

### SLOVENSKI STANDARD SIST EN ISO 16610-49:2015

01-september-2015

Specifikacija geometrijskih veličin izdelka (GPS) - Filtriranje - 49. del: Morfološki profilni filtri: Tehnike z velikostjo merila (ISO 16610-49:2015)

Geometrical product specifications (GPS) - Filtration - Part 49: Morphological profile filters: Scale space techniques (ISO 16610-49:2015)

Geometrische Produktspezifikation (GPS) - Filterung - Teil 49: Morphologische Profilfilter: Skalenraumverfahren (ISO 16610-49:2015)

(standards iteh.ai)
Spécification géométrique des produits (GPS) - Filtrage - Partie 49: Filtres de profil morphologiques: Techniques d'analyse par espace d'échelle (ISO 16610-49:2015)

https://standards.iteh.ai/catalog/standards/sist/ebfc2471-3e37-49fe-8d74-

Ta slovenski standard je istoveten z: EN ISO 16610-49-2015

ICS:

17.040.20 Lastnosti površin Properties of surfaces 17.040.30 Merila Measuring instruments

SIST EN ISO 16610-49:2015 en,fr,de

**SIST EN ISO 16610-49:2015** 

# iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 16610-49:2015 https://standards.iteh.ai/catalog/standards/sist/ebfc2471-3e37-49fe-8d74-09656389f2fa/sist-en-iso-16610-49-2015 EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM EN ISO 16610-49

June 2015

ICS 17.040.20

### **English Version**

Geometrical product specifications (GPS) - Filtration - Part 49: Morphological profile filters: Scale space techniques (ISO 16610-49:2015)

Spécification géométrique des produits (GPS) - Filtrage -Partie 49: Filtres de profil morphologiques: Techniques d'analyse par espace d'échelle (ISO 16610-49:2015) Geometrische Produktspezifikation (GPS) - Filterung - Teil 49: Morphologische Profilfilter: Skalenraumverfahren (ISO 16610-49:2015)

This European Standard was approved by CEN on 14 February 2015.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovakia, Slovakia, Sweden, Switzerland, Turkey and United Kingdom.

09656389f2fa/sist-en-iso-16610-49-2015



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents	Page
Foreword	

# iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 16610-49:2015 https://standards.iteh.ai/catalog/standards/sist/ebfc2471-3e37-49fe-8d74-09656389f2fa/sist-en-iso-16610-49-2015

### **Foreword**

This document (EN ISO 16610-49:2015) 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 December 2015, and conflicting national standards shall be withdrawn at the latest by December 2015.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

#### **Endorsement notice**

The text of ISO 16610-49:2015 has been approved by CEN as EN ISO 16610-49:2015 without any modification.

(standards.iteh.ai)

<u>SIST EN ISO 16610-49:2015</u> https://standards.iteh.ai/catalog/standards/sist/ebfc2471-3e37-49fe-8d74-09656389f2fa/sist-en-iso-16610-49-2015 **SIST EN ISO 16610-49:2015** 

# iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 16610-49:2015 https://standards.iteh.ai/catalog/standards/sist/ebfc2471-3e37-49fe-8d74-09656389f2fa/sist-en-iso-16610-49-2015 SIST EN ISO 16610-49:2015

# INTERNATIONAL STANDARD

ISO 16610-49

First edition 2015-06-01

## Geometrical product specifications (GPS) — Filtration —

Part 49:

Morphological profile filters: Scale space techniques

Teh ST Spécification géométrique des produits (GPS) — Filtrage —

Partie 49: Filtres de profil morphologiques: Techniques d'analyse par espace d'échelle

SIST EN ISO 16610-49:2015

https://standards.iteh.ai/catalog/standards/sist/ebfc2471-3e37-49fe-8d74-09656389f2fa/sist-en-iso-16610-49-2015



## iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 16610-49:2015 https://standards.iteh.ai/catalog/standards/sist/ebfc2471-3e37-49fe-8d74-09656389f2fa/sist-en-iso-16610-49-2015



### **COPYRIGHT PROTECTED DOCUMENT**

#### © ISO 2015, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office Ch. de Blandonnet 8 • CP 401 CH-1214 Vernier, Geneva, Switzerland Tel. +41 22 749 01 11 Fax +41 22 749 09 47 copyright@iso.org www.iso.org

Contents		Page
Foreword		iv
Introduction	on	vi
1 Scop	pe	1
2 Nor	mative references	
3 Teri	ms and definitions	1
4 Gen 4.1 4.2 4.3 4.4	eral scale space background  General Size and anti-size distributions Alternating symmetrical filters Nested mathematical models	2 2 3
5 Rec 5.1 5.2 5.3	ommendations Circular disk structuring element Horizontal line structuring element Default scale space technique	4 5
6 Filte	er designation	5
Annex A (in	nformative) Illustrative examples of scale space	6
Annex B (in	nformative) Concept diagram	14
Annex C (ir	nformative) <b>Concept diagram</b> nformative) <b>Relationship to the filtration matrix model</b>	15
	nformative) Relationship to the GPS matrix model	
Bibliogran	hy	17

SIST EN ISO 16610-49:2015

https://standards.iteh.ai/catalog/standards/sist/ebfc2471-3e37-49fe-8d74-09656389f2fa/sist-en-iso-16610-49-2015

### Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see <a href="www.iso.org/directives">www.iso.org/directives</a>).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see <a href="www.iso.org/patents">www.iso.org/patents</a>).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 213, Dimensional and geometrical product specifications and verification.

SIST EN ISO 16610-49:2015

This first edition cancels and replaces ISO/TS 16610-49:2006 which has been technically revised.

09656389f2fa/sist-en-iso-16610-49-2015

ISO 16610 consists of the following parts, under the general title *Geometrical product specifications* (GPS) — Filtration:

- Part 1: Overview and basic concepts
- Part 20: Linear profile filters: Basic concepts
- Part 21: Linear profile filters: Gaussian filters
- Part 22: Linear profile filters: Spline filters
- Part 28: Profile filters: End effects
- Part 29: Linear profile filters: Spline wavelets
- Part 30: Robust profile filters: Basic concepts
- Part 31: Robust profile filters: Gaussian regression filters
- Part 32: Robust profile filters: Spline filters
- Part 40: Morphological profile filters: Basic concepts
- Part 41: Morphological profile filters: Disk and horizontal line-segment filters
- Part 49: Morphological profile filters: Scale space techniques
- Part 60: Linear areal filters: Basic concepts
- Part 61: Linear areal filters: Gaussian filters

- Part 71: Robust areal filters: Gaussian regression filters
- Part 85: Morphological areal filters: Segmentation

### The following parts are planned:

- Part 26: Linear profile filters: Filtration on nominally orthogonal grid planar data sets
- Part 27: Linear profile filters: Filtration on nominally orthogonal grid cylindrical data sets
- Part 45: Morphological profile filters: Segmentation
- Part 62: Linear areal filters: Spline filters
- Part 69: Linear areal filters: Spline wavelets
- Part 70: Robust areal filters: Basic concepts
- Part 72: Robust areal filters: Spline filters
- Part 80: Morphological areal filters: Basic concepts
- Part 81: Morphological areal filters: Sphere and horizontal planar segment filters
- Part 89: *Morphological areal filters: Scale space techniques*

## iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN ISO 16610-49:2015</u> https://standards.iteh.ai/catalog/standards/sist/ebfc2471-3e37-49fe-8d74-09656389f2fa/sist-en-iso-16610-49-2015