



2023/2584

21.11.2023

**COMMISSION IMPLEMENTING DECISION (EU) 2023/2584**

**of 15 November 2023**

**on harmonised standards for the interoperability of the rail systems drafted in support of Directive (EU) 2016/797 of the European Parliament and of the Council**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation, amending Council Directives 89/686/EEC and 93/15/EEC and Directives 94/9/EC, 94/25/EC, 95/16/EC, 97/23/EC, 98/34/EC, 2004/22/EC, 2007/23/EC, 2009/23/EC and 2009/105/EC of the European Parliament and of the Council and repealing Council Decision 87/95/EEC and Decision No 1673/2006/EC of the European Parliament and of the Council <sup>(1)</sup>, and in particular Article 10(6) thereof,

Whereas:

- (1) In accordance with Article 17 of Directive (EU) 2016/797 of the European Parliament and of the Council <sup>(2)</sup>, interoperability constituents and subsystems which are in conformity with harmonised standards or parts thereof, the references of which have been published in the *Official Journal of the European Union*, are to be presumed to be in conformity with the essential requirements covered by those standards or parts thereof set out in that Directive.
- (2) By Commission Implementing Decision C(2023) 1057 <sup>(3)</sup> the Commission made a request to the European Committee for Standardisation (CEN) and the European Committee for Electrotechnical Standardisation (Cenelec) for the drafting and the revision of harmonised standards in support of Directive (EU) 2016/797, which repealed Directive 2008/57/EU.
- (3) On the basis of the request set out in Implementing Decision C(2023) 1057 CEN and Cenelec drafted the following new harmonised standards: EN 15085-3:2022+A1:2023; EN 15085-6:2022; EN 16334-1:2014+A1:2022; EN 16704-1:2016+A1:2021; EN 16704-3:2016+A1:2021; EN 16839:2022; EN 50641:2020 and an amendment EN 62580-1:2016/A11:2017 to harmonised standard EN 62580-1:2016.
- (4) Furthermore, on the basis of the Request, CEN and Cenelec revised the following harmonised standards, the references of which are published in the C series of the *Official Journal of the European Union* by means of Communications 2011/C 214/02 <sup>(4)</sup> and 2018/C 282/03 <sup>(5)</sup>, and Commission Implementing Decision (EU) 2020/453 <sup>(6)</sup>, in order to adapt them to technological progress: EN ISO 3381:2011, EN 12080:2017, EN 12082:2017, EN 13103-1:2017, EN 13230-4:2009, EN 13260:2009+A1:2010, EN 13261:2009+A1:2010, EN 13262:2004+A2:2011, EN 13272:2012, EN 13481-2:2012+A1:2017, EN 13481-3:2012, EN 13481-5:2012+A1:2017, EN 13481-7:2012, EN 13674-2:2006+A1:2010, EN 13715:2006+A1:2010, EN 13749:2011, EN 13979-1:2003+A2:2011, EN 14033-1:2017, EN 14067-5:2006+A1:2010, EN 14363:2016+A1:2018, EN 14531-1:2015, EN 14535-1:2005+A1:2011, EN 14535-2:2011, EN 14535-3:2015, EN 14601:2005+A1:2010,

<sup>(1)</sup> OJ L 316, 14.11.2012, p. 12.

<sup>(2)</sup> Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union (OJ L 138, 26.5.2016, p. 44).

<sup>(3)</sup> Commission Implementing Decision C(2023) 1057 final of 20.2.2023 on a standardisation request to the European Committee for Standardisation and the European Committee for Electrotechnical Standardisation as regards products in support of Directive (EU) 2016/797 of the European Parliament and of the Council

<sup>(4)</sup> Commission communication in the framework of the implementation of the Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the rail system within the Community (OJ C 214, 20.7.2011, p. 54).

<sup>(5)</sup> Commission communication in the framework of the implementation of the Directive 2008/57/EC of the European Parliament and of the Council on the interoperability of the rail system within the Community (OJ C 282, 10.8.2018, p. 6).

<sup>(6)</sup> Commission Implementing Decision (EU) 2020/453 of 27 March 2020 on the harmonised standards for railway products drafted in support of Directive 2008/57/EC of the European Parliament and of the Council on the interoperability of the rail system within the Community (OJ L 95, 30.3.2020, p. 1).

