

ICS 23.020.30

CCS J 74



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

GB/T 14194-2017

Replacing GB 14194-2006

Rules for the filling of compressed gas cylinders

压缩气体气瓶充装规定

Issued on: October 14, 2017

Implemented on: May 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Filling before the inspection and processing

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 14194-2006 "permanent gas cylinder filling provisions." This standard compared with GB/T 14194-2006, in addition to editorial changes outside the main technical changes are as follows:

- Modify the scope of the standard (see Chapter 1,.2006 edition Chapter 1);
- Increasing the flammable gas and strong oxidizing gas cylinders should be filled before the provisions of the vacuum, and the vacuum value of the proposed Body requirements (see 4.4, 4.5);
- Removed the specific limits of impurities in bottled gases (see version
- Modify the cylinder filling the determination of the principle that the reference temperature (20 °C), the filling pressure does not exceed the cylinder pressure test pressure Of the 2/3 (see 5.5,.2006 5.4);
- The gas has several characteristics, such as fluorine, nitric oxide and other gases limit the maximum filling pressure (see 5.6);
- According to the revised filling quantity to determine the principle of a comprehensive amendment to several commonly used gases at different filling temperature maximum filling pressure (See Table 1,.2006 edition Table 1);
- In Table 1, the maximum filling gas pressure commonly used to add a helium gas data (see Table 1);
- The vaporizer gas outlet pipe to the filling temperature limit of not less than -30 °C (see 5.9). This standard by the National Gas Cylinder Standardization Technical Committee (SAC/TC31) and focal point. This standard was drafted unit. Hangzhou New Century Mixed Gas Co., Ltd., Beijing Praxair Practical Gas Co., Ltd., Beijing North helium North Gas Co., Ltd. The main drafters of this standard. Wu Yue Sun, Hao Cheng, Shen Jianlin, Song Qi, Zhao Junxiu. This standard replaces the standards previously issued as.

--- GB 14194-1993, GB/T 14194-2006. Compressed gas cylinder filling provisions

1 Scope

China's national rules for the filling of compressed gas cylinders - the operation at which most serious gas cylinder accidents are actually created, even when they happen later and somewhere else. It specifies the basic principles and the safety technical requirements for the filling of compressed gas cylinders, and it applies to that operation. A cylinder is a pressure vessel that leaves the control of the person who fills it and is then carried, stored and used by people who know nothing about it. Everything that makes it safe therefore has to be established at the filling station: that this cylinder is the right one for this gas, that it is within its inspection date, that it is not damaged, that it does not still contain something else, and that it is filled to the right pressure and no further. The standard is built around those checks. It sets the requirements on the filling station and its equipment, the identification of the cylinder and the verification that its markings, its colour coding and its valve correspond to the gas being put into it - which is the check that prevents the classic catastrophe of a flammable gas going into an oxygen cylinder - the inspection before filling and the criteria for rejecting a cylinder, the residual pressure that must be present as evidence that the cylinder has not been emptied and contaminated, the evacuation and purging where the gas is being changed, the filling pressure and the temperature correction that governs it, the checks after filling including the leak test and the weight or pressure verification, and the records. The requirement to keep records for each cylinder filled is what makes an investigation possible after an accident, and it is the clause most often neglected. Issued on 14 October 2017 and in force since 1 May 2018, it replaces GB 14194-2006.

This standard specifies the basic principles of compressed gas cylinder filling and safety technical requirements. This standard applies to compressed gas cylinder filling. This standard does not apply to mixed gas (except natural gas) cylinders, compressed natural gas cylinders for car filling.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 7144 cylinder color logo

GB/T 13005 gas bottle terminology

GB/T 15383 cylinder valve outlet connection type and size

3 Terms and definitions

GB/T 13005 and defined by the following terms and definitions apply to this document.

3.1 Low temperature liquefied gas refrigeratedliquefiedgas cryogenicliquidgas The critical temperature is lower than or equal to -50 °C, during the storage and transportation due to low temperature and liquefied gas.

3.2 Filling temperature filingtemperature The actual temperature of the gas in the bottle at the end of gas filling.

3.3 Filling pressure filingpressure The pressure of gas in the bottle at the end of gas filling.

4 Filling before the inspection and processing

4.1 Before filling the cylinder should be personally responsible for checking by only one by one, the contents and requirements of the inspection should include at least.

- a) Cylinders should be produced by units with "special equipment manufacturing license";
- b) The imported gas cylinders shall be approved by the special equipment safety supervision and administration department;
- c) The filling gas shall be in accordance with the name or chemical formula of the gas filled in the cylinder marking of manufacture of steel stamping;
- d) the name and chemical formula of the bottled gas printed on the warning label should be consistent with the mark of the cylinder;
- e) The gas cylinder shall be a gas cylinder hosted on its own proprietary gas cylinder or other filling station at this filling station;
- f) the color of the outer surface of the cylinder logo should be consistent with the provisions of GB/T 7144, and clear and easy to recognize;
- g) Gas cylinder valve outlet thread type should be consistent with the provisions of GB/T 15383, that is combustible gas cylinder valve, the outlet thread should be