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(JTMIA/JSA)

**Thoriated tungsten wires and
rods for lighting and electronic
equipment**

ICS 29.140.99; 31.220.99; 77.120.99

Reference number : **JIS H 4463 : 2002 (E)**

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee, as the result of proposal for revision of Japanese Industrial Standard submitted by the Japan Tungsten & Molybdenum Industries Association (JTMIA)/ the Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14. Consequently **JIS H 4463 : 1984** is replaced with this Standard.

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Technical Committee on Non-Ferrous
Metals

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Thoriated tungsten wires and rods for lighting and electronic equipment

1 Scope This Japanese Industrial Standard specifies thoriated tungsten (tungsten including thorium oxide) wire (hereafter referred to as “wires”) and thoriated tungsten rod (hereafter referred to as “rods”), for lighting and electronic equipment. However, this Standard shall apply to wires and rods having a circular cross-section only.

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent editions (including amendments) of the standards indicated below shall be applied.

JIS H 0321 *General rules for inspection of non-ferrous metal materials*

JIS H 1405 *Methods for chemical analysis of thoriated tungsten materials*

JIS H 4460 *General rules for test of tungsten and molybdenum materials for lighting and electronic equipments*

3 Definitions Definitions for principal terms used in this Standard shall be as follows.

- a) **classification between wires and rods** Wires and rods are not classified by diameter. Those wound on a reel and the like and those bundled in a hoop state are generally called wires. Those not wound are called rods.
- b) **thickness** The thickness of wires and rods are represented by diameter (mm). However, the thickness of wires may be represented by MG⁽¹⁾ as occasion demands.

Note ⁽¹⁾ MG is a numerical value representing in milligrams the mass of a wire of 200 mm in length.

$$MG = 3\,016 \times D^2$$

where, D : diameter of wire (mm)

- c) **average value of thickness** Thicknesses of both ends of a wire or a rod are measured at two or more positions to be represented by its arithmetic mean.
- d) **tolerance of thickness** The range of the average value of thickness allowable for the same kind.
- e) **difference of thickness** The difference between thicknesses at both ends of a wire or a rod, represented by the following formula.

$$T = \frac{A - B}{\frac{A + B}{2}} \times 100$$

where, T : difference of thickness (%)

A : maximum thickness measured at both ends (mm or MG)