

Translated English of Chinese Standard: GB/T12137-2015

www.ChineseStandard.net

Sales@ChineseStandard.net

GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

ICS 23.020.30

J 74

GB/T 12137-2015

Replacing GB/T 12137-2002

Methods for Leakage Test of Gas Cylinders

气瓶气密性试验方法

GB/T 12137-2015 How to BUY & immediately GET a full-copy of this standard?

1. www.ChineseStandard.net;
2. Search --> Add to Cart --> Checkout (3-steps);
3. No action is required - Full-copy of this standard will be automatically & immediately delivered to your EMAIL address in 0~25 minutes.
4. Support: Sales@ChineseStandard.net. Wayne, Sales manager

Issued on: December 10, 2015

Implemented on: July 1, 2016

**Issued by: General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China;
Standardization Administration of the People's Republic of China.**

Table of Contents

Foreword.....	3
1 Application Scope.....	4
2 Normative References.....	4
3 Terms and Definitions.....	4
4 Test Apparatus.....	5
5 Requirements for Tested Gas Cylinders.....	6
6 Test Methods and Evaluation Criteria.....	7
7 Requirements for Test Records.....	8
Bibliography	9

Methods of Leakage Test of Gas Cylinders

1 Application Scope

This Standard specifies the requirements for test apparatus and test methods for leakage test of gas cylinders.

This Standard applies to leakage test of gas cylinders when water-immersion method or soap bubble method is used.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 13005, *Terminology of Gas Cylinders*

GB/T 16163, *Classification of Gases Filled in Cylinder*

TSG R0004, *Supervision Regulation on Safety Technology for Stationary Pressure Vessel*

TSG R0006, *Gas Cylinders Safety and Technical Supervision Regulation*

3 Terms and Definitions

For the purposes of this document, the following terms and definitions and those defined in GB/T 13005 apply.

3.1 Water-immersion test

The test method in which tested gas cylinders filled with a gas of specified pressure are immersed in a water tank to check their air-tightness.

NOTE Water-immersion test applies to leakage test of the whole or local part of tested gas cylinders.

3.2 Soap bubble test

The test method in which an inspection liquid is applied on the part to be tested of tested gas cylinders filled with a gas of specified pressure to check their air-tightness.

NOTE Soap bubble test applies to the leakage test of threaded connections of tested gas cylinders and cylinder valves, cylinder valve rods, cylinder valve air outlets, fusible plugs or gas

6 Test Methods and Evaluation Criteria

6.1 Options of test media and methods

6.1.1 The leakage test media of the manufacturer of gas cylinders shall be as specified in 4.1.2; priority shall be given to water-immersion method for leakage test.

6.1.2 The leakage test media and methods for the periodic inspection agency of gas cylinders are as follows:

- a) for gas cylinders containing non-combustible, non-toxic, non-corrosive gases as classified in GB/T 16163, directly choose gas cylinders to contain gases and use water-immersion method or soap bubble method to carry out leakage test;
- b) for gas cylinders containing other gases, choose test media as specified in 4.1.2 and use water-immersion method to carry out leakage test.

6.2 Test conditions

6.2.1 The environmental temperature for the leakage test of gas cylinders shall be greater than 0°C.

6.2.2 In accordance with the test requirements of different gas cylinders, fill tested gas cylinders to the pressure for leakage test at a constant, gentle speed.

6.3 Test requirements

6.3.1 Water-immersion method

The requirements for water-immersion test are as follows:

- a) place tested gas cylinders filled with gases of test pressure into test water tank to make any part of tested gas cylinders not less than 5 cm from water level;
- b) the immersion time of tested gas cylinders is not less than 1 min. After tested gas cylinders become stable, carry out visual inspection to determine whether any bubble appears in any part.

6.3.2 Soap bubble method

Apply inspection liquid on the part to be inspected on tested cylinders filled with gases of test pressure; the dwell time of applied liquid shall not be less than 1 min. Carry out visual inspection to determine whether any bubble occurs.

6.4 Evaluation criteria

Under any of the following circumstances, the leakage test of tested gas cylinders is decided to be a fail:

This is an excerpt of the PDF (Some pages are marked off intentionally)

Full-copy PDF can be purchased from 1 of 2 websites:

1. <https://www.ChineseStandard.us>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Select your country (currency), for example: USA (USD); Germany (Euro).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Tax invoice can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with download links).

2. <https://www.ChineseStandard.net>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Add to cart. Only accept USD (other currencies - <https://www.ChineseStandard.us>).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with PDFs attached, invoice and download links).

Translated by: Field Test Asia Pte. Ltd. (Incorporated & taxed in Singapore. Tax ID: 201302277C)

About Us (Goodwill, Policies, Fair Trading...): <https://www.chinesestandard.net/AboutUs.aspx>

Contact: Wayne Zheng, Sales@ChineseStandard.net

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

----- The End -----