This is a preview of BS EN 15085-3:2022+A1:2023. Click here to purchase the full version from the ANSI store.

BSI Standards Publication

Railway applications — Welding of railway vehicles and components

Part 3: Design requirements

bsi.

This is a preview of BS EN 15085-3:2022+A1:2023. Click here to purchase the full version from the ANSI store.

National foreword

This British Standard is the UK implementation of EN 15085-3:2022+A1:2023. It supersedes BS EN 15085-3:2007, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by A1 A1.

The UK participation in its preparation was entrusted to Technical Committee RAE/3/-/11, Railway Applications - Structural requirements and Welding.

A list of organizations represented on this committee can be obtained on request to its committee manager.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

This publication has been prepared under a mandate given to the European Standards Organizations by the European Commission and the European Free Trade Association. It is intended to support requirements of the EU legislation detailed in the European Foreword. A European Annex, usually Annex ZA or ZZ, describes how this publication relates to that EU legislation.

For the Great Britain market (England, Scotland and Wales), if UK Government has designated this publication for conformity with UKCA marking (or similar) legislation, it may contain an additional National Annex. Where such a National Annex exists, it shows the correlation between this publication and the relevant UK legislation. If there is no National Annex of this kind, the relevant Annex ZA or ZZ in the body of the European text will indicate the relationship to UK regulation applicable in Great Britain. References to EU legislation may need to be read in accordance with the UK designation and the applicable UK law. Further information on designated standards can be found at www.bsigroup.com/standardsandregulation.

For the Northern Ireland market, UK law will continue to implement relevant EU law subject to periodic confirmation. Therefore Annex ZA/ZZ in the European text, and references to EU legislation, are still valid for this market.

This is a preview of BS EN 15085-3:2022+A1:2023. Click here to purchase the full version from the ANSI store.

UK Government is responsible for legislation. For information on legislation and policies relating to that legislation, consult the relevant pages of www.gov.uk.

© The British Standards Institution 2023
Published by BSI Standards Limited 2023

ISBN 978 0 539 27443 1

ICS 25.160.10; 45.060.01

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2022.

Amendments/corrigenda issued since publication

Date	Text affected
30 June 2023	Implementation of CEN amendment A1:2023

This is a preview of BS EN 15085-3:2022+A1:2023. Click here to purchase the full version from the ANSI store.

This is a preview of BS EN 15085-3:2022+A1:2023. Click here to purchase the full version from the ANSI store.

EUROPEAN STANDARD EN 15085-3:2022+A1

NORME EUROPÉENNE

EUROPÄISCHE NORM April 2023

ICS 25.160.10; 45.060.01 Supersedes EN 15085-3:2022

English Version

Railway applications - Welding of railway vehicles and components - Part 3: Design requirements

Applications ferroviaires - Soudage des véhicules ferroviaires et des pièces - Partie 3 : Exigences de conception

Bahnanwendungen - Schweißen von Schienenfahrzeugen und -fahrzeugteilen - Teil 3: Konstruktionsvorgaben

This European Standard was approved by CEN on 5 September 2022 and includes Amendment 1 approved by CEN on 1 February 2023.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

CEN members are the national standards bodies of 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, Türkiye and United Kingdom.

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

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

© 2023 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 15085-3:2022+A1:2023 E

This is a preview of BS EN 15085-3:2022+A1:2023. Click here to purchase the full version from the ANSI store.

Contents

Page

This is a preview of BS EN 15085-3:2022+A1:2023. Click here to purchase the full version from the ANSI store.

This is a preview of BS EN 15085-3:2022+A1:2023. Click here to purchase the full version from the ANSI store.

European foreword

This document (EN 15085-3:2022+A1:2023) 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 October 2023, and conflicting national standards shall be withdrawn at the latest by October 2023.

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 includes Amendment 1 approved by CEN on 1 February 2023.

