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

GB/T 34560.1-2017

**Structural steels -- Part 1: General technical delivery condition
for hot-rolled products**

结构钢 第 1 部分:热轧产品一般交货技术条件
(English Translation)

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1 Scope

This Part of GB/T 34560 specifies the terms and definitions, classification and designation representation method, order content, size, shape, weight, technical requirements, inspection rules, test methods, packaging, marks and quality certificate of structural steels.

This Part is applicable to hot-rolled steel plate (band), wide flat steel, section steel, steel bar for welding, bolting, and riveting engineering structure use (hereinafter referred to as "steels").

The specific requirements of structural steels are given in each part of GB/T 34560.

2 Normative references

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

GB/T 221, Notations for designations of iron and steel

GB/T 222, Permissible Tolerances for Chemical Composition of Steel

Products

GB/T 223 (all parts), Methods for chemical analysis of iron, steel and alloy

GB/T 228.1, Metallic materials - Tensile testing - Part 1 : Method of test at room temperature (GB/T 228.1-2010, ISO 6892-1:2009, MOD)

GB/T 229, Charpy Notch Impact Test (GB/T 229-2007, ISO148-1:2006, MOD)

GB/T 232, Metallic materials - Bend test (GB/T 232-2010, ISO 7438:1985, MOD)

GB/T 247, General rule of package, mark and certification for steel plates (sheets) and strips

GB/T 702, Hot-rolled steel bars - Size, shape, weight and tolerances

GB/T 706, Hot rolled section steel

GB/T 709, Size, shape, weight and allowable deviation of hot-rolled steel plates and strips

GB/T 2101, General requirement of acceptance packaging marking and certification for section steel

GB/T 2970, Thicker steel plate - Method for ultrasonic inspection

GB/T 2975, Steel and Steel Products - Location and Preparation of Test

Pieces for Mechanical Testing (GB/T 2975-1998, eqv ISO 377:1997)

GB/T 5313, Steel plates with through-thickness characteristics

GB/T 8170, Rules of rounding off for numerical values & expression and judgement of limiting values

GB/T 11263, Hot-rolled H and cut T section steel

GB/T 13304.1, Steels classification - Part 1: Classification of according to chemical composition (GB/T 13304.1-2008, ISO 4948-1:1982, MOD)

GB/T 13304.2, Steels Classification - Part 2: Classification of According to

Main Quality Classes and Main Property or Application (GB/T 13304.2-2008, ISO 4948-2:1981, MOD)

GB/T 14977, General requirement for surface condition of hot-rolled steel plates

GB/T 15574, Steel products classification (GB/T 15574-2016, ISO 6829:2014, MOD)

GB/T 17505, Steel and steel products General technical delivery requirements (GB/T

17505-2016, ISO 404:2013, MOD)

GB/T 17600.1, Steel - Conversion of elongation values - Part 1: Carbon and low alloy steels (GB/T 17600.1-1998, eqv ISO 2566-1:1984)

GB/T 18253, Steel and steel products - Types of inspection documents (GB/T 18253-2000, eqv ISO 10474:1991)

GB/T 20066, Steel and Iron - Sampling and Preparation of Samples for the Determination of Chemical Composition (GB/T 20066-2006, ISO14284:1996, IDT)

GB/T 28300, Surface quality classes for hot-rolled bars and rods technical g) additional inspection (see 7.7);

h) chemical analysis methods (see 9.1);

i) test frequency (see 8.3.2);

j) impact test specimen direction (see 9.3);

k) packaging and marks (see Clause 10);

l) hot galvanizing method agreed upon under relevant standards;

m) non-destructive inspection negotiated under relevant standards.

6 Size, shape, weight

6.1

The size, shape, weight and tolerance of hot-rolled steel bar shall comply with the provisions of GB/T 702.

6.2

The size, shape, weight and tolerance of hot-rolled steel shall comply with the provisions of GB/T 706.

6.3 The size, shape, weight and tolerance of hot-rolled steel plate and strip

shall comply with the provisions of GB/T 709.

6.4 The size, shape, weight and tolerance of hot-rolled H-section steel and

some T-shaped steel shall comply with the provisions of GB/T 11263.

6.5 After negotiation between the supplier and the purchaser, the steels of

other sizes, shapes and tolerances can be supplied.

7.1 Smelting method

Unless otherwise specified in the contract or order, the smelting method of steel is generally selected by the supplier in accordance with the requirements of individual parts of GB/T 34560. After negotiation between the supplier and the purchaser, and indicated in the contract, other smelting method can be used.

7.2 Delivery status

The delivery status is given in individual parts of GB/T 34560. In accordance with the requirements of individual parts of GB/T 34560, the delivery status is specified by the purchaser and specified in the contract.

7.3 Chemical composition

7.5.1.3 Steel surface defects are allowed to be removed by grinding or other methods. The clearance shall be smooth and free of edges. The clearance depth shall not be greater than the negative deviation of the thickness of the steel plate, and the minimum allowable thickness of the steel plate shall be guaranteed.

7.5.1.4 For the defect on the surface of the steel plate that cannot be cleaned according to the provisions of 7.5.1.3, after negotiation between the supplier and the purchaser, welding repairs can be performed in accordance with the following requirements:

- a) use appropriate welding methods;
- b) completely remove the harmful defects on the steel plate by using shoveling or grinding equal methods before welding; the depth of the removed part is within 20% of the nominal thickness of the steel plate; the total area of one-sided dressing shall be within 2% of the area of the steel plate;
- c) there must be no undercut or overlap on the edge of the welded area of the steel plate; the stack height shall be more than 1.5mm above rolling surface, then use a shovel or mill to remove pile height;
- d) heat treatment plate shall be heat-treated again after welding.

7.5.1.5 After negotiating between the supplier and the purchaser, the surface

quality of the steel plate can also comply with the requirements of GB/T 14977.