# Railway applications - Track - Test methods for fastening systems - Part 6: Effect of severe environmental conditions

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# **EESTI STANDARDI EESSÕNA**

# **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 13146-
6:2002 sisaldab Euroopa standardi EN
13146-6:2002 ingliskeelset teksti.

Käesolev dokument on jõustatud 18.10.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 13146-6:2002 consists of the English text of the European standard EN 13146-6:2002.

This document is endorsed on 18.10.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

#### Käsitlusala:

This European Standard specifies a laboratory test procedure for finding the effect of exposure to severe environmental conditions on the fastening system. This test procedure applies to a complete fastening assembly.

# Scope:

This European Standard specifies a laboratory test procedure for finding the effect of exposure to severe environmental conditions on the fastening system. This test procedure applies to a complete fastening assembly.

ICS 19.040, 93.100

**Võtmesõnad:** environmental effe, fasteners, fixings, laboratory testing, materials handling equipment, permanent ways, rail fastening systems, railway applications, railway construction, railway installations, railways, sleepers, testing, tracks (materials handling equipment)

# EUROPEAN STANDARD NORME EUROPÉENNE

**EUROPÄISCHE NORM** 

EN 13146-6

May 2002

ICS 19.040: 93.100

## English version

# Railway applications - Track - Test methods for fastening systems - Part 6: Effect of severe environmental conditions

Applications ferroviaires - Voie - Méthodes d'essai pour les systèmes de fixation - Partie 6: Effet résultant de conditions environnantes rigoureuses Bahnanwendungen - Oberbau - Prüfverfahren für Befestigungssysteme - Teil 6: Auswirkung von starken Umwelteinflüssen

This European Standard was approved by CEN on 6 March 2002.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

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# **Foreword**

This document (EN 13146-6:2002) 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 2002, and conflicting national standards shall be withdrawn at the latest by November 2002.

This document has been prepared under mandates (M/024<sup>1</sup>, M/275<sup>2</sup>) given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

No existing European Standard is superseded.

This European Standard is one of the series EN 13146 as listed below:

- 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.

These support the requirements in the series EN 13481 "Railway applications — Track — Performance requirements for fastening systems", Parts 1-7.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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<sup>&</sup>lt;sup>1</sup> Railway equipment.

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<sup>&</sup>lt;sup>2</sup> Standardization in the field of Railway Equipment on the Interoperability of the Trans-European High-Speed Rail System.

# Introduction

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OCHANGE AND COLLEGE OF THE PROPERTY OF THE PROPERT This part of EN 13146 includes the only test procedure to find the effect of severe environmental conditions which is generally available at present. It is hoped that test procedures covering other environmental conditions will be included in future revisions.

# 1 Scope

This European Standard specifies a laboratory test procedure for finding the effect of exposure to severe environmental conditions on the fastening system.

This test procedure applies to a complete fastening assembly.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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

ISO 9227, Corrosion test in artificial atmospheres — Salt spray tests.

# 3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 13481-1 apply.

# 4 Principle

The complete fastening assembly is exposed to a salt spray and the effect on ease of dismantling, and reassembly, and condition of individual components is recorded.

# 5 Apparatus

### 5.1 Salt spray equipment

This shall conform with ISO 9227 for the NSS (neutral salt spray) test.

# 5.2 Tools

Manually operated tools normally used for installing and removing the clamping device from the fastening assembly.

### 6 Test specimens

Each specimen shall consist of a complete fastening assembly with a baseplate or a section of sleeper, bearer or element of slab track where no baseplate is used. This shall include a short length of rail of the section for which the fastening is designed.

# 7 Procedure

Visually examine and record the condition of each component. Then fit the rail to the section of sleeper or baseplate using the fastening components as they are to be assembled in track.