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

**GB/T 36231.1-2018**

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**Mining machinery - Graphical symbols - Part 1: Mineral mining  
equipment**

矿山机械 图形符号 第1部分：矿物开采设备

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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 first 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., Beijing Anshisheng Technology Co., Ltd., Pingxiang College, Jiangxi Lanxiang Heavy Industry Co., Ltd. Limited company, Taiyuan Heavy Machinery Group Engineering Technology Development Co., Ltd. The main drafters of this section. Hu Xilei, Chen Xueting, Dai Sujiang, Wang Yadong, Liu Guoxiang, Shang Tiejun, He Ping, Li Yang, Sun Gang. Mining machinery graphic symbol Part 1. Mineral mining equipment

### 1 Scope

Part 1 of China's national standard for mining machinery graphical symbols, covering mineral mining equipment. It specifies the symbols, the principles by which they are designed and the rules for using them, and it applies to mineral mining process flow diagrams. A process flow diagram is how a mine or a plant is described to everyone who is not standing in it - the designer, the buyer, the contractor, the operator, the regulator - and it works only if the symbols mean the same thing to all of them. Mining has a long tradition of drawing its own, and the result was that a shaft hoist, a conveyor, a feeder or a crusher looked different on drawings from different design institutes. Standardising them is unglamorous and it removes a whole class of misunderstanding, particularly on projects where the equipment comes from one country and is installed in another. Specifying the design principles alongside the symbols is what lets a new machine be drawn consistently rather than left to invention.

This part of GB/T 36231 specifies the graphical symbols of mining machinery mineral mining equipment and its design principles and rules of use. This section applies to the mineral mining process flow chart and equipment layout drawings, sketches and related technical documents, as well as other similar machines in other industries. Mechanical technical documentation.

## 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, which should be clear and concise, easy to draw, easy to understand, easy to remember, easy 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.