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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 2081-2018

Replacing GB/T 2081-1987

Indexable hard metal (carbide) inserts with wiper edges, without fixing hole -- Dimensions

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Foreword

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

This standard replaces GB/T 2081-1987 "Carbide Indexable Milling Insert", compared with GB/T 2081-1987, the main changes are as follows.

---Modified the standard name, changing the standard name from "Carbide Indexable Milling Insert" to "Hard-fit with light-cutting edge and no fixing hole"

Gold indexable milling insert size";

--- Added Chapter 3 "Blade Type" and Chapter 4 "Interchangeability";

--- Added Chapter 5 "Name and Logo";

--- Adjust Tables 1 to 12 according to ISO 3365 layout;

--- Removed the requirements of Table 8 of the original standard, namely the requirements and regulations of FPCN;

--- Removed the requirements of Table 9 of the original standard, that is, the requirements and regulations of LPEX;

--- Removed the technical requirements in the original standard;

--- Move the original Appendix B to Appendix A;

--- Removed the original standard Appendix C "Carbide indexable insert blank for milling";

--- Added Appendix C "with light wiper, no fixed hole blade size range";

--- Added Appendix D "Correspondence between this standard and ISO 13399".

This standard uses the translation method equivalent to ISO 3365.2016 "Carbide indexable milling inserts with a light-cutting edge and no fixing holes".

The documents of our country that have a consistent correspondence with the international documents referenced in this standard are as follows.

---GB/T 2075-2007 Classification and use of hard cutting materials for cutting Large group and use group classification code

(ISO 513.2004, IDT)

---GB/T 2076-2007 Index for indexable inserts for cutting tools (ISO 1832.2004, MOD)

This standard was proposed by the China Nonferrous Metals Industry Association.

This standard is under the jurisdiction of the National Nonferrous Metals Standardization Technical Committee (SAC/TC243).

This standard was drafted. Zhuzhou Diamond Cutting Tool Co., Ltd., Xiamen Golden Heron Special Alloy Co., Ltd., Zigong Cemented Carbide

Limited liability company, Shenzhen Injection Technology Co., Ltd., Zhuzhou Cemented Carbide Group Co., Ltd.

1 Scope

This standard specifies the size of carbide indexable milling inserts with wiper and without fixing holes. These blades are mainly pressed by the top or wedge

Tightly mounted on the milling tool.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

ISO 513 Classification and use of hard cutting materials for metal cutting. Classification and use of large groups and use groups (Classification

Andapplicationofhardcuttingmaterialsformetalremovalwithdefinedcuttingedges-Designationo
f

Themaingroupsandgroupsofapplication)

ISO 1832 cutting tool indexable insert name and symbol
(Indexableinsertsforcuttingtools-Designation)

3 blade type

The carbide indexable inserts specified in this standard are of the following types.

---TPPPN

An equilateral triangle blade with a 11° back angle, a 90° lead angle, and a 11° wiper back angle;

---TPPDR; TPPDL

An asymmetrical triangular blade having a chamfer, a 11° relief angle, a 90° lead angle, and a 15° wiper back angle;

---TEPER;TEPEL

An asymmetrical triangular blade having a chamfer, a 20° relief angle, a 90° lead angle, and a 20° wiper back angle;

---SNENN

a square blade with chamfer, 0° back angle, 75° lead angle, 0° wiper back angle;

---SPEDR; SPEDL

An asymmetrical square blade having a chamfer, a 11° relief angle, a 75° lead angle, and a 15° wiper back angle;

---SNANN

Square blade with 0° back angle, 45° lead angle, 0° wiper back angle;

---SEEER; SEEEL

Asymmetrical square blade with a 20° back angle, a 75° lead angle, and a 20° wiper back angle.

The standard only specifies blades with a wiper without fixing holes without chipbreakers.

4.1 Tolerance

According to ISO 1832, the carbide indexable inserts mentioned in this standard provide the following tolerance levels.

a) 0°, 11° back angle inserts (TP, SN and SP). The tolerance grades are divided into A grade, C grade, K grade, of which grade C is mainly used for coating.

blade;

b) 20° back angle insert (TE, SE). tolerance class C.

Appendix A gives these tolerance values in accordance with ISO 1832. For other tolerances, see the drawings and tables for the blade dimensions in Chapter 7.

4.2 Size m

The m value specified in this standard is the theoretical value. In fact, due to the different manufacturing and inspection positions of the blades, different manufacturers will guide

The size of the m value varies within +/-0.05 mm. For the same blade manufacturer, the m value shall be implemented in accordance with ISO 1832 (see

Appendix A).

5.1 Name

The name of the carbide indexable inserts shall be in accordance with ISO 1832. Except for the name, one or both of the following may be indicated.

--- Indicate the application area code according to ISO 513;

--- Carbide grade.

5.2 Identification

The following markings should be on the blade (unless the blade is too small to be identified). Application code or carbide grade (if the blade is large enough,

It is also possible to identify both).

6 detection

See Appendix B for the method for detecting the m value of cemented carbide indexable inserts.

7 recommended size

When using, try to use the recommended size of the blade given in Tables 1 to 12.

7.1 triangular blade

7.1.1 The 90° lead angle, the 11° back angle, and the 11° wiper back angle are shown in Figure 1. The parameters are shown in Table 1. The tolerances are shown in Table 2.