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

GB/T 14451-2025

Replacing GB/T 14451-2008

Steel wire ropes for control

操纵用钢丝绳

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. This document replaces GB/T 14451-2008 "Wire rope for operation". Compared with GB/T 14451-2008, except for the structural adjustment and editing In addition to the functional changes, the main technical changes are as follows:

- Added zinc alloy coating (see Chapter 1, 4.3);
- Changed the structural marking of wire rope (see 4.1, 5.1 of the.2008 edition);
- Added code and marking method (see Chapter 4);
- Changed the order content (see Chapter 5, Chapter 4 of the.2008 edition);
- Added the provisions for residual torsion value (see 6.1);
- Changed the provisions on wire rope lay length (see 6.4, 7.2.1.4 of the.2008 edition);
- Changed the requirements for flexible wire rope after cutting (see 6.6, 7.2.1.6 of the.2008 edition);
- Changed the provisions for wire rod (see 7.1.1, 7.1.1 of the.2008 edition);

1 Scope

GB/T 14451-2025 is the Chinese national standard on steel wire ropes for control, in the field of metallurgy. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification

calls it up - which in practice is how most foreign buyers meet it. It was issued on 30 June 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 January 2026. Classification: ICS 77.140.65, CCS H49. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the terms and definitions, classification and marking, ordering content, manufacturing process, technical requirements, inspection, testing, Receipt, packaging, marking, quality certificate, transportation and storage, arbitration inspection, safe use and maintenance. This document applies to zinc or zinc alloy coated carbon steel wire ropes (hereinafter referred to as steel wire ropes) used to operate various mechanical devices (except aviation devices) silk rope).

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 2104 General provisions for packaging, marking and quality certification of steel wire ropes

GB/T 8706 Terminology, marking and classification of wire ropes

GB/T 24242.2 Non-alloy steel wire rod for wire making - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 8706 and the following apply to this document.

3.1 Steel wire ropes used for operating various precision mechanical devices with high fatigue resistance requirements (such as automobile electric door and window lifts, etc.).

3.2 Other operating wire ropes except flexible wire ropes.

4 Classification and labeling

4.1 Steel wire ropes are divided into seven categories according to their structure. 1x7, 1x12M, 1x19M, 1x37M, 6x7-WSC, 6x19M-WSC and 8x7-WSC There are two types of WSC structures, among which the 8x7-WSC has two types. 1x19M and 1x19W.

4.2 Steel wire ropes are divided into two types according to their use. ordinary steel wire

ropes (codenamed PT) and flexible steel wire ropes (codenamed RX).

4.3 Steel wire coatings are classified into two types. zinc (code Zn) and zinc alloy (code ZnAl, ZnAlRE, ZnAlMg, etc.).

4.4 The marking code of the wire rope shall comply with the provisions of GB/T 8706.

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