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kinnitussüsteemidele. Osa 8: Ekspluatatsioonikatsed**

**Railway applications - Track - Test methods for
fastening systems - Part 8: In service testing**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Railway applications - Track - Test methods for fastening systems - Part 8: In service testing

Applications ferroviaires - Voie - Méthodes d'essai pour les systèmes de fixation - Partie 8: Essai en service

Bahnanwendungen - Oberbau - Prüfverfahren für Schienenbefestigungssysteme - Teil 8: Betriebserprobung

This European Standard was approved by CEN on 26 November 2011.

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Foreword

This document (EN 13146-8:2012) 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of an identical text or by endorsement, at the latest by October 2012, and conflicting national standards shall be withdrawn at the latest by October 2012.

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 13146-8:2002.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

No major changes have been made in this revision of EN 13146-8:2002.

This European Standard is one of the series EN 13146 "*Railway applications — Track — Test methods for fastening systems*" which consists of the following parts:

- *Part 1: Determination of longitudinal rail restraint;*
- *Part 2: Determination of torsional resistance;*
- *Part 3: Determination of attenuation of impact loads;*
- *Part 4: Effect of repeated loading;*
- *Part 5: Determination of electrical resistance;*
- *Part 6: Effect of severe environmental conditions;*
- *Part 7: Determination of clamping force;*
- *Part 8: In service testing;*
- *Part 9: Determination of stiffness.*

These support the requirements in the series EN 13481 "*Railway applications — Track — Performance requirements for fastening systems*".

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, Turkey and the United Kingdom.

Introduction

As fastening systems are safety critical, there is a need to have a standardized procedure to evaluate their performance in normal use. Performance in track is not always completely predicted from the laboratory tests in EN 13146, Parts 1 to 7 and 9.

The test described in this part of EN 13146 is intended to provide a procedure which can be used to compare the performance in track of new or modified fastening systems with systems whose performance is known.

In accordance with EN 13481-2:2012, EN 13481-3:2012, EN 13481-4:2012, EN 13481-5:2012 and EN 13481-7:2012, this test has to be performed when required by the user.

1 Scope

This European Standard specifies a procedure for the comparative testing of fastening systems in track. The test procedure is applicable to fastening systems which in all other respects conform to EN 13481-2:2012, EN 13481-3:2012, EN 13481-4:2012, EN 13481-5:2012 and EN 13481-7:2012.

This test applies to complete fastening assemblies.

It is only used for comparative testing of such fastening systems installed at the same time on the type of support for which they are intended.

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.

EN 13146-9:2009, *Railway applications — Track — Test methods for fastening systems — Part 9: Determination of stiffness*

EN 13481-1:2012, *Railway applications — Track — Performance requirements for fastening systems — Part 1: Definitions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13481-1:2012 apply.

4 Principle

The fastening system under test is installed in track at the same time as a reference fastening system, on sleepers, bearers or slab track of the same material and design. Location in track is arranged so that the test and reference fastening systems are in track with similar geometry and service conditions.

5 Test conditions

The performance of a fastening system, systems or variants of a system under test shall be compared with a reference fastening system. Test and reference fastening systems shall be installed in one track in lengths containing not less than 500 sleepers each or 200 sleepers each on metro systems or their equivalent for slab track. Installation shall be within a period not exceeding 7 days. All fastening systems in any test shall be installed on the type of sleeper for which they are designed and only one type of sleeper shall be used in a test. Each fastening system in a test shall be installed in track with similar conditions of formation, ballast support, curvature, gradient and cant, and with similar traffic conditions including traffic volume, type, speed, braking and acceleration.

If installation has involved a change in sleepers the track shall be consolidated mechanically, or by the passage of 1×10^5 t (gross) traffic, prior to commencement of the test. The following shall be recorded.

- method of installing sleepers, bearers or slab;
- method of installing fastening components;
- method of installing rail;