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NSAI Standards

Irish Standard
I.S. EN 14033-2:2017

Railway applications - Track - Railbound construction and maintenance machines - Part 2: Technical requirements for travelling and working

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 14033-2

May 2017

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Applications ferroviaires - Voie - Machines de construction et de maintenance empruntant exclusivement les voies ferrées - Partie 2 : Prescriptions techniques pour le déplacement et le travail

Bahnanwendungen - Oberbau - Schienengebundene Bau- und Instandhaltungsmaschinen - Teil 2: Technische Anforderungen an die Versetzfahrt und die Arbeitsstellung

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Contents

Page

European foreword 7

Introduction 9

1 Scope 10
1.1 General 10
1.2 Validity of this European Standard 11

2 Normative references 11

3 Terms and definitions 12

4 Field of use of machines 13

5 Specific railway requirements and/or measures 13
5.1 Interaction with the Infrastructure 13
5.1.1 General 13
5.1.2 Stress induced into the rails 13
5.1.3 Auxiliary wheels, auxiliary guides and working parts 14
5.1.4 Maximum wheel loads 15
5.1.5 Loads applied to the ballast 17
5.1.6 Loads applied to the formation 17
5.1.7 Loads on structures 17
5.2 Stability and safety against derailment 18
5.2.1 Proof of overturning stability, machine stationary 18
5.2.2 Prevention of derailment in travelling mode 20
5.2.3 Prevention of derailment during working movements 20
5.3 Machine gauge 23
5.3.1 Stowing of moveable machine parts in travelling mode 23
5.3.2 Working gauge 24
5.3.3 Exceedance of gauge in working mode 25
5.4 Working places 25
5.4.1 General 25
5.4.2 Arrangement of working places 25
5.4.3 Work positions – Visibility 25
5.4.4 Cabin windows used solely for working 25
5.5 Access to working places 26
5.5.1 General 26
5.5.2 Access to working places 26
5.6 Influences on the environment 26
5.6.1 Exhaust gases 26
5.6.2 Noise levels outside the machine 26
5.7 Electromagnetic compatibility 26
5.8 Protection from risks due to electric traction equipment 26
5.8.1 General 26
5.8.2 Protection from live overhead lines 26
5.8.3 Minimum safety distance between machine parts and overhead line equipment 27
5.8.4 Minimum safety distance between machine parts and conductor rail 27
5.8.5 Special earthing devices and/or protection from return traction currents 28
5.8.6 Use of a pantograph for other than traction use 28
5.9 Protection from the risks of fire 28

This is a free page sample. Access the full version online.

5.9.1 Material requirements ... 28
5.9.2 Fire detection and extinguishing systems ... 28
5.9.3 Fire extinguishing outside of the machine ... 28
5.10 Lighting for work ... 28
5.11 Visibility of machines ... 28
5.11.1 Marker lights for warning in travelling mode ... 28
5.11.2 Additional marker lights ... 29
5.12 Braking ... 29
5.12.1 General ... 29
5.12.2 Stopping distances ... 29
5.12.3 Holding on gradients ... 30
5.13 Warning systems ... 30
5.13.1 System for warning personnel of traffic on adjacent tracks ... 30
5.13.2 System for warning in travelling mode ... 31
5.14 Recovery conditions ... 31
5.15 Data recording ... 31
5.16 Parameters which influence ground based systems ... 31
5.17 Traction equipment ... 31
5.18 Laser equipment ... 32
5.19 Remote control ... 32

6 Verification of the conformity to the requirements and/or particular safety measures ... 32
6.1 General ... 32
6.2 Methods of testing ... 32
6.2.1 General ... 32
6.2.2 Visual check ... 32
6.2.3 Measurement ... 32
6.2.4 Functional test ... 33
6.2.5 Load test(s) ... 33
6.2.6 Specific verification/measurements ... 33

