

Geometrical product specifications (GPS) - Extraction (ISO 14406:2010)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 14406:2010 sisaldab Euroopa standardi EN ISO 14406:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.12.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.12.2010.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 14406:2010 consists of the English text of the European standard EN ISO 14406:2010.

This standard is ratified with the order of Estonian Centre for Standardisation dated 31.12.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 15.12.2010.

The standard is available from Estonian standardisation organisation.

ICS 17.040.01

Standardite reprodutseerimis- ja levitamisoigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

English Version

Geometrical product specifications (GPS) - Extraction (ISO
14406:2010)

Spécification géométrique des produits (GPS) - Extraction
(ISO 14406:2010)

Geometrische Produktspezifikation (GPS) - Erfassung (ISO
14406:2010)

This European Standard was approved by CEN on 9 October 2010.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, 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: Avenue Marnix 17, B-1000 Brussels

Foreword

This document (EN ISO 14406:2010) 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 June 2011, and conflicting national standards shall be withdrawn at the latest by June 2011.

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, Croatia, 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.

Endorsement notice

The text of ISO 14406:2010 has been approved by CEN as a EN ISO 14406:2010 without any modification.

Contents

Page

Foreword	iv
Introduction.....	v
1 Scope.....	1
2 Normative references	1
3 Terms and definitions	1
4 Sampling and reconstruction for extraction.....	5
4.1 General	5
4.2 Wavelets: exact reconstruction	5
4.3 Morphological filters: zone of possible reconstruction	5
4.3.1 General	5
4.3.2 Circular disk structuring element	6
4.3.3 Horizontal line structuring element	7
5 Sampling schemes	7
5.1 General	7
5.2 Orthogonal grid	8
5.3 Orthogonal grid [birdcage]	8
5.4 Orthogonal grid [polar grid]	9
5.5 Specified grid	9
5.6 Stratified	10
5.7 Helix	10
5.8 Spiral.....	11
5.9 Spider web	11
5.10 Points method.....	12
Annex A (informative) Concept diagram	13
Annex B (informative) Relation to the GPS matrix model.....	14
Bibliography.....	16

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 the chain links 3 and 5 of all chains of standards.

For more detailed information of the relation of this International Standard to the GPS matrix model, see Annex B.

This International Standard develops the terminology and concepts for GPS extraction. It introduces the concept of sampling and reconstruction for extraction (see ISO 17450-1).

Geometrical product specifications (GPS) — Extraction

1 Scope

This International Standard specifies the basic terminology for GPS extraction. It defines a framework for the fundamental operations used in GPS extraction and introduces the concepts of sampling and reconstruction for extraction, together with some principal sampling schemes on several basic geometries.

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 14660-1:1999, *Geometrical product specifications (GPS) — Geometrical features — Part 1: General terms and definitions*

ISO/TS 16610-1:2006, *Geometrical product specifications (GPS) — Filtration — Part 1: Overview and basic concepts*

ISO/TS 16610-40:2006, *Geometrical product specifications (GPS) — Filtration — Part 40: Morphological profile filters: Basic concepts*

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*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 14660-1, ISO/TS 16610-1, ISO/TS 16610-40, ISO 17450-1, ISO 17450-2 and the following apply.

3.1

non-ideal surface model (of a workpiece)

skin model (of a workpiece)

model of the physical interface of the workpiece with its environment

[ISO 17450-1:—, 3.27]

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

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