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

GB 17878-2009

Replacing GB/T 17878-2009

Cylinder valve for non-refillable steel welded industry cylinder

工业用非重复充装焊接钢瓶用瓶阀

(English Translation)

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Table of Contents

Preface
1 Scope
2 Normative References
3 Terms and Definitions
4 Structural type and basic dimensions
5 Materials and Manufacturing Requirements
6 Performance Requirements
7 Inspection and Test Methods
8 Inspection Rules
Appendix A (Normative) Non-refillability Test
References

Foreword

This document conforms to GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting is scheduled.

This document supersedes GB/T 17878-2009 "Cylinder Valves for Non-Refillable Welded Steel Cylinders for Industrial Use" and is consistent with GB/T 17878-2009.

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) The definition of the term "valve for non-refillable welded cylinders" has been changed (see 3.1, 2009 edition).
- b) The requirement for tooth angle has been removed (see 4.2.1 in the 2009 version);
- c) The range of carbon content has been changed (see 5.1.3, 5.5 in the 2009 edition).
- d) The requirements for low-temperature resistance of rubber seals have been added, and the requirements for media compatibility of rubber seals have been changed (see 5.2, 2009 edition).
- e) Requirements for helium mass spectrometry leak detection and leakage amount have been added (see 6.3);
- f) Added requirements for media compatibility testing (see 7.6);

- g) The requirements for low-temperature resistance testing of rubber seals have been added (see 7.7);
- h) The requirement to conduct an airtightness test after the temperature resistance test has been added (see 7.8);
- i) Requirements for the gas and water used in the non-refillability test medium have been added (see 7.11);
- j) The incoming inspection requirements for materials and parts have been changed (see 8.1, 9.1 in the 2009 edition).
- k) The requirements for inspecting items on a per-item basis have been changed (see 8.2.1, 9.2.1 in the 2009 version).
- m) The batch size has been changed (see 8.2.3, 9.2.3 in the 2009 version).
- n) The test item list has been changed (see 8.3, 9.3 in the 2009 edition).
- o) The requirement for product data retention time has been removed (see 10.2.3 in the 2009 version).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Gas Cylinders (SAC/TC 31).

1 Scope

This document specifies the structural type, basic dimensions, materials, and manufacturing requirements of cylinder valves (hereinafter referred to as "valve") for non-refillable welded steel cylinders.

Requirements, performance requirements, inspection and testing methods, inspection rules and marking, packaging, storage and transportation.

This document applies to valves for non-refillable welded steel cylinders as specified in GB/T 17268.

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 228.1 Metallic materials - Tensile testing - Part 1: Test method at room temperature
GB/T 4336 Determination of Multi-Element Content in Carbon Steel and Medium-Low Alloy

Steels by Spark Discharge Atomic Emission Spectrometry (Standard) (Regulations) GB/T 6478 Steel for Cold Heading and Cold Extrusion GB/T 13005 Gas Cylinder Terminology GB/T 20666 Unified Thread Tolerances GB/T 20667 Unified Thread Limit Sizes GB/T 20668 Unified Basic Dimensions of Threads GB/T 20669 Unified Thread Profile GB/T 20670 Unified Series of Thread Diameters and Number of Teeth

3 Terms and Definitions

The terms and definitions defined in GB/T 13005 and the following terms and definitions apply to this document.

Non-refillable cylinder valve A valve that cannot be refilled after one medium filling.

4 Structural type and basic dimensions

The valve model designation and representation methods are as follows.