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**Core drills with parallel shanks and with Morse taper shanks**

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### 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 of Standardization Documents" drafted.

This document replaces GB/T 4256-2004 "Straight Shank and Morse Taper Shank Reaming Drills". Compared with GB/T 4256-2004, except for structural adjustment

In addition to editorial changes, the main technical changes are as follows.

--- The scope of this document is added for the manufacture of straight shank reamer and Morse taper shank reamer (see Chapter 1);

--- Added terms and definitions (see Chapter 3);

--- Changed Figure 1 and Figure 2 (see Figure 1 and Figure 2, Figure 1 and Figure 2 of the.2004 edition);

--- Added mark (see 4.5);

--- Changed the title and content of Chapter 5 (see Chapter 5, Chapter 4 of the.2004 edition);

--- Added Appendix A (see Appendix A).

This document is modified using ISO 7079.2016 "Straight Shank and Morse Taper Shank Reaming Drills".

This document has the following structural adjustments compared to ISO 7079.2016.

--- Added Chapter 3 Terms and Definitions;

---4.1, 4.2 correspond to the paragraphs in ISO 7079.2016 Table 1, Table 2, Table 3, Table 4;

---4.3 corresponds to Chapter 3 of ISO 7079.2016, 4.4 corresponds to Chapter 4 of ISO 7079.2016;

--- Added 4.5 markers.

The technical differences between this document and ISO 7079.2016 and their reasons are as follows.

--- Replaced ISO 296 with the normatively quoted GB/T 1443 to adapt to the technical conditions of our country;

--- Modified Figure 1 and Figure 2 to facilitate the use of this document;

--- The cutting diameter tolerance (h8) in Table 1 and Table 3 is placed in 4.2, which is convenient for the use of this document;

---The length tolerance in Table 2 and Table 4 is put into 4.1, which is convenient for the use of this document;

--- Added mark to facilitate the use of this document.

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

## 1 Scope

This document specifies the types, dimensions and tolerances of straight shank reamer and Morse taper shank reamer.

This document lists two tables for each of the above types of reamer.

--- the preferred size;

--- Dimensions segmented by diameter range.

Only metric sizes are recommended in this document, and only metric sizes will be recommended for this type of reamer in the future.

Unless otherwise stated, these reamers are made to cut right.

This document applies to the manufacture of straight shank reamers and Morse taper reamers.

## 2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB/T 1443 Self-clamping cones for machine tools and tool handles (GB/T 1443-2016, ISO 296.1991, MOD)

### 3 Terms and Definitions

There are no terms and definitions that need to be defined in this document.

#### 4.1 Reaming drill length tolerance

Within a diameter range segment, the minimum and maximum limit values of the total length ( $l$ ) and the cutting edge length ( $l_1$ ) are allowed to vary, which are equal to the adjacent upper and lower two

The length specified by the diameter range segment.

Example. For a straight shank reaming drill with a diameter of 15mm, the nominal value of the cutting edge length ( $l_1$ ) is 114mm, which can vary from 108mm to 120mm; the nominal value of the total length ( $l$ ) is 114mm.

The weighing value is 169mm, which can be changed from 160mm to 178mm.

#### 4.2 Diameter tolerance of reamer

The diameter tolerance of the reaming drill is h8, which is measured close to the drill tip.

#### 4.3 Type and size of straight shank reamer

The type and size of the straight shank reaming drill are as specified in Figure 1 and Table 1 and Table 2. For the correspondence between names and symbols and ISO 13399, please refer to the appendix

Record A.