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Järnvägar – Rullande materiel – Placering av komponenter på buffertbalken

Railway applications – Rolling stock – Head stock layout

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EUROPEAN STANDARD

EN 16839

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2017

ICS 45.040

English Version

Railway applications - Rolling stock - Head stock layout

Applications ferroviaires - Matériel roulant ferroviaires
- Agencement de la traverse de tête

Bahnanwendungen - Schienenfahrzeuge - Anordnung
der Bauteile am Kopfstück

This European Standard was approved by CEN on 2 July 2017.

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COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 16839:2017) 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of an identical text or by endorsement, at the latest by April 2018, and conflicting national standards shall be withdrawn at the latest by April 2018.

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 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.

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

SS-EN 16839:2017 (E)

1 Scope

This European Standard is valid for vehicles equipped with buffers and screw coupling systems.

In order to allow operation and coupling of trainsets or vehicles, this European Standard specifies the defined free space for the shunter called the “Berne rectangle” and the necessary free space for the installation of the rescue coupler.

This European Standard specifies the location, fixing and free spaces on the headstock of:

- buffers;
- screw coupling systems;
- end cocks;
- pneumatic half couplings;
- connections for electric cables.

It also specifies the calculation of the width of the buffer heads.

Unless otherwise displayed, all dimensions given in this European Standard are nominal values.

NOTE Some parts of this EN are copied from EN 16116-1, EN 16116-2, EN 15551 and EN 15566. These parts are meant to be deleted from these ENs during their next revision.

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 14601:2005+A1:2010, *Railway applications — Straight and angled end cocks for brake pipe and main reservoir pipe*

EN 15020:2006+A1:2010, *Railway applications — Rescue coupler — Performance requirements, specific interface geometry and test methods*

EN 15551:2017, *Railway applications — Railway rolling stock — Buffers*

EN 15566:2016, *Railway applications — Railway rolling stock — Draw gear and screw coupling*

EN 15807:2011, *Railway applications — Pneumatic half couplings*

EN 15877-1:2012, *Railway applications — Marking on railway vehicles - Part 1: Freight wagons*

EN 60529:1991, *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

ISO 3864 (all parts), *Graphical symbols — Safety colours and safety signs*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14601, EN 15551, EN 15566, EN 15807 and the following apply.

3.1

Berne rectangle

defined free space which is needed to ensure safe working conditions for the shunting staff during coupling and uncoupling of screw couplings

3.2

clearance

areas needed for moveable parts

3.3

contact plane of buffers

plane tangent to buffing surfaces of both buffer heads at the end of the vehicle perpendicular to running surface

Note 1 to entry: See EN 13848-1:2003+A1:2008, 3.1.4 and 4.1.

Note 2 to entry: Sometimes also named as "buffing plane".

Note 3 to entry: "Running surface" sometimes also named as "Top of Rail (TOR)".

3.4

free space

area free of equipment used for protection for, e.g. shunters

3.5

headstock

part of the underframe with a vertical reference plane at the ends of the vehicle where the buffers are fixed

Note 1 to entry: Headstock includes the part where draw gear is fixed.

3.6

guidance device for draw hook

device to guide and support the draw hook

3.7

shunter

member of staff who couples and uncouples railway vehicles

3.8

symmetrical buffer

buffer, wherein the buffer head is, regardless of its contour geometry, mounted on its width dimension symmetrically to the centreline of the buffer housing or to the predetermined nominal position of the buffer centreline

4 Free spaces

4.1 General

To ensure safe working conditions and also for easy operation for the shunters during coupling and uncoupling, it is necessary to define proper free spaces.

With the exception of the shunter's handrails there shall be no devices under the buffers that limit the shunter's access for coupling operations.