



BSI Standards Publication

Railway applications — Welding of railway vehicles and components

Part 5: Inspection, testing and documentation

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National foreword

This British Standard is the UK implementation of EN 15085-5:2023. It supersedes BS EN 15085-5:2007, which is withdrawn.

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.

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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.

UK Government is responsible for legislation. For information on legislation and policies relating to that legislation, consult the relevant pages of [\[http://www.gov.uk/ext-link%3e%3c/pwww.gov.uk\]](http://www.gov.uk/ext-link%3e%3c/pwww.gov.uk).

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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 April 2023.

Amendments/corrigenda issued since publication

Date	Text affected
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EUROPÄISCHE NORM

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English Version

Railway applications - Welding of railway vehicles and components - Part 5: Inspection, testing and documentation

Applications ferroviaires - Soudage des véhicules et des composants ferroviaires - Partie 5 : Vérification, contrôles et documentation

Bahnanwendungen - Schweißen von Schienenfahrzeugen und -fahrzeugteilen - Teil 5: Prüfung und Dokumentation

This European Standard was approved by CEN on 23 January 2023.

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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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COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 15085-5:2023) 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 September 2023, and conflicting national standards shall be withdrawn at the latest by September 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 supersedes EN 15085-5:2007.

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 for welding manufacturers;
- Part 3: Design requirements;
- Part 4: Production requirements;
- Part 5: Inspection, testing and documentation;
- Part 6: Maintenance welding requirements.

EN 15085-5:2023 includes the following changes with respect to EN 15085-5:2007:

- a) Normative references have been updated;
- b) Clause 3, Terms and definitions has been updated;
- c) Clause 4, Inspection and testing of welded joints has been revised;
- d) Clause 5, Test planning and acceptance criteria has been revised;
- e) Clause 6, Documentation has been revised;
- f) Clause 7, Non-conformity has been revised;
- g) Clause 8, Sub-contractors has been removed;
- h) Clause 9, Declaration of conformity has been removed;
- i) Clause 10, Traceability has been revised and renamed in Clause 8;
- j) Annex A has been removed;
- k) Annex ZA has been added.

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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.

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.

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Introduction

Welding is a special process in the manufacture of railway vehicles and their parts. The required provisions for this process are defined 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 standards 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.

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1 Scope

This document specifies:

- inspections and testing to be executed on the welds;
- destructive as well as non-destructive tests to be performed;
- necessary documentation to issue to declare the conformity of the products.

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 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 15085-3:2022, *Railway applications - Welding of railway vehicles and components - Part 3: Design requirements*

EN 15085-4:2023, *Railway applications - Welding of railway vehicles and components - Part 4: Production requirements*

EN 15085-6:2022, *Railway applications - Welding of railway vehicles and components - Part 6: Maintenance welding requirements*

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

EN ISO 3834-1:2021, *Quality requirements for fusion welding of metallic materials - Part 1: Criteria for the selection of the appropriate level of quality requirements (ISO 3834-1:2021)*

EN ISO 3834-5:2021, *Quality requirements for fusion welding of metallic materials - Part 5: Documents with which it is necessary to conform to claim conformity to the quality requirements of ISO 3834-2, ISO 3834-3 or ISO 3834-4 (ISO 3834-5:2021)*

EN ISO 5817:2014, *Welding - Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) - Quality levels for imperfections (ISO 5817:2014)*

EN ISO 9712:2022, *Non-destructive testing - Qualification and certification of NDT personnel (ISO 9712:2022)*

EN ISO 10042:2018, *Welding - Arc-welded joints in aluminium and its alloys - Quality levels for imperfections (ISO 10042:2018)*

EN ISO 17635:2016, *Non-destructive testing of welds - General rules for metallic materials (ISO 17635:2016)*

EN ISO 17637:2016, *Non-destructive testing of welds - Visual testing of fusion-welded joints (ISO 17637:2016)*