

Raudteealased rakendused. Rööbastee. Pöörmad ja ristmed. Osa 5: Pöörmad KONSOLIDEERITUD TEKST

Railway applications - Track - Switches and crossings - Part 5: Switches CONSOLIDATED TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13232-5:2005+A1:2011 sisaldab Euroopa standardi EN 13232-5:2005+A1:2011 ingliskeelset teksti.

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English Version

Railway applications - Track - Switches and crossings - Part 5: Switches

Applications ferroviaires - Voie - Appareils de voie - Partie
5: Aiguillages

Bahnanwendungen - Oberbau - Weichen und Kreuzungen -
Teil 5: Zungenvorrichtungen

This European Standard was approved by CEN on 8 August 2005 and includes Amendment 1 approved by CEN on 13 September 2011.

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Foreword

This document (EN 13232-5:2005+A1:2011) 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of an identical text or by endorsement, at the latest by April 2012, and conflicting national standards shall be withdrawn at the latest by April 2012.

A1 This document has been prepared under a mandate given to CEN/CENELEC/ETSI by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2008/57/EC.

For relationship with EU Directive 2008/57/EC, see informative Annex ZA, which is an integral part of this document. **A1**

This document includes Amendment 1, approved by CEN on 2011-09-13.

This document supersedes EN 13232-5:2005.

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

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 series of standards "Railway applications – Track – Switches and crossings" covers the design and quality of switches and crossings in flat bottom rails. The list of parts is as follows:

- Part 1: Definitions
- Part 2: Requirements for geometric design
- Part 3: Requirements for wheel/rail interaction
- Part 4: Actuation, locking and detection
- Part 5: Switches
- Part 6: Fixed common and obtuse crossings
- Part 7: Crossings with moveable parts
- Part 8: Expansion devices
- Part 9: Layouts

Part 1 contains terminology used throughout all parts of this European Standard.

Parts 2 to 4 contain basic design guides and are applicable to all switch and crossing assemblies.

Parts 5 to 8 deal with particular types of equipment, including their tolerances. These use parts 1 to 4 as a basis.

Part 9 defines the functional and geometrical dimensions and tolerances for layout assembly.

The following terms are used within to define the parties involved in using the EN as the technical basis for a transaction:

CUSTOMER The operator or user of the equipment, or the purchaser of the equipment on the user's behalf.

SUPPLIER The body responsible for the use of the EN in response to the customer's requirements.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

The requirements of switches are that they are capable of performing their intended purpose, which is to cause a vehicle to transfer from one track to the other track of a turnout, either in the facing or trailing direction. The switches are designed to withstand all external forces from rolling stock, thermal influences etc. Switches are manufactured to give safe (and acceptable) motion of the vehicle based on conditions in the specification.

1 Scope

The scope of this European Standard is:

- establish a working definition for switches and their constituent parts and identify the main types;
- specify the minimum requirements for the manufacture of the switches and/or constituent parts;
- specify codes of practice for inspection and tolerances of both full and half sets of switches and their constituent parts;
- establish the limits and scope of supply;
- list the methods by which switches and their parts should be identified and traced;
- list the different and varying ways by which switches can be described using the following parameters:
 - geometry of the switches;
 - types of construction;
 - performance requirements;
 - design criteria;
 - tolerances and inspection.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 13145, *Railway applications – Track – Wood sleepers and bearers*

EN 13146 (all parts), *Railway applications – Track – Test methods for fastening systems*

EN 13230 (all parts), *Railway applications – Track – Concrete sleepers and bearers*

EN 13232-1:2003, *Railway applications – Track – Switches and crossings – Part 1: Definitions*

EN 13232-2:2003, *Railway applications – Track – Switches and crossings – Part 2: Requirements for geometric design*

EN 13232-3:2003, *Railway applications – Track – Switches and crossings – Part 3: Requirements for wheel/rail interaction*

EN 13232-4:2005, *Railway applications – Track – Switches and crossings – Part 4: Actuation, locking and detection*

EN 13481 (all parts), *Railway applications – Track – Performance requirements for fastening systems*

EN 13674 (all parts), *Railway applications – Track – Rail*

prEN 13803-2, *Railway applications – Track alignment design parameters – Track gauges 1 435 mm and wider – Part 2: Switches and crossings and comparable alignment design situations with abrupt changes of curvature*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 13232-1:2003, 6.2 and 7.1, and the following apply.

3.1 Parts of switches

3.1.1

left hand half set of switches

consists of one stock rail and its switch rail complete with small fittings

NOTE It is right or left hand as seen by an observer in the centre of the track facing the switch heel from the switch toe.

3.1.2

right hand half set of switches

see left hand half set of switches

3.1.3

set of switches

arrangement of two half sets of switches, one right hand, the other left hand. The requirement of any other fittings other than stud/distance block (Figure 1, item 11) and block or heel blocks (Figure 1, item 9) are specified, e.g. baseplates, fishplates, drive bar, stretcher bar brackets, stretcher bars, anti creep device

3.1.4

left hand switch rail

movable machined rail, often of special section, but fixed and/or joined at the heel end to a rail to provide continuity of wheel support. Details of movement are described in EN 13232-1:2003, 9.1. The two switch rails in a set of switches are the two inside rails

NOTE A switch rail is described as right or left hand according to whether it is part of a right hand or left hand half-set of switches.

3.1.5

right hand switch rail

see left hand switch rail

3.1.6

left hand stock rail

fixed machined rail, ensuring the continuity on the main or diverging track with the switch in the open position. The machined part of the stock rail supports the switch rail in the closed positions, giving continuity of line through this switch rail. The two stock rails in a set of switches are the two outside rails

NOTE A switch rail is described as right or left hand according to whether it is part of a right hand or left hand half-set of switches.

3.1.7

right hand stock rail

see left hand stock rail

3.1.8

heel baseplate

first baseplate at the heel end of the movable part of the switch. This baseplate with or without the aid of a heel block forms the first part of the rigid part of the switch