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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 16904.2-2025

Replacing GB/T 16904.2-2006

Checking of rolling stock clearance for standard gauge railways - Part 2: Inspection device

标准轨距铁路机车车辆限界检查 第2部分：检查装置

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document is Part 2 of GB/T 16904 "Inspection of Clearance for Standard Gauge Railway Locomotives and Rolling Stock". GB/T 16904 has been published. The following section.

1.Inspection Methods;

2.Inspection device. This document replaces GB/T 16904.2-2006 "Standard Gauge Railway Locomotive and Rolling Stock Clearance Inspection Part

2.Clearance Regulations", and is consistent with... Compared with GB/T 16904.2-2006, apart from structural adjustments and editorial changes, the main technical changes are as follows:

a) Added terms and definitions (see Chapter 3);

b) The classification of inspection devices has been expanded (see Chapter 4);

c) Increased operating ambient temperature (see 5.1);

d) The technical requirements for the geometric parameters of the track section being measured have been changed (see 5.4,

3.5 of the.2006 edition);

e) The technical requirements for clearance gauges have been revised (see 5.12,

3.8 of the.2006 edition);

f) Increased the indication error requirements for the clearance gauge (see Table 2);

g) Increased power supply adaptability requirements for the inspection device (see 5.13);

1 Scope

GB/T 16904.2-2025 is the Chinese national standard on checking of rolling stock clearance for standard gauge railways - part 2: inspection device, in the field of railway engineering. 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 31 December 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 July 2026. Classification: ICS 45.060.01, CCS S 04. 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 classification, technical requirements, inspection rules, markings, and packaging of clearance inspection devices for standard gauge railway locomotives and rolling stock, and describes... The corresponding experimental methods were developed. This document applies to clearance inspection devices for standard gauge railway locomotives and rolling stock (hereinafter referred to as "inspection devices").

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB 146.1-2020 Standard Gauge Railway Clearance Part

3 Terms and Definitions

The terms and definitions defined in GB 146.1-2020, as well as the following terms and definitions, apply to this document.

3.1 A coordinate system is established at the inspection device with the rail plane as the reference.

Note. The intersection of the inspection device's cross-section and the rail top plane is taken as the X-axis, the perpendicular bisector of the rail plane as the Y-axis, and the track centerline as the Z-axis, pointing in the direction of the theodolite. The positive direction of

the Z-axis, and the intersection of the Z-axis and the X-axis is the origin of the coordinate system.

3.2 Horizontal size Check the distance from the working point of the device to the vertical line of the rail surface.

3.3 Vertical size Check the distance from the working point of the inspection device to the rail surface.

3.4 A coordinate system established by two theodolites (A and B) through precise mutual aiming.

Note. The origin of the coordinate system is the intersection of the axes of one of the theodolites, A. The projection of the line connecting theodolites A and B onto the horizontal plane is given by the coordinate system origin, and the line pointing from A to B is the coordinate system origin. B is the positive direction of the X-axis, and the vertical direction upward through A is the positive direction of the Z-axis. The Y-axis is determined using a right-handed coordinate system.