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

GB/T 26280-2026

Replacing GB/T 26280-2010

Integral drill steels for rock drilling

凿岩用硬质合金整体钎

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 26280-2010 "Hard Alloy Integral Drill Bits for Rock Drilling". Compared with GB/T 26280-2010, the only differences are in the structural design. Aside from integration and editorial changes, the main technical changes are as follows:

- The scope has been changed (see Chapter 1, Chapter 1 of the.2010 edition);
- The entries "R25-H25xD, R28-H25xD, R28-H28xD, R32-H28xD" have been deleted (see Table 1 in the.2010 edition);
- The specification notation method has been changed (see 5.1, 5.3 in the.2010 version);
- Added schematic diagrams and requirements for integral quarrying drill bits (see 6.1.2);
- Added surface requirements for integral drill rods used in quarrying (see 6.3.4);
- The section on the overall brazing waveform threaded shank has been removed (see section 6.4 of the.2010 edition);
- The requirements for cemented carbide materials used in integral drill bits have been added (see 6.2.2). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China Iron and Steel Association. This document is

under the jurisdiction of the National Steel Standardization Technical Committee (SAC/TC183). This document was drafted by: Shougang Guiyang Special Steel Co., Ltd., Zhejiang Pulanka Drilling Tools Co., Ltd., and Shandong Pengrui Rock Drilling Technology Co., Ltd. Technology Co., Ltd., Metallurgical Industry Information and Standardization Research Institute, China Steel Structure Association, Jianhu County Hongda Valve and Pipe Fittings Co., Ltd. The main drafters of this document are. Xiong Jiaze, Yang Yun, Shen Guohua, Ma Yuanpeng, Xu Haochi, Shen Linggen, Sun Wei, Wang Yujie, Wu Qichun, and Zhang Jizhou. He Chao, Liu Baoshi, Xu Suicheng, Wu Yao. This document was first published in 2010, and this is its first revision. Carbide integral drill bit for rock drilling

1. Scope This document specifies the specification codes, technical requirements, test methods, inspection rules, packaging, marking, and quality of solid carbide drill bits for rock drilling. Certificates and transportation and storage. This document applies to H19, H22, and H25 specification cemented carbide integral drill bits (hereinafter referred to as "integral drill bits") for rock drilling.

4. Order details Contracts or orders placed in accordance with this document shall include at least the following.

a) Product Name;

5 Specification Code

5.1 The specification representation method for the overall brazing dowel is as follows:

5.2 A schematic diagram of the overall drill bit is shown in Figure 1.

5.3 Based on the type of drill bit alloy and the type of drill bit structure, integral drill bits are classified into four types. single-blade (-), three-blade (), cross-shaped (), and cylindrical (B). And composite type (F), common types are shown in Figure

2. Other drill bit shapes and alloy tooth patterns can also be provided upon negotiation between the supplier and the buyer. Body drill.

6.1 Dimensions, shape and permissible deviations

6.1.1 The diameter D of the integral drill bit for H19, H22 and H25 and the effective length L of the drill rod shall meet the requirements of Tables 1, 2 and 3.

6.1.2 When the recommended combination of integral drill bit diameter D and effective drill rod length L cannot be used, different heads as shown in the table may also be used. The combination of diameter D and effective length L of the drill rod.

6.1.3 A schematic diagram of the integral drill bit used in quarrying is shown in Figure

3. The drill bit diameter D and the effective length L of the drill rod should meet the requirements of Table

4. This should be agreed upon by both the supplier and the buyer. The supplier should specify in the contract that other sizes of integral quarrying drill bits may be used.

6.1.4 The permissible deviations of the overall drill bit diameter D and the effective length L of the drill rod shall conform to the provisions of Table 5.

6.1.5 The schematic diagram, dimensions and allowable deviations of the drill bit structure shall conform to the provisions of Figure 4.

6.1.6 The straightness of the entire drill rod body shall not exceed

6.1.7 The coaxiality between the drill bit and the rod body shall not exceed 2mm, and the coaxiality between the drill tail and the rod body shall not exceed 1mm.

6.2 Raw Material Requirements

6.2.1 Hollow steel for integral brazing shall comply with the provisions of GB/T 1301.

6.2.2 The cemented carbide used for integral brazing tips shall conform to the requirements of YS/T 296 and GB/T 2527, and high-quality cemented carbide that has been pressure-sintered is preferred. alloy.

6.3 Processing Requirements

6.3.1 The surface hardness of the integral drill bit steel body should not be less than HRC28.

6.3.2 The integral drill bit shoulder and drill bit head should be forged, preferably using medium frequency induction heating.

6.3.3 The hardness of the entire brazing tip should not be less than HRC48.

6.3.4 The effective working part of the integral drill rod used for quarrying should not have obvious tool marks, vibration marks, or steps.

6.3.5 The total decarburized layer depth on a single side of the integral brazing wire should not exceed $(0.20 \sim 1\%S)$ mm, where S is the nominal dimension of the hollow steel.

6.4 Surface Quality

6.4.1 The allowable weld defects at each point of the integral brazing tip weld shall be less than 3mm, and the cumulative weld defects shall be less than 5% of the total weld length. There shall be no incomplete welds or false welds. Phenomenon.

6.4.2 The entire drill rod body, drill bit, and drill cutting edge shall not have cracks, burrs, or chipped corners.

6.4.3 The overall water penetration holes should be unobstructed.

6.4.4 The drill bit should not have obvious weld marks.

6.4.5 The entire brazing line should undergo surface strengthening and anti-corrosion treatment.

7. Test Methods The inspection items, sampling quantity, and test methods for integral brazing shall comply with the provisions of Table 6.

8 Inspection Rules

8.1 Inspection and Acceptance The inspection and acceptance of the entire drill bit shall be carried out by the supplier's quality and technical inspection department. The buyer has the right to conduct the inspection.

8.2 Batching Rules Integral brazing should be accepted in batches, with each batch consisting of integral brazing pieces of the same brand, code, specification, and heat treatment process.

8.3 Sampling Quantity The sampling locations and quantities for the entire probe should be in accordance with the provisions of Table 6.

8.4 Re-examination and Judgment The re-inspection and judgment of integral brazing shall comply with the provisions of GB/T 2101. When the decarburized layer is unqualified, the re-inspection sample shall be taken from the finished product.

8.5 Numerical Rounding The rounding and judgment of test results shall comply with the provisions of YB/T 081.

9 Packaging, marking, quality certificate, and transportation and storage

9.1 Each bundle of integral rods consists of products of the same specification, model, material, and heat treatment batch. They are packaged in bundles of 4 to 6 rods. The bundles are formed into small bundles, which are then packaged into larger bundles, each weighing no more than 2 tons. Any special requirements will be negotiated between the supplier and the buyer.

9.2 Each bundle of integral rods shall have a label containing the following information. supplier's name, product name, product specifications, production batch number, and product quantity.

9.3 Each batch of integral brazing tools shall be accompanied by a supplier's quality certificate, which shall include. supplier's name or trademark, product name, document number, and specification code. Product number, product quantity, inspection date, and the supplier's technical supervision department's seal of approval.

9.4 During storage and transportation, integral drill bits should be protected from bending,