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

GB/T 4436-2026

Replacing GB/T 4436-2012

**Tolerances on form and dimensions of wrought aluminium and
aluminium alloy tubes**

铝及铝合金管材外形尺寸及允许偏差

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document supersedes GB/T 4436-2012 "Dimensions and Tolerancing of Aluminum and Aluminum Alloy Tubes" and is consistent with GB/T 4436-2012. Compared to previous versions, aside from structural adjustments and editorial changes, the main technical changes are as follows:

- a) The scope has been changed (see Chapter 1, Chapter 1 of the 2012 edition);
- b) The typical specification range for extruded seamless round tubes has been changed (see 4.1, 3.1 in the 2012 edition);
- c) The typical cross-sectional dimension specifications for cold-drawn, cold-rolled welded and seamless round tubes have been revised (see 4.3, 2012 edition of 3.3);

- d) The typical cross-sectional dimension specification range for cold-drawn welded and seamless flat tubes has been changed (see 4.5, 3.5 in the 2012 edition);
- e) The typical cross-sectional dimension specifications for cold-drawn welded and seamless oval tubes have been revised (see 4.6, 3.6 in the 2012 edition);
- f) The permissible deviations for the outer diameter and wall thickness of extruded seamless round tubes have been modified (see 5.1.1 and 5.1.2, and 4.1.2 in the 2012 edition);
- g) Added bending requirements for extruded seamless round tubes with an outer diameter >250.00~450.00mm (see 5.1.3);

4 Size Specifications

4.1 Typical cross-sectional dimensions of extruded seamless round tubes are shown in Table 1.

4.2 The cross-sectional dimensions of extruded welded round tubes, flat tubes, square tubes, hexagonal tubes, and octagonal tubes shall be determined through negotiation between the supplier and the buyer and shall be specified in the purchase order. Please note.

4.3 Typical cross-sectional dimensions of cold-drawn, cold-rolled welded or seamless round tubes are shown in Table 2.

4.4 Typical cross-sectional dimensions of cold-drawn seamed or seamless square tubes are shown in Table 3.

4.5 Typical cross-sectional dimensions of cold-drawn seamed or seamless flat tubes are shown in Table 4.

4.6 Typical cross-sectional dimensions of cold-drawn seamed or seamless elliptical tubes are shown in Table 5.

5.1.1 Outer diameter

5.1.1.1 When the pipe wall thickness is greater than 2.5% of the outer diameter, the outer diameter deviation of the extruded seamless round pipe shall conform to the provisions of Table

6. The buyer requires high precision. If so, it should be noted in the order form; otherwise, it

will be supplied as ordinary grade.

5.1.3 Curvature Except for the O condition, the curvature of extruded seamless round tubes should conform to the specifications in Table

8.If the buyer requires high-precision or ultra-high-precision grades, this should be specified when ordering. If specified in the order, otherwise supplied as standard grade. The buyer may specify the curvature of the O-state extruded seamless round tube or other states of extruded seamless round tubes. When there are special requirements for the degree of curvature, the supplier and the buyer shall negotiate and determine the degree of curvature and specify it in the order form.

5.1.4 Length

5.1.4.1 The length of extruded seamless round tubes supplied in irregular lengths shall not be less than 300mm.

5.1.4.2 The length deviation of extruded seamless round tubes supplied in fixed lengths (or multiple lengths) shall conform to the provisions of Table

9.When the buyer requires high precision, this should be specified in the order. If the bill of lading does not specify otherwise, the goods will be supplied as standard grade. For pipes supplied in multiples of length, a 5mm allowance should be left for each cut.

5.1.5 Cutting slope The bevel angle of extruded seamless round tubes should conform to the specifications in Table

10.If the buyer requires high precision, this should be specified in the purchase order; otherwise, it should be calculated according to... Standard grade supply.

5.2.1 Outer diameter

5.2.1.1 When the wall thickness of the extruded seamed round tube is greater than 2.5% of the outer diameter, its outer diameter deviation shall conform to the provisions of Table 11.

5.2.1.2 When the wall thickness of an extruded welded round tube is not greater than 2.5% of its outer diameter, the permissible deviation of its outer diameter shall meet the following requirements.

a) When the ratio of wall thickness to outer diameter is $>0.5\% \sim 1.0\%$, the allowable deviation is 4 times the corresponding value in Table 11;

b) When the ratio of wall thickness to outer diameter is $>1.0\% \sim 1.5\%$, the allowable deviation is 3 times the corresponding value in Table 11;

c) When the ratio of wall thickness to outer diameter is $>1.5\% \sim 2.0\%$, the allowable deviation is twice the corresponding value in Table 11;

d) When the ratio of wall thickness to outer diameter is $>2.0\% \sim 2.5\%$, the allowable deviation is

1.5 times the corresponding value in Table 11.

5.2.2 Wall thickness The wall thickness deviation of extruded seamed round tubes should conform to the specifications in Table

12.If the buyer requires high precision, this should be specified in the purchase order; otherwise, it should be noted. Supply at the standard grade.

5.2.4 Length

5.2.4.1 The length of extruded seamless round tubes supplied in irregular lengths shall not be less than 300mm.

5.2.4.2 The length deviation of extruded seamless round tubes supplied in fixed lengths (or multiple lengths) shall conform to the provisions of Table

14.When the buyer requires high precision, this should be specified in the order. If the bill of lading does not specify otherwise, the product will be supplied as standard grade. For pipes supplied in multiples of length, a 5mm allowance should be left for each cut.

5.2.5 Cutting slope The bevel of the extruded seamed round tube should conform to the specifications in Table

15.If the buyer requires high precision, this should be specified in the purchase order; otherwise, it should be calculated according to... Standard grade supply.

5.3.3 Curvature Except for O-state tubing, extruded welded square tubing, flat tubing, hexagonal tubing, and octagonal tubing with a wall thickness not less than 1.5% of the circumscribed circle diameter are permitted in any... The curvature over a 300mm length should not exceed 0.6mm, and the average curvature per meter of the entire length should not exceed 1.5mm. The curvature of extruded seamed square tubes, flat tubes, hexagonal tubes, and octagonal tubes in the O state or with a wall thickness less than 1.5% of the circumscribed circle diameter is important. If there are special requirements for the curvature, the supplier and the buyer shall negotiate and determine the specific requirements, and indicate them in the order form.

5.3.4 Planar clearance The planar clearance of extruded seamed square tubes, flat tubes, hexagonal tubes, and octagonal tubes should conform to the specifications in Table

18.When the buyer requires high precision, this should be specified in the order. If the invoice specifies otherwise, the goods will be supplied as standard grade.

5.3.5 Torque The torsion tolerances of extruded seamed square tubes, flat tubes, hexagonal tubes, and octagonal tubes should conform to the specifications in Table