EN 14752:2015, EN 15020:2006+A1:2010, EN 15153-1:2013+A1:2016, EN 15153-2:2013, EN 15227:2008+A1:2010, EN 15302:2008+A1:2010, EN 15427:2008+A1:2010, EN 15437-1:2009, EN 15437-2:2012, EN 15528:2015, EN 15551:2017, EN 15566:2016, EN 15595:2009+A1:2011, EN 15611:2008+A1:2010, EN 15612:2008+A1:2010, EN 15624:2008+A1:2010, EN 15625:2008+A1:2010, EN 15654-1:2018, EN 15663:2009, EN 15663:2009/AC:2010, EN 15686:2010, EN 15687:2010, EN 15734-1:2010, EN 15734-2:2010 as corrected by EN 15734-2:2010/AC:2012, EN 15746-1:2010+A1:2011, EN 15746-2:2010+A1:2011, EN 15806:2010, EN 15807:2011, EN 15892:2011, EN 16116-1:2013, EN 16116-2:2013, EN 16185-1:2014, EN 16185-2:2014, EN 16186-3:2016+A1:2018, EN 16207:2014, EN 16334:2014, EN 45545-2:2013+A1:2015, EN 50122-2:2010, EN 50122-3:2010, EN 50155:2007 as corrected by EN 50155:2007/AC:2010 and EN 50155:2007/AC:2012, EN 50159:2010, EN 50163:2004 as corrected by EN 50163:2004/AC:2010 and EN 50163:2004/AC:2013 and as amended by EN 50163:2004/A1:2007, EN 50238-1:2003 as corrected by EN 50238-1:2003/AC:2014, EN 50317:2012, EN 50317:2012/AC:2012, EN 50367:2012, EN 50367:2012/AC:2013 and amended by EN 50367:2012/A1:2016, EN 50388:2012 as corrected by EN 50388:2012/AC:2013, EN 50553:2012 as corrected by EN 50553:2012/AC:2013 and amended by EN 50553:2012/A1:2016.

- (5) This resulted in the adoption of the following amending harmonised standards: EN 13481-2:2022; EN 13481-3:2022; EN 14363:2016+A2:2022; EN 15437-2:2012+A1:2022; EN 15551:2022; EN 15566:2022; EN 15611:2020+A1:2022; EN 15624:2021; EN 15625:2021; EN 15734-1:2010+A1:2021; EN 15807:2021; EN 16116-1:2022; EN 16116-2:2021; EN 16186-3:2022; EN 50155:2021.
- (6) In addition, on the basis of the Request, CEN and Cenelec amended/revised the following standards, the references of which are included in Annex I to Implementing Decision (EU) 2020/453: EN 14067-6:2018, EN 14198:2016+A1:2018, EN 50122-1:2011 as amended by EN 50122-1:2011/A1:2011, EN 50122-1:2011/A2:2016, EN 50122-1:2011/A3:2016 and EN 50122-1:2011/A4:2017 and as corrected by EN 50122-1:2011/AC:2012, EN 50318:2018.
- (7) This resulted in the adoption of the following amending harmonised standards: EN 14198:2016+A2:2021 and EN 50318:2018 as amended by EN 50318:2018/A1:2022.
- (8) The Commission, together with CEN and Cenelec, has assessed whether those standards drafted or revised by CEN and Cenelec comply with the request set out in Implementing Decision C(2023) 1057.
- (9) The harmonised standards drafted, revised and amended by CEN and Cenelec on the basis of the Request, except for harmonised standard EN 50641:2020, satisfy all the requirements, which they aim to cover and which are set out in Directive (EU) 2016/797. It is therefore appropriate to publish the references of those standards in the *Official Journal of the European Union*.
- (10) However, having examined the standard EN 50641:2020, the Commission has concluded that the standard meets the requirements set out in Directive (EU) 2016/797 only in relation to clause 4.2.4 of Commission Regulation (EU) No 1301/2014 <sup>(7)</sup>. It is therefore appropriate to publish the reference of this standard, with restrictions, in the *Official Journal of the European Union*.
- (11) In the interests of clarity and rationality, a complete list of references of harmonised standards drafted in support of Directive (EU) 2016/797 and satisfying the requirements they aim to cover should be published in a single act. The other references of harmonised standards originally published in Implementing Decision (EU) 2020/453 and Communication 2018/C 282/03 should therefore either be included in this Decision if their validity is confirmed, or be withdrawn at the date of publication of this Decision from the *Official Journal of the European Union*.
- (12) Many of the references of harmonised standards published in Communication 2018/C 282/03 have already been withdrawn by Implementing Decision (EU) 2020/453.

<sup>(7)</sup> Commission Regulation (EU) No 1301/2014 of 18 November 2014 on the technical specifications for interoperability relating to the 'energy' subsystem of the rail system in the Union (OJ L 356, 12.12.2014, p. 179).

- (13) Implementing Decision (EU) 2020/453 should therefore be repealed and Communication 2018/C 282/03 should cease to apply.
- (14) Compliance with a harmonised standard confers a presumption of conformity with the corresponding essential requirements set out in Union harmonisation legislation from the date of publication of the reference of such standard in the *Official Journal of the European Union*. This Decision should therefore enter into force on the date of its publication,

HAS ADOPTED THIS DECISION:

*Article 1*

The references of harmonised standards for the interoperability of the rail systems and drafted in support of Directive (EU) 2016/797, listed in Annex I to this Decision, are hereby published in the *Official Journal of the European Union*. The reference listed in row 114 of that Annex is published with restrictions.

*Article 2*

Communication 2018/C 282/03 shall cease to apply.

