



Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

ILNAS-EN 15179:2007

**Railway applications - Braking -
Requirements for the brake system of
coaches**

Bahnanwendungen - Bremsen -
Anforderungen für die Bremsausrüstung
von Reisezugwagen

Applications ferroviaires - Freinage -
Exigences concernant le système de
freinage des voitures voyageurs

09/2007



National Foreword

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**Railway applications - Braking - Requirements for the brake
system of coaches**

Applications ferroviaires - Freinage - Exigences concernant
le système de freinage des voitures voyageurs

Bahnanwendungen - Bremsen - Anforderungen für die
Bremsausrüstung von Reisezugwagen

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Foreword

This document (EN 15179:2007) 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of an identical text or by endorsement, at the latest by March 2008, and conflicting national standards shall be withdrawn at the latest by March 2008.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

Currently, in the standard gauge area, there are EU regulations in the form of interoperability directives and the associated TSI that also contain specifications for the braking of railway vehicles. Before this time, brake engineering regulations only existed as internal railway documents in the form of UIC leaflets.

Agreements based on these govern the conditions for vehicle transfers between the individual railways. The relationship between the infrastructures and the minimum brake engineering requirements on trains and their individual vehicles is defined in EN 14198. This covers mainly generic vehicle regulations that should be assigned to individual vehicles by corresponding specifications.

With this European Standard, all suppliers will in future be able to offer in a Europe-wide tender invitation passenger coaches that have a defined basic brake engineering system and meet the minimum brake engineering requirements, taking into account the vehicle types

1 Scope

This European Standard defines basic requirements for the braking of passenger coaches in trains hauled by locomotives as described in EN 14198, using UIC air brakes (RIC traffic) operating on routes of the European railways and their infrastructure systems.

Normative Annex E is provided for passenger coaches limited to internal use in the UK.

This European Standard covers:

- all new vehicle designs of the passenger coach type of construction (day coaches, restaurant cars, sleeper coaches, driving trailers, baggage cars, couchette coaches);
- all new constructions of existing vehicle types;
- other vehicles (e.g. motorail vehicles) that may also be included in passenger trains;
- all major overhauls of the above-mentioned vehicles if they involve redesigning or extensive alteration to the brake system¹ of the vehicle concerned.

The vehicles meet the following technical criteria:

- inclusion in trains in accordance with EN 14198 in regular railway operation is possible (coupling capacity);
- the maximum speed is between 100 km/h and 200 km/h;
- the lower vehicle limitations of prEN 15273-1, prEN 15273-2, prEN 15273-3 are adhered to.

2 Normative references

The following referenced documents are indispensable for the application 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 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 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*

¹ or alterations to the vehicle weight also.

EN 14198:2004, *Railway applications — Braking — Requirements for the brake system of trains hauled by a locomotive*

EN 14478:2005, *Railway applications — Braking — Generic vocabulary*

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

prEN 15220-1, *Railway applications — Brake indicators — Part 1: Pneumatic operation brake indicators*

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

prEN 15273-3, *Railway applications — Gauges — Part 3: Obstacle gauge*

prEN 15327-1, *Railway applications — Passenger alarm subsystem — Part 1: General requirements and passenger interface for the passenger emergency brake system*

prEN 15328, *Railway applications — Braking — Brake pads*

prEN 15355, *Railway applications — Braking — Distributor valves*

prEN 15595, *Railway applications — Braking — Wheel slip prevention equipment*

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

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

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

prEN 14535-2², *Railway applications — Brake discs for railway rolling stock — Part 2: Brake discs mounted onto the wheel rim, wheel web or wheel hub, dimensions and quality requirements*

UIC 541-1:2003³, *Brakes — Regulations concerning the construction of the various brake components*

UIC 541-3:1984, *Brakes — Disc brakes and their application — General conditions for the approval of brake pads*

UIC 541-5, *Brakes — Electro-pneumatic brake (ep-brake) — Electro-pneumatic emergency brake override (EBO)*

UIC 541-06, *Brakes — Regulations concerning the construction of the various brake components — Magnetic brakes*

UIC 544-1, *Brakes — Braking power*

UIC 545:2003, *Brakes — Inscriptions, marks and signs*

UIC 546, *Brakes — High-power brakes for passenger trains*

UIC 550, *Power supply installations for passenger stock*

² To be published.

³ Available from: UIC Direction Générale, 16 rue Jean Rey, F-75015 Paris.