SVENSK STANDARD
SS-EN 13715:2020

Järnvägar – Hjulpar och boggier – Hjul – Löpbaneprofil

Railway applications – Wheelsets and bogies – Wheels – Tread profile

Svenska Institutet för Standarder

Språk: engelska/English
Utgåva: 2

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Fastställd: 2020-08-04
ICS: 14.540;45.040

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Europastandarden EN 13715:2020 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 13715:2020.

Denna standard ersätter SS-EN 13715:2006+A1:2010, utgåva 1.

The European Standard EN 13715:2020 has the status of a Swedish Standard. This document contains the official version of EN 13715:2020.

This standard supersedes the SS-EN 13715:2006+A1:2010, edition 1.

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13715

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ICS 45.040

Supersedes EN 13715:2006+A1:2010

English Version

Railway applications - Wheelsets and bogies - Wheels - Tread profile

Applications ferroviaires - Essieux montés et bogies - Roues - Profil de roulement

Bahnanwendungen - Radsätze und Drehgestelle - Räder - Radprofile

This European Standard was approved by CEN on 29 June 2020.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 13715:2020) 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of an identical text or by endorsement, at the latest by January 2021, and conflicting national standards shall be withdrawn at the latest by January 2021.

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 13715:2006+A1:2010.

This new revision includes minor amendments, mainly editorial, to help to fulfil TSI requirements.

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 2016/797/EU.

For relationship with EU Directive 2016/797/EU, see informative Annex ZA, which is an integral part of this document.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document states requirements that are in accordance with the principles adopted by the International Union of Railways.

It describes the rules, parameters and construction methods of the wheel tread profile.

It defines the geometry of the flange and reverse slope. The thicknesses and height of the flange are determined by the railway undertaking or its representative in compliance with the normative documents in force.

It defines the coordinates and geometry of the following three reference tread profiles of the wheels and their reverse slope:

— 1/40th (reverse slope 15 %);

— S1002 (reverse slope 6,7 %, other value used 15 %) in conformity with UIC Leaflet 510-2;

— EPS (reverse slope 10 %) equivalent to profile P8 of the United Kingdom with a flange 30 mm thick.

These three reference profiles are defined in Annexes B, C and D and represent original profiles from the time of their design, the flanges having been harmonized to a 32,5 mm flange thickness.

It defines the tolerances needed to achieve calibration control.

All the dimensions in this document are given in millimetres.

1 Scope

This document defines the tread profiles of wheels with a diameter equal or greater than 330 mm used on rolling stock submitted to the Directive 2016/797/EU. These profiles apply to new wheels, whether free-standing or assembled as wheelsets, as well as to wheels that require reprofiling during maintenance.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

3.1
technical specification
document describing the requirements pertaining to specific parameters in addition to the requirements of this document

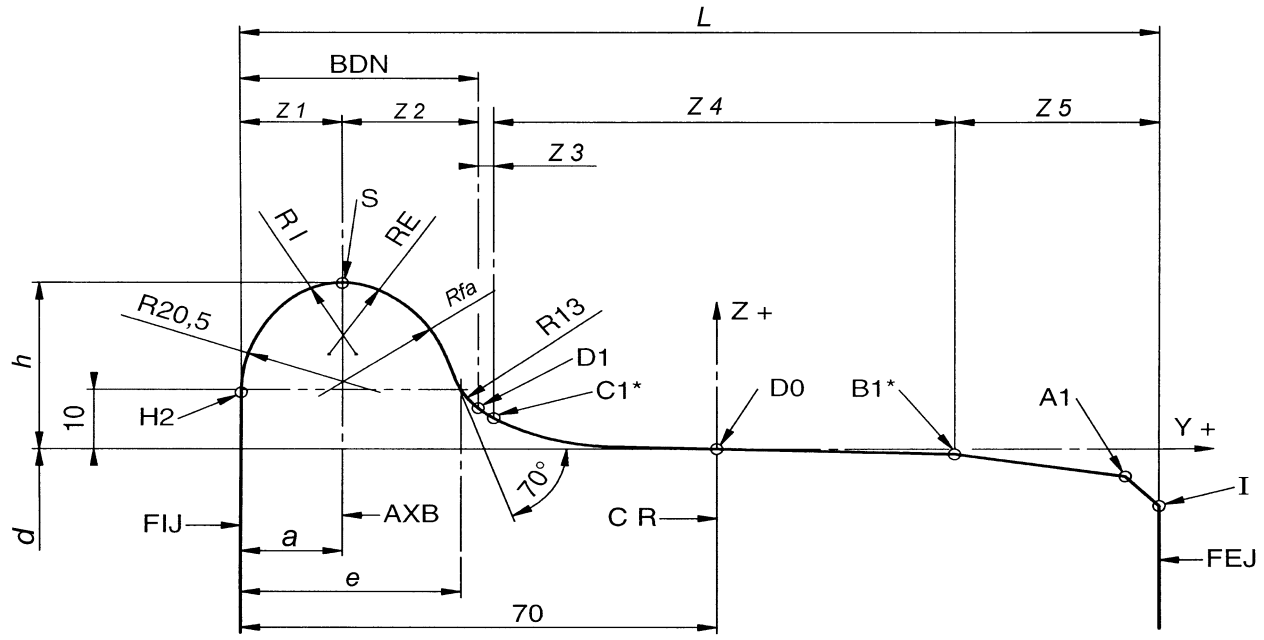
4 General

Given that this document describes three reference profiles used in Europe, any other profile that does not conform to this document shall be defined in a technical specification.

NOTE The profile is defined in the technical specification, usually agreed on between the railway undertaking and the infrastructure manager.

5 Definition of the tread profile

The tread profile is shown in Figure 1.



Key

The points marked with "*" relate respectively to the following profiles:

B1 S1002

B1a 1/40th

B1b EPS

C1 S1002

C1a 1/40th

C1b EPS

NOTE See Table 1.

Figure 1 — Wheel tread profile

6 Symbols and abbreviations

Table 1 — Symbols and abbreviations

Z1	Internal zone of flange (H2 – S)
Z2	External zone of flange (S – D1)
Z3	Connection zone, flange to wheel tread [D1 – C1(C1a, C1b)]
Z4	Wheel tread zone [C1 (C1a, C1b) – B1 (B1a, B1b)]
Z5	Zone between the wheel tread (reverse slope) and chamfer [B1 (B1a, B1b) – I]
a	Position of the axis intersecting the tip of the flange relative to the internal face of the wheel
d	Wheel diameter
e	Flange thickness