The references of harmonised standards published in that Communication, listed in Annex II to this Decision, are hereby withdrawn from the *Official Journal of the European Union*.

*Article 3*

Implementing Decision (EU) 2020/453 is repealed.

The references of harmonised standards published in that Decision, and listed in Annex III to this Decision, are hereby withdrawn from the *Official Journal of the European Union*.

*Article 4*

This Decision shall enter into force on the day of its publication in the *Official Journal of the European Union*.

Done at Brussels, 15 November 2023.

*For the Commission*  
*The President*  
Ursula VON DER LEYEN

## ANNEX I

No	Reference of the standard
1.	EN 12081:2017 Railway applications – Axleboxes – Lubricating greases
2.	EN 12663-1:2010+A1:2014 Railway applications – Structural requirements of railway vehicle bodies – Part 1: Locomotives and passenger rolling stock (and alternative method for freight wagons)
3.	EN 12663-2:2010 Railway applications – Structural requirements of railway vehicle bodies – Part 2: Freight wag
4.	EN 13129:2016 Railway applications – Air conditioning for main line rolling stock – Comfort parameters and type tests
5.	EN 13145:2001+A1:2011 Railway applications – Track – Wood sleepers and bearers
6.	EN 13230-1:2016 Railway applications – Track – Concrete sleepers and bearers – Part 1: General requirements
7.	EN 13230-2:2016 Railway applications – Track – Concrete sleepers and bearers – Part 2: Prestressed monoblock sleepers
8.	EN 13230-3:2016 Railway applications – Track – Concrete sleepers and bearers – Part 3: Twin-block reinforced sleepers
9.	EN 13231-5:2018 Railway applications – Track – Acceptance of works – Part 5: Procedures for rail reprofiling in plain line, switches, crossings and expansion devices
10.	EN 13232-2:2003+A1:2011 Railway applications – Track – Switches and crossings – Part 2: Requirements for geometric design
11.	EN 13232-3:2003+A1:2011 Railway applications – Track – Switches and crossings – Part 3: Requirements for wheel/rail interaction
12.	EN 13232-4:2005+A1:2011 Railway applications – Track – Switches and crossings – Part 4: Actuation, locking and detection
13.	EN 13232-5:2005+A1:2011 Railway applications – Track – Switches and crossings – Part 5: Switches

No	Reference of the standard
14.	EN 13232-6:2005+A1:2011 Railway applications – Track – Switches and crossings – Part 6: Fixed common and obtuse crossings
15.	EN 13232-7:2006+A1:2011 Railway applications – Track – Switches and crossings – Part 7: Crossings with moveable parts
16.	EN 13232-8:2007+A1:2011 Railway applications – Track – Switches and crossings – Part 8: Expansion devices
17.	EN 13232-9:2006+A1:2011 Railway applications – Track – Switches and crossings – Part 9: Layouts
18.	EN 13481-2:2022 Railway applications – Track – Performance requirements for fastening systems – Part 2: Fastening systems for concrete sleepers in ballast
19.	EN 13481-3:2022 Railway applications – Track – Performance requirements for fastening systems – Part 3: Fastening systems for wood and polymeric composite sleepers
20.	EN 13674-1:2011+A1:2017 Railway applications – Track – Rail – Part 1: Vignole railway rails 46 kg/m and above
21.	EN 13674-3:2006+A1:2010 Railway applications – Track – Rail – Part 3: Check rails
22.	EN 13803-1:2010 Railway applications – Track – Track alignment design parameters – Track gauges 1 435 mm and wider – Part 1: Plain line
23.	EN 13803-2:2006+A1:2009 Railway applications – Track – Track alignment design parameters – Track gauges 1 435 mm and wider – Part 2: Switches and crossings and comparable alignment design situations with abrupt changes of curvature
24.	EN 13848-5:2017 Railway applications – Track – Track geometry quality – Part 5: Geometric quality levels – Plain line, switches and crossings
25.	EN 14067-4:2013+A1:2018 Railway applications – Aerodynamics – Part 4: Requirements and test procedures for aerodynamics on open track
26.	EN 14198:2016+A2:2021 Railway applications – Braking – Requirements for the brake system of trains hauled by locomotives

