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STN	**Železnice Brzdenie Požiadavky na brzdovú sústavu vlakov ťahaných rušňom**	**STN EN 14198+A2 28 4005**

Railway applications - Braking - Requirements for the brake system of trains hauled by locomotives

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

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 09/21

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EUROPEAN STANDARD

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English Version

Railway applications - Braking - Requirements for the brake system of trains hauled by locomotives

Applications ferroviaires - Freinage - Exigences concernant le système de freinage des trains tractés par locomotive

Bahnanwendungen - Bremsen - Anforderungen an die Bremsausrüstung lokbespannter Züge

This European Standard was approved by CEN on 5 August 2018 and includes Amendment 2 approved by CEN on 12 April 2021.

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

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European foreword

This document (EN 14198:2016+A2:2021) 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of an identical text or by endorsement, at the latest by November 2021, and conflicting national standards shall be withdrawn at the latest by November 2021.

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 includes Amendment 1 approved by CEN on 2018-08-05.

This document includes Amendment 2 approved by CEN on 2021-04-12.

This document supersedes [A2] EN 14198:2016+A1:2018 [/A2].

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A1] [/A1], [A2] [/A2].

[A2] This document has been prepared under a standardization request addressed to CEN by the European Commission, and it aims to support essential or other requirements of EU Directive(s) or Regulation(s).

For relationship with EU Directive(s) or Regulation(s), see informative Annex ZA, which is an integral part of this document. [/A2]

[A1] *deleted text* [/A1]

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies basic requirements for the braking of trains hauled by locomotives:

— For trains hauled by locomotives and intended for use in general operation each vehicle is fitted with the traditional brake system with a brake pipe compatible with the UIC brake system.

NOTE This ensures technical compatibility of the brake function between vehicles of various origins in a train (see 5.4).

— For trains hauled by locomotives and intended for use in fixed or predefined formation, the requirements on the vehicle and the train are necessary. In the case of a UIC brake system, this standard applies; if not, the EN 16185 series or the EN 15734 series applies.

If concerned, the UIC brake architecture described in this standard (see 5.4) can be used for brakes for multiple unit train and high speed trains and urban rail described in the EN 13452 series, the EN 16185 series and the EN 15734 series.

This European Standard also takes into account electrical and electronic control functions and additional brake systems like dynamic brakes and adhesion independent brakes.

The brake system requirements, which are specific for on-track machines are set out in EN 14033-1.

This European Standard does not apply to Urban Rail rolling stock braking system, which is specified by EN 13452-1.

2 Normative References

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

EN 286-3, *Simple unfired pressure vessels designed to contain air or nitrogen - Part 3: Steel pressure vessels designed for air braking equipment and auxiliary pneumatic equipment for railway rolling stock*

EN 286-4, *Simple unfired pressure vessels designed to contain air or nitrogen - Part 4: Aluminium alloy pressure vessels designed for air braking equipment and auxiliary pneumatic equipment for railway rolling stock*

EN 837-1:1996, *Pressure gauges - Part 1: Bourdon tube pressure gauges - Dimensions, metrology, requirements and testing*

EN 854, *Rubber hoses and hose assemblies - Textile reinforced hydraulic type - Specification*

EN 10220, *Seamless and welded steel tubes - Dimensions and masses per unit length*

EN 10305-4, *Steel tubes for precision applications - Technical delivery conditions - Part 4: Seamless cold drawn tubes for hydraulic and pneumatic power systems*

EN 10305-6, *Steel tubes for precision applications - Technical delivery conditions - Part 6: Welded cold drawn tubes for hydraulic and pneumatic power systems*

EN 13749:2011, *Railway applications - Wheelsets and bogies - Method of specifying the structural requirements of bogie frames*

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

EN 14531-1, *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*

EN 14531-2, *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 14535-1, *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*

EN 14535-2, *Railway applications - Brake discs for railway rolling stock - Part 2: Brake discs mounted onto the wheel, dimensions and quality requirements*

EN 14535-3, *Railway applications - Brake discs for railway rolling stock - Part 3: Brake discs, performance of the disc and the friction couple, classification*

EN 14601, *Railway applications — Straight and angled end cocks for brake pipe and main reservoir pipe*

EN 15220, *Railway applications - Brake indicators*

EN 15273-2, *Railway applications - Gauges - Part 2: Rolling stock gauge*

EN 15329, *Railway applications - Braking - Brake block holder and brake shoe key for railway vehicles*

EN 15355, *Railway applications — Braking — Distributor valves and distributor-isolating devices*

EN 15595, *Railway applications — Braking — Wheel slide protection*

EN 15611, *Railway applications — Braking — Relay valves*

EN 15612, *Railway applications — Braking — Brake pipe accelerator valve*

EN 15663, *Railway applications - Definition of vehicle reference masses*

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

EN 15807, *Railway applications - Pneumatic half couplings*

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

prEN 16186-2, *Railway applications - Driver's cab - Part 2: Integration of displays, controls and indicators*

EN 16207, *Railway applications - Braking - Functional and performance criteria of Magnetic Track Brake systems for use in railway rolling stock*

EN 16241, *Railway applications - Slack adjuster*

EN 16334, *Railway applications - Passenger Alarm System - System requirements*

EN 16451, *Railway applications - Braking - Brake pad holder*

EN 16452, *Railway applications - Braking - Brake blocks*

prEN 16834, *Railway applications - Braking - Brake performance*

EN 45545 (all parts), *Railway applications — Fire protection on railway vehicles*

EN 50125-1, *Railway applications — Environmental conditions for equipment — Part 1: Rolling stock and on-board equipment*

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

EN 50553, *Railway applications - Requirements for running capability in case of fire on board of rolling stock*

EN ISO 1127, *Stainless steel tubes - Dimensions, tolerances and conventional masses per unit length (ISO 1127)*

NF F 11-100:1995, *Matériel roulant ferroviaire — Qualité de l'air comprimé destiné aux appareils et circuits pneumatiques*

UIC 541-3, *Brakes - Disc brakes and their application - General conditions for the approval of brake pads*

UIC 541-5:2005, *Brakes — Electropneumatic brake (ep brake) — Electropneumatic emergency brake override (EBO)*

UIC 541-6:2010, *Brakes — Electropneumatic brake (ep brake) and Passenger alarm signal (PAS) for vehicles used in hauled consists*

1) EN 14478 is under revision and the next edition will include several of the definitions currently contained in this document.