. | | | |
| EN 15153-1:2013 + A1:2016 | **Railway applications - External visible and audible warning devices for high speed trains Part 1: Head, marker and tail lamps** | CEN/TC 256 | 2016-12-12 | |
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| EN 15153-2:2013 | **Railway applications - External visible and audible warning devices for high speed trains Part 2: Warning horns** | CEN/TC 256 | 2013-04-30 | |
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| EN 15179:2007 | **Railway applications – Braking – Requirements for the brake system of coaches** | CEN/TC 256 | 2007-11-29 | |
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| EN 15220:2016 | **Railway applications – Brake indicators** | CEN/TC 256 | 2016-10-12 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 15227:2008+A1:2010 | **Railway applications Crashworthiness requirements for railway vehicle bodies** | CEN/TC 256 | 2011-02-07 | |
| | (…) applies to new designs of locomotives and passenger carrying rolling stock as defined in categories C-I to C-IV of Clause 4 taking into consideration the recommendations given in Annex E on the application of the standard (migration rule). It is intended to protect vehicle occupants, through the preservation of structural integrity, and does not extend to other railway employees and customers who are not in vehicles, or to third parties. The specified requirements relate to technical and operational conditions of use that prevail in the CEN member countries. The design of new vehicles for use in passenger trains is based on operations with compatible rolling stock that also meet this standard. It is recognised that operational requirement will require new crashworthy and existing non- crashworthy vehicles to exist in the same train unit but such combinations of vehicles are not required with this European Standard.<br>The requirements apply to the vehicle body, and so those mechanical elements directly associated with it that may be used to adsorb energy in a collision, such as couplers, buffing systems etc. They do not cover the safety features of doors, windows, system componentsor interior features except for specific issues relating to the preservation of survival space.<br>The requirements do not cover all possible accident scenarios but provide a level of crashworthiness that will reduce the consequences of an accident, when the active safety measureshave been inadequate. The requirement is to provide a level of protection by addressing the most common types of collision that cause injuries and fatalities.<br>The applicable design collision scenarios, and suitable parameters for normal European operations, are given in Clause 5. Annex A gives additional information regarding the derivation of the scenarios and describes situations when they may need to be modified and the processes that should then be followed.<br>(…) identifies common methods of providing passive safety that may be adopted to suit individual vehicle requirements. (…) also specifies the characteristics of reference obstacle models for use in the design collision scenarios. Not all vehicles in a train unit have to incorporate energy absorption provided that passenger train configurations formed entirely of new vehicle designs comply as a whole with this European Standard.<br>(…) also specifiesthe requirements for demonstrating that the passive safety objectives have been achieved by comparison with existing proven designs, numerical simulation, component or full-size tests, or a combination of all these methods. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 15273-1:2013 +A1:2016 | **Railway applications – Gauges**<br>**Part 1: General – Common rules for infrastructure and rolling stock** | CEN/TC 256 | 2017-01-10 | *Foi publicada uma Corrigenda em maio de 2017* |
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| EN 15273-2:2013 +A1:2016 | **Railway applications – Gauges**<br>**Part 2: Rolling stock gauge** | CEN/TC 256 | 2016-12-12 | |
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| EN 15273-3:2013 +A1:2016 | **Railway applications – Gauges**<br>**Part 3: Structures gauges** | CEN/TC 256 | 2017-01-10 | |
| | | | | |
| EN 15302:2008 A1:2010 | **Railway applications - Method for determining the equivalent conicity** | CEN/TC 256 | 2011-02-07 | |
| | (…) establishes an evaluation procedure for determining equivalent conicity. A benchmark calculation is specified to achieve comparable results on a consistent basis for the equivalent conicity, which may be calculated by different methods not given in this European Standard.<br>(…) includesreference profiles, profile combinations, tolerances and reference results with tolerance limits, which allow the user to assess the acceptability of a measuring and calculation system including random – and grid- errors of the measuring system. It set down the principles of calculation that need to be followed but does not impose any particular numerical calculation method.<br>(…) does not define limits for the equivalent conicity and gives no tolerance for the rail profile and the wheel profile to achieve acceptable results for the conicity.<br>For purposes outside the scope of this European Standard (e.g. simulation of vehicle behaviour) it can be useful or necessary to use more sophisticated theories. These methods are not within the scopeof this European Standard.<br>For the application of this European Standard some general recommendations are given in Annex I. | | | |
| EN 15313:2016 | **Railway applications – In-service wheelset operation requirements – In-service and off-vehicle wheelset maintenance** | CEN/TC 256 | 2016-06-09 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 15329:2015 | **Railway applications – Braking – Brake block holder and brake shoe key for railway vehicles** | CEN/TC 256 | 2015-10-09 | |
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| EN 15329:2019 | **Railway applications – Braking – Brake block holder and brake shoe key** | CEN/TC 256 | | *Data limite de implementação: 2019-09-30* |
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| EN 15355:2008+A1:2010 | **Railway applications – Braking – Distributor valves and distributor-isolating devices** | CEN/TC 256 | 2010-12-27 | |
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| EN 15355:2019 | **Railway applications – Braking – Distributor valves and distributor-isolating devices** | CEN/TC 256 | | Data limite de implementação: 2019-11-30 |
| | | | | |
| EN 15380-1:2006 | **Railway applications – Designation system for railway vehicles Part 1: General principles** | CEN/TC 256 | 2006-11-06 | |
| | As a railway-specific technical project standard, this European Standard specifies the designation system for technical products and technical project documentation. It takes into account the general rules for structuring principles according to EN 61346-1 and designations according to EN 61355.<br>(...) specifies the structure and the content of the designation sets required in the technical project documentation.<br>The designation depends on the aspect used, see Annex C, individually or in designation set combinations, i.e.:<br>- product groups according to EN 15380-2;<br>- installation site/location according to EN 15380-3;<br>- function structure according to DIN 25002-5. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 15380-2:2006 | **Railway applications – Designation system for railway vehicles**<br>**Part 2: Product groups** | CEN/TC 256 | 2006-05-25 | |
| | As a railway-specific technical standard, this European Standard is the basis for establishing product-oriented structures.<br>(...) is for product structuring; however the function-overlapping "combined assemblies" have to be taken into account. This structure is a common basis for communication between customer, suppliers, subcontractors and others in all stages of the cooperation. | | | |
| EN 15380-3:2006 | **Railway applications – Designation system for railway vehicles**<br>**Part 3: Designation of installation sites and locations** | CEN/TC 256 | 2006-05-25 | |
| | As a railway-specific technical standard, this document gives rules for the designation of installation sites and locations in railway vehicles. | | | |
| EN 15380-4:2013 | **Railway applications – Classification system for railway vehicles**<br>**Part 4: Function groups** | CEN/TC 256 | 2013-04-30 | |
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| EN 15380-5:2014 | **Railway applications – Classification system for railway vehicles**<br>**Part 5: System Breakdown Structure (SBS)** | CEN/TC 256 | 2015-01-13 | |
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| EN 15427:2008+A1:2010 | **Railway applications – Wheel/rail friction management – Flange lubrication** | CEN/TC 256 | 2010-12-27 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 15437-1:2009 | **Railway applications – Axlebox condition monitoring – Interface and design requiremnents Part 1: Track side equipment and rolling stock axlebox** | CEN/TC 256 | 2009-07-29 | |
| | | | | |
| EN 15437-2:2012 | **Railway applications – Axlebox condition monitoring – Interface and design requiremnents Part 2: Performance and design requirements of on-board systems for temperature monitoring** | CEN/TC 256 | 2013-12-18 | |
| | | | | |
| EN 15461:2008+A1:2010 | **Railway applications – Noise emission – Characterisation of the dynamic propertiesof track sectionsfor pass by noise measurements** | CEN/TC 256 | 2011-02-07 | |
| | (…) specifies a method for characterizing the dynamic behaviour of the structure of a track relative to its contribution to the sound radiation associated with the rolling noise.<br>(…) describes a method for:<br>a) acquiring data on mechanical frequency response functions on a track;<br>b) processing measurement data in order to calculate an estimate of the vibration decay rates along the rails in an audible frequency range associated with the rolling noise;<br>c) presenting this estimate for comparison with the lower limits of the decay rates.<br>It is applicable for evaluating the performance of sections of reference tracks for measuring railway vehicle noise within the framework of official approval tests.<br>The method is not applicable for characterizing the vibration behaviour of tracks on loadbearing structures such as bridges or embankments. | | | |
| EN 15528:2015 | **Railway applications – Line categories for managing the interface between load limits of vehicles and infrastructur**e | CEN/TC 256 | 2015-11-27 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 15551:2017 | **Railway applications – Railway rolling stock – Buffers** | CEN/TC 256 | 2017-05-10 | |
| EN 15566:2016 | **Railway applications – Railway rolling stock – Draw gear and screw coupling** | CEN/TC 256 | 2016-11-11 | |
| EN 15594:2009 | **Railway applications – Track – Restoration of rails by electric arc welding** | CEN/TC 256 | 2009-08-20 | |
| EN 15595:2018 | **Railway applications – Braking – Wheel slide protection** | CEN/TC 256 | 2019-04-11 | |
| EN 15610:2009 | **Railway applications – Noise emission – Rail roughness measurement related to rolling noise generation** | CEN/TC 256 | 2009-08-27 | |
| EN 15610:2019 | **Railway applications – Noise emission – Rail roughness measurement related to rolling noise generation** | CEN/TC 256 | | *Data limite de implementação: 2019-11-30* |
| EN 15611:2008+A1:2010 | **Railway applications – Braking – Relay valves** | CEN/TC 256 | 2010-12-27 | |
| EN 15612:2008+A1:2010 | **Railway applications – Braking- Brake pipe accelerator valve** | CEN/TC 256 | 2010-12-27 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 15624:2008+A1:2010 | **Railway applications – Braking – Empty-loaded changeover devices** | CEN/TC 256 | 2010-12-27 | |
| | | | | |
| EN 15625:2008+A1:2010 | **Railway applications – Braking – Automatic variable load sensing devices** | CEN/TC 256 | 2010-12-27 | |
| | | | | |
| EN 15654-1:2018 | **Railway applications – Measurement of vertical forces on wheels and wheelsets**<br>**Part 1: On-track measurement sites for vehicles in service** | CEN/TC 256 | 2018-05-02 | |
| | | | | |
| EN 15654-2:2019 | **Railway applications – Measurement of vertical forces on wheels and wheelsets**<br>**Part 2: Test in workshop for new, modified and maintained vehicles** | CEN/TC 256 | | *Data limite de implementação: 2019-10-31* |
| | | | | |
| EN 15663:2017+A1:2018 | **Railway applications – Definition of vehicle reference masses** | CEN/TC 256 | 2019-02-22 | |
| | | | | |
| EN 15689:2009 | **Railway applications – Track – Switches and crossings – Crossing components made of cast austenitic manganese steel** | CEN/TC 256 | 2010-03-05 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 15723:2010 | **Railway applications – Closing and locking devices for payload protecting devices against environmental influences – Requirements for durability, operation, indication, maintenance, recycling.** | CEN/TC 256 | 2010-03-30 | |
| EN 15734-1:2010 | **Railway applications – Brakingsystems of high speed trains**<br>**Part 1: Requirements and definitions** | CEN/TC 256 | 2011-02-07 | *Foi publicada uma Corrigenda em fevereiro de 2013* |
| EN 15734-2:2010 | **Railway applications – Brakingsystems of high speed trains**<br>**Part 2: Test methods** | CEN/TC 256 | 2011-02-07 | *Foi publicada uma Corrigenda em dezembro de 2012* |
