Road and airfield surface characteristics - Test methods - Part 6: Measurement of transverse and longitudinal profiles in the evenness and megatexture wavelength ranges

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13036-6:2009 sisaldab Euroopa standardi EN 13036-6:2008 ingliskeelset teksti.	This Estonian standard EVS-EN 13036-6:2009 consists of the English text of the European standard EN 13036-6:2008.
Standard on kinnitatud Eesti Standardikeskuse 30.09.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 30.09.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 12.03.2008.	Date of Availability of the European standard text 12.03.2008.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 93.080.10, 93.120

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13036-6

March 2008

ICS 93.080.10; 93.120

English Version

Road and airfield surface characteristics - Test methods - Part 6: Measurement of transverse and longitudinal profiles in the evenness and megatexture wavelength ranges

Caractéristiques de surface des routes et aérodromes - Méthodes d'essais - Partie 6 : Mesure de profils transversaux et longitudinaux dans le domaine de longueurs d'onde correspondant à l'uni et à la mégatexture

Oberflächeneigenschaften von Straßen und Flugplätzen - Prüfverfahren - Teil 6: Bestimmung der Quer- und Längsprofile in den Wellenlängen der Ebenheit und der Megatextur

This European Standard was approved by CEN on 4 February 2008.

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 CEN 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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, 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.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 13036-6:2008: E

Contents

Page

Foreword

This document (EN 13036-6:2008) 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.

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.

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, 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 the United Kingdom.

Introduction

This European Standard details the criteria for classifying profilometers according to profiling capabilities as well as the procedures for measuring transverse and longitudinal profiles in the evenness and megatexture wavelength ranges, independent of the test method and the equipment used.

The requirements regarding the performance of the measurement shall be independent of the measurement method used. This basic principle permits the development of new technologies and a variety of measurement devices without the need to modify this standard.

This European Standard is restricted to requirements about measurement specifications (e.g. accuracy, resolution, wavelength range).

Compliance with the requirements and classifications outlined in this standard will result in a geometrical representation of a profile intended to be used for research purposes or for further analysis aiming at summary indices for transverse profiles and/or longitudinal profiles in the evenness and megatexture wavelength ranges.

Evenness of pavements is important for reasons of safety, comfort and behaviour of vehicles, (pay)loads, road and bridge constructions, fuel consumption, etc.

Evenness demands are related to the speed limits, the kind of traffic, the climatic conditions, the accepted comfort limits, etc.

1 Scope

This European Standard establishes the minimum requirements and criteria for classification and measurement procedures with profiling devices, designed for the measurement of transverse and/or longitudinal profiles in the unevenness and megatexture wavelength ranges. Recommendations for verification and calibration are included.

Profiling devices are equipment to measure evenness of pavements in the longitudinal and/or in the transverse direction of the pavement.

Highway agencies, airfield authorities, equipment manufacturers, and other organizations can use this standard to define the measuring capabilities of survey equipment that collects the data necessary to characterize surface conditions.

Evenness measurements can be performed by means of static or dynamic devices. The standard includes high-speed, low-speed, and stationary equipment.

NOTE A dynamic measurement is a measurement executed out of a device running in the normal traffic flow at the accepted minimum speed or at higher speed (high-speed).

2 Terms and definitions

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

2.1
longitudinal profile
intersection between the pavement surface and a conventional reference plane perpendicular to the pavement surface and parallel to the lane direction

2.2
transverse profile
intersection between the pavement surface and a reference plane perpendicular to the pavement surface and to the lane direction

2.3
wavelength
distance between periodically repeated parts of a sinusoidal curve

2.4
unevenness
deviation of a pavement surface from a true filtered planar surface in a wavelength range of 0,5 m to 50 m

2.5
megatexture
deviation of a pavement surface from a filtered true planar surface in a wavelength range of 50 mm to 500 mm

2.6
profiling
method in which a measurement of a pavement surface profile is recorded for subsequent analysis. The profile data are used for calculating certain mathematically defined parameters

2.7
crossfall
transverse gradient across a section or full width of a pavement measured perpendicular to the centre line