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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 27513-2025

Replacing GB/T 27513-2011

Hypobaric chamber for human occupancy

载人低压舱

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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 for standardization documents" Drafting.

This document replaces GB/T 27513-2011 Manned Hypobaric Chamber. Compared with GB/T 27513-2011, except for structural adjustments and editorial In addition to the modifications, the main technical changes are as follows.

- The restriction of "maximum pressure altitude not exceeding 10000m (26.50kPa)" has been deleted, and the maximum pressure altitude has been extended to 46000m (0.138kPa), added "other low-pressure animal experiment chambers, product and equipment environmental experiment chambers that require personnel to stay in the chamber and artificial climate laboratories, etc." (see Chapter 1);

- Changed some terms and definitions, added terms and definitions such as rapid decompression and temperature hypobaric chamber (see Chapter 3);

- Deleted product classification (see Chapter 4 of the 2011 edition);

- Added requirements for rapid decompression and temperature hypobaric chambers (see

Chapter 4);

- Added requirements for temperature deviation, temperature uniformity, temperature fluctuation, and temperature change rate in temperature control systems (see Chapter 4);

- Added rapid decompression, transfer cylinder safety interlock, cabin air tightness, oxygen supply pipeline air tightness, pressure regulation system pipeline air tightness, etc.

Inspection items and inspection methods (see Chapter 5);

- Added "Low-pressure cabin windows (organic glass)", "Low-pressure cabin windows (inorganic glass)", "Quality of silicate glass" and "Low-pressure cabin daily Maintenance, service life and replacement of major components" (see Appendix A to Appendix D).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document is proposed and coordinated by the National Technical Committee for Standardization of Boilers and Pressure Vessels (SAC/TC262).

This document was drafted by: Army Medical University, Guizhou Fenglei Aviation Ordnance Co., Ltd., China Ship Research and Design Center, Air Force Special Color Medical Center, Beijing University of Chemical Technology, Hubei Special Equipment Inspection and Testing Institute, Navy Special Medical Center, Shenzhen People's Hospital, China Civil Aviation Flight University, Guizhou University.

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This document was first published in 2011 and this is the first revision. Manned low-pressure cabin

1 Scope

This document specifies the requirements, inspection, instruction manual, marking, packaging, storage and transportation requirements for manned low-pressure cabins.

This document is applicable to medical research and development cabins where the medium is air and the pressure altitude is not higher than 46000m (absolute pressure is not lower than 0.138kPa).

Design, manufacture and acceptance of manned low-pressure cabins used for research, training, etc.

2 Normative references

GB/T 150.1

GB/T 150.2

GB/T 150.3

GB/T 150.4

GB/T 191

GB/T 1040.1

GB/T 1040.2

GB/T 2410-2008

GB/T 2918

GB/T 4732.2

GB/T 7134-2008

GB 8624

GB 9706.1

GB/T 12130-2020

GB 18581

GB/T 30121

GB/T 32020

GB 50235

GB 50236

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1

The air pressure in the cabin is lower than the local atmospheric pressure, and people carry out various activities in the cabin.