No	Reference of the standard
27.	EN 14363:2016+A2:2022 Railway applications – Testing and Simulation for the acceptance of running characteristics of railway vehicles – Running Behaviour and stationary tests
28.	EN 14531-2:2015 Railway applications – Methods for calculation of stopping and slowing distances and immobilization braking – Part 2: Step by step calculations for train sets or single vehicles
29.	EN 14587-2:2009 Railway applications – Track – Flash butt welding of rails – Part 2: New R220, R260, R260Mn and R350HT grade rails by mobile welding machines at sites other than a fixed plant
30.	EN 14813-1:2006+A1:2010 Railway applications – Air conditioning for driving cabs – Part 1: Comfort parameters
31.	EN 14813-2:2006+A1:2010 Railway applications – Air conditioning for driving cabs – Part 2: Type tests
32.	EN 14865-1:2009+A1:2010 Railway applications – Axlebox lubricating greases – Part 1: Method to test the ability to lubricate
33.	EN 14865-2:2006+A2:2010 Railway applications – Axlebox lubricating greases – Part 2: Method to test the mechanical stability to cover vehicle speeds up to 200 km/h
34.	EN 15085-3:2022+A1:2023 Railway applications – Welding of railway vehicles and components – Part 3: Design requirements
35.	EN 15085-6:2022 Railway applications – Welding of railway vehicles and components – Part 6: Maintenance welding requirements
36.	EN 15220:2016 Railway applications – Brake indicators
37.	EN 15273-2:2013+A1:2016 Railway applications – Gauges – Part 2: Rolling stock gauge
38.	EN 15273-3:2013+A1:2016 Railway applications – Gauges – Part 3: Structure gauges
39.	EN 15313:2016 Railway applications – In-service wheelset operation requirements – In-service and off-vehicle wheelset maintenance

No	Reference of the standard
40.	EN 15355:2019 Railway applications – Braking – Distributor valves and distributor-isolating devices
41.	EN 15437-2:2012+A1:2022 Railway applications – Axlebox condition monitoring – Interface and design requirements – Part 2: Performance and design requirements of on-board systems for temperature monitoring
42.	EN 15461:2008+A1:2010 Railway applications – Noise emission – Characterisation of the dynamic properties of track sections for pass by noise measurements
43.	EN 15551:2022 Railway applications – Railway rolling stock – Buffers
44.	EN 15566:2022 Railway applications – Railway Rolling stock – Draw gear and screw coupling
45.	EN 15594:2009 Railway applications – Track – Restoration of rails by electric arc welding
46.	EN 15610:2019 Railway applications – Acoustics – Rail and wheel roughness measurement related to noise generation
47.	EN 15611:2020+A1:2022 Railway applications – Braking – Relay valves
48.	EN 15624:2021 Railway applications – Braking – Empty-loaded changeover devices
49.	EN 15625:2021 Railway applications – Braking – Automatic variable load sensing devices
50.	EN 15723:2010 Railway applications – Closing and locking devices for payload protecting devices against environmental influences – Requirements for durability, operation, indication, maintenance, recycling
51.	EN 15734-1:2010+A1:2021 Railway applications – Braking systems of high speed trains – Part 1: Requirements and definitions
52.	EN 15807:2021 Railway applications – Pneumatic half couplings
53.	EN 15827:2011 Railway applications – Requirements for bogies and running gears

No	Reference of the standard
54.	EN 15877-1:2012+A1:2018 Railway applications – Marking on railway vehicles – Part 1: Freight wagons
55.	EN 15877-2:2013 Railway applications – Markings of railway vehicles – Part 2: External markings on coaches, motive power units, locomotives and on track machines
56.	EN 16019:2014 Railway applications – Automatic coupler – Performance requirements, specific interface geometry and test method
57.	EN 16116-1:2022 Railway applications – Design requirements for steps, handrails and associated access for staff – Part 1: Passenger vehicles, vans and locomotives
58.	EN 16116-2:2021 Railway applications – Design requirements for steps, handrails and associated access for staff – Part 2: Freight wagons
59.	EN 16186-1:2014+A1:2018 Railway applications – Driver's cab – Part 1: Anthropometric data and visibility
60.	EN 16186-2:2017 Railway applications – Driver's cab – Part 2: Integration of displays, controls and indicators
61.	EN 16186-3:2022 Railway applications – Driver's cab – Part 3: Design of displays for heavy rail vehicles
62.	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
63.	EN 16241:2014+A1:2016 Railway applications – Slack adjuster
64.	EN 16286-1:2013 Railway applications – Gangway systems between vehicles – Part 1: Main applications
65.	EN 16334-1:2014+A1:2022 Railway applications – Passenger Alarm System – Part 1: System requirements for mainline rail
66.	EN 16404:2016 Railway applications – Re-railing and recovery requirements for railway vehicles



No	Reference of the standard
67.	EN 16452:2015+A1:2019 Railway applications – Braking – Brake blocks
68.	EN 16494:2015 Railway applications – Requirements for ERTMS Trackside Boards
69.	EN 16584-1:2017 Railway applications – Design for PRM use – General requirements – Part 1: Contrast
70.	EN 16584-2:2017 Railway applications – Design for PRM use – General requirements – Part 2: Information
71.	EN 16584-3:2017 Railway applications – Design for PRM use – General requirements – Part 3: Optical and friction characteristics
72.	EN 16585-1:2017 Railway applications – Design for PRM use – Equipment and components onboard rolling stock – Part 1: Toilets
73.	EN 16585-2:2017 Railway applications – Design for PRM use – Equipment and components on board rolling stock – Part 2: Elements for sitting, standing and moving
74.	EN 16585-3:2017 Railway applications – Design for PRM use – Equipment and components on board rolling stock – Part 3: Clearways and internal doors
75.	EN 16586-1:2017 Railway applications – Design for PRM use – Accessibility of persons with reduced mobility to rolling stock – Part 1: Steps for access and egress
76.	EN 16586-2:2017 Railway applications – Design for PRM use – Accessibility of persons with reduced mobility to rolling stock – Part 2: Boarding aids
77.	EN 16587:2017 Railway applications – Design for PRM Use – Requirements on obstacle free routes for infrastructure
78.	EN 16683:2015 Railway applications – Call for aid and communication device – Requirements
79.	EN 16704-1:2016+A1:2021 Railway applications – Track – Safety protection on the track during work – Part 1: Railway risks and common principles for protection of fixed and mobile work sites

