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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 38762.1-2020

Geometrical product specifications (GPS) - Dimensional tolerancing - Part 1: Linear sizes

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Foreword

GB/T 38762 "Geometric Technical Specifications (GPS) Dimensional Tolerance" is divided into 3 parts.

--- Part 1.Linear dimensions;

--- Part 2.Dimensions other than linear and angular dimensions;

--- Part 3.Angle dimensions.

This part is Part 1 of GB/T 38762.

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

This part uses the redrafting method to modify the use of ISO 14405-1..2016 "Product Geometrical Technical Specifications (GPS) Dimensional Tolerance Section 1

Part. Linear Dimensions.

The technical differences between this part and ISO 14405-1..2016 and the reasons 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.

* Replaced ISO 286-1 with GB/T 1800.1 modified to adopt international standards;

* Replaced ISO 8015 with GB/T 4249 modified to adopt international standards;

* Replace ISO 81714-1 with GB/T 16901.1 modified to adopt international standards;

* Replaced ISO 17450-1 with GB/T 24637.1 modified to adopt international standards;

* Replaced ISO 17450-2..2012 with GB/T 24637.2-2020, which adopts international standards.

* Replaced ISO 17450-3 with GB/T 24637.3 modified to adopt international standards.

This part is proposed and managed by the National Product Geometry Technical

Standardization Technical Committee (SAC/TC240).

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1 Scope

This part of GB/T 38762 establishes the default specification set of linear dimensions (see GB/T 24637.2), and specifies the

"Linear" "spherical" "toroidal" 1) "two relatively parallel planes" and "two relatively parallel straight lines" and other types of linear elements of certain dimensions

Fan operation set. In addition, this section also specifies the normative modifiers of linear dimensions and their graphic expressions.

1) When the diameter of the guideline is fixed, the torus is the dimension element.

This section covers the following linear dimensions.

a) Local dimensions.

--- Two-point size;

--- Spherical size;

--- Cross section size;

--- Partial size.

b) Global dimensions.

--- Direct global linear dimension.

--- Least square size;

--- Maximum inscribed size;

--- Minimum external dimensions;

--- Minimum area size;

--- Indirect global linear dimension.

c) Calculated size.

--- Perimeter diameter;

--- Area diameter;

--- Volume diameter.

d) Statistical size.

---biggest size;

---smallest size;

--- average size;

--- median size;

--- Extreme average size;

---Size range;

--- Standard deviation of size.

This section defines the following linear dimensional tolerances with and without specification modifiers (see Table 1 and Table 2).

--- /-limit deviation (example 0/-0.019) (see Figure 11);

--- Upper limit size (ULS)/Lower limit size (LLS) (Example 15.2max., 12min., Or 30.2/30.181) (see Figure 13);

--- Comply with the ISO tolerance zone code (example 10h6) of GB/T 1800.1 (see Figure 12).

This section provides a set of tools that describe several types of dimensional characteristics, but does not reflect the actual workpiece functional requirements and its dimensional characteristics

Information about internal relationships.