

Road and airfield surface characteristics - Test methods - Part 8: Determination of transverse unevenness indices

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13036-8:2008 sisaldab Euroopa standardi EN 13036-8:2008 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 26.05.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 12.03.2008.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13036-8:2008 consists of the English text of the European standard EN 13036-8:2008.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 26.05.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 12.03.2008.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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English Version

Road and airfield surface characteristics - Test methods - Part 8: Determination of transverse unevenness indices

Caractéristiques de surface des routes et aérodromes -
Méthodes d'essais - Partie 8 : Détermination des indices
d'uni transversal

Oberflächeneigenschaften von Straßen und Flugplätzen -
Prüfverfahren - Teil 8: Bestimmung der Parameter zur
Ermittlung der Breitenunebenheit

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Foreword

This document (EN 13036-8:2008) has been prepared by Technical Committee CEN/TC 227 "Road materials", 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of an identical text or by endorsement, at the latest by September 2008, and conflicting national standards shall be withdrawn at the latest by September 2008.

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Introduction

Road profile transverse unevenness affects safety and ride comfort. Transverse unevenness demands can differ from one road to another and are highly related to the speed limit, the kind of traffic, the climatic conditions, the accepted comfort limits, etc. Road profile transverse unevenness is consequently key information for acceptance of newly laid pavements and for road maintenance management systems.

Road profile transverse unevenness encompasses a variety of aspects, such as: the crossfall of the transverse profile, irregularities or different defects in the transverse profile (steps, ridges/dips and edge slumps) and the longitudinal ruts in the wheel paths caused by the traffic.

The measurement of road transverse unevenness has been a subject of much research for more than 70 years, resulting in many different measuring methods. Measurement devices can be split into:

- stationary equipment, such as e.g. the straightedge for irregularities and longitudinal ruts or rod and level for crossfall in single profiles,
- dynamic equipment, such as e.g. the profilometer, which is dependant on the characteristics of the device, suitable for measuring all mentioned aspects for single profiles as well as section (mean) values.

This European Standard has been written to be used in conjunction with the European Standards EN 13036-6 (Profilometer) and EN 13036-7 (Straightedge).

1 Scope

This European Standard defines the different transverse unevenness indices of the pavement surface of roads and airfields and the appropriate methods of evaluation and reporting.

The indices have been defined principally independent of the measurement device.

This European Standard focuses on transverse unevenness measurements for the following three purposes:

- indices to provide a means for quality control of pavement surfaces of newly laid pavements, especially with respect to crossfall and the evidence of irregularities due to improper laying and/or compacting action.
- indices to be used for evaluating the condition of pavements in service as part of routine condition monitoring programs. They are intended to detect transverse deformations caused by the traffic, pavement wear or subsurface movement.
- indices to be used for resurfacing activities on pavements in use.

The parameters and evaluation methods are applicable both for roads and airfields.

2 Normative references

The following referenced documents are indispensable for the application 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 13036-6:2008, *Road and airfield surface characteristics — Test methods — Part 6: Measurement of transverse and longitudinal profiles in the evenness and megatexture wavelength ranges*

EN 13036-7, *Road and airfield surface characteristics — Test methods — Part 7: Irregularity measurement of pavement courses: the straightedge test*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

acquisition repetition interval

travelled distance between two consecutive transverse profile measurements

3.2

bias

difference between the expectation of the test results and an accepted reference value

NOTE Bias is the total systematic error as contrasted to random error. There may be one or more systematic error components to the bias. A large systematic difference from the accepted reference value is reflected by a large bias value (see ISO 3534-1).

3.3

crossfall

transverse gradient across a section or full width of a pavement measured perpendicular to the centre line