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STN	**Železnice Koľaj Traťové stroje na stavbu a údržbu tratí Časť 4: Technické požiadavky na jazdu, dopravu a prácu na mestských koľajových dráhach**	**STN EN 14033-4 28 2236**

Railway applications - Track - Railbound construction and maintenance machines - Part 4: Technical requirements for running, travelling and working on urban rail

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Railway applications - Track - Railbound construction and maintenance machines - Part 4: Technical requirements for running, travelling and working on urban rail

Applications ferroviaires - Voie - Machines de construction et de maintenance empruntant exclusivement les voies ferrées - Partie 4 : Exigences techniques pour la circulation, le déplacement et le travail sur le réseau ferroviaire urbain

Bahnanwendungen - Oberbau - Schienengebundene Bau- und Instandhaltungsmaschinen - Teil 4: Technische Anforderungen an Fahrbetrieb, Versetzfahrt und Arbeitseinsatz in Schienennahverkehrssystemen

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (EN 14033-4:2019) 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of an identical text or by endorsement, at the latest by July 2019, and conflicting national standards shall be withdrawn at the latest by July 2019.

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.

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For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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Introduction

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

This document is the fourth of a series of four parts of the European Standard: Railway applications — Track — Railbound construction and maintenance machines, dealing with railway specific risks of the machines when running, travelling and working on railway infrastructures:

— Part 1 covers the essential requirements for the machines in running mode; this is a harmonized standard with the Railway Interoperability Directive 2008/57/EC and its associated Technical Specifications for Interoperability (TSI).

— Part 2 covers the technical requirements for the machines in working and travelling modes, and is applicable for all machines.

— 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.

— Part 4 covers the technical requirements for the machines intended to have working, travelling and/or running mode on urban rail systems.

Part 1 defines requirements for running on the European railway network, assessment of conformity is by a notified body as prescribed in the Railway Interoperability Directive.

Part 2 defines requirements for approval of the machine for use on the railway, depending on the decision of the Infrastructure Manager or National rules the assessment of conformance could be by the Infrastructure Manager concerned, by a third party assessor or declaration of conformity by the manufacturer.

Part 3 defines requirements for the machine to be declared conformant by the manufacturer, except in the case of machines classified under Annex 4 of the Machinery Directive, which require a conformity check in conjunction with a notified body.

Part 4 defines requirements for approval of the machine for use on urban rail systems. Depending on the decision of the Urban Rail Manager or National rules the assessment of conformance could be by the Urban Rail Manager concerned, by a third party assessor or declaration of conformity by the manufacturer.

Additional requirements or deviations to Parts 1, 2 and 3 for urban rail systems are detailed in Part 4.

The risks which exist in all mechanical, electrical, hydraulic, pneumatic and other components of machines which are dealt with in other relevant European Standards are not within the scope of this European Standard. Where appropriate, reference is made to other standards with which compliance is also necessary.

1 Scope

1.1 General

This document deals with the technical requirements to minimize the specific railway hazards of railbound construction and maintenance machines – henceforward referred to as machines, intended for use on urban rail systems. These hazards can arise during the commissioning, the operation and the maintenance of machines when carried out in accordance with the specification given by the manufacturer or his authorized representative.

The requirements in this standard amend those in EN 14033-1 to −3 as required for the use of the machine on urban rail systems. Where a machine is designed and intended for use on mainline and urban rail systems, compliance with the most onerous conditions of EN 14033-1 to −3 and EN 14033-4 will be required.

This document does not apply to the following:

— requirements for quality of the work or performance of the machine;

— machines moving and working whilst not on rails;

— specific requirements established by the machine owner and/or operating company for the use of machines, which will be the subject of negotiation between the manufacturer and the Urban Rail Manager.

This document does not establish additional requirements for the following:

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

— hazards due to natural causes, e.g. earthquake, lightning, flooding;

— working methods;

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

— hazards that may occur when a machine is used to handle suspended loads which may swing freely.

Other track construction and maintenance machines used on railway tracks are dealt with in other European Standards, see Annex B.

1.2 Scope of urban rail systems

Urban rail systems cover Urban Guided Transport systems (UGT) and might include other rail systems excluded from the scope of the Interoperability Directive 2008/57/EC (Article 1.3 (a) and (b))1.

Urban Guided Transport systems (UGT), which cover metro, tram and light rail, are defined as public transport systems permanently guided at least by one rail, intended for the operation of local, urban and suburban passenger services with self-propelled vehicles and operated either segregated or not from general road and pedestrian traffic.

Categories of urban rail systems include:

— (I) Metros: UGT systems operated on their own right of way and segregated from general road and pedestrian traffic. They are consequently designed for operations in tunnel, viaducts or on surface level but with physical separation in such a way that inadvertent access is not possible. In different parts of the world, Metro systems are also known as the underground, the subway or the tube. Rail systems with specific construction issues operating on a segregated guideway (e.g. monorail, rack railways) are also treated as Metros as long as they are designated as part of the urban public transport network.

— (II) Trams: UGT systems not segregated from general road and pedestrian traffic, which share their right of way with general road and/or pedestrian traffic and are therefore embedded in their relevant national road traffic legislation (highway codes and specific adaptations).

— (III) Light Rail: Light Rail is defined as a UGT system operated in parts of the system not segregated from general road and pedestrian traffic, and in parts of the system with segregated right-of-way. The segregation may include some sections of line where inadvertent access is not possible.

— (IV) Local rail systems which by national decision complying with Article 1 (3) a) or b) of Directive 2008/57/EC may be excluded from the European Community Rail System.

NOTE Such systems connect city centres with their suburban hinterland or regional local centres. Such systems are operated on rights of way which are basically segregated from general road and/or pedestrian traffic and/or which can be declared by law as independent from the public environment even if they are not segregated by location, form of construction or appropriate measures. For historical reasons they might be strongly influenced by conventional railway parameters and their operations procedures.

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 12663-1, *Railway applications — Structural requirements of railway vehicle bodies — Part 1: Locomotives and passenger rolling stock (and alternative method for freight wagons)*

EN 14033-1:2017, *Railway applications — Track — Railbound construction and maintenance machines — Part 1: Technical requirements for running*

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 ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*