| EN 15746-1:2010 +A1:2011 | **Railway applications – Track – Road-rail machines and associated equipment**<br>**Part 1: Technical requirements for runningand working** | CEN/TC 256 | 2012-01-31 | |
| EN 15746-2:2010 +A1:2011 | **Railway applications – Track – Road-rail machines and associated equipment**<br>**Part 2: General safety requirements** | CEN/TC 256 | 2012-01-31 | |
| EN 15807:2011 | **Railway applications – Pneumatic half couplings** | CEN/TC 256 | 2011-05-05 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 15827:2011 | **Railway applications – Pneumatic half couplings** | CEN/TC 256 | 2011-07-14 | |
| EN 15839:2012+A1:2015 | **Railway applications – Testing for the acceptance of running characteristics of railway vehicles – Freight wagons – Testing of running safety under longitudinal compressive forces** | CEN/TC 256 | 2015-12-10 | |
| EN 15877-1:2012+A1:2018 | **Railway applications – Marking on railway vehicles**<br>**Part 1: Freight wagons** | CEN/TC 256 | 2019-01-30 | |
| EN 15877-2:2013 | **Railway applications – Marking on railway vehicles**<br>**Part 2:External markings on coaches, motive power units,locomotives and on track machines** | CEN/TC 256 | 2014-01-27 | |
| EN 15892:2011 | **Railway applications – Noise emission – Measurement of noise inside driver's cabs** | CEN/TC 256 | 2011-05-31 | |
| EN 15954-1:2013 | **Railway applications – Track – Trailers and associated equipment**<br>**Part 1: Technical requirements for running and working** | CEN/TC 256 | 2013-07-15 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 15954-2:2013 | **Railway applications – Track – Trailers and associated equipment**<br>**Part 2: General safety requirements** | CEN/TC 256 | 2013-07-15 | |
| EN 15955-1:2013 | **Railway applications – Track – Demountable machines and associated equipment**<br>**Part 1: Technical requirements for running and working** | CEN/TC 256 | 2013-07-15 | |
| EN 15955-2:2013 | **Railway applications – Track – Demountable machines and associated equipment**<br>**Part 2: General safety requirements** | CEN/TC 256 | 2013-07-15 | |
| EN 16019:2014 | **Railway applications – Automatic coupler – Performance requirements, specific interface geometry and test method** | CEN/TC 256 | 2014-05-08 | |
| EN 16028:2012 | **Railway applications – Wheel/rail friction management – Lubricants for trainborne and trackside applications** | CEN/TC 256 | 2012-10-22 | |
| EN 16116-1:2013 | **Railway applications – Design requirements for steps, handrails and associated access for staff**<br>**Part 1: Passenger vehicles, luggage vans and locomotives** | CEN/TC 256 | 2013-12-19 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 16116-2:2013 | **Railway applications – Design requirements for steps, handrails and associated access for staff**<br>**Part 2: Freight wagons** | CEN/TC 256 | 2013-12-19 | |
| EN 16185-1:2014 | **Railway applications – Braking systems of multiple unit trains**<br>**Part 1: Requirements and definitions** | CEN/TC 256 | 2015-04-09 | |
| EN 16185-2:2014 | **Railway applications – Braking systems of multiple unit trains**<br>**Part 2: Test methods** | CEN/TC 256 | 2015-04-09 | |
| EN 16186:1:2014+ A1:2018 | **Railway applications – Driver's cab**<br>**Part 1: thropometric data and visibility** | CEN/TC 256 | 2019-01-30 | |
| EN 16186-2:2017 | **Railway applications – Driver's cab**<br>**Part 2: Integration of displays, controls and indicators** | CEN/TC 256 | 2017-12-13 | |
| EN 16186-3:2016 + A1:2018 | **Railway applications – Driver's cab**<br>**Part 3: Design of displays** | CEN/TC 256 | 2019-01-30 | |
| EN 16186-4:2019 | **Railway applications – Driver's cab**<br>**Part 4: Layout and access** | CEN/TC 256 | | *Data limite de implementação: 2019-10-31* |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 16207:2014 | **Railway applications – Braking – Functional and performance criteria of Magnetic Track Brake systems for use in railway rolling stock** | CEN/TC 256 | 2014-10-08 | |
| EN 16235:2013 | **Railway application – Testing for the acceptance of running characteristics of railway vehicles – Freight wagons – Conditions for dispensation of freight wagons with defined characteristics from on-track tests according to EN 14363** | CEN/TC 256 | 2014-01-27 | |
| EN 16241:2014+A1:2016 | **Railway applications – Slack adjuster** | CEN/TC 256 | 2017-01-10 | |
| EN 16272-1:2012 | **Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation – Test method for determining the acoustic performance<br>Part 1: Intrinsic characteristics – Sound absorption in the laboratory under diffuse sound field conditions** | CEN/TC 256 | 2013-01-28 | |
| EN 16272-2:2012 | **Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation – Test method for determining the acoustic performance<br>Part 2: Intrinsic characteristics –Airborne sound insulation in the laboratory under diffuse sound field conditions** | CEN/TC 256 | 2013-01-28 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 16272-3-1:2012 | **Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation – Test method for determining the acoustic performance**<br>**Part 3-1: Normalized railway noise spectrum and single number ratings for diffuse field applications** | CEN/TC 256 | 2013-01-28 | |
| EN 16272-3-2:2014 | **Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation – Test method for determining the acoustic performance**<br>**Part 3-2: Normalized railway noise spectrum and single number ratings for direct field applications** | CEN/TC 256 | 2014-11-13 | |
| EN 16272-4:2016 | **Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation – Test method for determining the acoustic performance**<br>**Part 4: Intrinsic characteristics – In situ values of sound diffraction under direct sound field** | CEN/TC 256 | 2016-11-11 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 16272-6:2014 | **Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation – Test method for determining the acoustic performance**<br>**Part 6: Intrinsic characteristics –In situ values of airborne sound insulation under direct sound field conditions** | CEN/TC 256 | 2015-02-11 | |
| EN 16273:2014 | **Railway applications – Gangway systems between vehicles**<br>**Part 1: Main applications** | CEN/TC 256 | 2015-04-09 | |
| EN 16286-1:2013 | **Railway applications – Gangway systems between vehicles**<br>**Part 1: Main applications** | CEN/TC 256 | 2013-07-15 | |
| EN 16286-2:2013 | **Railway applications – Gangway systems between vehicles**<br>**Part 2: Acoustic measurements** | CEN/TC 256 | 2013-07-15 | |
| EN 16334:2014 | **Railway applications – Passenger Alarm System – System requirements** | CEN/TC 256 | 2014-12-10 | |
| EN 16362:2013 | **Railway applications – Ground based services – Water restocking equipment** | CEN/TC 256 | 2014-04-07 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 16404:2016 | **Railway applications – Re-railing and recovery requirements for railway vehicles** | CEN/TC 256 | 2016-05-04 | |
| EN 16431:2014 | **Railway applications – Tack – Hollow sleepers and bearers** | CEN/TC 256 | 2014-11-13 | |
| EN 16432-1:2017 | **Railway applications – Ballastless track systems Part 1: General requirements** | CEN/TC 256 | 2017-11-10 | |
| EN 16432-2:2017 | **Railway applications – Ballastless track systems Part 2: System design, subsystems and components** | CEN/TC 256 | 2017-12-13 | |
| EN 16451:2015 | **Railway applications – Braking – Brake pad holder** | CEN/TC 256 | 2015-10-06 | |
| EN 16452:2015 | **Railway applications – Braking – Brake blocks** | CEN/TC 256 | 2015-11-27 | |
| EN 16452:2015+A1:2019 | **Railway applications – Braking – Brake blocks** | CEN/TC 256 | | *Data limite de implementação: 2019-09-30* |
| EN 16494:2015 | **Railway applications – Requirements dor ERTMS. Trackside Boards** | CEN/TC 256 | 2015-09-10 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 16507:2014 | **Railway applications – Ground based service – Diesel refuelling equipment** | CEN/TC 256 | 2015-02-11 | |
| EN 16584-1:2017 | **Railway applications – Design for PRM use – General requirements<br>Part 1: Contrast** | CEN/TC 256 | 2017-01-10 | |
| EN 16584-2:2017 | **Railway applications – Design for PRM use – General requirements<br>Part 1: Information** | CEN/TC 256 | 2017-05-10 | |
| EN 16584-3:2017 | **Railway applications – Design for PRM use – General requirements<br>Part 1: Optical and friction characteristics** | CEN/TC 256 | 2017-05-10 | |
| EN 16585-1:2017 | **Railway applications – Design for PRM use – Equipment and components onboard rolling stock<br>Part 1: Toilets** | CEN/TC 256 | 2017-05-10 | |
| EN 16585-2:2017 | **Railway applications – Design for PRM use – Equipment and components onboard rolling stock<br>Part 2: Elements for sitting,standing and moving** | CEN/TC 256 | 2017-05-10 | |
| EN 16585-3:2017 | **Railway applications – Design for PRM use – Equipment and components onboard rolling stock<br>Part 3: Clearways and internal doors** | CEN/TC 256 | 2017-05-10 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 16586-1:2017 | **Railway applications – Design for PRM use – Accessibility of persons with reduced mobility to rolling stock**<br>**Part 1: Steps for access and egress** | CEN/TC 256 | 2017-09-13 | |
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| EN 16586-2:2017 | **Railway applications – Design for PRM use – Accessibility of persons with reduced mobility to rolling stock**<br>**Part 1: Boarding aids** | CEN/TC 256 | 2017-09-13 | |
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| EN 16587:2017 | **Railway applications – Design for PRM use – Requirements on obstacle free routes for infrastructure** | CEN/TC 256 | 2017-10-11 | |
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| EN 16683:2015 | **Railway applications – Call for aid and communication device – Requirements** | CEN/TC 256 | 2016-02-11 | |
| | | | | |
| EN 16704-1:2016 | **Railway applications – Track – Safety protection on the track during work**<br>**Part 1: Railway risks and common principles for protection of fixed and mobile work sites** | CEN/TC 256 | 2017-04-11 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 16704-2-1:2016 | **Railway applications – Track – Safety protection on the track during work**<br>**Part 2-1: Common solutions and technologies – Technical requirements for Track Warning Systems (TWS)** | CEN/TC 256 | 2017-01-10 | |
| | | | | |
| EN 16704-2-2:2016 | **Railway applications – Track – Safety protection on the track during work**<br>**Part 2-2: Common solutions and technology – Requirements for barriers** | CEN/TC 256 | 2017-03-09 | |
| | | | | |
| EN 16704-3:2016 | **Railway applications – Track – Safety protection on the track during work**<br>**Part 3:** Competences for personnel related to work on or near tracks | CEN/TC 256 | 2017-01-10 | |
| | | | | |
| EN 16725:2016 | **Railway applications – Track – Restoration and repair of manganese crossings** | CEN/TC 256 | 2017-01-10 | |
| | | | | |
| EN 16727-1:2018 | **Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation – Non-acoustic performance**<br>**Part 1: Mechanical performance under static loadings – Calculation and test method** | CEN/TC 256 | 2018-08-27 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 16727-2-1:2018 | **Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation – Non-acoustic performance**<br>**Part 2-1: Mechanical performance under dynamic loadings caused by passing trains – Resistance to fatigue** | CEN/TC 256 | 2018-08-27 | |
| EN 16727-2-2:2016 | **Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation – Non-acoustic performance**<br>**Part 2-2: Mechanical performance under dynamic loadings caused by passing trains – Calculation method** | CEN/TC 256 | 2016-07-11 | |
| EN 16727-3:2017 | **Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation – Non-acoustic performance**<br>**Part 2-2: Mechanical performance under dynamic loadings caused by passing trains – Calculation method** | CEN/TC 256 | 2017-05-10 | |
| EN 16729-1:2016 | **Railway applications – Infrastructure – Non-destructive testing on rails in track**<br>**Part 1: Requirements for ultrasonic insoection and evaluation principles** | CEN/TC 256 | 2016-07-11 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 16729-3:2018 | **Railway applications – Infrastructure – Non-destructive testing on rails in track**<br>**Part 3: Requirements for identifying internal and surface rail defects** | CEN/TC 256 | 2018-06-08 | |
| EN 16729-4:2018 | **Railway applications – Infrastructure – Non-destructive testing on rails in track**<br>**Part 4: Qualification of personnel for non-destructive testing on rails** | CEN/TC 256 | 2019-04-11 | |
| EN 16730:2016 | **Railway applications – Track – Concrete sleepers and bearers with under sleeper pads** | CEN/TC 256 | 2016-09-12 | |
| EN 16771:2016 | **Railway applications – Infrastructure – Aluminothermic welding of grooved rails** | CEN/TC 256 | 2016-12-12 | |
| EN 16834:2019 | **Railway applications – Braking – Brake performance** | CEN/TC 256 | | *Data limite de implementação: 2019-10-31* |
| EN 16839:2017 | **Railway applications – Rolling stock – Head stock layout** | CEN/TC 256 | 2018-02-15 | |
