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

GB/T 39642-2020

**Technical product specification (TPS). Application guidance.
International model for national implementation**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1:1-2009:

This standard uses the redrafting method to amend and adopt ISO /T R23605:2018
National Standards for Application Guidelines for Product Technical Specifications (TPS)

International Model for Quasi-applications:

The technical differences between this standard and ISO /T R23605:2018 and the reasons are as follows:

---The international standards mentioned in ISO /T R23605:2018, wherever there is a corresponding Chinese standard, the Chinese standard is used:

To adapt to the actual application in our country:

This standard has made the following editorial changes:

---In accordance with the requirements of GB/T 1:1-2009, in the "Scope" chapter, "This standard applies to systems using GPS and TPD standards

Manufacturing enterprises":

This standard was proposed and managed by the National Standardization Technical Committee for Product Geometric Technical Specifications (SAC/TC240):

Drafting organizations of this standard: China Machinery Productivity Promotion Center, Shanghai Institute of Metrology and Testing Technology, Harbin Institute of Technology, Dekeyi (North

Beijing) Technology Co., Ltd., Pan Asia Automotive Technology Center Co., Ltd., Anji Asia Pacific Brake System Co., Ltd:

Introduction

The industrial fields of all developed countries in the world are paying more and more attention to design and assembly, and the manufacturing of parts and components is contracted:

The project is outsourced in a way, and this process will not be restricted and restricted by national boundaries: In addition, many companies have gradually deepened their

The dependence of the system reduces the influence of human factors in the manufacturing process:

These common trends have caused the impact of amplifying the limitations of some traditional technical specifications, and the lack of clear manufacturing and inspection stages of uncertainty:

The requirements of a certain degree:

The purpose of formulating this standard is to promote product technical specifications (TPS) through the application of current national standards and national standards under development

improvement of:

The main goal of the Standardization Technical Committee is to ensure that there are the necessary tools to prepare detailed and accurate specifications: The content covers the following seven

field:

- Design implementation plan (conceptual design);
- Product geometric technical specifications (simple and specific content);
- Graphic design (dimension tolerance engineering drawings);
- Inspection (measurement and precision measurement);
- Technical documents (process and testing);
- Electronic documents and controls;
- Related tools and equipment:

There are two standardization technical committees in my country responsible for determining and evaluating related to the preparation, presentation and verification of technical specifications in the field of mechanical engineering

Requirements of national standards, and is responsible for drafting all such standards that are actually needed: Their joint work plan addresses these technical specifications

Standardization requirements in all stages from the physical realization of the design concept preparation to the finished product verification:

Technical Product Document (TPD) is the field of SAC/TC146, and its scope is to formulate, coordinate and maintain the national standard of TPD, including

In the product life cycle, in order to achieve technical purposes, manual drawing or computer-based technical drawings, in order to facilitate preparation, management,

Store, retrieve, copy, exchange and use:

The Standardization Technical Committee is based on the more traditional engineering drawing disciplines, but its scope has been expanded to include all

A formal product technical specification, no matter which medium is chosen to support the specification: Especially those that contain graphs output using 3D modeling

Shape expression and description: The work of SAC/TC146 is closely related to the work of SAC/TC240 (see below), and works closely at the policy formulation level:

The working groups also maintain the closest contact:

SAC/TC240 is a standardization technical committee responsible for formulating product geometric technical specifications (GPS) standards, corresponding to the International Standardization Group

Weaving ISO /TC213: Its main goal is to develop and promote a complete specification and inspection system for the geometric characteristics of workpieces:

The system can be used as an enhanced tool for product development and manufacturing: In the context of international outsourcing mentioned earlier, as companies develop new technologies and new systems

With the rapid development of manufacturing technology, new materials and advanced product technology, such a system is indispensable:

This standard specifies the format and overall content for compiling all forms of TPS specifications, and aims to promote product technical definitions,

The formulation of specifications and graphical representations, including an index to a series of standards (core scope), is to achieve international compatibility between these standards

Necessary (see Appendix A, and the abolished ISO /TC213 standard see Appendix B): The core scope of the standard index not only includes the SAC/TC240

The prepared standards also include those prepared by other related standardization technical committees (mainly SAC/TC146): This way is

The main body of domestic standards serves as the basis for the work of standards in the mechanical engineering field: It should be noted that its structural regulations require appropriate supplementary

In the case of filling information, supplementary information can be added by means of comments and suggestions, but any such situation shall not be consistent with the published standards:

conflict:

In this standard, a standard framework is constructed by referencing the standard: In addition, for an overview of product geometric specifications and standards, see

GB/T 20308, which explains the concept of related standards and gives a standard matrix model:

The standards developed in the GPS field form an interrelated standard structure and