No	Reference of the standard
80.	EN 16704-3:2016+A1:2021 Railway applications – Track – Safety protection on the track during work – Part 3: Competences for personnel related to work on or near tracks
81.	EN 16729-1:2016 Railway applications – Infrastructure – Non-destructive testing on rails in track – Part 1: Requirements for ultrasonic inspection and evaluation principles
82.	EN 16729-3:2018 Railway applications – Infrastructure – Non-destructive testing on rails in track – Part 3: Requirements for identifying internal and surface rail defects
83.	EN 16729-4:2018 Railway applications – Infrastructure – Non-destructive testing on rails in track – Part 4: Qualification of personnel for non-destructive testing on rails
84.	EN 16839:2022 Railway applications – Rolling stock – Head stock layout
85.	EN 16922:2017+A1:2019 Railway applications – Ground based services – Vehicle waste water discharge equipment
86.	EN 17023:2018 Railway applications – Railway vehicle maintenance – Creation and modification of maintenance plan
87.	EN 17069-1:2019 Railway applications – Systems and procedures for change of track gauge – Part 1: Automatic Variable Gauge Systems
88.	EN 45545-1:2013 Railway applications – Fire protection on railway vehicles – Part 1: General
89.	EN 45545-3:2013 Railway applications – Fire protection on railway vehicles – Part 3: Fire resistance requirements for fire barriers
90.	EN 45545-4:2013 Railway applications – Fire protection on railway vehicles – Part 4: Fire safety requirements for rolling stock design
91.	EN 45545-5:2013+A1:2015 Railway applications – Fire protection on railway vehicles – Part 5: Fire safety requirements for electrical equipment including that of trolley buses, track guided buses and magnetic levitation vehicles

No	Reference of the standard
92.	EN 45545-6:2013 Railway applications – Fire protection on railway vehicles – Part 6: Fire control and management systems
93.	EN 45545-7:2013 Railway applications – Fire protection on railway vehicles – Part 7: Fire safety requirements for flammable liquid and flammable gas installations
94.	EN 50124-1:2017 Railway applications – Insulation coordination – Part 1: Basic requirements – Clearances and creepage distances for all electrical and electronic equipment
95.	EN 50124-2:2017 Railway applications – Insulation coordination – Part 2: Overvoltages and related protection
96.	EN 50125-2:2002 Railway applications – Environmental conditions for equipment – Part 2: Fixed electrical installations EN 50125-2:2002/AC:2010
97.	EN 50125-3:2003 Railway applications – Environmental conditions for equipment – Part 3: Equipment for signalling and telecommunications EN 50125-3:2003/AC:2010
98.	EN 50126-1:2017 Railway Applications – The Specification and Demonstration of Reliability, Availability, Maintainability and Safety (RAMS) – Part 1: Generic RAMS Process
99.	EN 50126-2:2017 Railway Applications – The Specification and Demonstration of Reliability, Availability, Maintainability and Safety (RAMS) – Part 2: Systems Approach to Safety
100.	EN 50129:2018 Railway applications – Communication, signalling and processing systems – Safety related electronic systems for signalling EN 50129:2018/AC:2019-04
101.	EN 50155:2021 Railway applications – Rolling stock – Electronic equipment
102.	EN 50318:2018 Railway applications – Current collection systems – Validation of simulation of the dynamic interaction between pantograph and overhead contact line EN 50318:2018/A1:2022

No	Reference of the standard
103.	EN 50405:2015 Railway applications – Current collection systems – Pantographs, testing methods for contact strips EN 50405:2015/A1:2016
104.	EN 50463-1:2017 Railway applications – Energy measurement on board trains – Part 1: General
105.	EN 50463-2:2017 Railway applications – Energy measurement on board trains – Part 2: Energy measuring EN 50463-2:2017/AC:2018-10
106.	EN 50463-3:2017 Railway applications – Energy measurement on board trains – Part 3: Data handling
107.	EN 50463-4:2017 Railway applications – Energy measurement on board trains – Part 4: Communication
108.	EN 50463-5:2017 Railway applications – Energy measurement on board trains – Part 5: Conformity assessment
109.	EN 50533:2011 Railway applications – Three-phase train line voltage characteristics EN 50533:2011/A1:2016
110.	EN 50562:2018 Railway applications – Fixed installations – Process, protective measures and demonstration of safety for electric traction systems
111.	EN 50592:2016 Railway applications – Testing of rolling stock for electromagnetic compatibility with axle counters
112.	EN 50617-1:2015 Railway applications – Technical parameters of train detection systems for the interoperability of the trans-European railway system – Part 1: Track circuits
113.	EN 50617-2:2015 Railway Applications – Technical parameters of train detection systems for the interoperability of the trans-European railway system – Part 2: Axle counters EN 50617-2:2015/AC:2016
114.	EN 50641:2020 Railway applications – Fixed installations – Requirements for the validation of simulation tools used for the design of electric traction power supply systems Restriction: The standard gives presumption of conformity only to clause 4.2.4. of Commission Regulation (EU) No 1301/2014