| EN 16860:2019 | **Railway applications – Requirements and general principles for securing payload in rail freight transport** | CEN/TC 256 | 2019-04-11 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 16910-1:2018 | **Railway applications – Rolling stock – Requirements for non-destructive testing on running gear in railway maintenance.<br>Part 1: Wheelsets** | CEN/TC 256 | 2018-06-08 | |
| EN 16922:2017 | **Railway applications – Ground based services – Vehicle waste water discharge equipment** | CEN/TC 256 | 2018-02-15 | |
| EN 16951-1:2018 | **Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation- Procedures for assessing long term performance<br>Part 1: Acoustics characteristics** | CEN/TC 256 | 2018-07-05 | |
| EN 16951-2:2018 | **Railway applications – Track – Noise barriers and related devices acting on airborne sound propagation- Procedures for assessing long term performance<br>Part 2: Non-acoustics characteristics** | CEN/TC 256 | 2018-08-27 | |
| EN 16989:2018 | **Railway applications – Fire protection on railways vehicles – Fire behaviour test for a complete seat** | CEN/TC 256 | 2018-08-27 | |
| EN 17018:2019 | **Railway applications – Rolling stock maintenance – Terms and definitions** | CEN/TC 256 | | *Data limite de implementação: 2019-08-31* |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 17023:2018 | **Railway applications – Railway vehicle maintenance – Creation and modification of maintenance plan** | CEN/TC 256 | 2019-04-11 | |
| EN 17065:2018 | **Railway applications – Braking – Passenger coach tast procedure** | CEN/TC 256 | 2018-11-08 | |
| EN 17069-1:2019 | **Railway applications – Systems and procedures for change of track gauge**<br>**Part 1: Automatic Variable Gauge Systems** | CEN/TC 256 | | *Data limite de implementação: 2019-10-31* |
| EN 17084:2018 | **Railway applications – Fire protection on railway vehicles – Toxicity test of materials and components** | CEN/TC 256 | 2019-04-11 | |
| EN 17095:2019 | **Railway applications – Rolling stock maintenance – Maintenance records** | CEN/TC 256 | | *Data limite de implementação: 2019-09-30* |
| EN 45545-1:2013 | **Railway applications – Fire protection on railway vehicles**<br>**Part 1: General** | CEN/TC 256 | 2013-07-15 | |
| EN 45545-2:2013 +A1:2015 | **Railway applications – Fire protection on railway vehicles**<br>**Part 2: Requirements for fire behaviour of materials and components** | CEN/TC 256 | 2016-02-11 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 45545-3:2013 | **Railway applications – Fire protection on railway vehicles**<br>**Part 3: Fire resistance requirements for fire barriers** | CEN/TC 256 | 2013-07-15 | |
| EN 45545-4:2013 | **Railway applications – Fire protection on railway vehicles**<br>**Part 4: Fire safety requirements for railway rolling stock design** | CEN/TC 256 | 2013-07-15 | |
| EN 45545-5:2013+ A1:2015 | **Railway applications – Fire protection on railway vehicles**<br>**Part 5: Fire safety requirements for electrical equipment including that of trolley buses, track guided buses and magnetic levitation vehicles** | CEN/TC 256 | 2015-12-10 | |
| EN 45545-6:2013 | **Railway applications – Fire protection on railway vehicles**<br>**Part 6: Fire control and management systems** | CEN/TC 256 | 2013-07-15 | |
| EN 45545-7:2013 | **Railway applications – Fire protection on railway vehicles**<br>**Part 7: Fire safety requirements for flammable liquid and flammable gas installations** | CEN/TC 256 | 2013-07-15 | |
| EN 50119:2009 | **Railway applications – Fixed installations – Electric traction overhead contact lines** | SC 9XC | 2010-02-02 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50119:2009/A1:2013 | **Railway applications – Fixed installations – Electric traction overhead contact lines** | SC 9XC | 2013-12-19 | |
| EN 50121-1:2017 | **Railway applications – Electromagnetic compatibility**<br>**Part 1: General** | TC 9X | 2017-09-13 | |
| EN 50121-2:2017 | **Railway applications – Electromagnetic compatibility**<br>**Part 2: Emission of the whole railway system to the outside world** | TC 9X | 2017-09-13 | |
| EN 50121-3-1:2017 | **Railway applications – Electromagnetic compatibility**<br>**Part 3-1: Rolling stock – Train and complete vehicle** | TC 9X | 2017-06-12 | |
| EN 50121-3-1:2017 /A1:2019 | **Railway applications – Electromagnetic compatibility**<br>**Part 3-1: Rolling stock – Train and complete vehicle** | TC 9X | | *Data limite de implementação: 2019-10-05* |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50121-3-2:2016 | **Railway applications – Electromagnetic compatibility**<br>**Part 3-2: Rolling stock – Apparatus** | TC 9X | 2017-03-09 | |
| EN 50121-3-2:2016 /A1:2019 | **Railway applications – Electromagnetic compatibility**<br>**Part 3-2: Rolling stock – Apparatus** | TC 9X | | *Data limite de implementação: 2019-10-05* |
| EN 50121-4:2016 | **Railway applications – Electromagnetic compatibility**<br>**Part 4: Emission and immunity of the signalling and telecommunications apparatus** | TC 9X | 2017-03-09 | |
| EN 50121-4:2016 /A1:2019 | **Railway applications – Electromagnetic compatibility**<br>**Part 4: Emission and immunity of the signalling and telecommunications apparatus** | TC 9X | | *Data limite de implementação: 2019-10-05* |
| EN 50121-5:2017 | **Railway applications – Electromagnetic compatibility**<br>**Part 5: Emission and immunity of fixed power supply installations and apparatus** | TC 9X | 2017-09-13 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50121-5:2017 /A1: 2019 | **Railway applications – Electromagnetic compatibility**<br>**Part 5: Emission and immunity of fixed power supply installations and apparatus** | TC 9X | 2017-09-13 | *Data limite de implementação: 2019-10-05* |
| | | | | |
| EN 50122-1:2011 + Corrigenda setembro 2012 | **Railway applications – Fixed installations**<br>**Part 1: Protective provisions relating to electrical safety and earthing** | SC 9XC | 2011-10-25 | |
| | | | | |
| EN 50122-1:2011 /A1:2011 | **Railway applications – Fixed installations – Electrical safety, earthing and the return circuit**<br>**Part 1: Protective provisions against electri shock** | SC 9XC | 2012-01-31 | |
| | | | | |
| EN 50122-1:2011 /A2:2016 | **Railway applications – Fixed installations – Electrical safety, earthing and the return circuit**<br>**Part 1: Protective provisions against electri shock** | SC 9XC | 2016-09-12 | |
| | | | | |
| EN 50122-1:2011 /A3:2016 | **Railway applications – Fixed installations – Electrical safety, earthing and the return circuit**<br>**Part 1: Protective provisions against electri shock** | SC 9XC | 2017-02-15 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50122-1:2011 /A4:2017 | **Railway applications – Fixed installations – Electrical safety, earthing and the return circuit**<br>**Part 1: Protective provisions against electri shock** | SC 9XC | 2017-09-13 | |
| | | | | |
| EN 50122-2:2010 | **Railway applications – Fixed installations – Electrical safety, earthing and the return circuit**<br>**Part 2: Provisions against the effects of stray currents caused by d.c. traction systems** | SC 9XC | 2011-07-14 | |
| | | | | |
| EN 50122-3:2010 | **Railway applications – Fixed installations – Electrical safety, earthing and the return circuit**<br>**Part 3: Mutual interaction of a.c. and d.c. traction systems** | SC 9XC | 2011-07-14 | |
| | | | | |
| EN 50123-1:2003 | **Railway applications – Fixed installations – D.C. switchgear**<br>**Part 1: General** | SC 9XC | 2003-06-05 | |
| | The EN 50123 series specifies requirements for d.c. switchgear and controlgear and is intended to be used in fixed electrical installations with nominal voltage not exceeding 3 000 V d.c., which supply electrical power to vehicles for public guided transport, i.e. railway vehicles, tramway vehicles, underground vehicles and trolley-buses.<br>Part 1 specifies general requirements. (...). | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50123-2:2003 | **Railway applications – Fixed installations – D.C. switchgear**<br>**Part 2: D.C. circuit breakers** | SC 9XC | 2003-06-05 | |
| | (...) specifies requirements for d.c. circuit breakers for use in fixed installations of traction systems. (...). | | | |
| EN 50123-3:2003 | **Railway applications – Fixed installations – D.C. switchgear**<br>**Part 3: Indoor d.c. disconnectors, switch-disconnectors and earthing switches** | SC 9XC | 2003-06-05 | |
| | (...) specifies requirements for d.c. disconnectors, switch-disconnectors and earthing switches for use indoor fixed installations of traction systems. (...). | | | |
| EN 50123-3:2003 /A1:2013 | **Railway applications – Fixed installations – D.C. switchgear**<br>**Part 3: Indoor d.c. disconnectors, switch-disconnectors and earthing switches** | SC 9XC | 2014-10-06 | |
| | | | | |
| EN 50123-4:2003 | **Railway applications – Fixed installations – D.C. switchgear**<br>**Part 4: Outdoor d.c. disconnectors, switch-disconnectors and earthing switches** | SC 9XC | 2003-06-05 | |
| | (...) specifies requirements for outdoor d.c. switch-disconnectors, disconnectors and earthing switches for use outdoor fixed installations of traction systems. (...). | | | |
| EN 50123-4:2003 /A1:2013 | **Railway applications – Fixed installations – D.C. switchgear**<br>**Part 4: Outdoor d.c. disconnectors, switch-disconnectors and earthing switches** | SC 9XC | 2014-10-06 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50123-6:2003 | **Railway applications – Fixed installations – D.C. switchgear**<br>**Part 6: D.C. switchgear assemblies** | SC 9XC | 2003-06-05 | |
| | (...) covers d.c. metal-enclosed and non-metallic enclosed switchgear assemblies used in indoor stationary installations of traction systems, with nominal voltage not exceeding 3 000V.<br>It is intended that individual items of equipment, for example circuit breakers, housed in the assembly are designed, manufactured and individually tested (simulating the enclosure when necessary) in accordance with their respective parts of EN 50123 or, when appropriate, with another applicable standard. (...). | | | |
| EN 50123-6:2003 /A1:2014 | **Railway applications – Fixed installations – D.C. switchgear**<br>**Part 6: D.C. switchgear assemblies** | SC 9XC | 2015-10-09 | |
| | | | | |
| EN 50123-7-1:2003 | **Railway applications – Fixed installations – D.C. switchgear**<br>**Part 7-1: Measurement, control and protection devices for specific use in d.c. traction systems – Application guide** | SC 9XC | 2003-06-05 | |
| | (...) provides assistance, guidance and requirements for the design of protection, control and measuring systems in d.c. installations intended to provide a power supply to traction systems. This application guide identifies the characteristics and parameters of equipment used in the measurement, control and protection of d.c. traction systems. Guidance is given concerning the appropriate application of electrical protection systems. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50123-7-2:2003 | **Railway applications – Fixed installations – D.C. switchgear**<br>**Part 7-2: Measurement, control and protection devices for specific use in d.c. traction systems – Isolating current transducers and other current measuring devices** | SC 9XC | 2003-06-05 | |
| | (...) gives the requirements for isolating current transducers and other current measuring devices used in d.c. railway applications, fixed installations.<br>This transducer is normally positioned between the sensor in the live switchboard conductor or rail and the secondary device, giving galvanic insulation between the input and the output. | | | |
| EN 50123-7-3:2003 | **Railway applications – Fixed installations – D.C. switchgear**<br>**Part 7-3: Measurement , control and protection devices for specific use in d.c. traction systems – Isolating voltage transducers and other voltage measuring devices** | SC 9XC | 2003-06-05 | |
| | (...) gives the requirements for isolating voltage transducers and other voltage measuring devices used in d.c. railway applications, fixed installations.<br>This transducer is normally positioned between the voltage sensor on the live switchboard conductor or rail and the secondary device, giving galvanic insulation between the input and the output. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50124-1:2001<br>+ EN 50124-1:2001/A1:2003<br>+ EN 50124-1:2001/A2:2005<br>+ Corrigenda maio 2010 | **Railway applications - Insulation coordination Part 1: Basic requirements - Clearances and creepage distances for all electrical and electronic equipment** | TC 9X | | *A versão portuguesa NP EN 50124-1:2001+A1:2003+A2:2005 foi editada em Março de 2011* |
