



NSAI
Standards

Irish Standard
I.S. EN 16704-1:2016+A1:2021

Railway applications - Track - Safety protection on the track during work - Part 1: Railway risks and common principles for protection of fixed and mobile work sites

I.S. EN 16704-1:2016+A1:2021

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

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EUROPEAN STANDARD
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English Version

**Railway applications - Track - Safety protection on the
track during work - Part 1: Railway risks and common
principles for protection of fixed and mobile work sites**

Applications ferroviaires - Voie - Protection et sécurité
durant des travaux sur la voie - Partie 1: Risques
ferroviaires et principes communs de protection des
chantiers fixes et mobiles

Bahnanwendungen - Oberbau - Sicherungsmaßnahmen
während Gleisbauarbeiten - Teil 1:
Eisenbahngefährdungen und allgemeine Prinzipien
zum Schutz ortsfester und ortsveränderlicher
Baustellen

This European Standard was approved by CEN on 10 September 2016 and includes Amendment 1 approved by CEN on 9 August 2021.

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.

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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.....	6
1 Scope	8
2 Normative references	8
3 Terms and definitions	9
4 Common principles.....	18
4.1 General.....	18
4.2 Work done by 3rd party.....	19
5 Principles of risk assessment.....	19
5.1 General.....	19
5.2 Decision about safety measures	20
5.3 Lines with more than one track	21
5.4 Supervision.....	21
5.5 Documentation.....	21
5.6 Consideration of human behaviour	21
5.7 Actualization of risk assessment	22
5.8 Remote controlled equipment of the track.....	22
6 Hierarchy of Safety Measures and parameters for the five railway risks.....	22
6.1 General.....	22
6.2 Risk 1 – Personnel being struck by a train or injured due to wind drag on open working track (safety of the worker).....	23
6.2.1 General	23
6.2.2 Blocking.....	24
6.2.3 Warning	25
6.3 Risk 2 – Personnel being struck by a train or injured due to wind drag from a train on adjacent track (safety of the worker)	26
6.3.1 General.....	26
6.3.2 Blocking).....	28
6.3.3 Separation.....	29
6.3.4 Warning	30
6.3.5 Additional measures	31
6.3.6 Exceptional circumstances	32
6.4 Risk 3 – Personnel being struck by machine or rail vehicle on blocked track (safety of the worker in the work site)	32
6.4.1 Measures	32
6.4.2 Process on the work site	32
6.4.3 Organization.....	33
6.5 Risk 4 – Machines, material or equipment being struck by a train on the adjacent track (safety of the operation/safety of the worker).....	33
6.5.1 General.....	33
6.5.2 Blocking (of the adjacent track).....	34
6.5.3 Separation.....	34
6.5.4 Warning with influence on train circulation).....	35
6.5.5 Additional measures	35

6.6	Risk 5 – Personnel being affected by electric shock/electrocuted (safety of the worker).....	35
6.6.1	General.....	35
6.6.2	Measures for work near fixed electrical equipment.....	35
6.6.3	Disconnection of power.....	37
6.6.4	Induction.....	37
6.6.5	Working procedures.....	37
6.6.6	Traction returning current in rail	38
6.6.7	Risk by broken overhead line	38
7	Working in tunnels.....	39
7.1	General.....	39
7.2	Safety measures for staff working in tunnels	40
8	Designing infrastructure.....	42
8.1	General.....	42
8.2	Designing new infrastructure	42
8.3	Designing modifications of the infrastructure.....	42
9	Safety documentation and information.....	43
9.1	General.....	43
9.2	Safety document for planning (safety plan).....	43
9.2.1	General requirements.....	43
9.2.2	Necessary information for the safety document for planning.....	44
9.3	Safety information for briefing.....	45
9.3.1	General.....	45
9.3.2	Content of safety briefing.....	45
9.3.3	Traceability.....	46
9.4	Access to and egress from the work site.....	46
10	Use of personal protective equipment.....	46
Annex A (normative)	Requirements and conditions to manage safety measures	47
A.1	Blocking.....	47
A.1.1	Conditions/requirements for blocking:	47
A.1.2	Procedure for blocking/de-blocking	47
A.1.2.1	Procedure before starting the work	47
A.1.2.2	Procedure after completion of the work.....	48
A.2	Separation	48
A.2.1	Risk assessment for installation/de-installation of a barrier	48
A.2.2	Specific requirements/conditions for using barriers as a separation	49
A.2.3	Surveillance of workers (without warning, without barrier)	49
A.2.4	Visual demarcation line.....	50
A.3	Warning.....	50
A.3.1	Warning process	50
A.3.2	Hierarchy in warning systems	50
A.3.3	Announcement distance for approaching trains.....	52
A.3.4	Type of signals.....	53
A.3.5	Acoustic planning.....	53

EN 16704-1:2016+A1:2021 (E)

