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

GB/T 36231.2-2018

**Mining machinery - Graphical symbols - Part 2: Mineral
processing equipment**

矿山机械 图形符号 第2部分：矿物选别加工处理设备

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Foreword

GB/T 36231 "Graphic Symbols for Mining Machinery" is divided into two parts.

---Part 1. Mineral mining equipment;

--- Part 2. Mineral processing equipment. This part is the second part of GB/T 36231. This part is drafted in accordance with the rules given in GB/T 1.1-2009. This part was proposed by the China Machinery Industry Federation. This part is under the jurisdiction of the National Mining Machinery Standardization Technical Committee (SAC/TC88). This section drafted by: Luoyang Mining Machinery Engineering Design and Research Institute Co., Ltd., Zhejiang Mining Machinery Co., Ltd., CITIC Heavy Industries Machinery Co., Ltd., Zhejiang Wujing Machinery Manufacturing Co., Ltd., Senhe Elevator Co., Ltd., North Heavy Industry Group Co., Ltd., Henan Dawn Heavy Industry Technology Co., Ltd. The main drafters of this section. Chen Xueting, Dai Sujiang, Hu Xilei, Liu Guoxiang, Wang Qibing, Pan Deqiang, Bai

Yinghui, Wang Yadong. Mining machinery graphic symbol Part 2. Mineral sorting processing equipment

1 Scope

Part 2 of China's national standard for mining machinery graphical symbols, covering mineral processing equipment. It specifies the symbols, their design principles and the rules for their use, and it applies to mineral processing flow diagrams. Where Part 1 covers what gets the ore out of the ground, this part covers what happens to it afterwards: crushing, grinding, screening, classification, flotation, magnetic and gravity separation, thickening, filtration and drying. A processing plant is far more intricate than a mine on a diagram, because the streams divide and recombine - concentrate, middlings and tailings from each stage, with the middlings usually returned to an earlier one - and the recirculating loads are the thing an engineer reads the diagram to understand. Symbols that distinguish a rod mill from a ball mill, a spiral from a cyclone, a drum filter from a belt filter are what make that reading possible at a glance rather than by consulting a legend.

This part of GB/T 36231 specifies the graphical symbols of the mineral sorting processing equipment and its design principles and rules of use. This section applies to the process flow chart of mineral sorting and equipment, drawings, diagrams and related technical documents, and is also applicable to other industries. Technical documents of machinery.

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.

GB/T 16900 graphical symbol representation rules

GB/T 16901.1 Technical documents with graphical symbols to represent rules Part 1. Basic rules

GB/T 16901.2 Technical documents with graphical symbols to represent rules Part 2. Graphical symbols (including graphics in the base symbol library) Computer electronic file format specification and its exchange requirements

GB/T 17450 technical drawing line

GB/T 20001.2 standard writing rules Part 2. Symbol standards

3 Design principles for graphic symbols used in mining machinery technical documents

3.1 Graphic symbol design procedures and design should follow GB/T 16900, GB/T 16901.1, GB/T 16901.2 and GB/T 20001.2 Provisions.

3.2 Graphic symbols should be designed according to the external shape and structural

features of the expression object, so that it is clear and concise, easy to draw, easy to understand, easy to remember, Easy to distinguish.

3.3 The graphic symbols specified in this part are designed in a 0.125M dot matrix grid system. When used, the graphic symbols can be different according to needs. The direction is adjusted in the same proportion or in different proportions, but the information of the original graphic symbol should be completely transmitted.

3.4 Graphic symbols are generally drawn from one direction of the expression object, or different graphics symbols can be drawn according to different views or functional requirements. Number, but should be given a different name.

3.5 Design graphic symbols apply the line drawing specified in GB/T 17450.

3.6 For the unrestricted mining machinery graphic symbols, the design principles of this part can be used to promote and derive the design, and can also refer to international standards and other Symbols specified by national standards, but the meaning of these symbols should be noted.

4 Rules for the use of graphical symbols for mining machinery technical documents

4.1 When using graphic symbols, apply the line drawing specified in GB/T 17450.

4.2 The direction of the graphical symbols specified in this section can be rotated at an angle or mirrored as needed.

4.3 You can add or delete arrows that indicate the direction of motion.

5 Graphic symbols

5.1 The graphical symbols of the crushing and grinding equipment are shown in Table 1.

5.2 The graphical symbols of the mining screening equipment are shown in Table 2.

5.3 The graphical symbols of the washing equipment are shown in Table 3.

5.4 The graphical symbols of the roasting equipment are shown in Table 4.

5.5 The graphical symbols of mineral deep processing equipment are shown in Table 5.

5.6 The graphical symbols of general mining equipment are shown in Table 6. Table

8 Forming Machine 5-

9 Press Forming Machine Table 5 (continued) Number graphic symbol name note 5-10 two-way press molding machine 5-

10 Shaker 3-

11 Jig 3-12 heavy medium concentrator Table 3 (continued) Number graphic symbol name note 3-

13 Scraper heavy medium Quality sorter 3-14 dry sorter 3-15 slot sorter 3-16 flotation machine Table 3 (continued) Number graphic symbol name note 3-

13 Rotating probability sieve 2-

14 Vibration probability sieve Table 2 (continued) Number graphic symbol name note 2-15 banana sieve 2-16 relaxation sieve 2-

17 Roller screen 2-18 drum screen Table 2 (continued) Number graphic symbol name note 2-19 mesh vibrating screen 2-20 hydraulic screen 2-

21 Shaking Screen 2-22 multi-screen table

3 Number graphic symbol name note 3-1 mechanical classifier 3-2 single spiral classifier 3-3 double spiral classifier 3-4 hydraulic classifier Table 3 (continued) Number graphic symbol name note 3-5 cyclone 3-6 grading cyclone 3-

7 Concentrated cyclone 3-8 heavy medium cyclone Table 3 (continued) Number graphic symbol name note 3-9 water medium cyclone 3-

14 Disc Feeder 6-

15 Rotary Feeder 6-16 reciprocating coal feeder Table 6 (continued) Number graphic symbol name note 6-

15 Injection Molding Machine 5-16 horizontal mixing mill 5-

17 Vertical mixing mill Table 5 (continued) Number graphic symbol name note 5-18 ring roller mill 5-19 horizontal roller mill 5-

17 Flotation column (high column) 3-

18 Flotation column (short column) 3-19 magnetic separator 3-20 vibrating magnetic separator Table 3 (continued) Number graphic symbol name note 3-21 cartridge magnetic separator 3-22 belt magnetic separator 3-

23 Roll Magnetic Separator 3-24 ring magnetic separator Table 3 (continued) Number graphic symbol name note 3-25 disk magnetic separator 3-26 magnetic dehydration tank 3-27 magnetic separation column 3-28 permanent magnet magnetic roller Table 3 (continued) Number graphic symbol name note 3-