

ICS 55.120
CCS A 82



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

GB 14174-1993

Replacing GB 14174-1993

**Large caliber liquid nitrogen container
(English Translation)**

Issued on: January 1, 1970

Implemented on: January 1, 1970

Issued by: Standardization Administration of China

Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Terms and Definitions

Foreword

This standard is based on GB/T 1.1-2009 given rule drafting.

This standard replaces GB 14174-1993, compared with GB 14174-1993, there are the following changes.

- Chapter 1, "Scope" increased scope shall not apply;
- Increased Chapter 3, "Terms and definitions" and the foundation "large caliber liquid nitrogen containers main terminology" in the original Appendix A (Supplement) Carried out on the appropriate additions, deletions and modifications;
- Original Chapter 3, "product models, specifications" to Chapter 4, "category", and large caliber liquid nitrogen containers directly into mouth and two partial mouth category;
- Original 1 "Structure Representation" to be modified, and the words "straight mouth type container structure diagram";
- Added Figure 2 "Partial opening type container structure diagram";
- Original Chapter 4, "technical requirements" to Chapter 5, and increases the technical requirements of flatfish type products;
- Increased by 5.1 "General requirements";
- An increase of 5.2 "material and an outer member," added the insulation material and the welding material requirements;
- Increased 5.3 "design";
- Canceled a Table 1 for product diameter, height, empty weight requirements;
- Table 1, the original product daily evaporation rate index appropriate changes, and adds static evaporation rate index flatfish type products;
- Original table 2 to Table 4 "neck tube diameter tolerance" and cancel the provisions of the original table 2 in the plug body diameter;

- On 5.4 "manufacturing" requirements, appropriate complementary;
- Adjusted 6.1 --- "effective volume" methods of measurement;
- An increase of 6.3 "sandwich vacuum degree" methods of measurement;
- Clear 6.4 "sandwich vacuum leak rate" measurement method;
- Canceled a 6.2 "unqualified category";
- A "type test" instead of the original "periodic inspection";
- On 8.2 "packaging" made the necessary additional provisions.

This standard by the National Standardization Technical Committee of the boiler pressure vessel (SAC/TC262) and focal points.

This standard was drafted. Chengdu Golden Phoenix Liquid Nitrogen Container Co., Ltd., Shanghai Gas Industry Association, Shanghai Jiaotong University, Shenyang Xinguang hypothermia Container Co., Ltd., Leshan East Asia Electrical and Mechanical Industry and Trade Company, China Special Equipment Inspection and Research Institute, Shanghai Huayi Equipment Engineering Co., Ltd., the National Low Temperature container Quality Supervision and Inspection Center, Shanghai Institute of Special Equipment Inspection.

1 Scope

1.1

standard austenitic stainless steel large caliber liquid nitrogen containers (hereinafter referred to as the container) terms and definitions, classifications, technical requirements, test Test methods, inspection rules and signs, packaging, storage and transportation requirements.

1.2

This standard applies to the storage of liquid nitrogen at atmospheric pressure, the effective volume of not more than 1830L, with a caliber of 315mm high vacuum multi-layer of absolute Thermal containers.

1.3

This standard does not apply to use of containers.

- With pressure storage of liquid nitrogen;
- Other cryogenic liquid storage and liquid oxygen.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references,

the latest edition (including any amendments) applies to this document.

GB 150.3 pressure vessels - Part 3. Design GB/T 191-2008 Packaging - Pictorial signs
GB/T 3198-2010 aluminum and aluminum foil GB/T 3280-2007 cold-rolled stainless steel
sheet and strip GB/T 4237-2007 hot-rolled stainless steel sheet and strip GB/T 6388-1986
transport package shipping mark GB/T 13550-1992 5A molecular sieve and test methods
GB/T 16958-2008 biaxially oriented polyester film for packaging GB/T 18443.2 vacuum
insulation cryogenic device performance test methods - Part 2. Vacuum Measurement GB/T
18443.3 vacuum insulation cryogenic device performance test methods - Part 3. leak rate
measurement GB/T 18443.5 vacuum insulation cryogenic device performance test methods
- Part 5. Static evaporation rate measurement GB/T 18443.8 vacuum insulation cryogenic
device performance test methods - Part 8. volume measurement GB 24511 pressure
equipment with stainless steel sheet and strip HG/T 2690-1995 13X molecular sieves SN/T
0273-2002 and export goods transport packaging wooden boxes for the inspection

3 Terms and Definitions

The following terms and definitions apply to this document.

Mezzanine interspace Confined space formed between the liner and the shell of the container.

High vacuum multi-layer insulation Multilayer insulation layer disposed within the spatial separation of the insulating material heat radiation screen, and high vacuum pumping adiabatically formed.