No	Reference of the standard
115.	EN 61375-1:2012 Electronic railway equipment – Train communication network (TCN) – Part 1: General architecture (IEC 61375-1:2012)
116.	EN 61375-2-1:2012 Electronic railway equipment – Train communication network (TCN) – Part 2-1: Wire Train Bus (WTB) (IEC 61375-2-1:2012)
117.	EN 61375-2-2:2012 Electronic railway equipment – Train communication network (TCN) – Part 2-2: Wire Train Bus conformance testing (IEC 61375-2-2:2012)
118.	EN 61375-2-5:2015 Electronic railway equipment – Train communication network (TCN) – Part 2-5: Ethernet train backbone (IEC 61375-2-5:2014)
119.	EN 61375-3-1:2012 Electronic railway equipment – Train communication network (TCN) – Part 3-1: Multifunction Vehicle Bus (MVB) (IEC 61375-3-1:2012)
120.	EN 61375-3-2:2012 Electronic railway equipment – Train communication network (TCN) – Part 3-2: MVB (Multifunction Vehicle Bus) conformance testing (IEC 61375-3-2:2012)
121.	EN 61375-3-3:2012 Electronic railway equipment – Train communication network (TCN) – Part 3-3: CANopen Consist Network (CCN) (IEC 61375-3-3:2012)
122.	EN 62580-1:2016 Electronic railway equipment – On-board multimedia and telematic subsystems for railways – Part 1: General architecture (IEC 62580-1:2015) EN 62580-1:2016/A11:2017
123.	EN 62621:2016 Railway applications – Fixed installations – Electric traction – Specific requirements for composite insulators used for overhead contact line systems (IEC 62621:2011) EN 62621:2016/A1:2016

## ANNEX II

No	Reference of the standard	Date of withdrawal
1.	EN ISO 3381:2011 Railway applications – Acoustics – Measurement of noise inside railbound vehicles (ISO 3381:2005)	21 November 2023
2.	EN 12080:2017 Railway applications – Axleboxes – Rolling bearings	21 November 2023
3.	EN 12082:2017 Railway applications – Axleboxes – Performance testing	21 November 2023
4.	EN 13103-1:2017 Railway applications – Wheelsets and bogies – Part 1: Design method for axles with external journals	21 November 2023
5.	EN 13230-4:2009 Railway applications – Track – Concrete sleepers and bearers – Part 4: Prestressed bearers for switches and crossings	21 November 2023
6.	EN 13260:2009+A1:2010 Railway applications – Wheelsets and bogies – Wheelsets – Product requirements	21 November 2023
7.	EN 13261:2009+A1:2010 Railway applications – Wheelsets and bogies – Axles – Product requirements	21 November 2023
8.	EN 13262:2004+A2:2011 Railway applications – Wheelsets and bogies – Wheels – Product requirements	21 November 2023
9.	EN 13272:2012 Railway applications – Electrical lighting for rolling stock in public transport systems	21 November 2023
10.	EN 13481-2:2012+A1:2017 Railway applications – Track – Performance requirements for fastening systems – Part 2: Fastening systems for concrete sleepers	21 November 2023
11.	EN 13481-3:2012 Railway applications – Track – Performance requirements for fastening systems – Part 3: Fastening systems for wood sleepers	21 November 2023
12.	EN 13481-5:2012+A1:2017 Railway applications – Track – Performance requirements for fastening systems – Part 5: Fastening systems for slab track with rail on the surface or rail embedded in a channel	21 November 2023

