NSAI
Standards

Irish Standard
I.S. EN ISO 25178-71:2012

Geometrical product specifications (GPS) - Surface texture: Areal - Part 71: Software measurement standards (ISO 25178 -71:2012)

I.S. EN ISO 25178-71:2012

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:

This document is based on:
EN ISO 25178-71:2012

Published:
4 January, 2013

This document was published under the authority of the NSAI and comes into effect on:

4 January, 2013

<u>ICS number:</u>

17.040.20

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie

W **NSAI.ie**

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 25178-71

December 2012

ICS 17.040.20

English Version

Geometrical product specifications (GPS) - Surface texture: Areal - Part 71: Software measurement standards (ISO 25178-71:2012)

Spécification géométrique des produits (GPS) - État de surface: Surfacique - Partie 71: Étalons logiciels (ISO 25178-71:2012)

Geometrische Produktspezifikation (GPS) - Oberflächenbeschaffenheit: Flächenhaft - Teil 71: Software-Normale (ISO 25178-71:2012)

This European Standard was approved by CEN on 10 November 2012.

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, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN ISO 25178-71:2012: E

EN ISO 25178-71:2012 (E)

Contents

Page

Foreword

This document (EN ISO 25178-71:2012) 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 2013, and conflicting national standards shall be withdrawn at the latest by June 2013.

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 organisations 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 25178-71:2012 has been approved by CEN as a EN ISO 25178-71:2012 without any modification.

I.S. EN ISO 25178-71:2012

This page is intentionally left BLANK.

I.S. EN ISO 25178-71:2012

I.S. EN ISO 25178-71:2012

INTERNATIONAL
STANDARD

ISO

25178-71

First edition
2012-12-01

Geometrical product specifications (GPS) — Surface texture: Areal —

Part 71:
Software measurement standards

Spécification géométrique des produits (GPS) — État de surface: Surfacique — Partie 71: Étalons logiciels

ISO 25178-71:2012(E)

Contents

Page

ISO 25178-71:2012(E)

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 25178-71 was prepared by Technical Committee ISO/TC 213, *Dimensional and geometrical product specifications and verification*.

ISO 25178 consists of the following parts, under the general title *Geometrical product specifications (GPS) — Surface texture: Areal*:

— *Part 2: Terms, definitions and surface texture parameters*

— *Part 3: Specification operators*

— *Part 6: Classification of methods for measuring surface texture*

— *Part 70: Physical measurement standards*

— *Part 71: Software measurement standards*

— *Part 601: Nominal characteristics of contact (stylus) instruments*

— *Part 602: Nominal characteristics of non-contact (confocal chromatic probe) instruments*

— *Part 604: Nominal characteristics of non-contact (coherence scanning interferometry) instruments*

— *Part 605: Nominal characteristics of non-contact (point autofocus probe) instruments*

— *Part 701: Calibration and measurement standards for contact (stylus) instruments*

The following parts are under preparation:

— *Part 1: Indication of surface texture*

— *Part 603: Nominal characteristics of non-contact (phase-shifting interferometric microscopy) instruments*

— *Part 606: Nominal characteristics of non-contact (focus variation) instruments*

Introduction

This part of ISO 25178 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 6 of the chains of standards on surface texture.

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

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

This part of ISO 25178 is concerned with software gauges (Type S1) and reference software (Type S2). It also defines the SDF file format for type S1 software gauges.

The SURFACE DATA FILE (SDF) format is already used by industry in particular by instrument manufacturers and academia. The SDF file format as defined in this document is a standardized sub-set of the possibilities included in the SDF file format as initially defined in the European Surfstand project and EUR15178. It is envisaged that the SDF file format could evolve (as more experience in its usage and future requirements are identified) later in a version 2.0 with additional fields and possibilities.

I.S. EN ISO 25178-71:2012

I.S. EN ISO 25178-71:2012

INTERNATIONAL STANDARD

ISO 25178-71:2012(E)

Geometrical product specifications (GPS) — Surface texture: Areal —

Part 71:
Software measurement standards

1 Scope

This part of ISO 25178 defines Type S1 and Type S2 software measurement standards (etalons) for verifying the software of measuring instruments. It also defines the file format of Type S1 software measurement standards for the calibration of instruments for the measurement of surface texture by the areal method as defined in the areal surface texture chain of standards, chain link 6.

NOTE   Throughout this part of ISO 25178, the term "softgauge" is used as a substitute for "software measurement standard Type S1".

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 5436-2:2001, *Geometrical Product Specifications (GPS) — Surface texture: Profile method; Measurement standards — Part 2: Software measurement standards*

ISO 16610 (all parts), *Geometrical Product Specifications (GPS) — Filtration*

ISO 17450-2:2012, *Geometrical product specifications (GPS) — General concepts — Part 2: Basic tenets, specifications, operators, uncertainties and ambiguities*

ISO 25178-2, *Geometrical product specifications (GPS) — Surface texture: Areal — Part 2: Terms, definitions and surface texture parameters*

ISO 25178-3, *Geometrical product specifications (GPS) — Surface texture: Areal — Part 3: Specification operators*

ISO/IEC Guide 98-1:2009, *Uncertainty of measurement — Part 1: Introduction to the expression of uncertainty in measurement*

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

3 Terms and definitions

For the purpose of this document, the terms and definitions in ISO 25178-2, ISO 25178-3, ISO 5436-2:2001, the ISO 16610 series, ISO 17250-2, ISO/IEC Guide 98-1 and ISO/IEC Guide 99, and the following apply.

3.1
software measurement standard
reference data or reference software intended to reproduce the value of a measurand with known specification uncertainty in order to verify the software used to calculate the value of a measurand

3.2
CHAR[n]
array of n ASCII characters

This is a free preview. Purchase the entire publication at the link below:

Product Page