

RAUDTEEALASED RAKENDUSED. INFRASTRUKTUUR.  
RÖÖBASTE KONTAKTKEEVITUS. OSA 2: UUTE R200,  
R220, R260, R260MN, R320CR, R350HT, R350LHT,  
R370CRHT JA R400HT KLASSI RÖÖBASTE  
KEEVITAMINE MOBIILSETE KEEVITUSSEADMETEGA  
VÄLJASPOOL STATIONAARSEID KEEVITUSKOHTI

Railway applications - Infrastructure - Flash butt  
welding of new rails - Part 2: R200, R220, R260,  
R260Mn, R320Cr, R350HT, R350LHT, R370CrHT and  
R400HT grade rails by mobile welding machines at  
sites other than a fixed plant

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 14587-2:2024 sisaldab Euroopa standardi EN 14587-2:2024 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 22.08.2024.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 14587-2:2024 consists of the English text of the European standard EN 14587-2:2024.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 22.08.2024.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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ICS 25.160.10, 93.100

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EUROPEAN STANDARD

EN 14587-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2024

ICS 25.160.10; 93.100

Supersedes EN 14587-2:2009

English Version

**Railway applications - Infrastructure - Flash butt welding of new rails - Part 2: R200, R220, R260, R260Mn, R320Cr, R350HT, R350LHT, R370CrHT and R400HT grade rails by mobile welding machines at sites other than a fixed plant**

Applications ferroviaires - Voie - Soudage des rails neufs par étincelage - Partie 2 : Rails de nuances R200, R220, R260, R260Mn, R320Cr, R350HT, R350 LHT, R370CrHT et R400HT par des machines à souder mobiles dans des sites autres qu'une installation fixe

Bahnanwendungen - Infrastruktur - Abbrennstumpfschweißen von Schienen - Teil 2: Abbrennstumpfschweißen neuer Schienen der Stahlsorten R200, R220, R260, R260Mn, R320Cr, R350HT, R350LHT, R370CrHT und R400HT durch mobile Schweißmaschinen an Orten außerhalb eines Schweißwerkes

This European Standard was approved by CEN on 14 July 2024.

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.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

# Contents

Page

European foreword.....	4
Introduction .....	5
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions .....	6
4 Requirements for the welding process .....	8
4.1 General.....	8
4.2 Rail end preparation and horizontal alignment requirements .....	8
4.3 Clamping force .....	8
4.4 Pre-heating.....	8
4.5 Final flashing.....	8
4.6 Upsetting .....	8
4.7 Unclamping.....	8
4.8 Slippage.....	9
4.9 Welding parameters .....	9
4.10 Steps across the weld.....	9
4.11 Removal of excess upset .....	11
4.12 Post-weld thermal treatment .....	13
5 Procedure approval.....	13
5.1 General.....	13
5.2 Information to be supplied by the purchaser .....	13
5.3 Sample preparation.....	14
5.4 Approval tests.....	14
5.4.1 Visual examination.....	14
5.4.2 Weld trimming .....	14
5.4.3 Weld straightness and flatness .....	14
5.4.4 Magnetic particle or dye penetrant testing .....	14
5.4.5 Bend test.....	14
5.4.6 Macro examination.....	15
5.4.7 Micro examination.....	17
5.4.8 Hardness test.....	17
5.4.9 Fatigue test .....	17
5.5 Test report.....	18
6 Approval of other rail profiles and grades.....	18
6.1 General.....	18
6.2 Sample preparation.....	18
6.3 Approval tests.....	18
6.4 Test report.....	18
7 Approval of the contractor.....	18
7.1 General.....	18
7.2 Welding procedure.....	19
7.3 Operators .....	19
7.4 Supervision.....	19
7.5 Weld testing .....	19
7.6 Equipment .....	19

