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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 24637.3-2020

**Geometrical product specifications (GPS) - General concepts -
Part 3: Tolerance features**

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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 3 of GB/T 24637.

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

This part uses the redrafting method to modify and adopt ISO 17450-3:2016) "Product Geometric Technical Specifications (GPS) General Concept No. 3

Part. Elements Under Test".

1) The revised ISO 17450-3:2016 adopted in this part cancels and replaces ISO 14660-2:1999 (GB/T 18780.2-2003).

The technical differences between this part and ISO 17450-3:2016 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 17450-1 with GB/T 24637.1 modified to adopt international standards;

* Replaced ISO 22432 with GB/T 38760 modified to adopt international standards;

* Replaced ISO 25378 with GB/T 38761 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 24637 gives the default definition of the extracted elements (composition or export) of the workpiece, which are all used in the GPS specification.

Measurement elements (size, geometry or surface structure specifications). This section defines the default geometric elements used to define GPS features.

This part is applicable to the extraction elements of workpieces in product geometric technical specifications and inspection.

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 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 38760 Product Geometric Technical Specification (GPS) specifications and elements used in inspection (GB/T 38760-2020,

ISO 22432..2011, MOD)

GB/T 38761 Geometrical Product Specification (GPS) Features and Conditions Definition (GB/T 38761-2020, ISO 25378.

2011, MOD)

3 Terms and definitions

The terms and definitions defined in GB/T 24637.1, GB/T 38760 and GB/T 38761 and the following apply to this document.

3.1

Relative point pair

The set of two points established at the same time, the distance between the two points is the local size of a size element.

Note 1. The distance between the two points forming the point pair is the size of the two points (see GB/T 38762.1).

Note 2. In the case where the dimension element is "two relatively parallel planes", the center point of the extracted relative point pair is on the center extraction plane.

3.2

Elementary toleranced feature

Define the smallest component of a complete geometric element of GPS characteristics.

Example 1.

For the unrestricted plane specification, a global GPS feature is defined for the complete component, in this case, it is a basic measured element.

Example 2.

For straight line specifications, it is possible to define a local GPS feature for each line feature in a given direction in the complete component, and each line feature is a plane

The intersection of the element and the complete constituent element, and is a basic measured element. The complete component is a measured element.

3.3

Measured feature toleranced feature

Complete measured element complete toleranced feature

A set of one or more geometric elements that define GPS characteristics, or a combination of basic measured elements.