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

GB/T 24238-2025

Replacing GB/T 24238-2017

Hot-rolled steel wire rod for prestressed steel wire and strand

预应力钢丝及钢绞线用热轧盘条

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1 Scope

This document specifies the designation representation method, ordering content, manufacturing process, technical requirements, test methods, inspection rules, packaging, marking and quality certificate of hot-rolled wire rod for prestressed steel wire and strand.

This document applies to hot-rolled wire rod for prestressed steel wire and strand (hereinafter referred to as the "wire rod").

2 Normative References

GB/T 222

GB/T 223.5

GB/T 223.12

GB/T 223.14

GB/T 223.19

GB/T 223.23

GB/T 223.37

GB/T 223.59

GB/T 223.60

GB/T 223.63

GB/T 223.82

GB/T 223.85

GB/T 223.86

3 Terms and Definitions

This document does not have terms or definitions that need to be defined.

4 Designation Representation Method

The designation of steel consists of the first letter of the Chinese pinyin representing "stress" (capitalized), the average carbon content and the manganese content or the silicon element symbol.

5 Ordering Content

The contract or order for goods placed under this document shall include the following contents.

6.1 Smelting Method

Steel is smelted in a converter or electric furnace, and shall be refined outside the furnace.

7.1 Designations and Chemical Composition

7.1.1 The designations and chemical composition (melting analysis) of steel for the wire rod shall comply with the provisions of Table 1.

7.2 Mechanical Properties

7.2.1 The tensile strength R_m and reduction of cross-sectional area Z of wire rod after aging shall comply with the provisions of Table 2 and Table 3. The recommended aging period for wire rod is shown in Appendix A. After negotiation between the supply-side and the demand-side, and statement in the contract, adjustments can be made based on the mechanical properties indicators in Table 2 and Table 3.

7.3 Decarburization Layer

The wire rod shall be inspected for the depth of decarburization layer. The depth of the total decarburization layer (ferrite + transition layer) on one side of the wire rod shall not be greater than $1.0\%D$ (D represents the nominal diameter of the wire rod).

7.4 Microstructure

7.4.1 The metallographic structure of the wire rod shall be mainly sorbite, and the sorbite content shall comply with the provisions of Table 4.

7.5 Surface Quality

7.5.1 The harmful defective parts at the head and tail of the wire rod shall be cut off, and its cross section shall not have shrinkage holes, delamination or inclusions.

8 Test Methods

8.1 The inspection items, sampling methods and test methods for each batch of wire rod shall comply with the provisions of Table 7.

8.2 Chemical analysis methods shall comply with the general methods, such as. GB/T 4336, GB/T 20213 and GB/T 20214, or GB/T 223.5, GB/T 223.12, GB/T 223.14, GB/T 223.19, GB/T 223.23, GB/T 223.37, GB/T 223.59, GB/T 223.60, GB/T 223.63, GB/T 223.82, GB/T 223.85 and GB/T 223.86.

9.1 Inspection and Acceptance

The inspection and acceptance of the wire rod shall be carried out by the supply-side's technical supervision department. The supply-side shall ensure that the wire rod delivered complies with the provisions of this document, and the demand-side has the right to inspect and accept in accordance with the provisions of this document.

9.2 Batch Rules

The wire rods shall be accepted in batches. Each batch consists of wire rods of the same designation, same heat number, same specifications and same delivery status.

9.4 Re-inspection and Determination

The re-inspection and determination of the wire rod shall be carried out in accordance with the provisions of GB/T 2101.

10 Packaging, Marking and Quality Certificate

10.1 The packaging and marking of the wire rod shall be in accordance with the contract requirements. When the demand-side does not specify them, they shall be determined by the supply-side.

10.2 The quality certificate of the wire rod shall comply with the provisions of GB/T 2101.

Appendix A Appendix A

(informative) Recommended Aging Period for Wire Rod The recommended aging period for the wire rod is shown in Table A.1.

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