| | The whole document deals with insulation coordination in railways. It applies to equipment for use in signalling, rolling stock and fixed installations up to 2000 m above sea level.<br>Insulation coordination is concerned with the selection, dimensioning and correlation of insulation both within and between items of equipment. In dimensioning insulation, electrical stresses and environmental conditions are taken into account. For the same conditions and stresses these dimensions are the same.<br>An objective of insulation coordination is to avoid unnecessary overdimensioning of insulation.<br>This standard specifies:<br>- requirements for clearances and creepage distances for equipment;<br>- general requirements for tests pertaining to insulation coordination.<br>The term equipment relates to a section as defined in 1.3.1.3: it may apply to a system, a sub-system, an apparatus, a part of an apparatus, or a physical realisation of an equipotential line. (...).<br>Product standards have to align with this generic standard.<br>However, they may require, with justification, different requirements due to safety and/or reliability reasons, e.g. for signalling, and/or particular operating conditions of the equipment itself, e.g. overhead lines which have to comply to EN 50119.<br>(...) also gives provisions for dielectric tests (type tests or routine tests) on equipment (see annex B). | | | |
| EN 50124-1:2017 | **Railway applications - Insulation coordination Part 1: Basic requirements - Clearances and creepage distances for all electrical and electronic equipment** | TC 9X | 2017-11-10 | |
| | | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50124-2:2001+ Corrigenda Maio 2010 | **Railway applications - Insulation coordination Part 2: Overvoltages and related protection** | TC 9X | 2001-07-02 | A versão portuguesa NP EN 50124-2 foi editada em 2003-06-20 |
| | (…) applies to:<br>- Fixed installations (downstream the secondary of the substation transformer) and rolling stock equipment linked to the contact line of one of the systems defined in EN 50163;<br>- Rolling stock equipment linked to a train line.<br>(...) gives simulation and/or test requirements for protection against transient overvoltages of such equipment.<br>Long-term overvoltages are not treated in this document. | | | |
| EN 50124-2:2017 | **Railway applications - Insulation coordination Part 2: Overvoltages and related protection** | TC 9X | 2017-11-10 | |
| | | | | |
| EN 50125-1:2014 | **Railway applications - Insulation coordination Part 1: Equipment on board rolling stock** | SC 9XB | 2014-12-10 | |
| | | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50125-2:2002 + Corrigenda junho 2010 | **Railway applications - Environmental conditions for equipment**<br>**Part 2: Fixed electrical installations** | SC 9XC | 2003-01-06 | |
| | (…) takes into account environmental conditions within Europe.<br>(...) deals with the environmental influences on fixed electrical installations for traction power supply and equipment essential to operate a railway:<br>- in open air;<br>- in covered areas;<br>- in tunnels;<br>- within enclosures placed in above areas.<br>Escalators, lifts, fire protection, lighting in tunnels and on plataforms, ticket machines, ventilation systems and non-essential functions are not included.<br>Such influences include altitude, temperature and humidity, air movement, rain snow, hail, ice, sand, solar rediation, lightning, pollution, vibration, shocks and EMC.<br>(...) does not specify the tests requirements for equipment.<br>In case of environmental conditions not covered by tghe Standard the data to be adopted for a specific project should be clearly stipulated when preparing a specification.<br>(...) is not intended to apply to cranes, installations in underground mines suspended cable cars and funicular railways.<br>(...) Fixed installed signalling and telecommunication equipment shall comply with EN 50125-3. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50125-3:2003<br>+Corrigenda maio:2010 | **Railway applications - Environmental conditions for equipment**<br>**Part 3: Equipment for signalling and telecommunications** | SC 9XA | 2003-02-13 | A versão portuguesa NP EN 50125-3 doi editada em 2006-04-28 |
| | (...) specifies the environmental conditions encountered within Europe. It can also be applied elsewhere by agreement between the supplier and the customer.<br>(...) covers the design and the use of equipment and any portable equipment for signalling and telecommunications systems (including test, measure, monitoring equipment, etc.).<br>The portable equipment must comply with the sections of this European Standard relevant to their use. (...).<br>In particular the Standard intends to define:<br>- interface conditions between the equipment and its environment,<br>- parameters to be used by designers when calculating RAMS and life time with respect to environmental condition effects.<br>In this respect it gives general guidance in order to allow consistent assessments of contract documentation for European projects.<br>The defined environmental conditions are considered as normal in service.<br>Microclimates surrounding components may need special requirements to be defined by the product standard.<br>(...). (...) applies to all signalling and telecommunications systems except those used for cranes, mining vehicles and cable cars. (...).<br>The train-borne signalling and telecommunications systems must comply with rolling stock environmental conditions specifications (EN 50125-1). | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50126-1:1999<br>+ Corrigenda maio 2006<br>+ Corrigenda maio 2010<br>+ Corrigenda outubro 2012 | **Railway applications - The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS)**<br>**Part 1: Basic requirements and generic process** | TC 9X | 1999-11-05 | A versão portuguesa NP EN 50126:2000 foi editada em 2000-10-12, contando já com 2 erratas: Março 2003 e Junho 2003<br>Editada em 2006-06-30 |
| (…) – defines RAMS in terms of reliability, availability, maintainability and safety and their interaction;<br>- defines a process, based on the system lifecycle and tasks within it, for managing RAMS;<br>- enables conflicts between RAMS elements to be controlled and managed effectively;<br>- defines a systematic process for specifying requirements for RAMS and demonstrating that these requirements are achieved;<br>- addresses railway specifics;<br>- does not specify requirements for ensuring system security;<br>- does not define rules or processes pertaining to the certification of railway products against the requirements of this standard;<br>- does not define an approval process by the safety regulatory authority.<br>(...) is applicable:<br>- to the specification and demonstration of RAMS for all railway applications and at all levels of such an application, as appropriate, from complete railway routes to major systems within a railway route, and to individual and combined sus-systems and components within a railway route, and to individual and combined sub-systems and components within these major systems, including those containing software; in particular:<br>-to new systems;<br>- to new systems integrated into existing systems in operating prior to the creation of this standard, although it is not generally applicable to other aspects of the existing system;<br>- to modifications of existing systems in operation prior to the creation of this standard, although it is not generally applicable to other aspects of the existing system;<br>-at all relevant phases of the lifecycle of an application;<br>-for use by Railway Authorities and the railway support industry.<br>NOTE: Guidance on the applicability is given in the requirements of this standard. | | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50126-1:2017 | **Railway applications – The Specification and Demonstration of Reliability, Availability, Maintainability and Safgety (RAMS)**<br>**Part 1: Generic RAMS Process** | SC 9XA | | Data limite de implementação: 2018-07-03 |
| | | | | |
| EN 50128:2011<br>+ Corrigenda fevereiro 2014 | **Railway applications – Communications, signalling and processing systems – Software for railway control and protection systems** | SC 9XA | 2012-01-31 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50129:2003 + Corrigenda maio 2010 | **Railway applications – Communication, signalling and processing systems – Safety related electronic systems for signalling** | SC 9XA | 2003-02-26 | A versão portuguesa NP EN 50129 foi editada em 2006-01-27 |
| | (…) applicable to safety-related electronic systems (including sub-systems and equipment for railway signalling applications.<br>The scope of this standard, and its relationship with other CENELEC standards, are shown in Figure 1.<br>(...) is intended to apply to all safety-related railways signalling systems sub-system equipment. However, the hazard analysis and risk assessment processes defined in EN 50126 and this standard are necessary for all railways signalling systems/sub-systems/equipment, in order to identify any safetyrequirements. If analysis reveals that no safety requirements exist (i. e.: that the situation is non-safety-related), and provided the conclusion is not revised as a consequence of later changes, this safety standard ceases to be applicable.<br>(...) applies to the specification, design, construction, installation, acceptance, operation, maintenance and modification/extension phases of complete signalling systems, and also to individual sub-systems and equipments within the complete system. Annex C includes procedures relating to electronic hardware components.<br>(...) applies to generic sub-systems and equipment (both application-independent and those intended for a particular class of application), and also to systems/sub-systems/equipment for specific applications.<br>(...). However, as far as reasonably practicable, this standard should be applied to modifications and extensions to existing systems, sub-systems and equipment.<br>(...) is primarily applicable to systems/sub-systems/equipment which have been specifically designed and manufactured for railway signalling applications. It should also be applied, as far as reasonably practicable, to general-purpose or industrial equipment (e. g.: power supplies, modems, etc.), which is procured for use as part of safety-related signalling system. As a minimum, evidence shall be provided in such cases to demonstrate<br>either that the equipment is not relied on for safety,<br>or that the equipment can be relied on for those functions which relate to safety.<br>(...) applicable to the functional safety of railway signalling systems. It is not intended to deal with the occupational health and safety of personnel; this subject is covered by other standards. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50129:2018<br>+ AC 2019-04 | **Railway applications – Communication, signalling and processing systems – Safety related electronic systems for signalling** | SC 9XA | 2019-02-22 | |
| | | | | |
| EN 50149:2012 | **Railways applications – Fixed installations – Electric traction – Copper and copper alloy grooved contact wires** | SC 9XC | 2013-01-28 | |
| | | | | |
| EN 50152-1:2012 | **Railway applications – Fixed installations – Particular requirements for a.c. switchgear Part 1: Single-phase circuit-breakers with $U_m$ above 1 kV** | SC 9XC | 2013-07-15 | |
| | | | | |
| EN 50152-1:2012<br>/A1:2013 | **Railway applications – Fixed installations – Particular requirements for a.c. switchgear Part 1: Single-phase circuit-breakers with $U_m$ above 1 kV** | SC 9XC | 2014-10-06 | |
| | | | | |
| EN 50152-2:2012 | **Railway applications – Fixed installations – Particular requirements for a.c. switchgear Part 2: Single-phase disconnectors, earthing switches and switches with $U_m$ above 1 kV** | SC 9XC | 2013-07-15 | |
| | | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50152-3-1:2017 | **Railway applications – Fixed installations – Particular requirements for a.c. switchgear Part 3 -1: Measurement, control and protection devices for specific use in a.c. traction systems – Application guide** | SC 9XC | 2017-10-11 | |
| | | | | |
| EN 50152-3-2:2016 | **Railway applications – Fixed installations – Particular requirements for a.c. switchgear Part 3-2: Measurement, control and protection devices for specific use in a.c. traction systems - Current transformers** | SC 9XC | 2017-02-10 | |
| | | | | |
| EN 50152-3-3:2016 | **Railway applications – Fixed installations – Particular requirements for a.c. switchgear Part 3: Measurement, control and protection devices for specific use in a.c. traction systems Section 3: Single-phase voltage transformers** | SC 9XC | 2017-02-10 | |
| | | | | |
| EN 50153:2014 | **Railway applications - Electronic equipment used on rolling stock** | SC 9XB | 2014-12-10 | |
| | | | | |
| EN 50153:2014/A1:2017 | **Railway applications - Electronic equipment used on rolling stock** | SC 9XB | 2018-03-08 | |
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| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50155:2007<br>+ Corrigenda Maio 2010<br>+ Corrigenda junho 2012 | **Railway applications - Electronic equipment used on rolling stock** | TC 9X | 2007-11-16 | A versão portuguesa NP EN 50155:2007 foi editada em 2008-12-12 |
| | | | | |
| EN 50155:2017 | **Railway applications - Rolling stock - Electronic equipment** | TC 9XB | 2018-02-15 | |
| | | | | |
| EN 50159:2010 | **Railway applications - – Communication, signalling and processing systems** | SC 9XA | 2011-07-14 | |
| | | | | |
| EN 50162:2004 | **Protection against corrosion by stray current from direct current systems** | BTTF 114-1 | 2004-09-06 | |
| | | | | |
| EN 50163:2004<br>EN 50163:2004/A1:2007<br>+ Corrigenda Maio 2010 | **Railway applications - Supply voltages of traction systems** | SC 9XC | (2004-12-27)<br>(2007-11-16) | *Versão portuguesa foi editada em Julho 2009* |