A.3.6	Working with/on (noisy) track working machines:	55
A.3.7	Visual signalling devices	56
A.3.8	Controlling the reaction of workers	56
A.3.9	Specific requirements for LOWS	57
A.3.9.1	General	57
A.3.9.2	Chain of lookouts	57
A.3.9.3	Transmission of the warning by radio	57
A.4	Additional measures	58
Annex B (normative)	Parameters in risk assessment	59
Annex C (informative)	Matrix of main responsibilities	61
Annex D (informative)	Noise levels of machines	66
Annex E (informative)	Warning and remembering devices	68
E.1	Collective warning device vs. individual warning device	68
E.2	Combination of acoustic warning and visual signalling devices	68
Annex F (informative)	National speed limits for trains approaching work sites	69
Annex G (informative)	Functions within the process “warning”	72
Annex H (informative)	Model for safety plan on railway risks	74
H.1	General	74
H.2	Safety document for the railway risks 1 to 4	74
H.3	Decision about the safety measures	76
H.3.1	General	76
H.3.2	Decision about the safety measure for the working track (risk 1 and 3)	76
H.3.2.1	Stopping distances machines	76
H.3.2.2	Blocking (hierarchy step 1)	76
H.3.2.3	Warning	77
H.3.3	Decision about the safety measure for the adjacent track (risk 2 and 4)	78
H.3.3.1	Blocking (hierarchy step 1)	78
H.3.3.2	Separation by technical measures	79
H.3.3.3	Warning	79
H.3.3.4	Surveillance of workers without warning	80
H.3.4	Safety measures for access	80
H.3.5	Train circulation, track distance, dangerous zone	80
H.4	Planning of the safety measures	81
H.5	Handing out of the safety document and instructions on the site	83
H.5.1	General	83
H.5.2	Safety supervision	83
H.5.3	Safety execution	83

H.5.4 Contractor / sub-contractor(s)	83
Annex I (informative) Guideline for the decision of blocking the working track in relation to the use of portable equipment	85
Annex J (informative) Process and documentation about disconnection of fixed electrical equipment	87
J.1 Process of the decision about disconnection of fixed electrical equipment	87
J.2 Minimum contents for the documentation of the decision about disconnection of fixed electrical equipment	87
J.2.1 Information by the contractor	87
J.2.2 Nominated person in control of the electrical equipment	88
J.2.3 Documentation of the decision about the disconnection	89
J.3 Documentation of disconnection/reconnection of power for work near fixed electrical equipment	89
J.3.1 General	89
J.3.2 Instructions for the routing of the document	89
J.3.3 Notice of working cessation	90
Annex K (informative) Examples for the possibility of intruding into the vicinity zone of the fixed electrical equipment	92
Annex L (informative) Key aspects of relevant EU Directives	93
L.1 Directive 89/391/EEC	93
L.2 Directive 2004/49/EEC	93
L.3 Directive 92/57/EEC	93
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of Directive (EU) 2016/797/EC aimed to be covered	94
Bibliography	96

EN 16704-1:2016+A1:2021 (E)**European foreword**

This document (EN 16704-1:2016+A1:2021) 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 April 2022, and conflicting national standards shall be withdrawn at the latest by April 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes A1 EN 16704-1:2016 A1.

This document includes Amendment 1 approved by CEN on 9 August 2021.

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

A1 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. A1

The purpose of this standard is to define a common approach to the safety of workers regarding the railway risks in relation to work on or in proximity of the track in the European Community.

National safety rules (for example national standards or company rules) should gradually be harmonized in line with this standard or be replaced by rules contained in this standard but according to directive 89/391/EEC it is not allowed to reduce the existing level of safety measures given by national safety rules. The current situation, in which, national safety rules continue to play a role, should be regarded as a transitional stage, leading ultimately to a situation in which, European rules described here after, will apply.

This European Standard is one of the series EN 16704 “*Railway applications – Track – Safety protection on the track during work*” as listed below:

- *Part 1: Railway risks and common principles for protection of fixed and mobile work sites*
- *Part 2-1: Common solutions and technology – Technical requirements for Track Warning Systems (TWS)*
- *Part 2-2: Common solutions and technology – Technical requirements for barriers*
- *Part 3: Competences of personnel related to work on or near the railway track*

A1 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. A1

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 16704-1:2016+A1:2021 (E)**1 Scope**

This European Standard provides requirements and measures to deal with the significant and specific railway risks during works on or in proximity of the track and with common principles for the protection of fixed and mobile work sites with trains and/or machines circulating on the working track and trains circulating on the adjacent track(s). Railway risks and protection measures for access and egress to/from the work site are considered in the same way as railway risks and protection measures for work itself.

This European Standard is applicable to all operations related to work activities on rail guided systems. Infrastructure of metro, tram and other light rail systems is excluded from the scope¹⁾.

The following specific railway risks are taken into consideration:

- Risk 1: Personnel being struck by a train or injured due to wind drag from a train on open working track (safety of the worker);

NOTE 1 Risk 1 includes injuring of a worker by machines, material or equipment being struck by a train on the working track.

- Risk 2: Personnel being struck by a train or injured due to wind drag from train on adjacent track (safety of the worker);
- Risk 3: Personnel being struck by machine or train on blocked track (safety of the worker);
- Risk 4: Machines, material or equipment being struck by a train on the adjacent track (safety of the operation/safety of the worker);
- Risk 5: Personnel being electrified or electrocuted by fixed electrical equipment (safety of the worker).

NOTE 2 Risk 5 includes hazards caused by pantographs of passing trains.

This European Standard also provides requirements to the process of installing basic preventive measures when planning new infrastructure or installing corrective measures when adapting existing infrastructure.

This European Standard may be extended to third parties when it is considered appropriate and reasonable by the infrastructure manager, if one or more of the five significant risks described inside this standard, arise as a result of their activities in proximity of the track.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

[A1] EN 14033-2:2017, *Railway applications - Track - Railbound construction and maintenance machines - Part 2: Technical requirements for travelling and working*

EN 14033-3:2017, *Railway applications - Track - Railbound construction and maintenance machines - Part 3: General safety requirements*

EN 15746-2:2020, *Railway applications - Track - Road-rail machines and associated equipment - Part 2: General safety requirements*

¹⁾ See Directive 2008/57/EC.

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