

**Geometrical Product Specifications (GPS) -
Surface texture: Profile method; Surfaces
having stratified functional properties - Part
3: Height characterization using the material
propability curve**

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texture: Profile method; Surfaces having stratified
functional properties - Part 3: Height characterization
using the material propability curve

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 13565-3:2000 sisaldab Euroopa standardi EN ISO 13565-3:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 13.10.2000 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 13565-3:2000 consists of the English text of the European standard EN ISO 13565-3:2000.</p> <p>This document is endorsed on 13.10.2000 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>This part of EN ISO 13565 establishes the evaluation process for determining parameters from the linear regions of the material probability curve, which is the Gaussian representation of the material ratio curve. The parameters are intended to aid in assessing tribological behaviour, for example of lubricated, sliding surfaces, and to control the manufacturing process.</p>	<p>Scope:</p> <p>This part of EN ISO 13565 establishes the evaluation process for determining parameters from the linear regions of the material probability curve, which is the Gaussian representation of the material ratio curve. The parameters are intended to aid in assessing tribological behaviour, for example of lubricated, sliding surfaces, and to control the manufacturing process.</p>
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Võtmesõnad: characteristics, determination, geometrical product specifications, rules of calculation, surface condition, surface properties

English version

Geometrical product specifications (GPS)

**Surface texture: Profile method – Surfaces having
stratified functional properties**

**Part 3: Height characterization using the material probability curve
(ISO 13565-3 : 1998)**

Spécification géométrique des
produits (GPS) – État de surface:
Méthode du profil – Surfaces ayant
des propriétés fonctionnelles
différentes suivant les niveaux -
Partie 3: Caractérisation des hauteurs
par la courbe de probabilité de
matière (ISO 13565-3 : 1998)

Geometrische Produktspezifikationen
(GPS) – Oberflächenbeschaffenheit:
Tastschnittverfahren – Oberflächen
mit plateauartigen funktions-
relevanten Eigenschaften – Teil 3:
Beschreibung der Höhe von Oberflä-
chen mit der Wahrscheinlichkeits-
dichtekurve (ISO 13565-3 : 1998)

This European Standard was approved by CEN on 2000-04-13.

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 13565-3 : 1998 Geometrical product specifications (GPS) – Surface texture: Profile method – Surfaces having stratified functional properties – Part 3: Height characterization using the material probability curve,

which was prepared by ISO/TC 213 'Dimensional and geometrical product specifications and verification' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 290 'Dimensional and geometrical product specifications 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 November 2000 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 13565-3 : 1998 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in Annex ZA (normative)

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Introduction

This part of ISO 13565 is a geometrical product specification (GPS) standard and is to be regarded as a general GPS standard (see ISO/TR 14638). It influences the chain link 2 of the chains of standards on roughness profile and primary profile.

For more detailed information on the relation of this standard to the GPS matrix model see annex E.

This part of ISO 13565 provides a numerical characterization of surfaces consisting of two vertical random components, namely, a relatively coarse "valley" texture and a finer "plateau" texture. This type of surface is used for lubricated, sliding contact, for example in cylinder liners and fuel injectors. The calculations necessary to determine the parameters R_{pq} , R_{vq} , and R_{mq} (P_{pq} , P_{vq} , and P_{mq}) used to characterize these two components separately involves the generation of the material probability curve, the determination of its linear regions, and the linear regressions through these regions.

The parameters are undefined for surfaces not consisting of two such components.

1 Scope

This part of ISO 13565 establishes the evaluation process for determining parameters from the linear regions of the material probability curve, which is the Gaussian representation of the material ratio curve. The parameters are intended to aid in assessing tribological behaviour, for example of lubricated, sliding surfaces, and to control the manufacturing process.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 13565. At the time of publication, the editions indicated were valid. All Standards are subject to revision, and parties to agreements based on this part of ISO 13565 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1302:1992, *Technical drawings — Methods of indicating surface texture*.

ISO 3274:1996, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Nominal characteristics of contact (stylus) instruments*.

ISO 4287:1997, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*.

ISO 13565-1:1996, *Geometrical Product Specifications (GPS) — Surface texture: Profile method; Surfaces having stratified functional properties — Part 1: Filtering and general measurement conditions*.

ISO 13565-2:1996, *Geometrical Product Specifications (GPS) — Surface texture: Profile method; Surfaces having stratified functional properties — Part 2: Height characterization using the linear material ratio curve*.

3 Definitions

For the purposes of this part of ISO 13565, the definitions given in ISO 3274, ISO 4287, ISO 13565-2 and the following apply.

3.1

material probability curve

a representation of the material ratio curve in which the profile material length ratio is expressed as Gaussian probability in standard deviation values, plotted linearly on the horizontal axis

NOTE — This scale is expressed linearly in standard deviations according to the Gaussian distribution. In this scale the material ratio curve of a Gaussian distribution becomes a straight line. For stratified surfaces composed of two Gaussian distributions, the material probability curve will exhibit two linear regions (see 1 and 2 in figure 1).