7.7	Field approval of the contractor.....	19
8	Weld production following procedure approval .....	19
8.1	Weld production .....	19
8.2	Information supplied by the purchaser .....	19
8.3	Rail end preparation and horizontal rail alignment requirements.....	20
8.4	Weld parameter monitoring.....	20
8.5	Weld identification.....	20
8.6	Visual examination .....	20
8.7	Steps across the weld .....	20
8.8	Finishing .....	20
8.8.1	Correction of vertical and horizontal weld alignment.....	20
8.8.2	Profile finishing of the rail head.....	20
8.9	Weld straightness and flatness.....	21
8.9.1	Alignment requirements.....	21
8.9.2	Straightness and flatness measurement .....	21
8.10	Bend test .....	22
8.10.1	General .....	22
8.10.2	Bend test procedure .....	22
8.10.3	Interpretation of results .....	23
8.10.4	Retesting.....	23
8.11	Documentation .....	23
	Annex A (normative) Bend test requirements.....	24
	Annex B (normative) Test weld fracture faces – Recording of defects.....	26
	Annex C (normative) Fatigue test method for flash butt welds .....	28
C.1	General .....	28
C.2	Test equipment.....	28
C.3	Calibration.....	30
C.4	Fatigue test method .....	30
	Annex D (normative) Macro examination and micro examination.....	35
D.1	Macro examination .....	35
D.2	Micro examination .....	35
	Annex E (normative) Hardness testing.....	37
	Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive (EU) 2016/797 aimed to be covered .....	39
	Bibliography .....	40

## European foreword

This document (EN 14587-2:2024) 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 February 2025, and conflicting national standards shall be withdrawn at the latest by February 2025.

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 14587-2:2009.

The main changes compared to the previous edition are listed below:

- introduction of new rail steel grades (R200, R350LHT, R370CrHT and R400HT);
- modification of the macro examination criteria;
- editorial changes concerning the text and drawings have been made to improve consistency and understanding of the requirements and information used throughout the document.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

This document is one of three parts of the EN 14587 series, under the general title “*Railway applications — Infrastructure — Flash butt welding of new rails*”. The list of parts is as follows:

- *Part 1: R220, R260, R260Mn, R320Cr, R350HT, R350LHT, R370CrHT and R400HT grade rails in a fixed plant;*
- *Part 2: R200, R220, R260, R260Mn, R320Cr, R350HT, R350LHT, R370CrHT and R400HT grade rails by mobile welding machines at sites other than a fixed plant;*
- *Part 3: Welding in association with crossing construction.*

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.

## Introduction

This part of the EN 14587 series has five main topics:

- a) requirements of a welding process;
- b) procedure approval for a mobile plant;
- c) approval of other rail profiles or grades;
- d) approval of welding contractor;
- e) weld production following approval.

This part of the EN 14587 series supports a European Directive that will permit the freedom of an open European market. To enable this, it is essential that a standard is in place that satisfies the needs of the infrastructure owners or custodians and reflects the production capabilities of the manufacturers in technical and quality terms.

## 1 Scope

This document specifies requirements for the approval of a welding process by mobile plant, together with the requirements for subsequent welding production.

It applies to new Vignole railway rails R200, R220, R260, R260Mn, R320Cr, R350HT, R350LHT, R370CrHT and R400HT grade rails of 46 kg/m and above, as contained in EN 13674-1:2011+A1:2017, welded by a flash butt welding process by mobile plant and intended for use on railway infrastructure.

This document applies to the welding of rails into welded strings.

## 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 13674-1:2011+A1:2017, *Railway applications — Track — Rail — Part 1: Vignole railway rails 46 kg/m and above*

EN ISO 3452-1:2021, *Non-destructive testing — Penetrant testing — Part 1: General principles (ISO 3452-1:2021)*

EN ISO 6507-1:2023, *Metallic materials — Vickers hardness test — Part 1: Test method (ISO 6507-1:2023)*

EN ISO 7500-1:2018, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system (ISO 7500-1:2018)*

EN ISO 17638:2016, *Non-destructive testing of welds — Magnetic particle testing (ISO 17638:2016)*

ISO 2768-1:1989, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

## 3 Terms and definitions

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

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

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

### 3.1

#### **as-welded condition**

rails that have been welded and trimmed only

### 3.2

#### **contractor**

company approved by a railway authority to provide staff and machinery to execute the production of flash butt welds by mobile plant

Note 1 to entry: This may include staff and machinery from within the railway authority.