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

GB/T 25053-2025

Replacing GB/T 25053-2010

Continuously hot-rolled low carbon steel sheet and strip

热连轧低碳钢板及钢带

(English Translation)

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Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020 "Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

This document replaces GB/T 25053-2010 "Continuously hot rolled low carbon steel sheet and strip". Compared with GB/T 25053-2010, apart from structural adjustments and editorial changes, the main technical changes are as follows.

a) A new chapter on "Terms and definitions" has been added (see Chapter 3 of this Edition);

- b) The nominal thickness limits for designations HR1, HR3, and HR4 have been changed (see Table 1 of this Edition; Table 1 in Edition 2010);
- c) Specifications for the inner and outer diameters of coils when steel sheets and strips are delivered in coils have been added (see 4.3 of this Edition);
- d) A new chapter on "Manufacturing processes" has been added (see Chapter 5 of this Edition);
- e) Specifications for the leveling treatment of steel sheets and strips have been added (see 5.3 of this Edition);
- f) The chemical compositions of designations HR1, HR2, HR3, and HR4 have been changed (see Table 2 of this Edition; Table 2 in Edition 2010). The upper limit of manganese content has been added for designation HR2 when the nominal thickness is greater than 14 mm (see Table 2 of this Edition);
- g) The surface condition of steel sheets and strips has been modified, with "pickling" changed to "removal of iron oxide scale" [see 6.2 b) of this Edition; 3.3 b) in Edition 2010];
- h) The provisions have been added regarding the edge condition, welding, and applications of steel sheets and strips (see 6.3, 6.5, and 6.7 of this Edition);
- i) The provisions regarding the mechanical and technological properties of steel sheets and strips have been modified (see 6.8 and 6.9 of this Edition; 6.5 in Edition 2010);
- j) The provisions regarding the dimensions, shape, weight, and permissible deviations of steel sheets and strips have been revised (see Chapter 7 of this Edition; Chapter 5 in Edition 2010);
- k) The inspection items for dimensions, shape, and surface quality have been added (see Table 6 of this Edition);

1 Scope

This document specifies the dimensions, manufacturing process, technical requirements, dimensions, shape, weight, test methods, re-inspection and judgment, surface quality, inspection rules, marks, ordering contents, packaging and quality certificate of hot-rolled low carbon steel sheets and strips.

This document applies to hot-rolled low carbon steel sheets and strips for cold forming (hereinafter referred to as steel sheets and strips).

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 222, Steels and alloys -- Permissible deviations of product analyzed chemical composition

GB/T 223.40, Iron, steel and alloy -- Determination of niobium content by the sulphochlorophenol S spectrophotometric method

GB/T 223.59, Iron, steel and alloy -- Determination of phosphorus content -- Bismuth phosphomolybdate blue spectrophotometric method and antimony phosphomolybdate blue spectrophotometric method

GB/T 223.64, Iron, steel and alloy -- Determination of manganese content -- Flame atomic absorption spectrometric method (GB/T 223.64-2008, ISO 10700:1994, IDT)

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

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 iron, steel and alloy. The flame atomic absorption spectrometric method for the determination of vanadium content

GB/T 223.84, Steel and iron -- Determination of titanium content -- Diantiprylmethane spectrophotometric method (GB/T 223.84-2009, ISO 10280:1991, IDT)

GB/T 228.1-2021, Metallic materials -- Tensile testing -- Part 1: Method of test at room temperature (GB/T 228.1-2021, ISO 6892-1:2019, MOD)

GB/T 232, Metallic materials -- Bend testing method (GB/T 232-2024, ISO 7438:2020, MOD)

GB/T 247, General rule of package, mark and certification for steel plate, sheet and strip

GB/T 709-2019, Dimension, shape, weight and tolerance for hot-rolled steel strip, plate and sheet

GB/T 2975, Steel and steel products -- Location and preparation of samples and test pieces for mechanical testing (GB/T 2975-2018, ISO 377:2017, MOD)

GB/T 4336, Carbon and low-alloy steel -- Determination of multielement contents - - Spark discharge atomic emission spectrometric method (routine method)

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

GB/T 17505, Steel and steel products -- General technical delivery requirements (GB/T 17505-2016, ISO 404:2013, MOD)

GB/T 18253-2018, Steel and steel products -- Types of inspection documents (GB/T

18253-2018, ISO 10474:2013, IDT)

GB/T 20066, Steel and iron -- Sampling and preparation of samples for the determination of chemical composition (GB/T 20066-2006, ISO 14284:1996, IDT)

GB/T 20123, Steel and iron -- Determination of total carbon and sulfur content Infrared absorption method after combustion in an induction furnace (routine method) (GB/T 20123-2006, ISO 15350:2000, IDT)

GB/T 20125, Low-alloy steel -- Determination of multi-element contents -- Inductively coupled plasma atomic emission spectrometric method

GB/T 20126, Unalloyed Steel -- Determination of low carbon content -- Part 2.

Infrared absorption method after combustion in an in an induction furnace (With preheating) (GB/T 20126-2006, ISO 15349-2:1999, IDT)

3 Terms and definitions

For the purposes of this document, the terms and definitions defined in GB/T 709 apply.

4 Dimensions

4.1

The thickness range of steel sheets and strips shall conform to the provisions of Table 1.

4.2

The width and length of steel sheets and strips shall comply with the provisions of GB/T 709.

4.3

When steel strip is delivered in coils, its minimum inner diameter or minimum inner diameter and permissible deviation shall be specified. In addition, the maximum outer diameter of the steel coil and the upper limit of the weight of the steel coil shall also be specified.

5 Manufacturing process

5.1

The steel used for the steel sheets and strips is smelted in an oxygen converter or electric furnace. Unless otherwise specified, the smelting method is selected by the supplier.

5.2

Steel sheets and strips are delivered in hot-rolled condition.