

ICS 13.230
CCS C83



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

GB 36660-2018

Low-pressure carbon dioxide inerting protection equipment

低压二氧化碳气体惰化保护装置

Issued on: September 17, 2018

Implemented on: April 1, 2019

**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	1
4 Category	2
5 Model	2
6 Requirements	2
6.1 Operating temperature range	2
6.2 Device	3
6.3 Carbon dioxide gas supply device	3
6.4 inerting master control valve	3
6.5 Vaporizer	4
6.6 Flow Control Component	4
6.7 inerting selection valve	5
6.8 Signal feedback device	5
6.9 nozzle	6
6.10 Inerting Controller	7
7 Test method	7
7.1 Device	7
7.2 Air tightness test	7
7.3 Strength test	8
7.4 Hydrostatic Pressure Seal Test	8
7.5 Vaporization performance test	8
7.6 Controlled flow characteristics test	8
7.7 Work Reliability Test	8
7.8 Insulation performance test	8
7.9 Salt spray corrosion test	8
7.10 Dustproof performance test	8
7.11 Anti-collision performance test	8
7.12 Heat and cold resistance test	8
7.13 Flow Characteristics Test	9
7.14 Manual Operation Performance Test	9
7.15 Basic function test of inerting controller	9

8 Inspection rules	9
8.1 Inspection Classification and Project	9
8.2 Sampling method	11
8.3 Test result judgment	11
18 Appendix G (informative) Nozzle code, equivalent orifice size and injection rate	19

Foreword

The contents of Chapters 6 and 8 of this standard are mandatory, and the rest are recommended. This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard is proposed and managed by the Ministry of Public Security of the People's Republic of China. This standard is drafted by: Tianjin Fire Research Institute of the Ministry of Public Security. Participated in the drafting of this standard. Wei Te Long Fire Safety Group Co., Ltd., Nanjing Fire Equipment Co., Ltd., Shaanxi Zhongan Fire Co., Ltd., Xi'an Nuclear Equipment Co., Ltd., Guangdong Provincial Public Security Fire Brigade, Ningxia Hui Autonomous Region Public Security Fire Brigade. The main drafters of this standard. Dong Haibin, Liu Lianxi, Sheng Yanfeng, Ma Jianqin, Zhang Junna, Lu Zhengqiang, Zhao Qingsong, Wang Ying, Yan Xuelei, Zhang Yuxian, Yang Zhenming, Gao Yunsheng, Ren Changxing, Yan Hong, Wang Qing, Wang Yingxing, Zhou Ping, Sun Chengzhong, Wang Shirong. Low pressure carbon dioxide gas inerting protection device

1 Scope

GB 36660-2018 is the Chinese national standard on low-pressure carbon dioxide inerting protection equipment, in the field of environment and health protection, safety. 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 17 September 2018 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 April 2019.

Classification: ICS 13.230, CCS C83. 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 standard specifies the terms and definitions, classification, model preparation, requirements, test methods, and inspection of low-pressure carbon dioxide gas inerting protection devices. Inspection rules, instructions for use in writing instructions. This standard is applicable to the preparation of coal powder in power plants, cement plants and other places and the low-pressure carbon dioxide gas used in natural gas transmission and distribution stations. Inerting protection device.

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 4396 carbon dioxide fire extinguishing agent

GB/T 9969 General guidelines for the use of industrial products

GB 19572-2013 Low-pressure carbon dioxide fire extinguishing system and components

GB/T 25208-2010 Environmental testing method for fixed fire extinguishing system products

GB 25972-2010 Gas fire extinguishing system and components GA61-2010 General technical conditions for driving and control devices for fixed fire-extinguishing systems

3 Terms and definitions

The following terms and definitions as defined in GB 19572-2013 apply to this document.

3.1 Inerting Explosion-proof technology that does not create an explosive atmosphere by filling the protective space with an inert gas.

3.2 Mixing a mixture of combustible gas (or dust) and air in a relatively confined space with carbon dioxide gas A device in which the oxygen content is below the explosive limit concentration to avoid explosion of the mixture.

3.3 Vaporizer vaporizer A device that converts liquid carbon dioxide directly or indirectly into gaseous carbon dioxide.

3.4 Water bath vaporizer water-bathvaporizer By heating the water in the vaporizer to exchange heat with liquid carbon dioxide, the liquid carbon dioxide is turned into a gaseous device.

3.5 Air bath vaporizer air-heatedvaporizer Air temperature vaporizer air-temperaturevaporizer The liquid carbon dioxide in the vaporizer conduit is heated by natural convection of the air to completely evaporate into a gaseous device.