| | | | | |
| EN 50206-1:1998<br>+ Corrigenda Maio 2010 | **Railway applications - Rolling stock - Pantographs: Characteristics and tests**<br>**Part 1: Pantographs for main line vehicles** | SC 9XB | (1998-11-30) | *A versão portuguesa NP EN 50206-1:2004 foi editada em 2004-03-30, cuja data limite de anulação se encontra em aberto* |
| | (...) defines the general assembly characteristics which are to be applied to pantographs, to enable current collection from the overhead line system. It also defines the tests the pantographs have to perform, excluding insulators. (...). | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50206-1:2010 | **Railway applications - Rolling stock - Pantographs: Characteristics and tests**<br>**Part 1: Pantographs for main line vehicles** | SC 9XB | 2011-02-07 | |
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| EN 50206-2:2010 | **Railway applications - Rolling stock - Pantographs: Characteristics and tests**<br>**Part 2: Pantographs for metros and light rail vehicles** | SC 9XB | 2011-02-07 | |
| | | | | |
| EN 50215:2009 | **Railway applications – Testing of rolling stock after completion of construction and before entry into service** | SC 9XB | 2010-03-30 | *Versão portuguesa NP EN 50215 "Aplicações ferroviárias – Ensaios do material circulante após o fabrico e antes da entrada em serviço" em fase de aprovação pela CTE 9.* |
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| EN 50238-1:2003<br>+ Corrigenda noven«mbro 2014 | **Railway applications – Compatibility between rolling stock and train detection systems** | SC 9XA | 2003-06-05 | *A versão portuguesa NP EN 50238 foi editada em Agosto 2009* |
| | (...) describe a procedure for mutual acceptance of rolling stock to run over specific routes. It describes the methods of measurement of interference currents, the methods of measurement of the susceptibility of train detection systems, the characterisation of traction power supplies and the procedure for acceptance. The result of the acceptance procedure is a structured justification document referred to as a "compatibility case", which documents the evidence that the conditions for compatibility have been satisfied.<br>(...). (...) may be applied to modifications of rolling stock, traction power supply or train detection systems which may affect compatibility.<br>The scope of the compatibility case is restricted to the demonstration of compatibility of rolling stock with a train detection system´s characterisation (e.g. gabarit). Radio based signalling systems are not within the scope of this European Standard. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50239:2018 | **Railway applications – Radio remote control system of traction vehicle for shunting application** | SC 9XA | 2018-09-26 | |
| EN 50261:1999 | **Railway applications – Mounting of electronic equipment** | TC 9X | 1999-05-25 | |
| EN 50264-1:2008 | **Railway applications – Railway rolling stock cables having special fire performance – Standard wall**<br>**Part 1: General requirements** | TC 9X + TC 20 | 2009-02-26 | *CLC/TC 20 "Electric cables"* |
| EN 50264-2-1:2008 | **Railway applications – Railway rolling stock power and control cables having special fire performance – Standard wall**<br>**Part 2-1: Cables with crosslinked elastomeric insulation - Single core cable** | TC 9X + TC 20 | 2009-02-26 | *CLC/TC 20 "Electric cables"* |
| EN 50264-2-2:2008 | **Railway applications – Railway rolling stock power and control cables having special fire performance – Standard wall**<br>**Part 2-2: Cables with crosslinked elastomeric insulation - Multicore cables** | TC 9X + TC 20 | 2009-02-26 | *CLC/TC 20 "Electric cables"* |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50264-3-1:2008 | **Railway applications – Railway rolling stock power and control cables having special fire performance – Standard wall**<br>**Part 3-1: Cables with crosslinked elastomeric insulation with reduced dimensions – Single core cables** | TC 9X + TC 20 | 2009-02-26 | *CLC/TC 20 "Electric cables"* |
| | | | | |
| EN 50264-3-2:2008 | **Railway applications – Railway rolling stock power and control cables having special fire performance – Standard wall**<br>**Part 3-2: Cables with crosslinked elastomeric insulation with reduced dimensions – Multocore cables** | TC 9X + TC 20 | 2009-02-26 | *CLC/TC 20 "Electric cables"* |
| | | | | |
| EN 50305:2002 | **Railway applications – Railway rolling stock cables having special fire performance – Test methods** | TC 9X + TC 20 | 2003-01-28 | |
| | (…) specifies special test methods applicable to cables, and their constituent insulating and sheathing materials, for use in railway rolling stock. Such cables are specified in the various parts of EN 50264 and EN 50306.<br>Ohter test methods required for railway rolling stock cables and their insulating and sheathing materials are listed in Annex A. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50306-1:2002 | **Railway applications – Railway rolling stock cables having special fire performance – Thin wall**<br>**Part 1: General requirements** | TC 9X + TC 20 | 2003-01-28 | *CLC/TC 20 "Electric cables"* |
| | EN 50306-1 specifies the general requirements applicable to the cables given EN 50306-2, EN 50306-3 and EN 50306-4. It includes the detailed requirements for S1 and S2 sheathing materials and other components called up in the separate Parts.<br>(...). These cables are rated for occasional thermal stresses causing ageing equivalent to continuous operational life at temperatures of 90 °C or 105 °C dependent upon the sheath system type. These temperatures are based upon an acceptance test, using long-term thermal endurance ageing at 110 °C and 125 °C respectively, and extrapolation of data to 20 000h. The maximum temperature for short circuit conditions is 160 °C based on a duration of 5 s.<br>EN 50306-1 should be used in conjunction with one or more of the other parts of EN 50306. | | | |
| EN 50306-2:2002 | **Railway applications – Railway rolling stock cables having special fire performance – Thin wall**<br>**Part 2: Single core cables** | TC 9X + TC 20 | 2003-01-28 | *CLC/TC 20 "Electric cables"* |
| | EN 50306-2 specifies requirements for, and constructions and dimensions of, single core cables, rated 300 V to earth, of the following type:<br>Unscreened (0,5 mm2 to 2,5 mm2 single core)<br>All cables have stranded tinned copper conductors and thin wall thickness, halogen-free insulation. They are for use in railway rolling stock as fixed wiring, or wiring where limited flexing in operation is encountered. The requirements provide for a continuous operational life at 105 °C, and a maximum temperature for short-circuit conditions of 160 °C based on duration of 5 seconds. (...).<br>Under fire conditions the cables exhibit special performance characteristics in respect of maximum permissible flame propagation (flame spread) and maximum permissible emission of smoke and toxic gases. These requirements are specified to permit the cables to satisfy Hazard Levels 2, 3 or 4 of EN 45545-1 1).<br>(...). EN 50306-2 should be used in conjunction with EN 50306-1, General requirements. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50306-3:2002 | **Railway applications – Railway rolling stock cables having special fire performance – Thin wall**<br>**Part 3: Single core and multicore cables (pairs, triples and quads) screened and thin wall sheathed** | TC 9X + TC 20 | 2003-01-28 | *CLC/TC 20 "Electric cables"* |
| | EN 50306-3 specifies requirements for, and constructions and dimensions of, multicore cables, rated 300 V to earth, of the following type:<br>Screened (0,5 mm2 to 2,5 mm2 , number of cores from 1 to 4)<br>All cables have stranded tinned copper conductors, and thin wall thickness, halogen-free, insulation and sheath. They are for use in railway rolling stock as fixed wiring, or wiring where limited flexing in operation is encountered. The requirements provide for a continuous operational life at temperatures of 90 °C or 105 °C dependent upon the seath system type.<br>(...). The maximum temperature for short-circuit conditions is 160 °C based on a duration of 5 s.<br>Under fire conditions the cables exhibit special performance characteristics in respect of maximum permissible flame propagation (flame spread) and maximum permissible emission of smoke and toxic gases. These requirements are specified to permit the cables to satisfy Hazard Levels 2, 3 or 4 of EN 45545-1 1).<br>(...). EN 50306-3 should be used in conjunction with EN 50306-1, General requirements, and EN 50306-2, Single core cables. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50306-4:2002 | **Railway applications – Railway rolling stock cables having special fire performance – Thin wall**<br>**Part 4: Multicore and multipair cables standard wall sheathed** | TC 9X + TC 20 | 2003-01-28 | *CLC/TC 20 "Electric cables"* |
| | EN 50306-4 specifies requirements for, and constructions and dimensions of, multicore and multipair cables rated 300 V to earth, of the following type:<br>- unscreened, sheathed for either exposed or protected wiring (0,5 mm2 to 2,5 mm2, number of cores from 2 to 48);<br>- screened, sheathed for either exposed or protected wiring (0,5 mm2 to 2,5 mm2, number of cores from 2 to 8);<br>- screened, sheathed for either exposed or protected wiring (0,5 mm2 to 1,5 mm2, number of cores from 2 to 7).<br>(...).All cables have stranded tinned copper conductors, halogen-free, thin wall thickness insulation and standard wall thickness sheath. Cables types are specified for use in exposed situations (Class E), and for protected situations (Class P). They are for use in railway rolling stock as fixed wiring, or wiring where limited flexing in operation is encountered. The requirements provide for a continuous operational life at temperatures of 90 °C or 105 °C dependent upon the seath system type.<br>(...). The maximum temperature for short-circuit conditions is 160 °C based on a duration of 5 s.<br>The cables specified in EN 50306-4 which have a sheath of type EM 101, EM 103 or S2 material are suitable for operation at temperatures as low as – 25° C and those with sheath of type EM 102 or EM 104 material are suitable for operatiom at temperatures as low as – 40 °C.<br>(...).Under fire conditions the cables exhibit special performance characteristics in respect of maximum permissible flame propagation (flame spread) and maximum permissible emission of smoke and toxic gases. These requirements are specified to permit the cables to satisfy Hazard Levels 2, 3 or 4 of EN 45545-1 2).<br>(...). EN 50306-4 should be used in conjunction with EN 50306-1, General requirements, and EN 50306-2, Single core cables, and EN 50306-3, Single core and multicore cables. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50311:2003 | **Railway applications – Rolling Stock – D.C. supplied electronic ballasts for lighting fluorescent lamps** | SC 9XB | 2003-10-03 | *Data limite de anulação da adoção: 2019-04-08* |
| | (…) specifies the performance and constructional requirements, and associated tests, for d.c. supplied electronic ballasts used to supply fluorescent lamps for lighting on railway rolling stock. Its requirements replace those of EN 60925 for all railway rolling stock applications and precise and complete those of EN 60924 for the specific needs for railway rolling stock applications.<br>(...) applies to electronic ballasts<br>- supplying pre-heated cathode fluorescent lamps without integrated starters, tubular or single capped, according to EN 60081 and EN 60901 respectively,<br>- having a single and non adjustable luminous flux level.<br>It does not apply to electronic ballasts supplying non pre-heated cathode lamps and/or lamps with integrated starters. | | | |
| EN 50317:2012<br>+ Corrigenda outubro 2012 | **Railway applications – Current collection systems – Requirements for and validation of measurements of the dynamic interaction between pantograph and overhead contact line** | SC 9XC | 2012-09-26 | |
| | | | | |
| EN 50318:2002 | **Railway applications – Current collection systems – Validation of simulation of the dynamic interaction between pantograph and overhead contact line** | SC 9XC | (2003-01-28) | *A versão portuguesa foi editada em agosto de 2009* |
| | (…) specifies the functional requirements for the validation of simulation methods to ensure mutual acceptance of<br>- input and output parameters;<br>- a standardized subset of test results for evaluation of simulation methods;<br>- comparison with measurements;<br>- comparison between simulation methods.<br>(...) applies to the current collection from an overhead contact line by pantographs mounted on railway vehicles. It does not apply to trolley bus systems. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50318:2018 | **Railway applications – Current collection systems – Validation of simulation of the dynamic interaction between pantograph and overhead contact line** | SC 9XC | | *Data limite de implementação: 2019-12-07* |
| | | | | |
| EN 50327:2003<br>EN 50327:2003/A1:2005 | **Railway applications – Fixed installations – Harmonisation of the rated values for converter groups and tests on converter groups** | SC 9XC | 2003-06-05<br>2005-07-11 | |

