ICS 45.040 SLOVENSKÁ TECHNICKÁ NORMA Jún 2024

STN	**Železnice Brzdenie Funkčné a výkonnostné kritériá systémov magnetickej koľajnicovej brzdy na použitie v železničných koľajových vozidlách**	**STN EN 16207 28 4022**

Railway applications - Braking - Functional and performance criteria of magnetic track brake systems for use in railway rolling stock

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Railway applications - Braking - Functional and performance criteria of Magnetic Track Brake systems for use in railway rolling stock

Applications ferroviaires - Freinage - Critères pour la fonction et la performance des systèmes de freinage magnétiques pour véhicules ferroviaires

Bahnanwendungen - Bremse - Anforderungen an die Funktion und Leistungsfähigkeit von Magnetschienenbremssystemen für Schienenfahrzeuge

This European Standard was approved by CEN on 15 October 2023.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 16207:2024) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2024, and conflicting national standards shall be withdrawn at the latest by September 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 16207:2014+A1:2019.

In comparison with the previous edition, the following technical modifications have been made:

a) normative references have been updated;

b) requirements for end pieces of magnet elements (see 5.5) have been modified;

c) requirements for control of the MTB (5.10) have been modified;

d) content of Table C.1 “List of end pieces and main dimensions” has been updated;

e) new normative Annex D “Validation process for new end pieces of MTB” has been added;

f) Annex ZA has been updated in accordance with Directive (EU) 2016/797.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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1 Scope

This document specifies the functionality, position, constraints and control of a magnetic track brake system (MTB system) installed in bogies for use in emergency braking and in low adhesion conditions on Mainline Trains with speeds up to 280 km/h. It covers high suspension types of MTB only and not high/low and low suspension type of MTB.

This document also specifies test methods and acceptance criteria for an MTB system. It identifies interfaces with electrical equipment, bogie, track and other brake systems.

This document specifies additional requirements for:

— conditions of application for the MTB system;

— retardation and brake forces;

— functional and design features;

— strength requirements;

— type, series and vehicle implementation tests.

For design and calculation a “reference surface” is established.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 10025-2:2019, *Hot rolled products of structural steels - Part 2: Technical delivery conditions for non-alloy structural steels*

EN 13674-1:2011+A1:2017, *Railway applications - Track - Rail - Part 1: Vignole railway rails 46 kg/m and above*

EN 14198:2016+A2:2021, *Railway applications - Braking - Requirements for the brake system of trains hauled by locomotives*

EN 14478:2017, *Railway applications - Braking - Generic vocabulary*

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*

EN 15273-2:2013+A1:2016, *Railway applications - Gauges - Part 2: Rolling stock gauge*

EN 15734-1:2010+A1:2021, *Railway applications - Braking systems of high speed trains - Part 1: Requirements and definitions*

EN 15734-2:2010+A1:2021, *Railway applications - Braking systems of high speed trains - Part 2: Test methods*

EN 16185-1:2014+A1:2020, *Railway applications - Braking systems of multiple unit trains - Part 1: Requirements and definitions*

EN 16185-2:2014+A1:2019, *Railway applications - Braking systems of multiple unit trains - Part 2: Test methods*

EN 16834:2019, *Railway applications - Braking - Brake performance*

EN 17065:2018, *Railway applications - Braking - Passenger coach test procedure*

EN 45545-2:2020+A1:2023, *Railway applications - Fire protection on railway vehicles - Part 2: Requirements for fire behavior of materials and components*

EN 50124-1:2017, *Railway applications - Insulation coordination - Part 1: Basic requirements - Clearances and creepage distances for all electrical and electronic equipment*

EN 50126-1:2017, *Railway Applications - The Specification and Demonstration of Reliability, Availability, Maintainability and Safety (RAMS) - Part 1: Generic RAMS Process*

EN 50129:2018,[1] *Railway applications — Communication, signalling and processing systems — Safety related electronic systems for signalling*

EN 50155:2021, *Railway applications - Rolling stock - Electronic equipment*

EN 50657:2017, *Railways Applications - Rolling stock applications - Software on Board Rolling Stock*

EN 60077-1:2017, *Railway applications - Electric equipment for rolling stock - Part 1: General service conditions and general rules*

EN 60529:1991,[2] *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

EN 61373:2010, *Railway applications - Rolling stock equipment - Shock and vibration tests*

EN ISO 2409:2020, *Paints and varnishes - Cross-cut test (ISO 2409:2020)*

EN ISO 4628-3:2016, *Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 3: Assessment of degree of rusting (ISO 4628-3:2016)*

EN ISO 9227:2022, *Corrosion tests in artificial atmospheres - Salt spray tests (ISO 9227:2022)*

1 As impacted by EN 50129:2018/AC:2019-04.
2 As impacted by EN 60529:1991/A1:2000 and EN 60529:1991/A2:2013.