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Electro-magnetic emergency shut-off valve for gas

电磁式燃气紧急切断阀

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Foreword

This document was drafted in accordance with the rules provided in GB/T 1.1-2020 Directives for Standardization - Part

1. Rules for the Structure and Drafting of Standardizing Documents. Please be noted that certain content of this document may involve patents. The institution issuing this document does not undertake the responsibility of identifying these patents. This document was proposed by and shall be under the jurisdiction of Ministry of Housing and Urban-Rural Development of the People's Republic of China. Electro-magnetic Emergency Shut-off Valve for Gas

1 Scope

GB 44016-2024 is the Chinese national standard on electro-magnetic emergency shut-off valve for gas, in the field of construction materials and building. 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 29 April 2024 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 August 2024. Classification: ICS 91.140, CCS P47. 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 document defines the terms and definitions of electro-magnetic emergency shut-off valve for gas; specifies the classification and model, material and structure, and requirements; describes corresponding test methods; clarifies the inspection rules, and the requirements for marking and instructions for use, packaging, transportation, and storage, etc. This document is applicable to electro-magnetic emergency shut-off valves for gas installed on gas user pipelines where the maximum working pressure is not greater than

0.4 MPa and the nominal dimension is not greater than DN300, and the transmission media are natural gas, liquefied petroleum gas (including liquefied petroleum gas mixed with air) and artificial gas (hereinafter referred to as the "shut-off valves").

2 Normative References

The contents of the following documents constitute indispensable clauses of this document

through the normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 229 Metallic Materials - Charpy Pendulum Impact Test Method

GB/T 699 Quality Carbon Structure Steels

GB/T 700 Carbon Structural Steels

GB/T 1173 Casting Aluminum Alloy

GB/T 1220 Stainless Steel Bars

GB/T 1239.2 Cold Coiled Helical Springs Technical Specifications - Part

3 Terms and Definitions

The terms and definitions defined in GB/(T) 3836 (all parts), GB/T 17213.2, GB/T 21465 and GB 50058, and the following are applicable to this document.

4 Classification and Models

4.1 Classification The classification mode, categories and codes of the shut-off valves are shown in Table 1.

4.2 Model The model compilation of the shut-off valves shall comply with the following format.

5.1.1 General requirements

5.1.1.1 The body of the components that separate gas and atmosphere shall be made of metal.

5.1.2 Metal materials

5.1.2.3 In addition to complying with the relevant requirements of GB/T 1239.2, the following requirements must also be satisfied.

5.1.3 Non-metallic materials

5.1.3.1 Non-metallic materials in contact with gas shall be gas-resistant.

5.1.4 Electrical components

5.1.4.1 The cable materials shall comply with the provisions of GB/T 5013.1 and GB/T 5023.1.

5.2 Structure

5.2.1 Design pressure Pressure-bearing parts include metal components that bear pressure during normal operation and components that bear pressure after the pressure differential seal fails. When the maximum working pressure is

0.01 MPa or

0.1 MPa, the design pressure shall be

0.4 MPa; when the maximum working pressure is

0.4 MPa, the design pressure shall be

0.6 MPa.

5.2.2 Structural length The structural length shall comply with the provisions of GB/T 12221.

5.2.3 Structural design

5.2.3.11 The manual shut-off triggering device shall have a protective mechanism, and manual operation can only be performed after the protection is removed.

5.2.3.12 The shut-off valves with remote transmission device shall have the function of outputting information, such as. valve position status and valve closing feedback signal, etc.

5.2.3.13 When powered off, the shut-off valves with nominal dimensions greater than DN25 shall be in a closed state.

5.2.3.14 The outgoing cables, terminals and joints of the shut-off valves shall be identified and explained. When equipped with a connection joint with the urban gas safety control system, electrical connection parts that prevent falling-off and reverse connections shall be used, and the protection degree shall not be lower than IP65 in GB/T 4208.

5.2.4 Explosion-proof structure

a) Flat-face Integrally Cast Flange

b) Raised-face Integrally Cast Flange

5.2.4.1 The shut-off valves shall adopt an explosion-proof structure.

5.2.4.2 The explosion-proof structural type shall be selected from the following four types, and shall comply with the relevant provisions of GB(T) 3836 (all parts).

6.1 General Requirements

6.1.1 Under the following conditions, the shut-off valves shall normally operate.

6.1.2 The valve closing signal voltage and power supply voltage shall comply with the