

ICS 77.150.10
CCS H61



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

GB/T 26006-2010

**Aluminium alloys extruded tubes, bars, rods, and profiles used
for ships**

船用铝合金挤压管、棒、型材

Issued on: January 10, 2011

Implemented on: October 1, 2011

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

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Foreword

This standard was proposed by China Nonferrous Metals Industry Association. This standard shall be under the jurisdiction of the National Non-ferrous Metal Standardization Technical Committee (SAC/TC 243). The main drafting organization of this standard. Southwest Aluminum (Group) Co., Ltd. The participated drafting organization of this standard. Northeast Light Alloy Co., Ltd., Chinalco Northwest Aluminum Processing Branch, Longkou Conglin Aluminum Co., Ltd., Shandong Dagon Mine Light Alloy Co., Ltd., Shandongnanshan Aluminum Co., Ltd., Fujian Nanping Aluminum Co., Ltd., Liaoning Zhongwang Group Co., Ltd., Guangdong Xingfa Aluminum Co., Ltd. The main drafters of this standard. Li Ruishan, Lu Yonghong, Zhang Yu, Wang Guojun, Wang Zheng'an, Duan Ruifen, Chen Qing, Xu Minghua, Yang Junzu, Sun Zhenyu. Aluminum alloys extruded tubes, bars, rods and profiles used for ships

1 Scope

GB/T 26006-2010 is the Chinese national standard on aluminium alloys extruded tubes, bars, rods, and profiles used for ships, in the field of metallurgy. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 10 January 2011 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 October 2011. Classification: ICS 77.150.10, CCS H61. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the requirements, test methods, inspection rules, markings, packaging, transportation, storage, quality certificate, contract (or order form), for aluminum alloy extruded seamless round tubes for ships (hereinafter referred to as tubes), aluminum alloy extruded bars for ships (hereinafter referred to as bars), aluminum alloy extruded profiles for ships (hereinafter referred to as profiles). This standard applies to tubes, bars with a circular cross-section (hereinafter referred to as round bars), bars with a rectangular cross-section (hereinafter referred to as flat bars), bars with a square cross-section (hereinafter referred to as square bars), bars with a regular hexagonal cross-section (hereinafter referred to as hexagonal bars), profiles.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) is applicable to this standard.

GB/T 228 Metallic materials - Tensile testing at ambient temperature

GB/T 3190 Wrought aluminum and aluminum alloy - Chemical composition

GB/T 3199 Wrought aluminum and aluminum alloy products - Packing, marking, transporting and storing

GB/T 3246.1 Wrought aluminum and aluminum alloys products inspection method for structure

GB/T 3246.2 Wrought aluminum and aluminum alloys products inspection method for structure

GB/T 6519 Process for ultrasonic inspection of wrought aluminum alloy products aluminum

alloys

3.1.3 Specifications

3.1.3.1 Profiles The specifications of the profile are determined, when the supplier and the buyer sign the drawing.

3.1.3.2 Bars

3.1.4 Example of markings The product marking is expressed, in the order of product name, alloy designation, state, specification, standard number. Examples of markings are as follows:

3.3.1.3 Other size deviations shall meet the requirements of GB/T 14846-2008.

3.3.2 Bars

3.3.2.1 Round bar 3.3.2.1.1 Diameter The diameter deviation shall meet the requirements of Table 5.

3.6 Microstructure For the quenched products, it is not allowed for over-burning on the microstructure.

3.7 Ultrasonic flaw detection For the products, which need ultrasonic testing, the supplier and purchaser may determine, through negotiation, the testing location and testing level, AND indicate in the drawing or contract (or order form).

3.8.1 Tubes

3.8.1.1 It is not allowed for cracks or corrosions on the surface of tubes.

3.8.2 Bars

3.8.2.1 It is not allowed for cracks, blisters, or corrosion spots on the surface of bars.

3.8.2.2 Where there is peeling off on the surface of bars, they shall be removed. However, the removal shall not make the deviation of outer diameter (or the diameter of inscribed circle of bars) exceed the allowable range.

3.8.3 Profiles

3.8.3.1 It is not allowed for the presence of cracks, corrosions, or non-metallic press-ins, on the surface of profiles.

3.8.3.2 On the surface of profiles, it is NEITHER allowed for the peeling off, pits, indentations, blisters, bumps, which have a depth larger than the negative deviation of the wall thickness, NOR allowed for scratches, surface roughness, or individual scratch, which

have a depth larger than the negative deviation of wall thickness. Within any 1 m length of the profile, the total area of defect shall not exceed 4% of the surface area of profile.

3.8.3.3 It is allowed for the supplier to make trimming of the surface defects of the profiles, along the longitudinal direction, until obtaining a smooth surface. This trimming operation shall not make the deviation of wall thickness of the profile exceed the allowable range.

4 Test method

4.1 Chemical composition The chemical composition of product is analyzed, according to GB/T 7999 or GB/T 20975. The arbitration analysis shall be carried out, according to the method specified in GB/T 20975.

4.2 Deviation of size

4.2.1 For the cross-sectional size, it shall be measured by a measuring tool, which has an accuracy of not lower than

0.02 mm. For other sizes, it may be measured by the measuring tools, such as ruler, meter ruler, tape ruler, feeler gauge.

4.2.3 The measurement method of planer clearance is as follows: Place the product on the platform, to measure the maximum clearance f , between the product and the platform, as shown in Figure 4.

4.2.4 The measurement method for twisting degree is as follows: For the product, which has a specified testing length (as shown in Figure 5, the AC-segment product), make one end (such as the AB end in Figure 5) of a certain plane (such as the ABCD plane in Figure 5) be in close contact to the platform.

4.3 Mechanical properties The longitudinal tensile properties of the product, under room temperature, shall be tested according to the method, which is specified in GB/T 228.

4.4 Macrostructure The macrostructure of the product shall be tested, according to the method specified in GB/T 3246.2.

4.5 Microstructure The microstructure of the product shall be tested, according to the method specified in GB/T 3246.1.

4.6 Ultrasonic flaw detection The product shall be subject to the ultrasonic flaw detection, according to the method, which is specified in GB/T 6519.

5.1 Inspection and acceptance

5.1.1 The product shall be inspected by the technical supervision department of the supplier, to ensure that, the product quality meets the requirements of this standard and the contract (or order form); meanwhile the quality certificate is filled.