

ICS 77.150.99

CCS H 63



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

GB/T 4182-2017

Molybdenum wire

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Issued on: July 12, 2017

Implemented on: June 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 4182-2003 "molybdenum wire". This standard and GB/T 4182-2003 compared to the main changes are as follows:

- increased the definition of molybdenum wire and white molybdenum wire;
- increased MoLa, MoY and MoK grades and requirements;
- increase the line cutting, spraying molybdenum wire at room temperature mechanical performance requirements;
- increase the diameter of 1800 μ m ~ 5000 μ m size requirements;
- increase the diameter of more than 400 μ m minimum length requirements;
- increase the thermal brittleness performance requirements and test methods;
- increase the shelf life of the storage requirements. This standard is proposed by China Nonferrous Metals Industry Association. This standard is owned by the National Committee for the Standardization of Nonferrous Metals (SAC/TC243). The standard drafting unit. Xiamen Honglu tungsten and molybdenum Industry Co., Ltd., Jinduicheng Molybdenum Co., Ltd., Jinduicheng Molybdenum Industry (Shandong) Co., Ltd., Zigong Carbide Co., Ltd., Beijing Tianlong Tungsten Molybdenum Technology Co., Ltd., Beijing Mining and Metallurgy Research Institute. The main drafters of this standard. Peng Fusheng, Li Fengjin, Pan Xiaofeng, Tang Jin, Wu Jianhong, Li Shiwei, Huang Lifeng, Dong Ping, Su Guoping, Zhong Ming, Wang Luyan, Zhang Shengjie. This standard replaced the previous version of the standard release. GB/T 4182-1997, GB/T 4182-2003. Molybdenum wire

1 Scope

China's national standard for molybdenum wire. It specifies the product classification and marking, the requirements, the test methods and the inspection rules. Molybdenum wire has two quite separate lives. In lighting and electronics it is the support wire and the

mandrel of incandescent and halogen lamps, the lead-in that seals through glass because its expansion matches, and the filament support in vacuum tubes and X-ray equipment. In manufacturing it is the electrode of wire electrical discharge machining, and there it is a consumable: the wire is drawn through the cut once and discarded, and molybdenum is chosen over brass for the finest cuts because it can be drawn to a few hundredths of a millimetre and still carry the discharge without breaking. The two uses want different things - the first wants creep resistance at temperature, the second tensile strength and dimensional uniformity - which is why the standard grades rather than simply specifies it.

This standard specifies the product classification and marking of molybdenum wire, requirements, test methods, inspection rules, packaging, marking, storage, transportation and quality Book, contract (or order) content. This standard applies to the use of lighting core, bulb components and molybdenum foil, vacuum electronic devices, spraying, heating elements, welding electrodes, high temperature structure Pieces, wire cutting, printer needle, etc. with molybdenum wire.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document. Metallic materials - Tensile testing - Part 1. Test methods for room temperature GB/T

GB/T 2828.1-2012 Count Sampling Inspection Procedures Part 1. Batch Inspection Sampling by Reception Quality Limit (AQL) plan

GB/T 4325 (all parts) molybdenum chemical analysis method

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 After the drawing on the reel or around the wire into the coil of molybdenum metal wire, or diameter less than 0.40mm small length of molybdenum material.

3.2 Through the electrolysis, chemical treatment, annealing, etc. to remove the surface of the graphite coating, the surface was silver or silver-white molybdenum wire.

4 Classification and marking

Classification and classification of molybdenum wire Molybdenum wire can be divided into three grades according to the diameter tolerance requirements, molybdenum wire processing state can include drawing, straightening, annealing, electrolysis and chemical Reason. The molybdenum wire grading and classification marking method is shown in Table 1. Table

1 Molybdenum wire grading and classification marking method Classification Marking
Method Classification markings I grade I drawing D Grade II Straightening

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