

Geometrical product specifications (GPS) - Inspection by measurement of workpieces and measuring equipment - Part 3: Guidelines for achieving agreements on measurement uncertainty statements (ISO 14253-3:2011)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 14253-3:2011 sisaldab Euroopa standardi EN ISO 14253-3:2011 ingliskeelset teksti.

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English Version

Geometrical product specifications (GPS) - Inspection by
measurement of workpieces and measuring equipment - Part 3:
Guidelines for achieving agreements on measurement
uncertainty statements (ISO 14253-3:2011)

Spécification géométrique des produits (GPS) - Vérification
par la mesure des pièces et des équipements de mesure -
Partie 3: Lignes directrices pour l'obtention d'accords sur la
déclaration des incertitudes de mesure (ISO 14253-3:2011)

Geometrische Produktspezifikation (GPS) - Prüfung von
Werkstücken und Messgeräten durch Messen - Teil 3:
Richtlinien für das Erzielen einer Einigung über
Messunsicherheitsangaben (ISO 14253-3:2011)

This European Standard was approved by CEN on 14 April 2011.

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Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

This document (EN ISO 14253-3:2011) has been prepared by Technical Committee ISO/TC 213 "Dimensional and geometrical product specifications and verification" in collaboration with Technical Committee CEN/TC 290 "Dimensional and geometrical product specification and verification" the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by October 2011, and conflicting national standards shall be withdrawn at the latest by October 2011.

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Endorsement notice

The text of ISO 14253-3:2011 has been approved by CEN as a EN ISO 14253-3:2011 without any modification.

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Introduction

This part of ISO 14253 is a geometrical product specification (GPS) International Standard and is to be regarded as a global GPS Standard (see ISO/TR 14638). It influences links 4, 5 and 6 of all chains of standards in the general GPS matrix.

The ISO/GPS Masterplan given in ISO/TR 14638 gives an overview of the ISO/GPS system of which this part of ISO 14253 is a part. The fundamental rules of ISO/GPS given in ISO 8015 apply to this part of ISO 14253 and the default decision rules given in ISO 14253-1 apply to specifications made in accordance with this part of ISO 14253, unless otherwise indicated.

For more detailed information on the relation of this International Standard to other standards and the GPS matrix model, see Annex A.

ISO 14253-1 provides decision rules for proving conformance or non-conformance with specifications of workpieces and measuring equipment when taking into account the uncertainty of measurement. ISO 14253-2 provides instructions for preparing uncertainty budgets for determining measurement uncertainty as defined in the *Guide to the Expression of Uncertainty in Measurement (GUM)*. However, the possibility still exists that disagreement between customer and supplier can occur on the estimated measurement uncertainty.

It is becoming increasingly common for suppliers to have in place a quality system providing satisfactory assurance to the customer that the latter is receiving a product which conforms to specifications. This avoids the need for costly duplicate inspections.

For this reason, the most common case of disagreement over a measurement uncertainty statement or an uncertainty budget involves the customer questioning the supplier's uncertainty budget. The customer may also question the measured value of a characteristic of a workpiece or of measuring equipment, thus indirectly questioning the total uncertainty budget (see ISO 14253-1).

In a rarer case of disagreement, the supplier may question the customer's uncertainty budget when the customer rejects a workpiece or measuring equipment (see ISO 14253-1:1998, 6.2).

In addition to those mentioned, there are other cases of disagreement, as well as other motivations that may lead to discussion of stated uncertainties.

Geometrical product specifications (GPS) — Inspection by measurement of workpieces and measuring equipment —

Part 3: Guidelines for achieving agreements on measurement uncertainty statements

1 Scope

This part of ISO 14253 provides guidelines and defines procedures for assisting the customer and supplier to reach amicable agreements on disputed measurement uncertainty statements regulated in accordance with ISO 14253-1, and so avoid costly and time-consuming disputes.

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.

ISO 14253-1:1998, *Geometrical Product Specifications (GPS) — Inspection by measurement of workpieces and measuring equipment — Part 1: Decision rules for proving conformance or non-conformance with specifications*

ISO 14253-2:2011, *Geometrical product specifications (GPS) — Inspection by measurement of workpieces and measuring equipment — Part 2: Guidance for the estimation of uncertainty in GPS measurement, in calibration of measuring equipment and in product verification*

ISO 14978:2006, *Geometrical product specifications (GPS) — General concepts and requirements for GPS measuring equipment*

ISO 17450-1:—¹⁾, *Geometrical product specifications (GPS) — General concepts — Part 1: Model for geometrical specification and verification*

ISO 17450-2:—²⁾, *Geometrical product specifications (GPS) — General concepts — Part 2: Basic tenets, specifications, operators and uncertainties*

ISO/IEC Guide 98-3:2008, *Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

ISO/IEC Guide 99:2007, *International vocabulary of metrology — Basic and general concepts and associated terms (VIM)*

1) To be published. (Revision of ISO/TS 17450-1:2005)

2) To be published. (Revision of ISO/TS 17450-2:2002)