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CEN ISO/TS 12181-1

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English Version

Geometrical product specifications (GPS) - Roundness - Part 1: Vocabulary and parameters of roundness (ISO/TS 12181-1:2003)

Spécification géométrique des produits (GPS) - Circularité - Partie 1: Vocabulaire et paramètres de circularité (ISO/TS 12181-1:2003)

Geometrische Produktspezifikation (GPS) - Rundheit - Teil 1: Begriffe und Kenngrößen der Rundheit (ISO/TS 12181-1:2003)

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Foreword

The text of ISO/TS 12181-1:2003 has been prepared by Technical Committee ISO/TC 213 "Dimensional and geometrical product specifications and verification" of the International Organization for Standardization (ISO) and has been taken over as CEN ISO/TS 12181-1:2007 by Technical Committee CEN/TC 290 "Dimensional and geometrical product specification and verification" the secretariat of which is held by AFNOR.

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Endorsement notice

The text of ISO/TS 12181-1:2003 has been approved by CEN as a CEN ISO/TS 12181-1:2007 without any modification.

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Introduction

This part of ISO/TS 12181 is a geometrical product specification (GPS) Technical Specification and is to be regarded as a general GPS document (see ISO/TR 14638). It influences chain link 2 of the chain of standards on form of a surface (independent of a datum).

For more detailed information on the relation of this part of ISO/TS 12181 to other standards and the GPS matrix model, see Annex C.

This part of ISO/TS 12181 defines terms and concepts necessary for defining the specification operators according to ISO/TS 17450-2 for roundness of integral features.

Extracting data will always involve applying a certain filtering process. An additional filtering of the extracted data may or may not be applied. This additional filter can be a mean line filter (Gaussian, spline, wavelet, etc.) or a non-linear filter (e.g. morphological filter). The type of filtering will influence the actual specification operator and, consequently, the actual definition of roundness. Therefore, the type of filtering needs to be stated unambiguously.

This part of ISO/TS 12181 is not intended to disallow any means of measuring roundness.

Geometrical Product Specifications (GPS) — Roundness —

Part 1: Vocabulary and parameters of roundness

1 Scope

This part of ISO/TS 12181 defines the terms and concepts related to the roundness of individual integral features and covers complete roundness profiles only.

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/TS 12181-2:2003, *Geometrical Product Specifications (GPS) — Roundness — Part 2: Specification operators*

ISO 14660-1:1999, *Geometrical Product Specifications (GPS) — Geometrical features — Part 1: General terms and definitions*

ISO 14660-2:1999, *Geometrical Product Specifications (GPS) — Geometrical features — Part 2: Extracted median line of a cylinder and a cone, extracted median surface, local size of an extracted feature*

ISO/TS 17450-1:—[1)] *Geometrical Product Specifications (GPS) — General concepts — Part 1: Model for geometrical specification and verification*

3 General terms and definitions

For the purposes of this part of ISO/TS 12181, the terms and definitions given in ISO 14660-1, ISO 14660-2, ISO/TS 17450-1 and the following apply.

3.1 General terms

3.1.1
roundness
property of a circle

3.1.2
roundness axis
axis of a feature associated to an integral feature

NOTE The integral feature can be a cylindrical surface or a surface of revolution.

1) To be published.