7 User information ... 33
7.1 General ... 33
7.1.1 Instructions ... 33
7.1.2 Special operating instructions ... 33
7.1.3 Maintenance instructions ... 35
7.2 Warning signs and pictograms ... 35

8 Marking of machines ... 35

Annex A (normative) Special national conditions ... 36

Annex B (normative) Check list for conformity ... 41

Annex C (normative) Warning plate ... 43

Annex D (informative) Working gauge ... 44
D.1 General ... 44
D.1.1 Introduction ... 44
D.1.2 Scope ... 44
D.1.3 List of symbols used ... 44
D.2 Determination of the horizontal working limit ... 47
D.2.1 General ... 47
D.2.2 Characteristics of the working track and the machine ... 48
D.2.3 Characteristics of a standard vehicle travelling on the adjacent line in service ... 48

This is a free page sample. Access the full version online.

D.3 Calculation of the reductions for the limit line of Figure D.2, applicable to the critical parts of the machine ... 48
D.4 Determination of clearance of the working parts ... 49
D.4.1 General ... 49
D.4.2 Method of calculation ... 50
D.4.3 Addition for curvature, for working parts (Z_b) ... 50
D.4.4 Addition for cant (Zu) ... 50
D.4.5 Addition for safety (z_s) ... 50
D.4.6 Kinematic clearance necessary for a standard vehicle on the track in service (RB_k) 51
D.4.7 Possible exterior clearance for a working part (AW_z) ... 51

Annex E (normative) **Technical documentation** ... 57
E.1 General ... 57
E.2 General notices on the machine ... 57
E.3 Assembly drawing indicating the following: ... 57
E.4 Detailed drawings indicating the following: ... 57
E.5 Detailed drawings with the following indications ... 57
E.6 Technical details ... 58
E.7 Possible functions of the working parts ... 58

Annex F (normative) **Limiting geometric parameters of the degraded working track** ... 59

Annex G (normative) **Pictograms — Pictogram "Working direction"** ... 60

Annex H (informative) **Method of calculating safety against derailment** ... 61
H.1 Calculation of the safety against derailment ... 61
H.1.1 General ... 61
H.1.2 Calculation of the vehicle testing twist ... 62
H.1.3 Limit value of the safety against derailment ... 62
H.1.4 Guiding force and vertical wheel-load of the leading wheel ... 63
H.1.5 Guiding force and vertical wheel-load of the leading wheel in the working load case ... 63
H.1.6 Calculation of the torsional stiffness of the vehicle ... 64

Annex I (informative) **Procedure for working authorization** ... 67
I.1 General ... 67
I.2 Validity and application of the authorization to work ... 67
I.2.1 Validity ... 67
I.2.2 Field of application ... 67
I.2.3 Enlargement of field of application ... 67
I.2.4 Withdrawal of the authorization to work ... 67
I.2.5 Renewal of the authorization to work ... 67
I.3 Applications for authorization to work ... 68
I.4 Submission of the technical documentation ... 68
I.5 Type testing ... 68
I.6 Quality testing ... 68
I.7 Type approval ... 68
I.8 Examining the finished machine ... 69
I.9 Authorization to work for machines identical to a machine that has received type approval ... 69
I.10 Refusal of working authorization ... 69
I.11 Validity of working authorization ... 69
I.12 Procedure for working agreement ... 70

Annex J (informative) **Basis of calculations** ... 71
J.1 Machines without load control devices ... 71

This is a free page sample. Access the full version online.

