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

**GB/T 3505-2009**

Replacing GB/T 3505-2000

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**Geometrical product specifications (GPS) -- Surface texture:  
Profile method -- Terms, definitions and surface texture  
parameters**

产品几何技术规范（GPS）表面结构 轮廓法 术语、定义及表面结构参数  
**(English Translation)**

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### Foreword

This standard is equivalent to international standards ISO 4287:1997 "Geometrical Product surface contour law term structure specification (GPS), Definitions and surface texture parameters "(in English).

This standard replaces GB/T 3505-2000 "term Geometrical Product Specifications Surface texture Profile method surface structure, definitions and parameters. " Compared with GB/T 3505-2000, the main changes are as follows.

- Remove the foreword and introduction of international standards;
- According to GB/T 1.1-2000 Standardization Guide Part 1. Standard structure and writing rules requirements, Write format GB/T 3505-2000 were modified, such as a standard cover page and the like;
- Of GB/T 3505-2000 standard name was revised agreement with the new standards;
- Increased 2 normative references;
- Some of the terms of the text name of unity modify the original text of the "horizontal position Ba 'to' section height Ba" will "outline Average height of the unit "to" average height profile unit "and so on;

Appendix A of this standard is a normative appendix, Appendix B, Appendix C and Appendix D are informative appendices. This standard GPS System

Position illustrated in Appendix D.

The standard dimensions and geometry by the National Technical Committee of Standardization Technical Specification (SAC/TC240) and focal points.

This standard was drafted. the machine Productivity Promotion Center, Harbin Measuring & Cutting Tool Group Co., Ltd., China Institute of Metrology, Beijing Institute of measurement testing.

## 1 Scope

This standard specifies the method to determine the contours of the surface structures (roughness, waviness and primary profile) terms, definitions and parameters.

This standard applies to technical standards and documents as well as science and technology publications.

## 2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 6062-2009 Geometrical product specifications (GPS) Surface texture Profile method of contact (stylus) instruments nominal Laid Resistance (ISO 3274:1996, IDT) GB/T 10610-2009 Geometrical Product Specifications Surface texture Profile method - Rules and procedures for evaluation of the surface structure (ISO 4288:1997, IDT) Metrological characteristics GB/T 18777-2002 Geometrical Product Specifications Surface texture Profile method of phase correct filters (Eqv ISO 11562:1996) GB/Z20308-2006 Geometrical product specifications (GPS) Master Plan (ISO/T R14638.1995, MOD)

## 3 Terms and Definitions

The following terms and definitions apply to this standard.

### 3.1 General terms

#### 3.1.1

The outline is divided into short-wave and long-wave filter components.

**Note:** The use of three filter (see Fig. 1) measuring roughness, waviness and primary profile of the instrument. They all have the same GB/T 18777 provisions of Transmission characteristics, but different cutoff wavelengths.

##### 3.1.1.1

Filter between the determined present on the surface roughness and shorter than its component waves intersect boundaries (see Figure 1).

##### 3.1.1.2

Determine the filter intersecting boundaries between roughness and waviness components (see Figure 1).

### 3.1.1.3

Determining the presence of the filter intersects the boundaries between the waviness on the surface of the component than its longer waves (see Figure 1).

GB/T 3505-2009/ISO 4287:1997