No	Reference of the standard	Date of withdrawal
13.	EN 13481-7:2012 Railway applications – Track – Performance requirements for fastening systems – Part 7: Special fastening systems for switches and crossings and check rails	21 November 2023
14.	EN 13674-2:2006+A1:2010 Railway applications – Track – Rail – Part 2: Switch and crossing rails used in conjunction with Vignole railway rails 46 kg/m and above	21 November 2023
15.	EN 13715:2006+A1:2010 Railway applications – Wheelsets and bogies – Wheels – Tread profile	21 November 2023
16.	EN 13749:2011 Railway applications – Wheelsets and bogies – Method of specifying the structural requirements of bogie frames	21 November 2023
17.	EN 13979-1:2003+A2:2011 Railway applications – Wheelsets and bogies – Monobloc wheels – Technical approval procedure – Part 1: Forged and rolled wheels	21 November 2023
18.	EN 14033-1:2017 Railway applications – Track – Railbound construction and maintenance machines – Part 1: Technical requirements for running	21 November 2023
19.	EN 14067-5:2006+A1:2010 Railway applications – Aerodynamics – Part 5: Requirements and test procedures for aerodynamics in tunnels	21 November 2023
20.	EN 14363:2016+A1:2018 Railway applications – Testing and Simulation for the acceptance of running characteristics of railway vehicles – Running Behaviour and stationary tests Notice: Presumption of conformity shall only be provided when used in conjunction with the technical opinion of the European Union Agency for Railways ERA-OPI-2018-3 ( <a href="https://www.era.europa.eu/library/opinions-and-technical-advice_en">https://www.era.europa.eu/library/opinions-and-technical-advice_en</a> )	21 November 2023
21.	EN 14531-1:2015 Railway applications – Methods for calculation of stopping and slowing distances and immobilization braking – Part 1: General algorithms utilizing mean value calculation for train sets or single vehicles	21 November 2023

No	Reference of the standard	Date of withdrawal
22.	EN 14535-1:2005+A1:2011 Railway applications – Brake discs for railway rolling stock – Part 1: Brake discs pressed or shrunk onto the axle or drive shaft, dimensions and quality requirements	21 November 2023
23.	EN 14535-2:2011 Railway applications – Brake discs for railway rolling stock – Part 2: Brake discs mounted onto the wheel, dimensions and quality requirements	21 November 2023
24.	EN 14535-3:2015 Railway applications – Brake discs for railway rolling stock – Part 3: Brake discs, performance of the disc and the friction couple, classification	21 November 2023
25.	EN 14601:2005+A1:2010 Railway applications – Straight and angled end cocks for brake pipe and main reservoir pipe	21 November 2023
26.	EN 14752:2015 Railway applications – Body side entrance systems for rolling stock	21 November 2023
27.	EN 15020:2006+A1:2010 Railway applications – Rescue coupler – Performance requirements, specific interface geometry and test methods	21 November 2023
28.	EN 15153-1:2013+A1:2016 Railway applications – External visible and audible warning devices for trains – Part 1: Head, marker and tail lamps	21 November 2023
29.	EN 15153-2:2013 Railway applications – External visible and audible warning devices for trains – Part 2: Warning horns	21 November 2023
30.	EN 15227:2008+A1:2010 Railway applications – Crashworthiness requirements for railway vehicle bodies	21 November 2023
31.	EN 15302:2008+A1:2010 Railway applications – Method for determining the equivalent conicity	21 November 2023
32.	EN 15427:2008+A1:2010 Railway applications – Wheel/rail friction management – Flange lubrication	21 November 2023



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33.	EN 15437-1:2009 Railway applications – Axlebox condition monitoring – Interface and design requirements – Part 1: Track side equipment and rolling stock axlebox	21 November 2023
34.	EN 15437-2:2012 Railway applications – Axlebox condition monitoring – Interface and design requirements – Part 2: Performance and design requirements of on-board systems for temperature monitoring	21 November 2023
35.	EN 15528:2015 Railway applications – Line categories for managing the interface between load limits of vehicles and infrastructure	21 November 2023
36.	EN 15551:2017 Railway applications – Railway rolling stock – Buffers	21 November 2023
37.	EN 15566:2016 Railway applications – Railway rolling stock – Draw gear and screw coupling	21 November 2023
38.	EN 15595:2009+A1:2011 Railway applications – Braking – Wheel slide protection	21 November 2023
39.	EN 15611:2008+A1:2010 Railway applications – Braking – Relay valves	21 November 2023
40.	EN 15612:2008+A1:2010 Railway applications – Braking – Brake pipe accelerator valve	21 November 2023
41.	EN 15624:2008+A1:2010 Railway applications – Braking – Empty-loaded changeover devices	21 November 2023
42.	EN 15625:2008+A1:2010 Railway applications – Braking – Automatic variable load sensing devices	21 November 2023
43.	EN 15654-1:2018 Railway applications – Measurement of vertical forces on wheels and wheelsets – Part 1: On-track measurement sites for vehicles in service	21 November 2023

