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

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 14535-2

March 2019

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Supersedes EN 14535-2:2011

English Version

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

Applications ferroviaires - Disques de frein pour matériel roulant ferroviaire - Partie 2 : Disques de frein montés sur la roue, dimensions et exigences de qualité

Bahnanwendungen - Bremsscheiben für Schienenfahrzeuge - Teil 2: Bremsscheiben, die an einem Rad befestigt werden, Abmessungen und Qualitätsanforderungen

This European Standard was approved by CEN on 14 October 2018.

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European foreword

This document (EN 14535-2:2019) 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of an identical text or by endorsement, at the latest by September 2019, and conflicting national standards shall be withdrawn at the latest by September 2019.

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 14535-2:2011.

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 EU Directive 2008/57/EC, see informative Annex ZA, which is an integral part of this document.

Compared to the previous edition, the following changes have been made:

a) the standard’s scope has been modified;

b) normative references have been updated;

c) terms and definitions have been revised;

d) requirements on materials, design, dimensions and installation have been revised;

e) requirements on testing have been revised;

f) requirements on designation and markings have been revised;

g) Annexes have been revised.

The EN 14535 series, *Railway applications - Brake discs for railway rolling stock*, consists 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 organisations 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.

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Introduction

The requirements given in this document cannot be written in sufficient detail to ensure good workmanship or proper construction. Each manufacturer is therefore responsible for taking every necessary step to make sure that the quality of design, workmanship and construction is such as to ensure accordance with good engineering practice.

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1 Scope

This document specifies requirements for the design and dimensions of the brake disc.

This document applies to brake discs mounted onto the wheel, including the wheel web or wheel hub of railway rolling stock.

This document applies to discs having one or more disc brake rings, each having two axially separated friction faces.

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 13260, *Railway applications — Wheelsets and bogies — Wheelsets — Product requirements*

EN 13261, *Railway applications — Wheelsets and bogies — Axles — Product requirements*

EN 13262, *Railway applications — Wheelsets and bogies — Wheels — Product 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 14478, *Railway applications – Braking - Generic vocabulary*

EN ISO 4287, *Geometrical product specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters (ISO 4287)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14478 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
brake disc
arrangement of two brake rings having co-planar, annular friction faces to which brake pads are applied in order to develop a braking torque

3.2
friction face
surface of a disc that provides the friction interface for transferring the brake force

3.3
brake ring
portion of the disc having the friction face

Note 1 to entry: Brake rings can consist of one or more sectors and can have continuous or non-continuous friction faces.

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