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

GB/T 32532-2016

**Non-consumable tungsten electrodes for arc welding and
cutting**

焊接与切割用钨极

(English Translation)

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the re-drafting method to modify ISO 6848.:2004 "Arc Welding and Cutting Non-Melted Tungsten Classification" the main technical differences between this standard and ISO 6848.:2004 are as follows.

--- normative reference documents with the use of international standards GB 3101 instead of ISO 31-0;

--- According to the development and application of the electrode, an increase of composite tungsten electrode classification, an increase of WX10, WX20, WX30 and WX40, etc.

4 composite tungsten electrode models.

For ease of use, this standard has also made the following editorial changes.

--- standard name to "welding and cutting with tungsten";

- the standard structure, according to the model, technical requirements, test methods, inspection rules, packaging, signs and quality certification to prepare;

The number of the nominal value of the added oxide in the tungsten model is multiplied by the mass percentage by 10 as the nominal content (mass fraction Number) multiplied by 1000;

--- Added Appendix B, introduced the characteristics and uses of various types of tungsten, easy to use.

This standard is proposed by the National Welding Standardization Technical Committee (SAC/TC55).

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Welds for welding and cutting

1 Scope

This standard specifies the tungsten model, technical requirements, test methods, inspection rules, packaging, marking and quality certification.

This standard applies to inert gas shielded welding, plasma arc welding, cutting and thermal spraying with non-melting tungsten.

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.

GB 3101-1993 General principles relating to quantities, units and symbols (equiv ISO 31-0..1992)

3.1 Model division

The tungsten model is divided by its chemical composition. Refer to Appendix A for the use of tungsten and see Appendix B for tungsten type and use.

3.2 Model preparation method

The tungsten model consists of three parts.

- a) The first part uses the letter "W" to represent the tungsten;
- b) The second part is the tungsten chemical composition classification code, see Table 1. among them.
 - 1) No added oxide is indicated by the letter "P";
 - 2) the addition of the oxide is represented by the non-oxygen element symbol of the main oxide;
 - 3) adding the multicomponent compound oxide with the letter "X";

4) The above is indicated by the letter "G" and the non-oxygen element symbol of the main oxide.

c) The third part is one or two digits, multiplied by 1000 for the added major or multiple oxide nominal content (mass fraction).

3.3 Model example

Examples of complete tungsten models in this standard are as follows.

Said tungsten

Indicating that the main additive oxide is CeO_2 Indicates that the nominal content of the main oxide (mass fraction) is 2.0% multiplied by 1000

4.1 Size and allowable deviation

The tungsten diameter and tolerances shall be in accordance with Table 2. The tungsten length and tolerances shall be in accordance with Table 3. According to the agreement between supply and demand, can be produced