

ICS 77.140.60

CCS H 44



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

GB/T 4354-2025

Replacing GB/T 4354-2008

Hot-rolled quality carbon steel wire rods

优质碳素钢热轧盘条

Issued on: March 28, 2025

Implemented on: October 1, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

Foreword	3
1 Scope	5
2 Normative references	5
3 Terms and definitions	8
4 Order content	8
5 Manufacturing process	8
6 Technical requirements	8
7 Test methods	11
8 Inspection rules	12
9 Packaging, marking and quality certification	12
Appendix A (Normative) Quantitative analysis method of centre segregation for high carbon wire rod	13
Appendix B (Informative) Working curve setting example	18

1 Scope

This document specifies the order content, manufacturing process, technical requirements, test methods, inspection rules, packaging, marking and quality certificate of hot-rolled quality carbon steel wire rods.

This document applies to hot-rolled quality carbon steel wire rods with a nominal diameter of 5 mm ~ 52 mm (hereinafter referred to as "wire rods").

2 Normative references

GB/T 222

GB/T 223.3

GB/T 223.4

GB/T 223.5

GB/T 223.12

3 Terms and definitions

No terms and definitions need to be defined in this document.

4 Order content

The contract for placing an order based on this document shall include the following.

5.1 Smelting method

Steel is smelted in a converter or an electric arc furnace, and can be refined outside the furnace if necessary.

5.2 Delivery state

Wire rods are delivered in hot rolled state.

6.1.1 The steel designation and chemical composition (melting analysis) shall comply

with the requirements of GB/T 699.

6.2 Decarburized layer

Wire rods of 30 steel and above shall be inspected for the depth of decarburized layer, and the total decarburized layer (ferrite + transition layer) depth on one side of the wire rod shall comply with the requirements of Table 1. If not specified, Group II shall apply.

6.3 Micro structure

6.3.1 The metallographic structure of wire rods of 65 steel and above is mainly sorbite structure. The sorbite content shall comply with the requirements of Table 2. Special requirements may be stated in the contract.

6.3.2 Wire rods of 65 steel and above are required to be tested for grain boundary cementite and central martensite and shall comply with the requirements of Table 3.

6.4 Center segregation

6.4.1 Based on the requirements of the buyer and upon agreement between the supplier and the buyer, wire rods of 60 steel and above may be subjected to the central carbon segregation test. There shall be no central carbon segregation of grade 3 or above.

6.5 Mechanical properties

Wire rods shall be tested for tensile properties and provided with tensile strength and area reduction results. Specific requirements for mechanical properties can also be specified through consultation between the supplier and the buyer. Table 4 shows the reference range of mechanical properties of typical designations.

6.7 Size, shape, weight

6.7.1 The size, shape and allowable deviation of the wire rod shall comply with the requirements of Grade B accuracy in GB/T 14981-2009. 6.8 Special requirements.

Based on the requirements of the buyer and upon agreement between the supplier and the buyer, bending test, forging test, torsion test and inspections of grain size, non-metallic inclusions, metallographic structure, etc. can be carried out. The indicators shall be stipulated by the agreement between the supplier and the buyer and shall be indicated in the contract.

7 Test methods

7.1 The sampling quantity, sampling method and test method of each batch of wire rod inspection items shall comply with the requirements of Table 5.

7.2 Chemical analysis shall be carried out in accordance with GB/T 223.3, GB/T 223.4, GB/T 223.5, GB/T 223.12, GB/T 223.19, GB/T 223.23, GB/T 223.58, GB/T 223.59, GB/T 223.60, GB/T 223.61, GB/T 223.62, GB/T 223.63, GB/T 223.64, GB/T 223.68, GB/T 223.69, GB/T 223.71, GB/T 223.72, GB/T 223.85, GB/T 223.86, or other general methods such as GB/T 4336, GB/T 20066 and GB/T 20123.

8.1 Inspection and acceptance

The quality inspection and acceptance of wire rods shall be carried out by the supplier's technical quality supervision department.

8.2 Batch rules

Wire rods shall be inspected and accepted in batches, and each batch shall consist of wire rods of the same designation, same furnace number and same specification.

9 Packaging, marking and quality certification

The packaging, marking and quality certificate of wire rods shall comply with the provisions of GB/T 2101.