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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/Z 29014.5-2024

Cutting tool data representation and exchange - Part 5: Reference dictionary for assembly items

切削刀具数据表达与交换 第5部分：装配项目参考字典

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Table of Contents

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1.Structure and drafting rules for standardization documents" Drafting. This document is part 5 of GB /Z 29014 "Cutting tool data representation and exchange". GB /Z 29014 has published the following part.

1.Overview, basic principles and general information model;

2.Reference dictionary for cutting items;

3.Tool item reference dictionary;

4.Adaptation item reference dictionary;

5.Assembly item reference dictionary;

--- Part 100: Definitions, principles and methods of reference dictionaries. This document is equivalent to ISO /T S13399-5.2014 "Cutting tool data expression and exchange Part

5.Assembly item reference word The document type was adjusted from ISO technical specifications to my country's national standardization guiding technical documents. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed by the China Machinery Industry Federation. This document is under the jurisdiction of the National Technical Committee for Standardization of Cutting Tools (SAC/TC91). This document was drafted by: Chengdu Tool Research Institute Co., Ltd. and Chengdu Tool Testing Institute. The main drafters of this document are. Qiu Yi, Xu Gang, Chen Wenlang, Shen Shichang, Zhu Hong, Zhu Guoli and Wu Xingsheng.

GB /Z 29014 provides a method for describing various data related to cutting tools and cutting tool assemblies by providing the information structure required. A method for realizing the informational expression of cutting tool data (including all items between the workpiece and the machine tool). Replaceable cutting items), solid tools (e.g. solid drills and solid end mills), assembly tools (e.g. boring bars, indexable drills and Information on indexable milling cutters), adapters (e.g. milling shanks and chucks), components (e.g. washers, screws and clamps) or any combination of these can be included. Exchange. It is intended to facilitate the use, processing and exchange of cutting tool data within and between manufacturers, distributors and users. This document is Part 5 of GB /Z 29014 "Cutting tool data expression and exchange". GB /Z 29014 consists of 6 parts.

1.Overview, basic principles and general information model. The purpose is to provide a basis for the expression and exchange of cutting tool data. These principles and general information model are used for other parts of GB /Z 29014.

2.Reference dictionary for cutting items. The purpose is to provide a reference dictionary for cutting items to support the use of The general information model defined in GB /Z 29014.1.

3.Tool project reference dictionary. The purpose is to provide a reference dictionary for tool projects to support the use of The general information model defined in GB /Z 29014.1.

4.Adaptation project reference dictionary. The purpose is to provide a reference dictionary for adaptation projects to support the use of The general information model defined in GB /Z 29014.1.

1 Scope

GB/Z 29014.5-2024 is the part of the cutting tool data series covering assembly items - the adaptors, collets, chucks, extensions and clamping components that sit between the machine spindle and the cutting edge. They are what makes a tool a usable assembly, and they are the part most often overlooked in tool data: a shop's system may know its inserts and holders precisely and still be unable to compute the assembly's gauge length or check whether a combination can physically be built, because the connecting items are described in free text. This part specifies a reference dictionary of assembly items and the properties and value ranges that describe them, including the definition and identification of assembly item classes, the classification schemes for them, and the definitions of their properties - machine-readable, so that CAM systems, tool management databases and supplier catalogues can exchange assemblies rather than loose components. As a GB/Z it is a guiding technical document. Under ICS 35.240.50 and CCS J41, it is written for tooling manufacturers publishing electronic catalogues, for CAM and tool management software vendors, and for manufacturing engineering departments building tool libraries. It rests on the information model of GB/Z 29014.1.

This document specifies a reference dictionary of assembly items and the properties and

value ranges they describe. The reference dictionaries specified in this document include.

--- Definition and identification of assembly item classes, and related classification schemes;

--- Definition and identification of data element types representing the characteristics of assembly items;

---Used to describe the definition and identification of the value domain of the above data element type. Each class, property, or value range of this application domain is counted as a reference dictionary entry defined in this document. It is associated with a computer-recognizable and The human-readable definition is associated with a computer-readable identifier. The identifier of the dictionary entry accepts the definition from the implementation of GB /Z 29014.1 It can be unambiguously referenced in any application of the information model. Dictionary entries are defined and identified by means of standard data defined in a common dictionary schema. The EXPRESS entity data type is composed of instances of the EXPRESS entity data type. This result is a joint effort between ISO /TC184/SC4 and IEC SC3D. force, and the extensions defined in ISO 13584-24 and ISO 13584-25. This document applies to.

---Represents standard data of various cutting tool assembly item categories;

---Standard data indicating the characteristics of various cutting tool assembly items;

--- Standard data indicating the characteristic value range for cutting tool assembly items;

---The implementation method by which the standard data defined in this document can be exchanged. NOTE 1 ISO 10303-21 specifies the means by which the standard data defined in this document can be exchanged. This document does not apply to.

---Specialized or specialized knowledge in the design and use of cutting tools;

--- Principles for determining what information should be transmitted;

---Applications that can store or reference these standard data;

--- In addition to the implementation methods defined in this document, other methods that can achieve standard data exchange and reference;

---Cutting tool information model;

--- Definition of cutting item classes and characteristics;

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.