

SLOVENSKI STANDARD kSIST FprEN ISO 16610-22:2015

01-maj-2015

Specifikacija geometrijskih veličin izdelka (GPS) - Filtriranje - 22. del: Filtri linearnih profilov: utorni filtri (ISO/FDIS 16610-22:2015)

Geometrical product specifications (GPS) - Filtration - Part 22: Linear profile filters: Spline filters (ISO/FDIS 16610-22:2015)

Spécification géométrique des produits (GPS) - Filtrage - Partie 22: Filtres de profil linéaires: Filtres splines (ISO/FDIS 16610-22:2015)

Ta slovenski standard je istoveten z: FprEN ISO 16610-22

ICS:

17.040.20 Lastnosti površin Properties of surfaces

kSIST FprEN ISO 16610-22:2015 en

kSIST FprEN ISO 16610-22:2015

FINAL DRAFT

INTERNATIONAL STANDARD

ISO/FDIS 16610-22

ISO/TC 213

Secretariat: DS

Voting begins on: **2015-02-05**

Voting terminates on: **2015-04-05**

Geometrical product specifications (GPS) — Filtration —

Part 22:

Linear profile filters: Spline filters

Spécification géométrique des produits (GPS) — Filtrage — Partie 22: Filtres de profil linéaires: Filtres splines

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

Please see the administrative notes on page iii



Reference number ISO/FDIS 16610-22:2014(E)

ISO/FDIS 16610-22:2014(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2014

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 Case postale 56 • CH-1211 Geneva 20 Tel. + 41 22 749 01 11 Fax + 41 22 749 09 47 E-mail copyright@iso.org Web www.iso.org

Published in Switzerland

ISO/CEN PARALLEL PROCESSING

This final draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO-lead** mode of collaboration as defined in the Vienna Agreement. The final draft was established on the basis of comments received during a parallel enquiry on the draft.

This final draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel two-month approval vote in ISO and formal vote in CEN.

Positive votes shall not be accompanied by comments.

Negative votes shall be accompanied by the relevant technical reasons.

ISO/FDIS 16610-22:2014(E)

Contents			Page
Fore	word		v
Introduction		vii	
1	Scop	e	1
2	Norr	native references	1
3	Terms and definitions		
4	Spline profile filters		2
_	4.1	General	
	4.2	Weighting function	2
	4.3	Filter equations	3
		4.3.1 General	
		4.3.2 Filter equation for the non-periodic spline profile filter	
		4.3.3 Filter equation for the periodic spline profile filter	5
	4.4	Transmission characteristics	
		4.4.1 General	
		4.4.2 Transmission characteristic of the long-wave profile component	
		4.4.3 Transmission characteristic of the short-wave profile component	6
5	Recommendations		7
	5.1	Nesting Index (cut-off values)	7
	5.2	Tension parameter (β)	7
	5.3	Implementation	8
6	Filte	r designation	8
Anno	ex A (in	formative) Influence of the sampling interval	9
Anno	ex B (in	formative) Comparison of spline profile filter and Gaussian filter	10
Anno	ex C (in	formative) Illustrative examples	11
Anno	ex D (in	formative) Concept diagram	15
		formative) Relationship to the filtration matrix model	
Annex F (informative) Relationship to the GPS matrix model			17
Bibliography			19

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 www.iso.org/directives).

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 www.iso.org/patents).

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*.

This edition cancels and replaces ISO/TS 16610-22:2006, which has been technically revised.

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

kSIST FprEN ISO 16610-22:2015

ISO/FDIS 16610-22:2014(E)

- 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