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

**中华人民共和国国家标准**

**GB/T 10858-2008**

**Replace GB/T 10858-1989**

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**Aluminium and aluminium alloy wires and rods**

**铝及铝合金焊丝**

(ISO 18273: 2004, Welding consumables—Wire electrodes, wires and rods for welding of aluminium and aluminium alloys—Classification, MOD)

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**Standardization Administration of the People's Republic of  
China**

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## Foreword

The standard is formulated based on the amended version of ISO 18273:2004 Welding Consumables - Wire Electrodes, Wires and Rods for Welding of Aluminum and Aluminum Alloys - Classification. This standard is re-drafted based on ISO 18273:2004.

In consideration of the actual conditions of aluminum and aluminum alloy welding wire in our country, the technical content of ISO 18273: 2004 is modified as follows:

- Delete the normative referenced standards, i.e. EN ISO 544, ISO 31-0: 1992 and ISO 14344;
- Add Annex A and the comparison table of type No. widely applied internationally;
- Add Table 2, 3, 4 and Figure 1.

For the purpose of convenience in use, the standard also is modified as follows:

- The name of standard is changed to “Aluminum and Aluminum Alloy Wires and Rods”
- In the aspect of the structure of standard, add the inspection rules, identification and quality certificate;
- “International standard” is changed to “this standard”.
- Use “.” to replace “,” as the decimal point
- Delete the preface of the international standard.

This standard is the modified version of GB/T 10858-1989 Aluminum and Aluminum Alloy Wires and Rods. Compared with GB/T 10858-1989, the modification is shown as follows:

- For the classification and type of welding wire, adopt the expression method in ISO 18273:2004. Add 23 type No. of welding wire.
- The chemical components of welding wire are consistent with these in ISO 18273.
- The dimension and package of welding wire conform to ISO 18273 but adjusted correspondingly.
- Annex A specifies the corresponding relation of type No. applied internationally.

Since publication, this standard replaces GB/T 10858-1989.

Annex A of this standard is informative.

This standard is proposed by and under jurisdiction of National Technical Committee on Welding of Standardization Administration of China.

Drafting units of this standard: Harbin Welding Research Institute, Changzhou Huatong

Welding Industry Co., Ltd., Shanghai GIMIC Welding Consumables Co., Ltd. and Linde Engineering (Dalian) Co., Ltd.

Main drafters of this standard: CHU Jijun, LI Chunfan, LI Zhenhua, WU Bin and SHI Zhenchun.

Previous versions that this standard replaces are as follows:

GB/T 10858-1989.

# **Aluminum and Aluminum Alloy Wires and Rods**

## **1 Scope**

This standard specifies the classification and type, technical requirements, test methods, inspection rules, package, identification and quality certificate of aluminum and aluminum alloy wires and rods.

This standard is applicable to the aluminum and aluminum alloy wires and rods (hereinafter referred as welding wires) used for gas metal arc welding, gas tungsten arc welding, gas welding and plasma arc welding.

## **2 Normative references**

The articles contained in the following documents have become this Standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB/T 6987 (All parts) Aluminium and aluminium alloys-Determination of copper content

## **3 Classification and type**

### **3.1 Classification of welding wires**

There are 5 types of welding wires, aluminum, aluminum bronze, aluminum manganese, aluminum silicon and aluminum magnesium based on chemical components.

### **3.2 Classification of type**

For the type of welding wire divided based on the chemical component, see Table 1.

### **3.3 Numbering method of type**

The type No. of welding wire is composed of three parts. The first part is "SA1", indicating aluminum and aluminum alloy wires; the second part is four figures, indicating the type No. of welding wire; the third part is optional, indicating the code of chemical component. For the standard type No. widely applied internationally, refer to Annex A.

The type No. of welding wire in this standard is shown as follows:



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