This document supersedes A1 EN 15085-3:2022 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

This series of European Standards EN 15085 “*Railway applications — Welding of railway vehicles and components*” consists of the following parts:

— *Part 1: General*

— *Part 2: Requirements of the organization of welding manufacturer*

— *Part 3: Design requirements*

— *Part 4: Production requirements*

— *Part 5: Inspection, testing and documentation*

— *Part 6: Maintenance*

EN 15085-3:2022 includes the following changes with respect to EN 15085-3:2007.

— The weld performance class CP B has been divided into CP B1 and CP B2 (see Table 2);

— Terms and definitions have been updated;

— The following annexes have been reworked accordingly;

  — Annex H has been deleted and part of its content has been integrated into the main text (see 6.2 and 7.1);

  — Annex ZA has been added.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

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

This is a preview of BS EN 15085-3:2022+A1:2023. Click here to purchase the full version from the ANSI store.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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, Türkiye and the United Kingdom.

This is a preview of BS EN 15085-3:2022+A1:2023. Click here to purchase the full version from the ANSI store.

Introduction

Welding is a special process in the manufacture of railway vehicles and their parts. The required provisions for this process are laid down in the standards series EN ISO 3834. The basis of these provisions is the basic technical welding standards with respect to the special requirements for the construction of railway vehicles.

This series of standards applies to welding of metallic materials in the manufacture and maintenance of railway vehicles and their parts.

It describes the control for the welding process for railway vehicles and their components for new manufacture and maintenance.

With respect to the railway environment, this series of standards defines the quality requirements for the welding manufacturer to undertake new building and repair work.

Components, parts and subassemblies are assigned a classification level, based on their safety relevance.

According to these levels, qualifications for welding personnel of the manufacturer are specified.

This series provides an essential link between the weld performance class defined during design, the quality of the weld, and the demonstration of the required quality by inspection.

This series of standards does not deal with product qualification.

NOTE This series of standard can also be used by internal and external parties, including certification bodies, to assess the organization's ability to meet customer, regulatory and the organization's own requirements.

This is a preview of BS EN 15085-3:2022+A1:2023. Click here to purchase the full version from the ANSI store.

1 Scope

This document applies to welding of metallic materials in the manufacture and maintenance of railway vehicles and their components.

This document specifies applicable design and classification rules.

This document does not specify parameters for the dimensioning.

NOTE Requirements for structures can be found in other standards (e.g. EN 12663).

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 1011-2:2001, *Welding - Recommendations for welding of metallic materials - Part 2: Arc welding of ferritic steels*

EN 12663-1:2010+A1:2014, *Railway applications - Structural requirements of railway vehicle bodies - Part 1: Locomotives and passenger rolling stock (and alternative method for freight wagons)*

EN 12663-2:2010, *Railway applications - Structural requirements of railway vehicle bodies - Part 2: Freight wagons*

EN 13749:2021, *Railway applications - Wheelsets and bogies - Method of specifying the structural requirements of bogie frames*

EN 15085-1:—,[1] *Railway applications — Welding of railway vehicles and components — Part 1: General*

EN 15085-2:2020, *Railway applications - Welding of railway vehicles and components - Part 2: Requirements for welding manufacturer*

EN 15085-4:—,[2] Railway applications — Welding of railway vehicles and components — Part 4: Production requirements

EN 15085-5:—,[3] Railway applications — Welding of railway vehicles and components — Part 5: Inspection, testing and documentation

EN 15085-6:—,[4] *Railway applications — Welding of railway vehicles and components — Part 6:* Maintenance welding requirements

EN 15827:2011, *Railway applications - Requirements for bogies and running gears*

---

[1] Under preparation. Stage at the time of publication: prEN 15085-1:2021

[2] Under preparation. Stage at the time of publication: prEN 15085-4:2020

[3] Under preparation. Stage at the time of publication: FprEN 15085-5:2021

[4] Under preparation. Stage at the time of publication: FprEN 15085-6:2021