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**High Strength Stainless Structural
Steel for Constructions**

建筑结构用高强不锈钢

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High Strength Stainless Structural Steel for Constructions

1 Scope

This Standard stipulates the terms, definitions, dimensions, shape and weight tolerances, technical requirements, test methods, inspection rules, packaging, marking and quality certificate of high strength stainless structural steel for constructions.

This Standard is applicable to 12Cr13Ni2 high strength stainless structural steel plates (or steel strips), section steel and steel rods (hereinafter referred to as stainless steel) for constructions.

2 Normative References

The following documents are indispensable to the application of this document. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 222 *Permissible Tolerances for Chemical Composition of Steel Products*

GB/T 223.3 *Methods for Chemical Analysis of Iron, Steel and Alloy - The Diaminepyrrol Methane Phosphomolybdate Gravimetric Method for the Determination of Phosphorous Content*

GB/T 223.5 *Steel and Iron - Determination of Acid-soluble Silicon and Total Silicon Content - Reduced Molybdosilicate Spectrophotometric Method*

GB/T 223.11 *Iron, Steel and Alloy - Determination of Chromium Content - Visual Titration or Potentiometric Titration Method*

GB/T 223.23 *Iron, Steel and Alloy - Determination of Nickel Content - The Dimethylglyoxime Spectrophotometric Method*

GB/T 223.25 *Methods for Chemical Analysis of Iron, Steel and Alloy - The Dimethylglyoxime Gravimetric Method for the Determination of Nickel Content*

GB/T 223.58 *Methods for Chemical Analysis of Iron, Steel and Alloy - The Sodium Arsenite-sodium Nitrite Titrimetric Method for the Determination of Manganese Content*

GB/T 223.59 *Iron, Steel and Alloy - Determination of Phosphorus Content - Bismuth Phosphomolybdate Blue Spectrophotometric Method and Antimony*

GB/T 709 *Dimension, Shape, Weight and Tolerance for Hot-rolled Steel Strip, Plate and Sheet*

GB/T 2101 *General Requirement of Acceptance, Packaging, Marking and Certification for Section Steel*

GB/T 2975 *Steel and Steel Products - Location and Preparation of Samples and Test Pieces for Mechanical Testing*

GB/T 4237 *Hot Rolled Stainless Steel Plate, Sheet and Strip*

GB/T 10561 *Steel - Determination of Content of Nonmetallic Inclusions - Micrographic Method Using Standards Diagrams*

GB/T 11170 *Stainless Steel - Determination of Multi-element Contents - Spark Discharge Atomic Emission Spectrometric Method (routine method)*

GB/T 11263 *Hot-rolled H and Cut T Section Steel*

GB/T 13298 *Inspection Methods of Microstructure for Metals*

GB/T 20066 *Steel and Iron - Sampling and Preparation of Samples for the Determination of Chemical Composition*

YB/T 081 *Rule for Rounding-off of Numerical Values and Judgement of Testing Values for Technical Standards of Metallurgy*

3 Terms and Definitions

The following terms and definitions are applicable to this document.

3.1 High Strength Stainless Structural Steel for Constructions

High strength stainless structural steel for constructions refers to steel for architecture structural engineering, which takes stainless and anti-corrosion as the main characteristic; and complies with following stipulations: non-proportional extension strength shall be not lower than 600 MPa, carbon content shall be not more than 0.16%, chromium content shall be not less than 12.5%, metallographic structure shall be tempered sorbite.

4 Dimensions, Shape, Weight and Tolerances

The dimensions, shape, weight and tolerances of hot-rolled steel bars shall respectively comply with relevant stipulations in GB/T 702.

The dimensions, shape, weight and tolerances of hot-rolled steel plates shall

Stainless steel shall receive acceptance check in batches. Each batch shall be constituted of steel materials of the same furnace No., the same dimensions and the same delivery state.

7.3 Re-inspection and Determination

The re-inspection and determination of stainless steel shall comply with GB/T 247 or GB/T 2101.

7.4 Rounding-off of Numerical Value

The rounding-off of numerical value in the inspection result shall comply with the stipulations in YB/T 081.

8 Packaging, Marking and Quality Certificate

The packaging, marking and quality certificate of stainless steel shall comply with the stipulations in GB/T 247 or GB/T 2101.

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