

ICS 43.160
CCS T59



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

GB 18564.1-2019

**Road tanker for dangerous liquid goods transportation -
Part1:Technical requirements of atmospheric pressure metal
tank**

道路运输液体危险货物罐式车辆 第1部分：金属常压罐体技术要求

Issued on: October 14, 2019

Implemented on: January 1, 2020

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

Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and Definitions	2
4 Material	3
5 Design	6
6 Safety accessories, instruments and handling accessories	14
7 Manufacturing	17
8 Test method	22
9 Inspection rules 24 10 tank logo	27
11 Factory file 27 12 connection requirements	27
46 Appendix G (informative) Tank nameplate	47

Foreword

The full technical content of this standard is mandatory. GB 18564 "Land transport liquid dangerous goods tank vehicles" consists of two parts.

--- Part 1. Technical requirements for metal atmospheric pressure tanks;

--- Part 2. Technical requirements for non-metallic atmospheric tanks. This part is the first part of GB 18564. This part is drafted in accordance with the rules given in GB/T 1.1-2009. This part replaces GB 18564.1-2006 "Roller transporting liquid dangerous goods tank vehicles - Part 1. Metal atmospheric tank technology Requirements, compared with GB 18564.1-2006, except for editorial changes, the technical changes are as follows:

--- Revised the scope of application of Chapter 1 (see Chapter 1, Chapter 1 of the.2006 edition);

--- Removed the terms and definitions of "pressure", "computational pressure", "tank", "safety attachment" and "emission system" (see 3.1, 3. in.2006 edition). 2. 3.3, 3.4, 3.5);

---Modified the terminology and definition of "liquid" (see 3.1, 3.7 of.2006 edition);

---Added the terms and definitions of "tank", "tank semi-trailer", "volume" and "filling rate" (see 3.4, 3.5, 3.6, 3.7);

--- Removed the general chapter of Chapter 4 (see Chapter 4 of the.2006 edition);

--- Removed the requirement for the effective volume of the tank for the shipment of highly toxic media (see

5.1.1.4 of the 2006 edition);

--- Removed the requirements for tank design for liquid dangerous goods other than Appendix A (see

5.1.1.5 of 2006 edition);

--- Revised the requirements for material compatibility with media contact (see 4.1.1, 2006 edition 5.2.1.4);

1 Scope

GB 18564.1-2019 is the Chinese national standard on road tanker for dangerous liquid goods transportation - part 1: technical requirements of atmospheric pressure metal tank, in the field of road vehicles engineering. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 14 October 2019 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 January 2020. Classification: ICS 43.160, CCS T59. 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 part of GB 18564 specifies metal atmospheric pressure tanks for road transport liquid dangerous goods tank vehicles (hereinafter referred to as tank trucks) (below Materials, designs, safety accessories, instruments and loading and unloading accessories, manufacturing, test methods, inspection rules, signs and labels, and factory documents Wait for the request. This section applies to tanks that meet the following conditions.

a) the filling medium is a liquid dangerous goods;

b) the working pressure during normal transportation is less than 0.1 MPa;

c) The metal material is manufactured and permanently connected to the styling car chassis or to the tank semi-trailer. This section does not apply to tanks with special requirements such as non-metallic materials, vacuum insulation structures or military equipment. For tanks that cannot be designed in this section, the following methods are allowed to be designed, but they must be assessed in accordance with relevant national regulations. Recognition.

--- Stress analysis including finite element method;

---Verification experimental analysis (such as experimental stress analysis, confirmatory hydraulic test);

--- Comparative verification design with comparable structures already in use.

Note 1. The scope of the tank is defined as follows:

- a) the groove surface of the first circumferential joint of the tank and the pipe welded joint;
- b) The first threaded joint end face of the tank and the pipeline, safety accessories, instrument and loading and unloading accessories, the first flange of the flange connection Cover
- c) end caps, end plugs and fasteners of the opening portion of the can body;
- d) Connection welds between tank and non-compressed components.

Note 2. The pipeline includes all pipes and fittings connected to the tank.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 150 (all parts) pressure vessel

GB/T 228.1 tensile testing of metallic materials - Part 1

GB/T 229 metal material Charpy pendulum impact test method

GB/T 700 carbon structural steel

GB/T 713 steel plate for boiler and pressure vessel

GB 1589 Car, trailer and car train profile size, axle load and mass limit

GB/T 1591 low alloy high strength structural steel

GB/T 1804 General tolerances No tolerances for linear and angular dimensions tolerances

GB/T 2975 steel and steel products mechanical properties test sampling position and sample preparation

GB/T 3274 carbon structural steel and low alloy structural steel hot rolled steel sheet and strip