J.2 Machines with load control devices ... 71

Annex K (informative) **Instruction handbook** ... 72

Annex L (normative) **Design specification for earthing pantograph(s) where permitted on individual infrastructures** ... 74

L.1 Object ... 74

L.2 Position of the pantograph ... 75

L.3 Maintaining contact between the equipotential contact strip and the contact wire 75

L.4 Contact strip design ... 75

L.5 Electrical connection between the equipotential pantograph head and the rail ... 75

Annex M (informative) **Structure of European Standards for track construction and maintenance machines** ... 77

Bibliography ... 79

Tables

Table 1 — Stress limit in the rails ... 14

Table 2 — Maximum wheel load with the machine in travelling and working mode for machines without wheel load control devices ... 16

Table 3 —Maximum wheel load with the machine in working and travelling mode for machine that do not lift a load or machine that lift a load with wheel load control devices ... 17

Table 4 — Load cases for calculating stability ... 19

Table 5 — Load cases for testing prevention of overturning ... 20

Table 6 — Comparison of track parameters ... 21

Table 7 — Minimum safety distance between machine parts and overhead line equipment 27

Table 8 — Minimum safety distance between machine parts and conductor rails ... 27

Table 9 — Maximum stopping distances ... 30

Table A.1 — Special national conditions ... 39

Table B.1 — Determination of safety requirements and/or safety measures ... 41

Table F.1 — Limiting geometric parameters of the degraded working track ... 59

Table M.1 — Structure of European Standards for track construction and maintenance machines ... 78

Figures

Figure 1 — Cross section of rail showing stress points given in Table 1 ... 14

Figure C.1 — Warning plate ... 43

Figure C.2 — Example of general warning sign ... 43

Figure D.1 — Position of working zones and the zone limit between the working track and the adjacent operating track ... 47

Figure D.2 — Lateral working limit ... 49

Figure D.3 — Kinematic envelope necessary for a G1 or G2 gauge vehicle on a line open to traffic on a curve of a radius 250 m ≤ *R* < 2 000 m ... 53

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Figure D.4 — Kinematic space "RBk" necessary for a G1 or G2 gauge standard vehicle on the operating track on a curve of with radius 2 000 m ≤ R < 4 000 m 54

Figure D.5 — Kinematic space "RBk" necessary for a G1 or G2 gauge vehicle on the operating track on a curve of with radius R ≥ 4 000 m 55

Figure D.6 — Representation of calculating variants of the permissible working distance AW_z 56

Figure G.1 — Example of pictograms denoting working directions 60

Figure I.1 — Procedure for working agreement 70

Figure L.1 —Principle of equipotential bonding (example) 74

Figure L.2 —Contact strip freedom of movement – Example of an equipotential pantograph 75

Figure M.1 — Flowchart of European Standards for track construction and maintenance machines 77

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European foreword

This document (EN 14033-2:2017) 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 November 2017, and conflicting national standards shall be withdrawn at the latest by November 2017.

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 EN 14033-2:2008+A1:2011.

This series of standards EN 14033, *Railway applications — Track — Railbound construction and maintenance machines*, consists of the following parts:

— *Part 1: Technical requirements for running*;

— *Part 2: Technical requirements for travelling and working*;

— *Part 3: General safety requirements*.

Amended clauses compared to EN 14033-2:2008+A1:2011:

General	Addition of travelling mode for machines, when moving between sites and not in running mode
General	All references updated to latest issue
5.1.2	Additional diagram added to clarify stress points
5.2.1.1	Devices attached to rail to prevent overturning have been forbidden
5.2.1.2	No longer permitted to exempt proof of stability by testing
5.2.2	New subclause for prevention of derailment in running mode
5.2.3.2.1	New Table 6 to show comparison between track parameters in EN 14363 and degraded working track
5.2.3.3	Rules for deviating from prevention of derailment extended for rail cranes
5.3.1	Requirements for gauge in travelling mode added
5.3.2.2.1	Lateral limit conditions in working mode clarified
5.3.2.2.2	More than one lateral working limit now permitted
5.3.2.2.4	Warning light colour changed from red to orange
5.3.3	Previous requirement for working limit in lower area withdrawn and replaced by general requirement about exceeding gauge
5.4.2	New requirement for work surface added
5.5.2	Requirement for steps and handrails added