(…) provides requirements for some type tests which are significant only when made on the entire group.
It provides also a basic relationship between compatible ratings of traction transformer and converter(s), in order to provide minimum requirements for the choise of their ratings.
Moreover it gives the minimum values to be considered in order to choose switching devices with characteristics suitable for the converter group(s) involved.
Annexes provide useful information as a guide for the group designer.
Table 1 indicates the components of a converter group and the relevant applicable standards.

**Table 1 – Components of a converter group**

| Component | Standard |
|---|---|
| Converter | EN 50328 |
| Traction transformer | EN 50329 |
| Interbridge reactor | EN 60289 and informative annex D |
| Reactors | EN 60289 |
| Transducers | EN 50123-7-1<br>EN 50123-7-2 |
| Instrument transformers (as applicable) | EN 50152-3-2/ EN 50152-3-3<br>EN 60044 series |
| Control devices | as applicable |
| Busbars and connections | as applicable |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50328:2003<br>+ Corrigenda dez. 2006 | **Railway applications – Fixed installations – Electronic power converters for substations** | SC 9XC | 2003-06-05 | |
| | (…) specifies the requirements for the performance of all fixed installations electronic power converters, using controllable and/or non-controllable electronic valves, intended for traction power supply.<br>The devices can be controlled by means of current, voltage or light. Non-bistable devices are assumed to be operated in the switched mode.<br>(...) applies to fixed installations of following electric traction systems:<br>- railways,<br>- guided mass transport systems such as : tramways, light rail systems, elevated and underground railways, mountain railways, trolleybusses.<br>(...). (...) applies to diode rectifiers, controlled rectifiers, inverters and frequency converters.<br>The equipment covered in this European Standard is the converter itself. | | | |
| EN 50329:2003<br>+Corrigenda dez. 2006<br>EN 50329:2003/A1:2010 | **Railway applications – Fixed installations – Traction transformers** | SC 9XC | 2003-06-05<br><br>2011-02-07 | |
| | (…) covers specific characteristics of traction transformers as defined in 1.3.1, used in traction substation or along the track for the supply of power to a.c. and d.c. traction systems or to provide power to auxiliary services. Traction transformers are either<br>- single-phase traction transformers,<br>- single-, three- or poly-phase rectifier-transformers or converter/inverter-transformers for d.c. or a.c. contact line,<br>- single phase auto-transformers for traction power supply,<br>- single- or three-phase auxiliary transformers at traction supply voltage.<br>Transformers feeding a.c. contact lines are coverd by EN 60076. Dry-type transformers are convered by HD 464. These standards are valid with the additional requirements given in this document.<br>For transformers feeding contact lines through static converters EN 61378-1 may assist, but modified or additional requirements are given in this document.<br>NOTE Transformers mounted on-board traction vehicles are covered by EN 60310 and are excluded from the scope of this document.<br>Electromagnetic compatibility is ruled by EN 60076-1 which states that a transformer may be considered a passive element in this respect.<br>Some accessories however are subject to EMC requirements and shall comply with EN 50121-5. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50343:2014 | **Railway applications – Rolling stock – Rules for installation of cabling** | SC 9XB | 2014-05-08 | |
| | | | | |
| EN 50343:2014/A1:2017 | **Railway applications – Rolling stock – Rules for installation of cabling** | SC 9XB | 2018-04-24 | |
| | | | | |
| EN 50345:2009 | **Railway applications – Fixed installations – Electric traction – Insulating synthetic rope assemblies for support of overhead contact lines** | SC 9XC | 2010-03-05 | |
| | | | | |
| EN 50355:2013 | **Railway applications – Railway rolling stock cables having special fire performance wall – Guide to use** | TC 20 + TC 9X | 2014-06-19 | |
| | | | | |
| EN 50367:2012 +Corrigenda agosto 2013 | **Railway applications – Current collection systems – Technical criteria for the interaction between pantograph and overhead line (to achieve free access)** | SC 9XC | 2012-12-18 | |
| | | | | |
| EN 50367:2012 A1:2016 | **Railway applications – Current collection systems – Technical criteria for the interaction between pantograph and overhead line (to achieve free access)** | SC 9XC | 2017-05-10 | |
| | | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50382-1:2008 | **Railway applications – Railway rolling stock high temperature power cables having special fire perfomance**<br>**Part 1: General requirements** | TC 9X | 2008-12-23 | |
| EN 50382-1:2008 /A1:2013 | **Railway applications – Railway rolling stock high temperature power cables having special fire perfomance**<br>**Part 1: General requirements** | TC 9X | 2014-01-27 | |
| EN 50382-2:2008 | **Railway applications – Railway rolling stock high temperature power cables having special fire perfomance**<br>**Part 2: Single core silicone rubber insulated cable for 120° C or 150° C** | TC 9X | 2008-12-23 | |
| EN 50382-2:2008 /A1:2013 | **Railway applications – Railway rolling stock high temperature power cables having special fire perfomance**<br>**Part 2: Single core silicone rubber insulated cable for 120° C or 150° C** | CLC/SC 9XB | 2014-01-27 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50388:2012<br>+ Corrigenda set.2012<br>+Corrigenda abril 2013 | **Railway applications – Power supply and rolling stock – Technical criteria for the coordination between power supply (substation) and rolling stock to achieve interoperability** | SC 9XC | 2012-11-28 | |
| | | | | |
| EN 50405:2015 | **Railway applications – Current collection systems – Pantographs, testing methods for carbon contact strips** | SC 9XB | 2016-09-12 | |
| | | | | |
| EN 50405:2015/A1:2016 | **Railway applications – Current collection systems – Pantographs, testing methods for carbon contact strips** | SC 9XB | 2016-12-12 | |
| | | | | |
| EN 50443:2011 | **Effects of electromagnetic interference on pipelines caused by high voltage a.c. electric traction systems and/or high voltage a.c. power supply systems** | SC 9XC | 2012-08-13 | |
| | | | | |
| EN 50463-1:2017 | **Railway applications – Energy measurement on board trains**<br>**Part 1: General** | TC 9X | 2018-01-11 | |
| | | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50463-2:2017 +AC2018-10 | **Railway applications – Energy measurement on board trains**<br>**Part 2: Energy measuring** | TC 9X | 2018-01-11 | |
| | | | | |
| EN 50463-3:2017 | **Railway applications – Energy measurement on board trains**<br>**Part 3: Data handling** | TC 9X | 2018-01-11 | |
| | | | | |
| EN 50463-4:2017 | **Railway applications – Energy measurement on board trains**<br>**Part 4: Communication** | TC 9X | 2018-01-11 | |
| | | | | |
| EN 50463-5:2017 | **Railway applications – Energy measurement on board trains**<br>**Part 5: Conformity assessment** | TC 9X | 2017-11-10 | |
| | | | | |
| EN 50467:2011 | **Railway applications – Rolling stock – Electrical connectors,requirements and test methods** | SC 9XB | 2012-08-13 | |
| | | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50500:2008 | **Measurement procedures of magnetic field levels generated by electronic and electric apparatus in the railway environment with respect to human exposure** | TC 9X | 2009-04-29 | |
| | The scope of this product-family standard is limited to apparatus, systems and fixed installations which are intended for use in the railway environment. The frequency range covered is 0 Hz to 300 GHz.<br>Technical considerations and measurements are necessary for frequencies up to 20 kHz because no relevant field strengths are expected above due to the physical nature of EMF-sources in the railway environment.<br>The object of this standard is to provide measurement and calculation procedures of electric and magnetic field levels generated by electronic and electrical apparatus in the railway environment with respect to human exposure.<br>The regulations regarding the protection of human being during exposure to non-ionizing electromagnetic fields in the railway environment are different within the countries of European Community. This standard offers a procedure regarding measurement, simulation and evaluation.<br>At present two European documents regarding EMF have to be considered:<br>a) Council Recommendation 1999/519/EC of 12 July 1999 (see Bibliography);<br>b) Directive 2004/40/EC (see Bibliography).<br>The measurement procedures and points of measurement cover also the aspect of persons bearing active implantable medical devices.<br>NOTE 1 Not covered is the risk assessment for persons bearing active implants in magnetic field generated by electronic and electrical apparatus in the railway environment.<br>Note covered are personal electronic devices (e.g. mobile phones, notebooks, wireless communication systems etc.) of passengers and workers.<br>Not covered are intentional transmitters with frequencies higher than 20 kHz.<br>NOTE 2 These apparatus (with a working frequency of 9 kHz or higher) are covered by R&TTE Directive and have to comply also with LVD (Low Voltage Directive). In this view these apparatus have also limitation of EM fields or a "safety-distance" for these apparatus must be given. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50500:2008/A1:2015 | **Measurement procedures of magnetic field levels generated by electronic and electric apparatus in the railway environment with respect to human exposure** | TC 9X | 2015-11-27 | |
| | | | | |
| EN 50502:2015 | **Railway applications – Rolling stock – Electric equipment in trolley buses – Safety requirements and connection systems** | SC 9XB | 2016-01-12 | |
| | | | | |
| EN 50526-1:2012 | **Railway applications – Fixed installations – D.C. surge arresters and voltage limiting devices Part 1: Surge arresters** | SC 9XC | 2012-08-13 | |
| | | | | |
| EN 50526-2:2014 | **Railway applications – Fixed installations – D.C. surge arresters and voltage limiting devices Part 2: Voltage limiting devices** | SC 9XC | *2014-10-06* | |
| | | | | |
| EN 50526-3:2016 | **Railway applications – Fixed installations – D.C. surge arresters and voltage limiting devices Part 3: Application guide** | SC 9XC | *2016-09-12* | |
| | | | | |
| EN 50533:2011 | **Railway applications – Three-phase train line voltage characteristics** | SC 9XB | 2012-08-13 | |
| | | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50533:2011/A1:2016 | **Railway applications – Three-phase train line voltage characteristics** | SC 9XB | 2016-12-15 | |
| | | | | |
| EN 50547:2013 | **Railway applications – Batteries for auxiliary power supply systems** | SC 9XB | 2013-12-19 | |
| | | | | |
| EN 50553:2012 +AC:2013 | **Railway applications – Requirements for running capability in case of fire on board of rolling stock** | TC 9X | 2012-10-22 | |
| | | | | |
| EN 50553:2012 +A1:2016 | **Railway applications – Requirements for running capability in case of fire on board of rolling stock** | TC 9X | 2016-04-14 | |
| | | | | |
| EN 50562:2018 | **Railway applications – Fixed installations – Process, protective measures and demonstration of safety for electric traction systems** | TC 9XC | 201-05-02 | |
| | | | | |
| EN 50578:2013 | **Railway applications – Direct current signalling relays** | SC 9XA | 2014-02-25 | |
| | | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 50592:2016 | **Railway applications – Testing of rolling stock for electromagnetic compatibility with axle counters** | SC 9XA | 2017-05-10 | |
| EN 50617-1:2015 | **Railway applications – Technical parameters of train detection systems for the interoperability of the trans-European railway system**<br>**Part 1: Track circuits** | SC 9XA | 2015-12-10 | |
| EN 50617-2:2015<br>+AC:2016 | **Railway applications – Technical parameters of train detection systems for the interoperability of the trans-European railway system**<br>**Part 2: Axle counters** | SC 9XA | 2015-12-10 | |
