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

GB/T 16904.1-2006

Replacing GB/T 16904.1-1997

**Checking of rolling stock clearance for standard gauge railways
- Part 1: Inspection methods**

标准轨距铁路机车车辆限界检查 第1部分:检查方法

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1 Scope

This part of GB/T 16904 specifies the methods for inspecting the clearance of rolling stock on standard gauge railways.

The envelope, and how little room is in it

The rolling stock gauge is the outline a vehicle must stay within so that it passes platforms, tunnels, bridges, signals and lineside structures without touching them, and so that two vehicles on adjacent tracks pass each other.

It is not the structure gauge, and the margin between the two is small. A vehicle that violates it by a few centimetres at one point - a mirror, a lamp, a door handle, a step, a loaded tarpaulin - is a hazard on every line it runs.

Why the check is made on the vehicle, not the drawing

The drawings do not capture what the shops actually built. And the check has to be repeatable, because what comes out of it is a permission to operate.

So the vehicle is prepared and positioned on level, straight track with the suspension in a defined state - ride height and lateral play both change the measured outline.

Measuring, and then allowing for what a static check cannot see

Either a template or gauge frame is passed over the vehicle, or the points are measured individually against the track centreline and the rail level. The standard fixes which points must be taken: the ones that project, the ones that move, and the ones that move once the vehicle is loaded.

The measured values are then compared with the permitted outline including the allowances for the displacements a vehicle undergoes in service - which is the part a static measurement can never reproduce.

About this edition

GB/T 16904.1-2006 is the current edition. It was issued on 14 December 2006 and has been in force since 1 May 2007, replacing GB/T 16904.1-1997.

GB/T 16904.1-1997 has been superseded: a specification that still cites it is citing a withdrawn edition.

The interval between issue and effect is the transition period. It exists so that producers, laboratories and buyers can requalify products, revise procedures and use up documentation before the new text becomes the one that applies. The date on this page is the official one from the record of the Standardization Administration.

Classification and status

GB/T 16904.1-2006 is classified under ICS 45.060.01. ICS is the International Classification for Standards, the same scheme used by ISO and by the national bodies of most countries, which is what allows a Chinese standard to be placed beside its foreign counterparts on subject rather than on number.

Its Chinese Standard Classification code is CCS S 04. CCS is the domestic scheme, a letter for the sector and two digits for the subject within it, and it is the code by which the standard is filed and searched in China.

The GB/T prefix marks a recommended national standard. It is not, in itself, law: it becomes binding when a contract names it, when a regulation or a mandatory standard refers to it, or when a producer declares conformity with it. In practice that covers most of the cases in which it will be read - a purchase specification, an inspection agreement or a certification scheme.

How a Chinese national standard is set out

Chinese national standards are drafted to the rules of GB/T 1.1, which fixes the order in which a standard is set out. The document opens with a foreword recording the issuing

bodies, the relationship to any previous edition and the technical committee responsible for it. Clause 1 is the scope. Clause 2 lists the normative references - the other standards that have to be applied together with this one, and without which its requirements cannot be met. Clause 3 gives the terms and definitions. The technical clauses follow: the requirements themselves, the test or measurement methods by which conformity is established, the inspection rules that say how a lot is sampled and judged, and, for a product standard, the provisions on marking, packaging, transport and storage. Annexes, normative or informative, come last.

GB/T 16904.1-2006 runs to 15 pages in the English translation. What is delivered is the complete document in that order: every clause, every table, every figure and every annex of the Chinese original, with the same numbering, so that a reference to a clause number in a contract or a test report points to the same place in both languages.

About this English translation

The English edition of GB/T 16904.1-2006 is a full translation of the official Chinese text, not a summary, an abstract or a machine rendering left unchecked. Clause and subclause numbers, table and figure numbers and annex letters are those of the original, because they are what a specification, a purchase order or a test report cites.

Technical terms are translated against the vocabulary standards of the same field, so that a term used in GB/T 16904.1-2006 reads the same way as in the other Chinese standards it is used beside. Where a term has an established English form in an ISO or IEC document on the same subject, that form is used; where China's term has no foreign counterpart, it is translated literally and the Chinese is kept alongside it rather than replaced by an approximation.

Quantities, units and symbols are carried over unchanged. Chinese standards use SI, so a value in the translation is the value in the original document, not a conversion, and a limit read from the English text is the limit that will be applied by a Chinese inspection body reading the Chinese one.

This page is compiled from the official publication record: the standard number and both titles, the issuing bodies, the dates of issue and effect, the edition it replaces, the ICS and CCS classification. The requirements, limits, tables and test conditions are in the document itself.