

**Toote geomeetriline kirjeldus ja tehnilised
andmed (GPS). Pinnatekstuur:
profiilimeetod. Faasikorrektsoonifiltrite
metrooloogilised karakteristikud**

Geometrical product specifications (GPS) - Surface
texture: Profile method - Metrological characteristics
of phase correct filters

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 11562:1999 sisaldab Euroopa standardi EN ISO 11562:1997 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 12.12.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 11562:1999 consists of the English text of the European standard EN ISO 11562:1997.</p> <p>This document is endorsed on 12.12.1999 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>Käesolev rahvusvaheline standard määrab kindlaks faasi korrektsioonfiltrite metrooloogilised karakteristikud pinnaprofiilide mõõtmiseks. Eelkõige määrab käesolev standard kindlaks, kuidas eraldada pinnaprofiili pika- ja lühilainelist osa.</p>	<p>Scope:</p>
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ICS 17.040.20

Võtmesõnad: filtrid, karedus, kareduse mõõtmine, metrooloogilised karakteristikud, mõõteriistad, pinna lainelisus, pinna seisund, profilomeetrid

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Descriptors: GPS, surface texture, filters.

English version

Geometrical Product Specifications (GPS)
Surface texture: Profile method

Metrological characteristics of phase correct filters
(ISO 11562 : 1996)

Spécification géométrique des
produits (GPS) – État de surface:
Méthode du profil – Caractéristiques
métrologiques des filtres à phase
correcte (ISO 11562 : 1996)

Geometrische Produktspezifikationen
(GPS) – Oberflächenbeschaffenheit:
Tastschnittverfahren – Meßtechnische
Eigenschaften von phasenkorrekten
Filtern (ISO 11562 : 1996)

This European Standard was approved by CEN on 1997-11-02.

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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

International Standard

ISO 11562 : 1996 Geometrical Product Specification (GPS) – Surface texture: Profile method – Metrological characteristics of phase correct filters,

which was prepared by ISO/TC 57 'Metrology and properties of surfaces' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 290 'Dimensional and geometrical product specification and verification', the Secretariat of which is held by DIN, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by June 1998 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 11562 : 1996 was approved by CEN as a European Standard without any modification.

Introduction

This International Standard is a Geometrical Product Specification (GPS) standard and is to be regarded as a *General GPS standard* (see ISO/TR 14638). It influences chain links 2 and 3 of the chains of standards for roughness profile and waviness profile and chain link 2 of the chain of standards for primary profile and is envisaged also to cover roundness and other form characteristics.

For more detailed information of the relation of this standard to other standards and the GPS matrix model, see annex B.

For digital instruments, the appropriate filter for surface profile information is a phase correct filter. The chosen weighting function, for the phase correct filter, is Gaussian with a 50 % transmission at the cut-off wavelength. This provides a transmission characteristic with a relatively sharp cut-off.

It is of importance that the transmission for the cut-off wavelength is 50 % since the short wave and long wave portions of the surface profile are separated and can be recombined without altering the surface profile.

1 Scope

This International Standard specifies the metrological characteristics of phase correct filters for the measurement of surface profiles.

In particular it specifies how to separate the long and short wave content of a surface profile.

2 Definitions

For the purposes of this International Standard, the following definitions apply.

2.1 profile filter: Filter which separates profiles into longwave and shortwave components.

2.1.1 phase correct profile filter: Profile filter which does not cause phase shifts which lead to asymmetrical profile distortions.

2.2 phase correct filter mean line (mean line): Long wave profile component which is determined for any point of the profile by a weighted mean value derived from adjacent points.

2.3 transmission characteristic of a filter: Characteristic which indicates the amount by which the amplitude of a sinusoidal profile is attenuated as a function of its wavelength.

2.4 weighting function: Function for calculating the mean line which indicates for each point the weight attached by the profile in the neighbourhood of that point.

NOTE — The transmission characteristic of the mean line is the Fourier transformation of the weighting function.

2.5 cut-off wavelength of the phase correct filter: Wavelength of a sinusoidal profile of which 50 % of the amplitude is transmitted by the profile filter.

NOTE — Profile filters are identified by their cut-off wavelength value.