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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 24637.2-2020

Geometrical product specifications (GPS) - General concepts - Part 2: Basic tenets, specifications, operators, uncertainties and ambiguities

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Foreword

GB/T 24637 "General Concept of Product Geometric Technical Specifications (GPS)" is divided into 4 parts.

--- Part 1.Geometry specification and inspection model;

--- Part 2.Basic principles, specifications, operation set and uncertainty;

--- Part 3.The measured elements;

--- Part 4.Quantification of GPS deviations of geometric features.

This part is Part 2 of GB/T 24637.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB /Z 24637.2-2009 "Product Geometrical Technical Specifications (GPS) General Concept Part 2.Basic Principles, Regulations

`` Fan, operation set and uncertainty ", compared with GB /Z 24637.2-2009, the main technical changes are as follows.

--- Deleted the definition of "measurement characteristic deviation" (see.2009 version 3.1.1);

--- Deleted the definition of "measurement uncertainty" (see 3.4.2 of the.2009 edition);

--- Deleted the definition of "in accordance with uncertainty" (see.2009 version 3.4.7);

--- Change "Relevant Uncertainty" to "Functional Description Uncertainty" (see 3.3.3,.2009 version 3.4.4);

--- Modify the definition of "default specification operation" (see 3.1.2, 3.2.2 of.2009 edition);

--- Modify the definition of "ideal inspection operation" (see 3.1.6,.2009 version 3.2.6);

--- Modify the definition of "default specification operation set" (see 3.2.6,.2009 version

3.3.6).

This part uses the redrafting method to modify the adoption of ISO 17450-2..2012 "Geometric Technical Specifications of Products (GPS) General Concept No. 2

Part. Basic Principles, Norms, Operation Set and Uncertainty.

There are technical differences between this part and ISO 17450-2..2012.The corresponding technical differences and their causes are as follows.

--- With regard to normative quotation documents, this part has been adjusted with technical differences to adapt to my country's technical conditions and adjustments

The situation is reflected in Chapter 2 "Regulatory Reference Documents", with specific adjustments as follows.

* Added GB/T 18779.1;

* Replace ISO 14253-2..2011 with GB/T 18779.2 equivalent to international standards;

* Replace ISO 14978..2006 with GB/T 24634 equivalent to international standards;

* Replace ISO 14660-1..1999 and ISO 17450-1..2011 with GB/T 24637.1 modified to adopt international standards;

* Replace ISO /IEC Guide98-3..2008 with GB/T 27418 modified to adopt international standards;

* Use JJF1001 instead of ISO /IEC Guide99..2007.

This part is proposed and managed by the National Product Geometry Technical Standardization Technical Committee (SAC/TC240).

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Hai) Management Co., Ltd., Beijing Automobile Co., Ltd., Henan University of Technology.

1 Scope

This part of GB/T 24637 defines and specifications, operations, operation sets and inaccuracies used in the product geometric technical specification (GPS) standard

Terms related to grading, give the basic principles of GPS system, and discuss the impact of uncertainty in these principles

Specification and inspection process in GPS applications.

This section applies to the standard operation and inspection operation of geometric products.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article

Pieces. For the cited documents without date, the latest version (including all amendments) applies to this document.

GB/T 18779.1 Technical Specification for Product Geometric Quantity (GPS) Measurement and Inspection of Workpieces and Measuring Equipment Part 1.Inspection according to specifications

Judgment rules for pass or fail (GB/T 18779.1-2002, eqvISO 14253-1..1998)

GB/T 18779.2 Technical Specification for Product Geometric Quantity (GPS) Measurement Inspection of Workpieces and Measuring Equipment Part 2.Measuring Equipment

Guidance on the uncertainty assessment of GPS measurement in calibration and product inspection (GB/T 18779.2-2004, ISO /T S14253-2..1999, IDT)

GB/T 24634 Product Geometric Technical Specifications (GPS) General Concepts and Requirements for GPS Measuring Equipment (GB/T 24634-2009,

(ISO 14978..2006, IDT)

GB/T 24637.1 Geometrical Product Specification (GPS) General Concept Part 1.Geometric Specification and Inspection Model

(GB/T 24637.1-2020, ISO 17450-1..2011, MOD)

GB/T 27418 Evaluation and presentation of measurement uncertainty (GB/T 27418-2017, ISO /IEC Guide98-3..2008, MOD)

JJF1001 General Measurement Terms and Definitions

3 Terms and definitions

GB/T 18779.2, GB/T 24634, GB/T 24637.1, GB/T 27418, JJF1001 and the following terms and definitions apply

Used in this document. Appendix A, Figure A.1, describes the relationship between these terms.

3.1 Terms related to operation

3.1.1

Specification operation

Use mathematical expressions, geometric expressions or algorithms, or a combination of

them to define the operation of the specification section.

Note 1.Specification operation is part of the specification operation set (3.2.3), used to define a GPS requirement for a workpiece (product or part).

Note 2.Standard operation is a theoretical concept.

Example 1.In the shaft diameter specification, the smallest circumscribed cylinder is used for fitting.

Example 2.In the specification of surface structure requirements, Gaussian filter is used for filtering.