| EN 50633:2016 | **Railway applications – Fixed installations – Protection principles for AC and DC electric traction systems** | SC 9XA | 2017-02-10 | |
| EN 50657:2017 | **Railway applications – Rolling stock applications – Software on board rolling stock** | SC 9XB | 2018-02-05 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 60077-1:2017 | **Railway applications – Electric equipment for rolling stock**<br>**Part 1: General service conditions and general rules**<br>**(IEC 60077-1:2017)** | SC 9XB | | *Data de implementação: 2018-06-04* |
| | | | | |
| EN 60077-2:2017 | **Railway applications – Electric equipment for rolling stock**<br>**Part 2: Electrotechnical components - General rules**<br>**(IEC 60077-2:2017)** | SC 9XB | | *Data de implementação: 2018-06-01* |
| | | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 60077-3:2002 | **Railway applications – Electric equipment for rolling stock**<br>**Part 3: Electrotechnical components – Rules for d.c. circuit-breakers**<br>**(IEC 60077-3:2001)** | CLC/SC 9XB | 2002-07-10 | |
| | In addition to the general requirements of IEC 60077-2, this part of IEC 60077 gives rules for circuit-breakers, the main contacts of which are to be connected to d.c. power and/or auxiliary circuits. The nominal voltage of these circuits does not exceed 3 000 V d.c. according to IEC 60850.<br>This part of IEC 60077, together with IEC 60077-2, states specifically<br>a) the characteristics of the circuit-breakers;<br>b) the service conditions with which circuit-breakers have to comply with reference to<br>- operation and behaviour in normal service,<br>- operation and behaviour in the case of short-circuit,<br>- dielectric properties;<br>c) the tests for confirming the compliance of the components with the characteristics under the service conditions and the methods to be adopted for these tests;<br>d) the information to be marked on, or given with the circuit-breakers. (...).<br>This standard does not cover<br>a. multi-connection of electro-technical components to achieve a particular duty;<br>b. industrial circuit-breakers which have to comply with IEC 60947-2;<br>c. d.c. circuit-breakers for fixed installations which have to comply with IEC 61992-2.<br>For b) and c), in order to ensure satisfactory operation, this standard should be used to specify only the particular requirements for rolling stock. In such cases, a specific document should stste the additional requirements with which the industrial o r fixed installations circuit breakers are to comply, for example:<br>a. either to be adapted (e.g. for control voltage, environmental conditions, etc);<br>b. or to be installed ansd used in such a way they do not have to endure specific rolling stock conditions;<br>or to be additionally tested to prove that these components can withstand satisfactorily the rolling stock conditions. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 60077-4:2003 | **Railway applications – Electric equipment for rolling stock**<br>**Part 4: Electrotechnical components – Rules for a.c. circuit-breakers**<br>**(IEC 60077-4:2003)** | CLC/SC 9XB | 2003-07-15 | |
| | In addition to the general requirements of IEC 60077-2, this part of IEC 60077 gives rules for AC circuit-breakers, the main contacts of which are to be connected to AC overhead contact lines; the nominal voltage of these circuits being in accordance with IEC 60850.<br>This standard, together with IEC 60077-2, states specifically:<br>e) the characteristics of the circuit-breakers;<br>f) the service conditions with which circuit-breakers have to comply with reference to:<br>a. operation and behaviour in normal service,<br>b. operation and behaviour in short-circuit,<br>c. dielectric properties;<br>g) the tests for confirming the compliance of the components with the characteristics under the service conditions and the methods to be adopted for these tests;<br>h) the information to be marked on, or given with the circuit-breakers. (...).<br>This standard does not cover industrial circuit-breakers which have to comply with IEC 60056. For these, in order to ensure satisfactory operation, this standard should be used to specify only the particular requirements for rolling stock. In such case , a specific document should state the additional requirements with which the industrial circuit-breakers are to comply, for exemple:<br>a. either to be adapted (e.g. for control voltage, environmental conditions, etc);<br>b. or to be installed ansd used so that they do not have to endure specific rolling stock conditions;<br>or to be additional tested to prove that these components can withstand satisfactorily the rolling stock conditions. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 60077-5:2003 | **Railway applications – Electrotechnical equipment for rolling stock**<br>**Part 4: Electrotechnical components – Rules for HV fuses**<br>**(IEC 60077-5:2003)** | CLC/SC 9XB | 2003-11-12 | |
| | (…) is to give additional or amended rules for high voltage fuses as a supplement to those given by IEC 60077-2.<br>*NOTE In this product standard the term high voltage fuses iis used in the context of the voltages used in the field of railway rolling stock.*<br>The high voltage fuses concerned are those to be connected into power and/or auxiliary circuits. The nominal voltage of these circuits lies between 600 V d.c. and 300 V d.c., according to IEC 60850. These fuses may alsobe used in auxiliary a.c. circuits up to a nominal voltage of 1500 V.<br>*Note Certain of these rules may, after agreement between user amd manufacturer, be used for fuses installed on vehicles other than rail rolling stock such as mine locomotives, trolleybuses, etc..*<br>This product standard together with IEC 60077-2 states specifically:<br>a) characteristics of the fuses;<br>b) the service conditions with which the fuses have to comply with reference to:<br>- operation and behaviour in normal service;<br>- operation and behaviour in case of short circuit;<br>- dielectric properties.<br>c) the tests intended for confirming the compliance of the fuse with the characteristics under the service conditions and the methods to be adopted for these tests;<br>d) the information to be marked on, or given with the fuse.<br>(...). During preparation of this product standard, IEC 60269-1 and IEC 60282-1 have been considered and their requirements have been kept as far as possible.<br>(...) makes reference to the general rules for electrotechnical components given in IEC 60077-2, but for general conditions reference is made directly to IEC 60077-1. | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 60310:2016<br>+ Corrigenda março 2018 | **Railway applications – Traction transformers and inductors on rolling stock**<br>**(IEC 60310:2016)** | CLC/SC 9XB | 2016-09-12 | |
| | | | | |
| EN 60322:2001 | **Railway applications – Electric equipment for rolling stock – Rules for power resistors of open construction**<br>**(IEC 60322:2001)** | CLC/SC 9XC | 2002-01-16 | |
| | (...) gives the rules for all power resistors (for example, braking, heating, snubber and filter) used in the power and auxiliary circuits on board rolling stock irrespective of the circuit and the type of vehicle where they are used.<br>These resistors are generally pof open construction and are used in polluted areas. The construction consists of resistor elements of grids, plates, strips, ribbons or wires. (...).<br>This standard states:<br>c. the characteristics of the resistors;<br>d. the service conditions with which the power resistors have to comply;<br>e. the tests intended for confirming that these conditions have been met and the methods to be adopted for these tests;<br>f. the information to be marked on, or given with , the resistors.<br>(...). The object of this standard is to adapt the general rules given in IEC 60077-1 to power resistors for rolling stock in order to obtain uniformity of requirements and tests throughout the corresponding range of components and to avoid the need for testing to two different standards. | | | |
| EN 60349-1:2010 | **Electric traction – Rotating electrical machines for rail and road vehicles**<br>**Part 1: Machines other than electronic convertor-fed alternating current motors**<br>**(IEC 60349-1:1999)** | CLC/SC 9XB | 2011-05-31 | |
| | | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 60349-2:2010 | **Electric traction – Rotating electrical machines for rail and road vehicles**<br>**Part 2: Electronic convertor-fed alternating current motors**<br>**(IEC 60349-2:2010)** | CLC/SC 9XB | 2011-07-14 | |
| EN 60349-4:2013 | **Electric traction – Rolating electrical machines for railand road vehicles**<br>**Part 4: Permanent magnet synchrounous electrical machines connected to an electronic converter**<br>**(IEC 60349-4:2012)** | CLC/SC 9XB | 2011-07-14 | |
| EN 61287-1:2014<br>+ Corrigenda dezembro 2014 | **Railway applications – Power convertors installed on board rolling stock**<br>**Part 1: Characteristics and test methods** (IEC 61287-1:2014) | CLC/SC 9XB | 2015-03-10 | |
| EN 61373:2010<br>+ Corrigenda setembro 2017 | **Railway applications – Rolling stock equipment – Shock and vibration tests** | CLC/SC 9XB | 2011-03-28 | |
| EN 61375-1:2012 | Electronic railway equipment – Train communication network (TCN)<br>Part 1: General architecture (IEC 61375-1:2012) | TC 9X | 2013-02-28 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 61375-2-1:2012 | Electronic railway equipment – Train communication network (TCN)<br>Part 2-1: Wire Train Bus (WTB)<br>IEC 61375-2-1:2012) | TC 9X | 2013-02-28 | |
| EN 61375-2-2:2012 | Electronic railway equipment – Train communication network (TCN)<br>Part 2-2: Wire Train Bus conformance testing<br>(IEC 61375-2-2:2012) | TC 9X | 2013-02-28 | |
| EN 61375-2-3:2015<br>+AC:2016-01<br>+AC:2016-11 | Electronic railway equipment – Train communication network (TCN)<br>Part 2-3: TCN communication profile<br>(IEC 61375-2-3:2015) | TC 9X | 2016-03-10 | |
| EN 61375-2-5:2015/A11:2017 | Electronic railway equipment – Train communication network (TCN)<br>Part 2-5: Ethernet train backbone<br>(IEC 61375-2-5:2014) | TC 9X | 2017-09-13 | |
| EN 61375-2-5:2015 | Electronic railway equipment – Train communication network (TCN)<br>Part 2-5: Ethernet train backbone<br>(IEC 61375-2-5:2014) | TC 9X | 2015-06-12 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN IEC 61375-2-6:2018 | Electronic railway equipment – Train communication network (TCN)<br>Part 2-6: On-board to ground communication (IEC 61375-2-6:2018) | TC 9X | 2019-02-22 | |
| EN 61375-3-1:2012 | Electronic railway equipment – Train communication network (TCN)<br>Part 3-1: Multifunction Vehicle Bus (MVB) (IEC 61375-3-1:2012) | TC 9X | 2013-02-28 | |
| EN 61375-3-2:2012 | Electronic railway equipment – Train communication network (TCN)<br>Part 3-2: MVB (Multifunction Vehicle Bus) conformance testing (IEC 61375-3-2:2012) | TC 9X | 2013-02-28 | |
| EN 61375-3-3:2012 | Electronic railway equipment – Train communication network (TCN)<br>Part 3-3: CANopen Consist Network (CCN)(IEC 61375-3-3:2012) | TC 9X | 2013-02-28 | |
| EN 61375-3-4:2014 | Electronic railway equipment – Train communication network (TCN)<br>Part 4: Ethernet Consist Network (ECN) (IEC 61375-3-4:2014) | TC 9X | 2015-09-30 | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 61375-3-4:2014 /A11:2017 | Electronic railway equipment – Train communication network (TCN)<br>Part 4: Ethernet Consist Network (ECN)<br>(IEC 61375-3-4:2014) | TC 9X | 2017-09-13 | |
| | | | | |
| EN 61377-1:2006 + Corrigenda Dec. 2006 | Railway applications – Rolling stock<br>Part 1: Combined testing of inverter-fed alternatingcurrent motors and their control system (IEC 61377-1:2006 | CLC/SC 9XC | 2006-11-08 | *Data limite de anulação da adoção: 2019-02-23* |
| | | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 61377-2:2002 | **Railway applications - Rolling stock - Combined testing**<br>**Part 2: Chopper-fed direct current traction motors and their control**<br>**(IEC 61377-2:2002)** | CLC/SC 9XB | 2003-01-29 | *Data limite de anulação da adoção: 2019-02-23* |

