



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

GB/T 36225-2018

Silver Steel for Bogie

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1 Scope

This Standard specifies the order content, dimension, appearance, weight and allowable deviation, technical requirements, test methods, inspection rules, packaging, marking and certification of silver steel for bogie.

This Standard is applicable to silver steel for bogie (hereinafter referred to as steel) whose nominal diameter is less than 100 mm.

2 Normative References

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

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-Benzoyl-N-Phenylhydroxylamine Extraction Photometric Method for the Determination of Vanadium Content

GB/T 223.19 Methods for Chemical Analysis of Iron, Steel and Alloy - The Neocuproine-chloroform Extraction Photometric Method for the Determination of Copper

Content

GB/T 223.26 Iron, Steel and Alloy - Determination of Molybdenum Content - The Thiocyanate Spectrophotometric Method

GB/T 223.50 Methods for Chemical Analysis of Iron, Steel and Alloy - The Phenylfluorone-CTMAB Direct Photometric Method for the Determination of Tin Content

GB/T 223.54 Methods for Chemical Analysis of Iron, Steel and Alloy - The Flame Atomic Absorption Spectrophotometric 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 223.60 Methods for Chemical Analysis of Iron, Steel and Alloy - The

GB/T 8170-2008 Rules of Rounding off for Numerical Values & Expression and Judgement of Limiting Values

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

GB/T 10610 Geometrical Product Specifications (GPS) - Surface Texture. Profile Method - Rules and Procedures for the Assessment of Surface Texture

GB/T 11261 Steel and Iron - Determination of Oxygen Content - The Pulse Heating Inert Gas Fusion - Infrared Absorption Method

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

GB/T 20123 Steel and Iron - Determination of Total Carbon and Sulfur Content -Infrared Absorption Method after Combustion in an Induction Furnace (routine method)

3 Order Content

Contract or order that purchases products in accordance with this Standard shall include the following content.

- a) Serial number of standard;
- b) Name of standard;
- c) Nameplate;
- d) Dimension and accuracy (refer to Chapter 4);
- e) Ordering weight;
- f) Status of delivery (refer to 5.3);

g) Hardenability requirement, for example, 51CrMnV + H, J (13) $\geq$ 52 (HRC) or J (13) 54 ~ 63 (HRC).

4 Dimension, Appearance, Weight and Allowable

Deviation

4.1 Dimension and Allowable Deviation

The diameter and allowable deviation of steel shall comply with Level-11 (h11) stipulation in GB/T 3207-2008. Through the negotiation between the supply side and the demand side, steel can also be delivered under other technical requirements of diameter and allowable deviation; this content shall be indicated in the contract.

4.2.1 The out-of-roundness of steel shall be not more than 50% of nominal diameter

tolerance.

4.2.2 The per meter curvature of steel shall be not more than 2.0 mm; the total curvature shall be not more than 0.20% of steel's length.

4.3.1 Generally speaking, steel's length shall be 3,000 mm ~ 7,000 mm; the maximum

delivered length shall be 12,000 mm. Steel shall be delivered in accordance with fixed length or multiple length.

4.3.3 The ends of steel shall be evenly sheared; there shall be no burr that might influence the usage. In accordance with users' demands, steel can be delivered with chamfered edges on the ends; this content shall be indicated in the contract.

4.4 Weight

Steel shall be delivered in accordance with the actual weight.

5.1.1 The nameplate and chemical composition (smelting analysis) of steel shall comply with the stipulation in Table 1 below.

Table 1 -- Nameplate and Chemical Composition (smelting analysis)

GB/T 223.69, GB/T 223.82.

7 Inspection Rules

7.1 Inspection and Acceptance Check Steel's quality shall be inspected by the supply side's quality department. The demand side is entitled to conduct acceptance check of steel in accordance with this Standard.

7.2 Batch Rule Steel shall be inspected and accepted by batch. Each batch of steel shall be constituted of steel of the same furnace number, nameplate, specification and thermal treatment furnace number.

7.3 Sampling Size and Location The sampling size and location of each batch of steel shall comply with the stipulation in Table 9.

7.4 Re-inspection and Determination Rule

7.4.1 The re-inspection and determination of steel shall comply with the stipulation in GB/T 2101.

7.4.2 When the supply side can guarantee that the steel is qualified, it is allowed to replace steel with steel billet, and replace large-sized steel with small-sized steel in the inspection of steel of the same furnace number, or the macrostructure, non-metallic inclusion, tensile performance, impact and end hardenability of steel billet.

7.5 Rounding-off of Numerical Value Adopt the method of numerical value rounding-off and comparison to round off the inspection and test result to the same numerical digit of the stipulated value. The rule of rounding-off shall comply with the stipulation in Chapter 3 in GB/T 8170-2008.

8 Packaging, Marking and Certification Packaging, marking and certification shall comply with the stipulation in GB/T 2101.