

**Raudteelased rakendused. Kiirraudtee rongi
pidurdussüsteemid. Osa 1: Nõuded ja
definitsioonid**

Railway applications - Braking systems of high speed
trains - Part 1: Requirements and definitions

EESTI STANDARDI EESSÕNA

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English Version

Railway applications - Braking systems of high speed trains - Part 1: Requirements and definitions

Applications ferroviaires - Systèmes de freinage pour trains
à grande vitesse - Partie 1 : Exigences et définitions

Bahnwendungen - Bremsysteme für
Hochgeschwindigkeitszüge - Teil 1: Anforderungen und
Definitionen

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Foreword

This document (EN 15734-1:2010) 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of an identical text or by endorsement, at the latest by May 2011, and conflicting national standards shall be withdrawn at the latest by May 2011.

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

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2008/57/EC.

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

EN 15734, *Railway applications — Brake systems of high speed trains*, consists of the following parts:

- *Part 1: Requirements and definitions*
- *Part 2: Test methods*

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, 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.

1 Scope

This European Standard describes the functionality, constraints, performance and operation of a brake system for use in high speed trains as described in the TSI High Speed Rolling Stock, operating on routes of the European railways and their infrastructure systems.

The brake system requirements specified in this European Standard apply to trains that may operate at a maximum speed of up to 350 km/h on lines specifically built for high speed and define graduated values for deceleration related to four speed ranges (see Clause 6).

This European Standard covers:

- all new vehicle designs of high speed trains;
- all major overhauls of the above-mentioned vehicles if they involve redesigning or extensive alteration to the brake system of the vehicle concerned.

This European Standard does not cover locomotive hauled trains, which are specified by EN 14198.

NOTE This document applies the functional subdivision into subsystems as specified in the TSI High speed. The braking system is part of the function: "Accelerate, maintain speed, brake and stop".

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 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 13749:2005, *Railway applications — Wheelsets and bogies — Methods of specifying structural requirements of bogie frames*

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

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

EN 14531-6, *Railway applications — Methods for calculation of stopping and slowing distances and immobilisation braking — Part 6: 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*

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

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

EN 15020, *Railway applications — Rescue coupler — Performance requirements, specific interface geometry and test methods*

EN 15179, *Railway applications — Braking — Requirements for the brake system of coaches*

EN 15220-1, *Railway applications — Brake indicators — Part 1: Pneumatically operated brake indicators*

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

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

prEN 15329, *Railway applications — Braking — Brake block holder and brake shoe key for rail vehicles*

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

EN 15566, *Railway applications — Railway rolling stock — Draw gear and screw coupling*

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

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

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

EN 15734-2, *Railway applications — Braking systems of high speed trains — Part 2: Test methods*

CEN/TS 45545 (all parts), *Railway applications — Fire protection on railway vehicles*

EN 50121-3 (all subparts), *Railway applications — Electromagnetic compatibility*

EN 50125-1:1999, *Railway applications — Environmental conditions for equipment — Part 1: Equipment on board rolling stock*

EN 50126-1, *Railway applications — The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS) — Part 1: Basic requirements and generic process*

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

EN 50215, *Railway applications — Rolling stock — Testing of rolling stock on completion of construction and before entry into service*

UIC 541-03:1984, *Brakes; regulations concerning manufacture of the different brake parts; driver's brake valve*

UIC 544-1:2004, *Brakes — Braking power*

UIC 557:1998, *Diagnosis techniques for coaches*

UIC 648:2001, *Connections for electric cables and air pipes on headstocks of locomotives and driving trailers*

UIC 651:2002, *Layout of driver's cabs in locomotives, railcars, multiple unit trains and driving trailers*