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

GB/T 44578-2024

Diaphragm valves of thermoplastics materials

热塑性塑料隔膜阀

(English Translation)

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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 is modified to adopt ISO 16138:2006 "Industrial valves - Thermoplastic diaphragm valves".

Compared with ISO 16138:2006, this document has many structural adjustments. Comparison table of structural number changes between the two documents See Appendix A.

This document has many technical differences compared to ISO 16138:2006.

A single line (|) is used to indicate these technical differences. A summary of these technical differences and their reasons is given in Appendix B.

The following editorial changes were made to this document.

--- In order to coordinate with the existing standards, the name of the standard is changed to "Thermoplastic Diaphragm Valve";

--- Incorporated the amendments to ISO 16138:2006/Amd.2019, the outer margins of the clauses involved are indicated by vertical Double lines (||) are marked;

---Changed the contents of Note 1 and Note 2 in the range;

--- Added Appendix C (informative) "Relationship between nominal outside diameter (dn) and nominal diameter (DN)".

1 Scope

This document specifies the materials, design, requirements, inspection rules, marking, packaging, transportation, and other aspects of thermoplastic diaphragm valves (hereinafter referred to as "diaphragm valves").

and storage, and the corresponding test methods are described.

This document is applicable to nominal outer diameter (dn) of 16mm~280mm, nominal pressure (PN) of 0.6MPa~1.6MPa, and operating temperature Manufacturing and inspection of diaphragm valves for temperatures between -40°C and 120°C.

This document applies to manual or power-actuated diaphragm valves in systems such as industrial water pipelines, water treatment pipelines and drinking water pipelines.

Note 1: The purchaser is responsible for selecting the appropriate product based on the conveying medium, pressure, temperature or specific application requirements, combined with relevant laws, regulations, standards or specifications.

product.

Note 2: When conveying non-aqueous media, see ISO/T R10358 for the effects of chemical media on diaphragm valves.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 2828.1 Sampling procedures for inspection by attributes Part 1: Sampling plans for batch inspection based on the acceptance quality limit (AQL) (GB/T 2828.1-2012, ISO 2859-1:1999, IDT) GB/T 2918 Standard environment for conditioning and testing of plastic specimens (GB/T 2918-2018, ISO 291:2008, MOD) GB/T 7306.1 55° Sealing Pipe Thread Part 1: Cylindrical Internal Thread and Conical External Thread (GB/T 7306.1-2000, eqv ISO 7-1:1994) GB/T 7306.2 55° Sealing Pipe Thread Part 2: Conical Internal Thread and Conical External Thread (GB/T 7306.2-2000, eqv ISO 7-1:1994) GB/T 8806 Plastic piping systems - Determination of dimensions of plastic parts (GB/T 8806-2008, ISO 3126:2005, IDT) GB/T 12222 Connection of multi-turn valve drive devices (GB/T 12222-2023, ISO 5210:2017, MOD) GB/T 17219 Safety evaluation standard for drinking water transmission and distribution equipment and protective materials GB/T 19278 General terms and definitions for thermoplastic pipes, fittings and valves GB/T 21300 Determination of the opacity of plastic pipes and fittings (GB/T 21300-2007, ISO 7686:2005, IDT) GB/T 27726-2011 Thermoplastic valve pressure test methods and requirements (ISO 9393-1:2004, MOD) GB/T 28494-2012 Thermoplastic stop valves (ISO 21787:2006, MOD) GB/T 30832 Test method for flow coefficient and flow resistance coefficient of valves GB/T 44580 Test method for fatigue strength of thermoplastic valves (GB/T 44580-2024, ISO 8659:2020, MOD) GB/T 44576 Torque test method for thermoplastic valves (GB/T 44576-2024, ISO 8233:2024, MOD)