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Railway applications - Systems and procedures for change of track gauge - Part 1: Automatic Variable Gauge Systems

EESTI STANDARDIKESKUS
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NATIONAL FOREWORD

See Eesti standard EVS-EN 17069-1:2019 sisaldab Euroopa standardi EN 17069-1:2019 ingliskeelset teksti.	This Estonian standard EVS-EN 17069-1:2019 consists of the English text of the European standard EN 17069-1:2019.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 10.04.2019.	Date of Availability of the European standard is 10.04.2019.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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Bahnanwendungen - Systeme und Verfahren zur Umspurung - Teil 1: Automatische Umspursysteme

This European Standard was approved by CEN on 2 December 2018.

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Contents

Page

European foreword

This document (EN 17069-1:2019) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2019, and conflicting national standards shall be withdrawn at the latest by October 2019.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.

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 Directive 2008/57/EC.

For relationship with Directive 2008/57/EC, see informative Annex ZA, which is an integral part of this document.

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Introduction

For historical reasons, several track gauges are used on the rail networks in Europe. In order to cross the borders among these, passengers and goods need to be transferred.

In order to increase comfort of passengers by avoiding transhipments, and to reduce both the risk of damaging goods and the involved cost of transferring them, several systems and procedures for change of track gauge have been developed. Nowadays, there are three main possibilities to attain connection among rail networks with different track gauges:

— automatic variable-gauge systems;

— interchange of complete bogies;

— interchange of complete wheelsets.

The interfaces and the approval methods for such systems were defined in several UIC-leaflets and national regulations. This document is intended to set all related requirements together in a single document for automatic variable-gauge systems.

1 Scope

This document defines the interfaces and gives guidance for the design of systems and procedures for change of track gauge. It defines also their assessment for technical approval, for the automatic variable-gauge systems.

The document is focused on the change of track gauge among the following nominal track gauges: 1 435 mm, 1 520 mm, 1 524 mm, 1 600 mm and 1 668 mm.

This document is not limited to the aforementioned nominal track gauges but the interfaces to change to/from other nominal track gauges can be different. The established assessment procedures can be used as well.

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 12080, *Railway applications – Axleboxes - Rolling bearings*

EN 12081, *Railway applications – Axleboxes – Lubricating greases*

EN 12082, *Railway applications – Axleboxes – Performance testing*

EN 13103-1, *Railway applications – Wheelsets and bogies – Part 1: Design method for axles with external journals*

EN 13260, *Railway applications – Wheelsets and bogies – Wheelsets – Product requirements*

EN 13261, *Railway applications – Wheelsets and bogies – Axles – Product requirements*

EN 13262, *Railway applications – Wheelsets and bogies – Wheels – Product requirements*

EN 13749, *Railway applications – Wheelsets and bogies – Method of specifying the structural requirements of bogie frames*

EN 13979-1, *Railway applications – Wheelsets and bogies – Monobloc wheels – Technical approval procedure – Part 1: Forged and rolled wheels*

EN 14363, *Railway applications – Testing and Simulation for the acceptance of running characteristics of railway vehicles – Running Behaviour and stationary tests*

EN 15273-1, *Railway applications – Gauges – Part 1: General – Common rules for infrastructure and rolling stock*

EN 15273-2, *Railway applications – Gauges – Part 2: Rolling stock gauge*

EN 15437-1, *Railway applications – Axlebox condition monitoring – Interface and design requirements – Part 1: Track side equipment and rolling stock axlebox*

EN 15437-2, *Railway applications – Axlebox condition monitoring – Interface and design requirements – Part 2: Performance and design requirements of on-board systems for temperature monitoring*

EN 15551, *Railway applications – Railway rolling stock – Buffers*

EN 15663, *Railway applications – Vehicle reference masses*

EN 15827, *Railway applications – Requirements for bogies and running gears*

EN 15839, *Railway applications – Testing for the acceptance of running characteristics of railway vehicles – Freight wagons – Testing of running safety under longitudinal compressive forces*

EN 15877-1, *Railway applications – Marking on railway vehicles – Part 1: Freight wagons*

EN 50126-1, *Railway applications – The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS) – Part 1: Basic requirements and generic process*

EN 50126-2, *Railway Applications – The Specification and Demonstration of Reliability, Availability, Maintainability and Safety (RAMS) – Part 2: Systems Approach to Safety*

CLC/TR 50126-3, *Railway applications – The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS) – Part 3: Guide to the application of EN 50126-1 for rolling stock RAM*

EN 50153, *Railway applications – Rolling stock – Protective provisions relating to electrical hazards*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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
nominal track gauge
single value which identifies the track gauge, but may differ from the design track gauge

Note 1 to entry: Definition in addition to the EN 15273 series. As example 1 435 mm.

3.2
gauge changeover technology
set of systems and devices specifically designed to perform the automatic gauge changeover process on certain types of compatible rolling stock fitted with variable-gauge running gear

3.3
automatic variable-gauge running gear
specific type of running gear designed to automatically switch between different track gauges when passing through a gauge changeover facility

Note 1 to entry: This process does not involve the removal or assembly of any component of the running gear.