



**NSAI**  
Standards

Irish Standard  
I.S. EN 16729-2:2020

Railway applications - Infrastructure -  
Non-destructive testing on rails in track -  
Part 2: Eddy current testing of rails in  
track

**I.S. EN 16729-2:2020**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):*

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

*This document is based on:*

EN 16729-2:2020

*Published:*

2020-03-04

*This document was published under the authority of the NSAI and comes into effect on:*

2020-03-22

ICS number:

93.100

NOTE: If blank see CEN/CENELEC cover page

NSAI  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

Sales:  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

## National Foreword

I.S. EN 16729-2:2020 is the adopted Irish version of the European Document EN 16729-2:2020, Railway applications - Infrastructure - Non-destructive testing on rails in track - Part 2: Eddy current testing of rails in track

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

**Compliance with this document does not of itself confer immunity from legal obligations.**

*In line with international standards practice the decimal point is shown as a comma (,) throughout this document.*

This page is intentionally left blank

EUROPEAN STANDARD

**EN 16729-2**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2020

ICS 93.100

English Version

## Railway applications - Infrastructure - Non-destructive testing on rails in track - Part 2: Eddy current testing of rails in track

Applications ferroviaires - Infrastructure - Test non-destructive sur des rails

Bahnanwendungen - Infrastruktur - Zerstörungsfreie Prüfung an Schienen im Gleis - Teil 2: Wirbelstromprüfung an Schienen im Gleis

This European Standard was approved by CEN on 15 December 2019.

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, Turkey 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**

<b>Contents</b>	<b>Page</b>
<b>European foreword</b> .....	<b>3</b>
<b>Introduction</b> .....	<b>4</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>5</b>
<b>4 Symbols and abbreviations</b> .....	<b>9</b>
<b>5 Basic principles</b> .....	<b>9</b>
<b>5.1 General</b> .....	<b>9</b>
<b>5.2 Purpose of testing</b> .....	<b>9</b>
<b>6 Requirements for the eddy current testing system on rails</b> .....	<b>10</b>
<b>7 Requirements for testing procedure</b> .....	<b>10</b>
<b>8 Requirements for documentation</b> .....	<b>11</b>
<b>Annex A (normative) System acceptance of eddy current systems for detecting head checks</b> ....	<b>12</b>
<b>A.1 General</b> .....	<b>12</b>
<b>A.2 Requirements for detecting and sizing head checks</b> .....	<b>12</b>
<b>Bibliography</b> .....	<b>32</b>

## European foreword

This document (EN 16729-2:2020) 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 September 2020, and conflicting national standards shall be withdrawn at the latest by September 2020.

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 EN 16729 series, *Railway applications – Infrastructure – Non-destructive testing on rails in track*, consists of:

- *Part 1: Requirements for ultrasonic inspection and evaluation principles;*
- *Part 2: Eddy current testing of rails in track;*
- *Part 3: Requirements for identifying internal and surface rail defects;*
- *Part 4: Qualification of personnel for non-destructive testing on rails.*

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.

## **EN 16729-2:2020 (E)**

### **Introduction**

This document represents the actual state of the art of eddy current testing for surface cracks on rails in track applied by European railway companies.



## 1 Scope

This document is applicable to testing of rails installed in track for detecting rail surface cracks. This document applies to testing equipment in inspection-trains or reprofiling machines and manual systems. This document specifies the requirement for testing principles and systems in order to produce comparable results in respect to the location and the characteristic of surface cracks. This document is not aiming to give any guidelines for managing the result of eddy current rail testing. This document does not define the requirements for vehicle acceptance. This document is not concerned with production testing of rails in a production plant. This document applies only to rail profiles meeting the requirements of EN 13674-1.

## 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 13231-5, *Railway applications — Track — Acceptance of works — Part 5: Procedures for rail reprofiling in plain line, switches, crossings and expansion devices*

EN 16729-1:2016, *Railway applications — Infrastructure — Non-destructive testing on rails in track — Part 1: Requirements for ultrasonic inspection and evaluation principles*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16729-1:2016 and the following apply.

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

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

### 3.1

#### **real crack**

crack caused by traffic loads or production induced

Note 1 to entry: Cracks may also be simulated. They then constitute an artificial feature designed to represent a real defect of a known size, orientation and position.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
  - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-