



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

GB/T 38589-2020

**General technical requirements of corrosion-resistant alloy
bars, wire rods and wires**

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1 Scope

This Standard specifies the terms and definitions, classification and designation, dimension, shape, weight, technical requirements, surface quality, test methods, inspection rules, packaging, marking and quality certificates of corrosion-resistant alloy bars, wire rods and wires.

This Standard is applicable to the general requirements for hot-rolled, forged, cold-drawn bars, hot-rolled wire rods, and cold-drawn wires (hereinafter collectively referred to as alloys) of corrosion-resistant alloys.

2 Normative References

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this document.

GB/T 702-2017 Hot-Rolled Steel Bars - Dimensions, Shape, Weight and Tolerances

GB/T 905-1994 Dimension, Shape, Weight and Tolerance for Cold-Drawn Round, Square and Hexagonal Steels

GB/T 908-2019 Forged Bars for Dimensions, Shape, Weight and Tolerances

GB/T 3207-2008 Bright Steel

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

GB/T 15007 Designations of Corrosion-Resistant Alloy

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

3 Terms and Definitions

For the purpose of this document, the following terms and definitions apply.

3.1 Bars

The products that are usually round or square cross-section, have fixed standard dimension range, shape and dimension tolerance and smooth surface through forging, rolling or cold drawing, and supplied in straight bars.

NOTE: Rewrite GB/T 15574-2016, definition 5.2.

3.2 Wire rods

The products that have round cross-section and smooth surface; usually used after further processing, or may be used directly without processing; and delivered after hot-rolling into wire rods.

NOTE: Rewrite GB/T 15574-2016, definition 5.2.1.

3.3 Wires

The products that have equal cross-section, obtained by cold-drawing the wire rods repeatedly through a reducer or applying pressure between the rolls.

NOTE 1: The cross-section is usually round, heat treatment and/or surface treatment may improve performance, and may be supplied with or without coating.

NOTE 2: Rewrite GB/T 15574-2016, definition 5.2.2.

4 Classification and Definition

The classification and definition of the alloy materials shall conform to the provisions of GB/T 15007.

5.1 Dimension and shape of bars

The dimension, shape and allowable deviation of the bars shall conform to the provisions of Table 1. Bars with other dimensions and shapes may also be specified after negotiation between the supplier and the purchaser, and indicated in the contract.

9 Inspection Rules

9.1 Inspection and acceptance The inspection and acceptance of alloy materials are carried out by the supplier's quality and technical supervision department. The supplier shall ensure that the delivered alloy materials conform to the provisions of product standards and contract.

The purchaser has the right to conduct inspection and acceptance according to the provisions of product standards and contract.

9.2 Batching rules Alloy materials shall be submitted for inspection and acceptance in batches. The batching rules shall be in accordance with the provisions of product standards and contract.

9.3 Sampling quantity and sampling location The sampling location and sampling quantity of alloy materials shall comply with the provisions of Table 8.

9.4 Re-inspection and judgment rules

9.4.1 When the analysis results of the chemical composition of the alloy materials are unqualified, re-sampling is allowed to re-test the unqualified elements. If the re-test results are still unqualified, then such furnace-batch of alloy materials is judged as unqualified.

9.4.2 When a certain inspection results of the technical requirements of the alloy materials are unqualified, it is allowed to take double quantities of samples from the batch of alloy materials (including the alloy materials that are unqualified in the original inspection) for re-testing. When there is one unqualified specimen in the re-inspection results, then such batch of alloy materials is judged as unqualified.

9.4.3 When the ultrasonic test, dimension, shape and surface quality of alloy materials are unqualified, then single piece (disk) shall be judged as unqualified.

9.4.4 The supplier has the right to re-classify or heat-treat the unqualified alloy materials, and then submit them for inspection as a new batch.

9.5 Rounding-off the test results The test results stipulated in this Standard shall be all rounded-off by the rounding-off comparison method; and the rounding-off rules shall comply with the provisions of

GB/T 8170.

number, dimension, etc. at the end or surface. For alloy materials delivered in bundles, at

least 2 nameplates (labels) shall be hung on each bundle, indicating the name of the supplier (trademark), alloy designation, furnace number, dimension, weight, delivery status, etc. The nameplate (label) shall be firmly tied or pasted on the material bundle on the side that is convenient for inspection. For bars delivered in wooden boxes, the label shall be printed or pasted on the outer surface of the box, indicating the name of the supplier (trademark), alloy designation, furnace (batch) number, dimension, gross weight, net weight, number of pieces, production date, etc.

10.2 Wire rods

10.2.1 Packaging

10.2.1.1 If the wire rods are packaged in disks, and each disk shall be firmly tied by wire, wire rods, or steel strips, with no less than 3 radial bundles, and the disk weight shall not exceed 2000kg.

10.2.1.2 In the same batch, the wire rods with a small single weight are allowed for several disks to be packed in a bundle. The coils shall be arranged neatly, and each disk should be bundled 2 radially.

10.2.2 Marking The marking of wire rods shall be carried out by means of hanging and pasting labels.

Each wire rod shall be affixed or hung with a label at the end of the outer ring, indicating the alloy designation, furnace number, specification, weight, etc. The nameplate (label)

of the outer packaging of each wire rod shall indicate the manufacturer's name (trademark), designation, furnace number, specification, weight and production date, etc. The marking shall be legible, firm and reliable.

10.3 Wires

10.3.1 Packaging

10.3.1.1 The wires shall be packed in disks (or bundles); each disc consists of one piece of wire. Each disk of wire is equidistantly bundled by galvanized iron wire for no less than 2 places; and each bundle of wire is equidistantly bundled for no less than 3 places; the wires with the nominal diameter of less than 0.7mm may be wrapped and wound tightly. The bundled wires are wrapped by wrapping paper (gas-phase anti-rust paper or paraffin paper) and packaging cloth in sequence or contained in packaging boxes to prevent damage during transportation and handling.

10.3.1.2 Each bundle of straight wire materials shall be bagged and tied up for sealing, and then packed in a box. It is allowed to form a bundle of packaging from one or several disks of wires.

10.3.1.3 If there are special requirements for the packaging dimension and shape of