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

GB/T 24587-2025

Replacing GB/T 24587-2009

Hot-rolled wire rods for prestressing steel bars of concrete

预应力混凝土钢棒用热轧盘条

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 Directives for Standardization - Part 1: Rules for the Structure and Drafting of Standardizing Documents.

This Document replaced GB/T 24587-2009 Hot-Rolled Wire Rods for Prestressing Steel Bars of Concrete, and GB/T 28899-2012 Wire Rods for Cold Rolled Ribbed Steel Bars. This document is mainly based on GB/T 24587-2009, integrating the contents of GB/T 28899-2012.

Compared with GB/T 24587-2009, the major technical changes of this Document are as follows besides the structural adjustments and editorial modifications.

- Add terms and definitions (see Clause 3 of this Edition).
- Change the requirements for smelting method (see 5.1 of this Edition; 5.2 of the 2009 Edition).
- Change the description of delivery condition (see 5.2 of this Edition; 5.3 of the 2009 Edition).
- Change the dimensions, shape, weight, and specified range of permissible deviation for wire rod, which shall conform to the requirements of Grade B and above in GB/T 14981-2009 (see 6.7 of this Edition; 4.1 of the 2009 Edition).
- The upper limit of S content for 35Si2Cr and 40Si2Mn is adjusted from 0.025% to 0.020%. Delete Designations 48Si2Mn and 45Si2Cr; and add Designation 35SiMn (see Table 1 of this Edition; Table 1 of the 2009 Edition).

- Add analytical requirements for the residual contents of tungsten, vanadium, and titanium in steel (see Table 1 of this Edition).
- Add the designation and chemical composition of wire rod for rebar (see 6.1.2, Table 2 of this Edition).
- Change the requirements for mechanical and technological properties (see 6.2 of this Edition; 5.4 of the 2009 Edition); and add mechanical properties (see Table 3 of this Edition).
- Add requirements for macrostructure (see 6.4 of this Edition).
- Add requirements for non-metallic inclusions (see 6.5 of this Edition).
- Add requirements for aging time (see 6.8).
- Change the inspection items, sampling quantity, sampling method, and test methods; adjust the test method of chemical composition; add bending inspection items and the sampling quantity of wire rod for rebar (see Table 6 of this Edition; Table 1 of the 2009 Hot-Rolled Wire Rods for Prestressing Steel Bars of Concrete

1 Scope

This Document specifies the ordering details, manufacturing process, technical requirements, test methods, inspection rules, packaging, marking, and quality certificate for hot-rolled wire rods for prestressing steel bars of concrete.

This Document applies to hot-rolled wire rods for prestressing steel bars of concrete (hereinafter referred to as wire rods for steel bars) and wire rods for cold-rolled ribbed steel bars (hereinafter referred to as wire rods for rebars).

2 Normative References

GB/T 222

GB/T 223

GB/T 224

GB/T 226

GB/T 228.1

GB/T 232

GB/T 1979

GB/T 2101

GB/T 2975

GB/T 4336

GB/T 10561

GB/T 13298

GB/T 14981-2009

GB/T 20066

GB/T 20123

3 Terms and Definitions

For the purposes of this Document, the following terms and definitions apply.

3.1 Hot-rolled wire rods for prestressing steel bars of concrete

Hot-rolled wire rods, typically with a circular cross-section and a smooth surface, are used to manufacture prestressing steel bars of concrete.

NOTE. Abbreviated as wire rods for steel bars.

3.2 Wire rods for cold rolled ribbed steel bars

Hot-rolled wire rods, typically with a circular cross-section and a smooth surface, are used as raw materials for cold rolled ribbed steel bars.

NOTE. Abbreviated as wire rods for rebars.

4 Ordering Contents

Contracts or orders placed according to this Document shall include the following.

- a) This Document number;
- b) Product name;
- c) Designation;
- d) Specifications;
- e) Dimensional accuracy level;
- f) Weight (or quantity);
- g) Delivery condition;
- h) Other special requirements.

5.1 Smelting method

Steel shall be smelted in a converter or electric furnace. Wire rods for steel bars shall also undergo out-of-furnace refining.

5.2 Delivery condition

Wire rods shall be delivered in hot-rolled condition. Other conditions may be agreed upon by both the supplier and the purchaser and specified in the contract.

6.1 Designation and chemical composition

6.1.1 The designation and chemical composition (smelting analysis) of wire rods for steel bars shall conform to the provisions of Table 1.

6.1.2 The designation and chemical composition (smelting analysis) of wire rods for rebars

shall conform to the provisions of Table 2.

6.1.3 Other designations and chemical compositions of wire rods may be supplied upon

agreement between the supplier and the purchaser, and as specified in the contract.

6.1.4 When sampling from steel billets or wire rods for chemical analysis, the permissible deviation in chemical composition shall comply with the relevant provisions of GB/T 222.

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