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

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

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EUROPEAN STANDARD

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English Version

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

Applications ferroviaires - Disques de frein pour
matériel roulant ferroviaire - Partie 3: Disques de frein,
performances du disque et du couple de friction,
classification

Bahnanwendungen - Bremsscheiben für
Schienenfahrzeuge - Teil 3: Bremsscheiben, Leistung
Bremsscheibe und der Reibpaarung, Klassifikation

This European Standard was approved by CEN on 10 July 2015.

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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 14535-3:2015) 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of an identical text or by endorsement, at the latest by June 2016 and conflicting national standards shall be withdrawn at the latest by June 2016.

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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(s).

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

EN 14535, *Railway applications — Brake discs for railway rolling stock*, is currently composed of the following parts:

- *Part 1: Brake discs pressed or shrunk onto the axle or drive shaft, dimensions and quality requirements;*
- *Part 2: Brake discs mounted onto the wheel, dimensions and quality requirements;*
- *Part 3: Brake discs, performance of the disc and the friction couple, classification.*

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This European Standard gives the requirements and classification to be met for the design, dimensions, performance, and testing of the brake disc and "pad and brake disc friction couple". These requirements need to be proven in sufficient detail by dynamometer tests. Quality of design, workmanship and construction need to ensure accordance with good engineering practice and manufacture.

The classification according to this standard is the subject of a brake disc classification certificate (Annex A).

1 Scope

This European Standard applies to brake discs designed to be fitted to railway vehicles.

This European Standard comprises a type test of brake disc performance. The brake disc is tested for energy conversion and dissipation, ventilation characteristics as well as mechanical integrity.

The classification qualifies a brake disc in conjunction with the defined brake pad by dynamometer tests which simulates up to one year in service when operating in the defined application class. It does not define the application and the brake performance in specific trains.

NOTE For this purpose, additional tests may be necessary.

For the application of brake discs on railway vehicles it is not mandatory to use classified brake discs.

Classified brake discs can be validated for the use on railway vehicles for higher performance applications with additional tests.

This standard describes the type test procedure for brake disc classification as specified in EN 14535-1 and EN 14535-2.

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 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 14478, *Railway applications - Braking - Generic vocabulary*

EN ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025)*

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