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

GB/T 706-2016

Replacing GB/T 706-2008

Hot Rolled Section Steel

热轧型钢

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Table of Contents

Foreword

1 Scope

2 Normative references

3 Order contents

4 Dimension, shape, weight and allowable deviation

5 Technical requirements

6 Test methods

7 Inspection rules

8 Packaging, marking and quality certificate

Annex A Cross-sectional dimension, cross-sectional area, theoretical weight and cross-

Foreword

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

This Standard replaces GB/T 706-2008 “Hot rolled section steel”. Compared with GB/T 706-2008, main technical changes of this Standard are as follows:

- DELETE relevant contents of hot rolled L-shape section steels (see Table 3, Table
- ADD order contents (see Clause 3);
- ADJUST parts of dimension, shape and allowable deviation (see Table 1 and Table 2 of this Standard, Table 1 and Table 2 of 2008 edition);
- ADJUST the requirements for the allowable deviation of weight (see 4.4 of this
- ADD the representing method for specification (see 4.5);

characteristics (see Table A.1, Table A.2, Table A.3 and Table A.4).

This Standard is proposed by China Iron and Steel Industry Association.

This Standard is under the jurisdiction of National Technical Committee on Steel of Standardization Administration of China (SCA/TC 183).

Drafting organizations of this Standard: Magang (Group) Holdings Co., Ltd., Hebei Jinxi Iron and Steel Group Co., Ltd., Hebei Iron and Steel Group Tangshan Branch, Shandong Iron and Steel Group Lai Steel Branch, Anshan Baode Iron and Steel Co., Ltd., Rizhao Iron and Steel Holding Group Co., Ltd., Changshu Longteng Special Steel Co., Ltd., China Metallurgical Information and Standardization Institute.

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The previous version of the standard replaced by this Standard are as follows:

1 Scope

This Standard specifies the order contents, dimension, shape, weight and allowable deviation, technical requirements, test methods, inspection rules, packaging, marking and quality certificate of hot rolled I-beam steels, hot rolled channel steels, hot rolled equal angle steels and hot rolled unequal angle steels.

This Standard applies to hot rolled equal angle steels, hot rolled unequal angle steels and hot rolled I-beam steels and hot rolled channel steels with a slope on the inside of the leg (hereinafter referred to as section steels).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the dated edition cited applies. For undated references, the latest edition of the referenced document (including all amendments) applies.

3 Order contents

The contract ordered in accordance with this Standard shall contain the following technical contents:

g) other special requirements of the demand party.

4 Dimension, shape, weight and allowable deviation

4.1 Dimension and representing method

4.1.1 Schematic diagrams and marked symbols of cross-section of section steels are as shown in Figure 1 to Figure 4.

4.1.2 Parameters of cross-sectional dimension, cross-sectional area, theoretical

weight and cross-section characteristics of section steels shall comply with the specifications of Tables A.1 to A.4 of Annex A.

4.2 Dimension, shape and allowable deviation

4.2.1 Dimension, shape and allowable deviation of section steels shall comply with the specifications of Table 1 to Table 2. According to the requirements of the demand party, dimension, shape and allowable deviation of section steels can also be specified in accordance with the agreement between supply and demand parties.

r_1 arc radius of leg end.

r_1 arc radius of leg end.

Z_0 distance of center of gravity.

r_1 edge arc radius; Z_0 distance of center of gravity.

r_1 edge arc radius; X_0 distance of center of gravity;

Y_0 distance of center of gravity.

4.2.2 Passivation of leg end edge of I-beam steels and passivation of leg end edge and shoulder of channel steels shall be such that a round bar with a diameter of $0.18t$ can not pass through; passivation of corner angle and vertex angle of angle steels shall be such that a round bar with a diameter of $0.18d$ can not pass through.

4.2.3 Slope of outer edge and bending deflection I-beam steels and channel steels, and top

right angle of angle steels shall be inspected at where with a distance of not less than 750 mm from the end.

4.2.4 Allowable deviation of leg thickness (t) of I-beam steels and channel steels is $\pm 0.06t$.

4.2.5 Section steels shall not be significantly reversed.

NOTE: Measurement positions of dimension and shape are as shown in schematic diagrams.

NOTE: Measurement positions of dimension and shape are as shown in schematic diagrams.

a For unequal angle steels, this is the long side length B.

4.3 Length and allowable deviation

4.4 Weight and allowable deviation

4.4.1 Section steels shall be delivered in theoretical weight and the theoretical weight shall be calculated at a density of 7.85 g/cm³.

4.5 Representing method of specification

5 Technical requirements

5.1 Grades and chemical composition

5.2 Mechanical properties

Mechanical properties of section steels shall comply with the relevant specifications of GB/T 700 or GB/T 1591. According to the requirements of the demand party, through the agreement between the supply and demand parties, steels of other mechanical property indicators can also be supplied.

5.3 Delivery status

The steel is delivered in hot rolled state.

5.4 Surface quality

5.4.1 Surface of section steels shall not have cracks, folding, scarring, stratification and inclusions.

5.4.2 Surface of section steels allows existence of defects such as local hairlines, pits, dots, scratches and iron oxide presses, but these defects shall not exceed the allowable deviation of dimension of section steels.

5.4.3 Defects on the surface of section steels are allowed to be cleared, which shall be