(…) applies to the combinations of motor(s), chopper and their control, and its object is to specify

- the performance characteristics of electric drives consisting of a chopper, direct current motors, and the related control system;
- methods of verifying these performance characteristics by tesys.

In traction drives, a combined system with chopper and direct current motor(s) without any control between the mechanical output and the chopper is not usual. It is not, therefore, considered in this standard.~

(...) Figure 1a – Combined system with series d.c. motor.

(...) Figure 1 – Traction drive.

IEC 60349-1 applies to chopper-fed direct current motors, IEC 61287-1 to power electronic convertors, and IEC 60571 to electronic equipments.

(...) applies to the combination of motor(s), chopper, and their control. As a consequence, IEC 60349-1 describes the tests to demonstrate the compliance of the motor to its specification, while IEC 61287-1 does the same for the chopper. It is self-evident that some of the tests mentioned in this standard may generally replace the corresponding ones described in the above-mentioned standards. An agreement should be reached between the parties to avoid the duplication of tests.

A complete combined test is heavy and often requires high power, which is not always available in a workshop. An agreement between the user and the manufacturer may be reached to allow testing either in the workshop or on the vehicle.

At the time of drafting this standard, only the following combinations of motors and choppers are used for traction applications, but it may also apply to other combinations, which may be used in the future:

- direct current series motors (one or more connected in series and/or in parallel) fed by a chopper converter (figure 1a)
- direct current separately excited motors (one or more connected in series) fed by a chopper converter (figure 1b).

For both cases, electrical braking circuits, if used, are included.

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 61377-2:2002 | **Railway applications - Rolling stock - Combined testing**<br>**Part 2: Chopper-fed direct current traction motors and their control**<br>**(IEC 61377-2:2002)** | CLC/SC 9XB | 2003-01-29 | |
| | (Cont.)<br>The separate exciting circuits and their control, or the shunting circuit and their control, for series motors, are considered as a part of the combined system.<br>(...). The d.c. source can be a supply line, a rectifier, a chopper, an input convertor, and a diesel generator with integrated rectifiers, etc.<br>Environmental conditions relative to motor, chopper, and control system are detailed in IEC 60349-1, IEC 61287-1 and IEC 60571. | | | |
| EN 61377-3:2002 | **Railway applications - Rolling stock - Combined testing** fed by an indirect convertor, and their control system(IEC 61377-3:2002) | CLC/SC 9XB | 2003-01-29 | *Data limite de anulação da adoção: 2019-02-23* |
| | | | | |
| EN 61377:2016 | **Railway applications - Rolling stock - Combined test method for traction systems**<br>**(IEC 61377:2016)** | CLC/SC 9XB | 2016-09-12 | |
| | | | | |
| EN 61881-1:2011 | **Railway applications - Rolling stock equipment - Capacitors for power electronics**<br>**Part 1: Paper/plastic film capacitors (IEC 61881-1:2010** | TC 9X | 2011-07-14 | |
| | | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 61881-2:2012 | **Railway applications - Rolling stock equipment - Capacitors for power electronics<br>Part 2: Aluminium electrolytic capacitors with non-solid electrolyte** | TC 9X | 2013-03-28 | |
| | | | | |
| EN 61881-3:2012 | **Railway applications - Rolling stock equipment - Capacitors for power electronics<br>Part 3: Electric double-layer capacitors<br>(IEC 61881-3:2012)** | TC 9X | 2013-03-28 | |
| | | | | |
| EN 61881-3:2012/A1:2013 | **Railway applications - Rolling stock equipment - Capacitors for power electronics<br>Part 3: Electric double-layer capacitors<br>(IEC 61881-3:2012/A1:2013)** | TC 9X | 2014-10-06 | |
| | | | | |
| EN 62267:2009 | **Railway applications – Automated urban guided transport (AUGT) – Safety requirements** | TC 9X | 2010-03-30 | |
| | | | | |
| EN 62290-1:2014 | **Railway applications – Urban guided transport management and command/control systems<br>Part 1: System principles and fundamental concepts (IEC 62290-1:2014)** | TC 9X | 2015-03-10 | |
| | | | | |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 62290-2:2014 | **Railway applications – Urban guided transport management and command/control systems**<br>**Part 2: Functional requirements specification**<br>(IEC 62290-2:2014) | TC 9X | 2014-11-13 | |
| EN 62520:2011 | Railway applications – Electric traction – Short-primary type linear induction motors (LIM) fed by power converters (IEC 62520:2011) | TC 9X | 2011-12-23 | |
| EN 62580-1:2016 | Electronic railway equipment – On-board multimedia and telematics subsystems for railways<br>Part 1: General architecture<br>(IEC 62580-1:2015) | TC 9X | 2017-02-10 | |
| EN 62580-1:2016 /A11:2017 | Electronic railway equipment – On-board multimedia and telematics subsystems for railways<br>Part 1: General architecture | TC 9X | 2018-03-08 | |
| EN 62621:2016 | Railway applications – Fixed installations – Electric traction – Specific requirements for composite insulators used for overhead contact line systems<br>(IEC 62621:2011) | TC 9X | 2016-10-12 | *Esta substitui a EN 50151:2003. Data limite de anulação da adoção da EN 50151:2003: 2018-12-21* |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 62621:2016/A1:2016 | Railway applications – Fixed installations – Electric traction – Specific requirements for composite insulators used for overhead contact line systems<br>(IEC 62621:2011) | TC 9X | 2016-12-15 | |
| EN 62625-1:2013<br>+AC:2016-10 | Electronic railway equipment – On board driving data recording system<br>Part 1: System specification<br>(IEC 62625-1:2013) | TC 9X | 2014-10-06 | |
| EN 62625-1:2013<br>/A11:2017 | Electronic railway equipment – On board driving data recording system<br>Part 1: System specification | TC 9X | 2017-13-09 | |
| EN 62625-2:2016 | Electronic railway equipment – On board driving data recording system<br>Part 2: Conformity testing<br>(IEC 62625-2:2016) | TC 9X | 2016-09-14 | |
| EN 62718:2016 | Railway applications – Rolling stock – DC supplied electronic ballats for lighting fluorescent lamps<br>(IEC 62718:2013) | SC 9XB | 2016-07-11 | *Esta substitui a EN 50311:2003. Data limite de anulação da adoção da EN 50311:2003: 2019-04-08* |

| Referência | Título / Campo de Aplicação | Emissor | Data de adopção | Observações |
|---|---|---|---|---|
| EN 62864-1:2016 | Railway applications – Rolling stock – Power supply with onboard energy storage system<br>Part 1: Series hybrid system<br>(IEC 62864-1:2016) | TC 9X | 2017-02-10 | |
| | | | | |
| EN 62924:2017 | Railway applications – Fixed installations – Stationary energy storage system for DC traction systems<br>(IEC 62924:2017) | TC 9X | 2017-09-13 | |
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| EN IEC 62928:2018 | Railway applications – Rolling stock – Onboard lithium-ion traction batteries<br>(IEC 62928:2017) | TC 9X | 2018-08-27 | |
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