

ICS 03.220.30

CCS S 51



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

GB/T 18818-2021

Replacing GB/T 18818-2002

**Inspecting specification for railway wagon dumper and bulk
cargo unfreezing warehouse**

铁路货车翻车机和散装货物解冻库检测技术条件

Issued on: December 31, 2021

Implemented on: July 1, 2022

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

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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 of Standardization Documents" drafted: This document replaces GB/T 18818-2002 "Technical Conditions for Testing Railway Wagon Dumpers and Bulk Cargo Thawing Storehouses": and Compared with GB/T 18818-2002, in addition to structural adjustment and editorial changes, the main technical changes are as follows:

- a) Changed the scope of application of the standard (see Chapter 1, Chapter 1 of the:2002 edition);
- b) Changed the terms and definitions of railway freight car dumpers (see 3:1, 3:1 of the:2002 edition);
- c) Changed the requirements for boundaries (see 4:1:1, 4:1:2, 4:2:1, 4:2:2 of the:2002 edition);
- d) The names of the dialing machine (positioning machine) and the dialing arm have been changed (see 4:1:4, 4:7:2, 4:2:4 and 4:8:2 of the:2002 edition);
- e) Changed the requirement that the pressure beam acts on the vehicle position (see 4:2:1, 4:3:1 of the:2002 edition);
- f) Changed the requirements for the pressing force (see 4:2:2, 4:3:2 of the:2002 edition);
- g) Changed the requirement that the supporting beam acts on the position of the vehicle (see 4:3:1, 4:4:1 of the:2002 edition);
- h) Changed the requirement that the supporting beam should support the height of the column on the side wall of the vehicle (see 4:3:2, 4:4:2 of the:2002 edition);
- i) Changed the requirements for the action position of the vibrator (see 4:4:1, 4:7:1 of the:2002 edition);
- j) Changed the requirements for the selection frequency of the vibrator (see 4:4:2, 4:7:2 of the:2002 edition);

- k) Changed the requirements for lateral impact force (see 4:5, 4:5 of the:2002 edition);
- l) The requirements for setting up anti-slip devices on the empty and heavy vehicle lines of the dumper are added (see 4:6:1);
- m) The requirements for the height difference between the center horizontal line of the tipper shunter coupler and the vehicle coupler when they are connected and moved are added (see 4:6:2);

1 Scope

GB/T 18818-2021 is the Chinese national standard on inspecting specification for railway wagon dumper and bulk cargo unfreezing warehouse, in the field of services and company organization. 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 2021 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 July 2022. Classification: ICS 03.220.30, CCS S 51. 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 for the inspection of railway truck dumpers and bulk cargo thawing warehouses, the technical requirements for railway truck dumpers and the Inspection methods, technical requirements, inspection methods and inspection rules for bulk cargo thawing warehouses: This document is applicable to the detection of railway truck dumpers (with a total weight of 120t and below for dumping a single truck) and bulk cargo thawing warehouses:

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document: GB 146:

- 1 Standard Gauge Railway Limits Part 1: Rolling Stock Limits GB 146:
- 2 Standard Gauge Railway Limits Part 2: Building Limits TB/T 3550:
- 2 Specification for strength design and test identification of rolling stock - Part 2: Freight car body

3 Terms and Definitions

The following terms and definitions apply to this document: 3:1 railway wagon dumper
railway wagon dumper Unloading system for direct tipping of bulk cargo from railway
wagons:

Note: It is mainly composed of unloading equipment, shunting machine used to cooperate
with shunting operation, shunting platform, stopper, wheel clamp and other ancillary
equipment and ground facilities: 3:2 bulk cargo thawing warehouse
bulk cargo unfreezing warehouse Warehouses and related facilities that are heated and
thawed when the bulk cargo loaded by railway wagons is frozen:

4 Technical requirements for railway freight car dumpers

- 1 The unloading equipment and auxiliary equipment of the dumper shall not violate the
limits specified in GB 146:1 in the non-working state: 4:1:
- 2 The ground facilities of the dumper shall comply with the limits specified in GB 146:2: 4:1:
- 3 The truck support beam (relying plate) of the dumper should be able to allow the use of
trucks within the allowable limit of vehicle body expansion to pass: 4:1:
- 4 If a shunting machine is used to position the vehicle, during the period when the shunting
arm moves to the pushing vehicle position, it will not be in contact with the specified
pushing and pulling parts of the vehicle: In addition, it should not collide with other parts: 4:
- 2 Pressing device 4:2:
 - 1 The pressure beams shall be arranged symmetrically along the longitudinal direction of
the vehicle: 4:2:
 - 2 When the dumper dumps the vehicle, the pressure beam should press the full width of the
beams on both sides of the vehicle: For tipplers with four indenters, the pressure of each
indenter