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5.8.2	Reminder for size of electrical bonding added
5.8.6	New section for pantographs added
5.9.1	Material requirements updated
5.9.2	New section for fire detection and extinguishing systems added
5.11	Additional requirements for marker lights added
5.12.1	Additional requirement for travelling and working brake added
5.12.2	Relaxation permitted for stopping distance at slow speed, with additional requirements for brake architecture
5.12.3	Requirement for all potentially independent vehicles to have parking brake
5.13.2	Additional requirement for warning horn in travelling mode added
5.14	Recovery conditions deleted because duplicate to running mode
5.15	New section on data recorders added
5.16	New section on compatibility with ground based systems added
5.17	New section on traction equipment added
5.18	New section on laser equipment added
5.19	New section on remote control added
Clause 8	Service number requirements deleted because duplicate to running mode
Annexes	All annexes reviewed and updated
	Annex for certification withdrawn
Annex L	New annex on earthing pantographs added

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

This European Standard was prepared to meet the basic requirements of EU Directives to facilitate an open market for goods and services.

This document is the second of a series of three parts of the European Standard: *Railway applications — Track — Railbound construction and maintenance machines*:

— Part 1 covers the safety and technical requirements for the machines in running mode; this is a harmonized standard with the Technical Specification for Interoperability (TSI) for Locomotives and Passenger Rolling Stock Commission decision 2011/291/EU, which itself meets the essential requirements to ensure the interoperability of the rail system as described in Article 1 of European Directive 2008/57/EC;

— Part 2 covers the technical requirements for the machines in working and travelling modes;

— Part 3 covers the safety requirements for the machines in working and travelling modes; this is a harmonized standard with the European Machinery Directive 2006/42/EC.

For deviations or special national conditions, see Annex A.

The risks that exist in all mechanical, electrical, hydraulic, pneumatic and other components of machines and that are dealt with in the relevant European Standards are not within the scope of this European Standard. If necessary, references are made to appropriate standards of this type.

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1 Scope

1.1 General

This European Standard defines the specific technical railway requirements for travelling and working with machines and other vehicles used for construction, maintenance and inspection of track, structures, track formation and fixed electric traction equipment as specified in EN 14033-1.

This European Standard applies to all railbound machines and other vehicles – referred to as machines – working exclusively on the railway (utilizing adhesion between the rail and rail wheels) and used for construction, maintenance and inspection of track, structures, infrastructure and fixed electric traction equipment.

This European Standard applies to machines that are intended to operate signalling and control systems. Other similar machines are dealt with in other European Standards, see Annex M.

This European Standard is applicable to 1 435 mm nominal track gauge. Some requirements may be applicable for working on infrastructures with nominal narrow track gauge or nominal broad track gauge lines, tramways, railways utilizing other than adhesion between the rail and rail wheels and underground infrastructures.

This European Standard covers the safety requirements for the railway specific problems for travelling and working on different infrastructures. The application of these requirements is the object of a verification procedure, which does not form part of this European Standard, but an Annex I is included for information. In all cases an authorization to work is needed to access the infrastructure.

This European Standard is also applicable for machines that in working position are partly supported on the ballast or the formation.

This European Standard does not apply to:

— the requirements with regard to the quality of work, including the related measuring methods, and the performance of the machine;[1)]

— the specific requirements established by each railway infrastructure manager for the use of machines which will be the subject of negotiation between the manufacturer and the machine keeper.

This European Standard does not deal with the following additional requirements:

— working methods;

— operation in severe working conditions requiring special measures (e.g. work in tunnels or in cuttings, extreme environmental conditions such as high or low temperatures, corrosive environment, tropical environment, contaminating environments, strong magnetic fields);

— operation subject to special rules (e.g. potentially explosive atmospheres);

— hazards due to errors in software;

— hazards occurring when used to handle suspended loads which may swing freely;

1) Parameters for the measurement of track quality are dealt with in EN 13848-3.

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