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44.	EN 15663:2009 Railway applications – Definition of vehicle reference masses EN 15663:2009/AC:2010	21 November 2023
45.	EN 15686:2010 Railway applications – Testing for the acceptance of running characteristics of railway vehicles with cant deficiency compensation system and/or vehicles intended to operate with higher cant deficiency than stated in EN 14363:2005, Annex G	21 November 2023
46.	EN 15687:2010 Railway applications – Testing for the acceptance of running characteristics of freight vehicles with static axle loads higher than 225 kN and up to 250 kN	21 November 2023
47.	EN 15734-1:2010 Railway applications – Braking systems of high speed trains – Part 1: Requirements and definitions	21 November 2023
48.	EN 15734-2:2010 Railway applications – Braking systems of high speed trains – Part 2: Test methods EN 15734-2:2010/AC:2012	21 November 2023
49.	EN 15746-1:2010+A1:2011 Railway applications – Track – Road-rail machines and associated equipment – Part 1: Technical requirements for running and working	21 November 2023
50.	EN 15746-2:2010+A1:2011 Railway applications – Track – Road-rail machines and associated equipment – Part 2: General safety requirements	21 November 2023
51.	EN 15806:2010 Railway applications – Braking – Static brake testing	21 November 2023
52.	EN 15807:2011 Railway applications – Pneumatic half couplings	21 November 2023
53.	EN 15892:2011 Railway applications – Noise Emission – Measurement of noise inside driver's cabs	21 November 2023
54.	EN 16116-1:2013 Railway applications – Design requirements for steps, handrails and associated access for staff – Part 1: Passenger vehicles, luggage vans and locomotives	21 November 2023

No	Reference of the standard	Date of withdrawal
55.	EN 16116-2:2013 Railway applications – Design requirements for steps, handrails and associated access for staff – Part 2: Freight wagons	21 November 2023
56.	EN 16185-1:2014 Railway applications – Braking systems of multiple unit trains – Part 1: Requirements and definitions	21 November 2023
57.	EN 16185-2:2014 Railway applications – Braking systems of multiple unit trains – Part 2: Test methods	21 November 2023
58.	EN 16186-3:2016+A1:2018 Railway applications – Driver's cab – Part 3: Design of displays	21 November 2023
59.	EN 16207:2014 Railway applications – Braking – Functional and performance criteria of Magnetic Track Brake systems for use in railway rolling stock	21 November 2023
60.	EN 16334:2014 Railway applications – Passenger Alarm System – System requirements	21 November 2023
61.	EN 45545-2:2013+A1:2015 Railway applications – Fire protection on railway vehicles – Part 2: Requirements for fire behaviour of materials and components	21 November 2023
62.	EN 50122-2:2010 Railway applications – Fixed installations – Electrical safety, earthing and the return circuit – Part 2: Provisions against the effects of stray currents caused by d.c. traction systems	21 November 2023
63.	EN 50122-3:2010 Railway applications – Fixed installations – Electrical safety, earthing and the return circuit – Part 3: Mutual Interaction of a.c. and d.c. traction systems	21 November 2023
64.	EN 50155:2007 Railway applications – Electronic equipment used on rolling stock EN 50155:2007/AC:2010 EN 50155:2007/AC:2012	21 November 2023
65.	EN 50159:2010 Railway applications – Communication, signalling and processing systems – Safety-related communication in transmission systems	21 November 2023

No	Reference of the standard	Date of withdrawal
66.	EN 50163:2004 Railway applications – Supply voltages of traction systems EN 50163:2004/AC:2010 EN 50163:2004/AC:2013 EN 50163:2004/A1:2007	21 November 2023
67.	EN 50238-1:2003 Railway applications – Compatibility between rolling stock and train detection systems – Part 1: General EN 50238-1:2003/AC:2014	21 November 2023
68.	EN 50317:2012 Railway applications – Current collection systems – Requirements for and validation of measurements of the dynamic interaction between pantograph and overhead contact line EN 50317:2012/AC:2012	21 November 2023
69.	EN 50367:2012 Railway applications – Current collection systems – Technical criteria for the interaction between pantograph and overhead line (to achieve free access) EN 50367:2012/AC:2013 EN 50367:2012/A1:2016	21 November 2023
70.	EN 50388:2012 Railway Applications – Power supply and rolling stock – Technical criteria for the coordination between power supply (substation) and rolling stock to achieve interoperability EN 50388:2012/AC:2013	21 November 2023
71.	EN 50553:2012 Railway applications – Requirements for running capability in case of fire on board of rolling stock EN 50553:2012/AC:2013 EN 50553:2012/A1:2016	21 November 2023
72.	EN 62580-1:2016 Electronic railway equipment – On-board multimedia and telematic subsystems for railways – Part 1: General architecture (IEC 62580-1:2015)	21 November 2023

## ANNEX III

No	Reference of the standard	Date of withdrawal
1.	EN 14067-6:2018 Railway applications – Aerodynamics – Part 6: Requirements and test procedures for cross wind assessment	21 November 2023
2.	EN 14198:2016+A1:2018 Railway applications – Braking – Requirements for the brake system of trains hauled by locomotives	21 November 2023
3.	EN 50122-1:2011 Railway applications – Fixed installations – Electrical safety, earthing and the return circuit – Part 1: Protective provisions against electric shock EN 50122-1:2011/A1:2011 EN 50122-1:2011/A2:2016 EN 50122-1:2011/A3:2016 EN 50122-1:2011/A4:2017 EN 50122-1:2011/AC:2012	21 November 2023
4.	EN 50318:2018 Railway applications – Current collection systems – Validation of simulation of the dynamic interaction between pantograph and overhead contact line	21 November 2023