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# FERROUS METALLURGY INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

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## **Cold-roll low carbon steel strips**

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## **Cold-roll low carbon steel strips**

## 1 Scope

This standard specifies the classification and code, size, shape, technical requirements, test methods, inspection rules, packaging, markings, product quality certificates of cold-roll low carbon steel strips.

This standard applies to the cold-roll low carbon steel strips, which have a rolling width of less than 600 mm AND thickness of not more than 3 mm, AND used to manufacture stamped parts, steel pipes and other metal products (hereinafter referred to as steel strips).

#### 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 222 Permissible tolerances for chemical composition of steel products

GB/T 223.3 Methods for chemical analysis of iron, steel and alloy - The diantipyryl methane phosphomolybdate gravimetric method for the determination of phosphorus content

GB/T 223.5 Steel and iron - Determination of acid-soluble silicon and total silicon content - Reduced molybdosilicate spectrophotometric method

GB/T 223.9 Iron steel and alloy - Determination of aluminium content - Chrome azurol S photometric method

GB/T 223.11 Iron, steel and alloy - Determination of chromium content - Visual titration or potentiometric titration method

GB/T 223.14 Methods for chemical analysis of iron, steel and alloy - The N-Benzoy-N-Phenylhydroxylamine extraction photometric method for the determination of vanadium content

GB/T 223.16 Methods for chemical analysis of iron, steel and alloy - The chromotropic acid photometric method for the determination of titanium content

#### YB/T 5059-2013

GB/T 223.68 Methods for chemical analysis of iron steel and alloy - The combustion potassium iodate volumetric method for the determination of sulfur content

GB/T 223.69 Iron, steel and alloy - Determination of carbon contents - Gasvolumetric method after combustion in the pipe furnace

GB/T 223.71 Methods for chemical analysis of iron, steel and alloy - The gravimetric method after combustion in the pipe furnace for the determination of carbon content

GB/T 223.72 Iron, steel and alloy - Determination of sulfur content - Gravimetric method

GB/T 223.74 Methods for chemical analysis of iron, steel and alloy - The combustion gravimetric/gas-volumetric method for the determination of combined carbon content

GB/T 223.75 Iron steel and alloy - Determination of boron content - Methanol distillation-curcumin photometric method

GB/T 223.76 Methods for chemical analysis of iron, steel and alloy - The flame atomic absorption spectrometric method for the determination of vanadium content

GB/T 223.79 Iron and steel - Determination of multi-element contents - X-ray fluorescence spectrometry (Routine method)

GB/T 228.1 Metallic materials - Tensile testing - Part 1: Method of test at room temperature

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

GB/T 699 Quality carbon structural steels

GB/T 2523 Measuring method of surface roughness and peak count for cold-rolled metal sheet (strip)

GB/T 4156 Metallic materials - Sheet and strip - Erichsen cupping test

GB/T 4336 Standard test method for spark discharge atomic emission spectrometric analysis of carbon and low-alloy steel (Routine method)

GB/T 4340.1 Metallic materials - Vickers hardness test - Part 1: Test method

GB/T 6394 Metal - Methods for estimating the average grain size

Edge trimmed: EC

Edge untrimmed: EM

#### 4.2 According to dimensional accuracy

Ordinary thickness accuracy: PT•A

Higher thickness accuracy: PT•B

Ordinary width accuracy: PW•A

Higher width accuracy: PW•B

#### 4.3 According to the surface grade

Relatively high grade: FB

High grade: FC

Ultra-high grade: FD

#### 4.4 According to the surface state

Pitted surface: D

Bright surface: B

#### 4.5 According to the delivery state

Extra soft steel strip: S2

Soft steel strip: S

Semi-soft steel strip: S1/2

Low cold hard steel strip: H1/4

Cold steel strip: H

## 5 Dimension, form, weight, allowable deviation

The dimension, form, allowable deviation of the steel strip shall comply with the corresponding requirements of GB/T 15391. The steel strip shall be delivered, according to the actual weight.

take the specimen, which has a width equal to the width of steel strip. Under such conditions, it is exempted from the determination of elongation at break.

## 8 Inspection rules

- **8.1** Steel strips shall be accepted in batches. Each batch of steel strips shall consist of steel strips of the same heat number, same dimension, same state, same category, which is classified according to Chapter 4 of this standard.
- **8.2** For each test, take one specimen from each of the inner end and the outer end of each coil of steel strip, OR take one specimen from each of the two steel strips, which are taken from each selected bundle.
- **8.3** The re-inspection and judgment of the steel strip shall be carried out, in accordance with the provisions of GB/T 17505.
- **8.4** Take out 5% steel coils/bundles from each batch, but not less than 4 coils (bundles), to check for unevenness and sickle bend. If there is one coil unqualified, this batch of steel strips shall be checked coil/bundle by coil/bundle; only the qualified coil/bundle is accepted.

## 9 Packaging, marking, quality certificate of steel strip

The packaging, marking, quality certificate of the steel strip shall be implemented, in accordance with GB/T 247.

## 10 Numerical rounding off

The numerical rounding of the inspection results of steel strip shall be in accordance with the provisions of YB/T 081.

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