

ICS 77.140.60
CCS H 44



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

GB/T 4356-2025

Replacing GB/T 4356-2016

Stainless steel wire rods

不锈钢盘条

Issued on: August 29, 2025

Implemented on: March 1, 2026

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

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Foreword

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

This document serves as a replacement of GB/T 4356-2016 Stainless steel wire rods and GB/T 39033-2020 Austenitic-ferritic duplex stainless steel wire rods. This document is primarily based on GB/T 4356-2016 and incorporates content from GB/T 39033-2020. In comparison with GB/T 4356-2016 and GB/T 39033-2020, apart from structural adjustments and editorial modifications, the main technical changes are as follows.

- a) The applicable scope of specifications has been changed (see Chapter 1; Chapter 1 of GB/T 4356-2016);
- b) 29 new grades have been added, including 20 austenitic grades, 3 austenitic-ferritic grades, 3 ferritic grades, 1 martensitic grade, and 2 precipitation-hardening grades (see Tables 2 to 6; Tables 1 to 5 of GB/T 4356-2016);
- c) The old grade designation method has been removed (see Tables 2 to 6; Tables 1 to 5 of GB/T 4356-2016);
- d) The unified numerical codes for some grades have been changed (see Tables 2 to 5;

Tables 1 to 4 of GB/T 4356-2016);

e) The naming method for some grades has been changed (see Tables 2 to 4; Tables 1 to 3 of GB/T 4356-2016; Table 2 of GB/T 39033-2020);

f) The chemical composition of some grades has been changed (see Tables 3 to 5; Tables 2 to 4 of GB/T 4356-2016);

g) The grade 06Cr19Ni9Cu2 has been removed (see Table 2; Table 1 of GB/T 4356-2016);

h) The PREN calculation formula and PREN value for grade 022Cr25Ni7Mo4WCuN have been changed (see Table 3; Table 2 of GB/T 39033-2020);

i) The delivery condition has been changed (see Chapter 5; 5.2 of GB/T 4356-2016);

j) The recommended heat treatment process for grade 14Cr17Ni2 has been changed (see Table 7; Table 7 of GB/T 4356-2016);

k) The mechanical property requirements for newly added grades have been changed (see Table 8; Table 8 of GB/T 4356-2016);

l) The surface quality requirements for wire rods have been changed (see 6.4.1, 6.4.2 and Table 9; 5.5 and Table 9 of GB/T 4356-2016); Stainless Steel Wire Rods

1 Scope

This document specifies the order contents, manufacturing process, technical requirements, test methods, inspection rules, packaging, marking and quality certificate for stainless steel wire rods.

This document is applicable to stainless steel round wire rods with a nominal diameter of 4.5 mm to 45.0 mm.

This document is not applicable to stainless steel wire rods for welding purposes.

2 Normative References

GB/T 222

GB/T 223

GB/T 226

GB/T 228.1

GB/T 231.1

GB/T 1979

GB/T 2101
GB/T 6394
GB/T 8170
GB/T 10561
GB/T 11170
GB/T 13305
GB/T 14981-2009
GB/T 17505
GB/T 20066
GB/T 20123
GB/T 20124
GB/T 20878
GB/T 36164

3 Terms and Definitions

This document contains no terms or definitions that require clarification.

4 Order Contents

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

- a) Number of this document;
- b) Product name;
- c) Grade or unified numerical code;
- d) Weight (quantity) of delivery;
- e) Dimensions and shape;
- f) Delivery condition;
- g) Mechanical properties (unless otherwise specified, Group 2 shall apply);
- h) Special requirements.

5 Manufacturing Process

The delivery condition of the wire rods shall comply with the provisions of Table 1. Other

delivery conditions may be used upon agreement between the supply and demand sides and specified in the contract.

6.1.1 The steel grades and chemical composition (melting analysis) shall comply with the

provisions of Tables 2 to 6. According to the demander's requirements and through negotiation between both parties, wire rods with other grades and chemical composition requirements may also be supplied. The main uses of the grades specified in this document are shown in Appendix A, and the comparison between the grades in this document and some foreign grades can be found in GB/T 20878.

6.1.2 The permissible deviations in the chemical composition of finished wire rods shall comply with the provisions of GB/T 222. The manufacturer shall only perform chemical composition analysis of finished products and report the analysis results of finished products in the quality certificate when required by the demander and specified in the contract.

6.2 Hardness

For ferritic and martensitic stainless steel wire rods delivered in the annealed condition, the hardness shall comply with the provisions of Table 7, and the recommended annealing process is shown in Table 7.

6.3 Mechanical Properties

The mechanical properties of solution-annealed austenitic and austenitic-ferritic stainless steel wire rods with a nominal diameter not exceeding 20 mm shall comply with the provisions of Table 8. Unless otherwise specified, Group 2 provisions shall apply. For grades not listed in Table 8, the mechanical properties of solution-annealed products shall be negotiated between