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Railway applications - Fire protection on railway vehicles - Part 4: Fire safety requirements for rolling stock design

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EN 45545-4

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English Version

Railway applications - Fire protection on railway vehicles - Part 4: Fire safety requirements for rolling stock design

Applications ferroviaires - Protection contre les incendies dans les véhicules ferroviaires - Partie 4: Exigences de sécurité incendie pour la conception des véhicules ferroviaires

Bahnanwendungen - Brandschutz in Schienenfahrzeugen - Teil 4: Brandschutzanforderungen an die konstruktive Gestaltung von Schienenfahrzeugen

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Foreword

This document (EN 45545-4:2013) 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of an identical text or by endorsement, at the latest by September 2013, and conflicting national standards shall be withdrawn at the latest by March 2016.

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 supersedes CEN/TS 45545-4:2009.

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.

This series of European standards *Railway applications — Fire protection on railway vehicles* consists of:

— *Part 1: General*;

— *Part 2: Requirements for fire behaviour of materials and components*;

— *Part 3: Fire resistance requirements for fire barriers*;

— *Part 4: Fire safety requirements for railway rolling stock design*;

— *Part 5: Fire safety requirements for electrical equipment including that of trolley buses, track guided buses and magnetic levitation vehicles*;

— *Part 6: Fire control and management systems*;

— *Part 7: Fire safety requirements for flammable liquid and flammable gas installations*.

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Introduction

EN 45545-4 has been developed from existing fire safety regulations for railway vehicles from the International Union of Railways (UIC) and different European countries.

In using the operation and design categories defined in EN 45545-1, the requirements laid down in this part take into account the current operating conditions for European public rail transport.

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1 Scope

This part specifies fire safety requirements for railway vehicle design to cover the objectives defined in EN 45545-1.

The measures and requirements specified in this part of EN 45545 aim to protect passengers and staff in railway vehicles in the event of a fire on board by minimizing the risk of a fire starting, delaying the fire development and controlling the spread of fire products through the railway vehicle, thus aiding evacuation.

It is not within the scope of this standard to describe measures which ensure the preservation of the railway vehicles in the event of a fire.

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 14752, *Railway applications — Bodyside entrance systems*

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

EN 45545-1:2013, *Railway applications — Fire protection of railway vehicles — Part 1: General*

EN 45545-2, *Railway applications — Fire protection of railway vehicles — Part 2: Requirements for fire behaviour of materials and components*

EN 45545-3:2013, *Railway applications — Fire protection of railway vehicles — Part 3: Fire resistance requirements for fire barriers*

EN 45545-6, *Railway applications — Fire protection of railway vehicles — Part 6: Fire control and management systems*

EN 45545-7, *Railway applications — Fire protection of railway vehicles — Part 7: Fire safety requirements for flammable liquid and flammable gas installations*

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

EN ISO 13943:2010, *Fire safety — Vocabulary (ISO 13943:2008)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 45545-1:2013 and EN ISO 13943:2010 apply.

4 Fire protection measures

4.1 General

In consideration of the wide range of possible interior layouts for rail vehicles it is only possible to specify a limited number of normative requirements to control the risks of fires starting accidentally or deliberately and to then control the risks of such fires spreading. Informative guidance is therefore set out in Annex A to provide accepted good practice and design aspects to be considered.

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