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

GB/T 5099.4-2017

**Seamless steel gas cylinders -- Part 4: Seamless stainless steel
gas cylinders**

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Foreword

GB/T 5099 "Steel Seamless Gasket" is intended to be divided into the following sections.

--- Part 1. Cylinders with a tensile strength less than 1100 MPa after tempering;

--- Part 2. Cylinders with a tensile strength greater than or equal to 1100 MPa after quenching;

--- Part 3. Normalized steel cylinders;

--- Part 4. Seamless stainless steel cylinders.

This part is Part 4 of GB/T 5099.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This section uses the redrafted law reference ISO 9809-4.2014 "Cylinder refillable steel seamless cylinder design, manufacture and test

Part 4. Stainless Steel Gaskets with Tensile Strength Less than 1100 MPa, compiled with non-conformity to ISO 9809-4.2014

Equivalent.

The main differences between this part and ISO 9809-4.2014 are as follows.

--- In this section, only some austenitic stainless steels and austenitic-ferritic duplex stainless steels were used for the manufacture of raw materials for cylinders.

As the main material of the cylinder, no martensitic stainless steel and ferritic stainless steel bottle materials are used;

--- This section defines the use of ambient temperature;

--- This section increases the service life of the cylinder design;

--- This section does not use the low-temperature processing molding manufacturing process in the bottle forming process.

1 Scope

This part of GB/T 5099 specifies the terms and definitions, symbols, types and parameters of stainless steel seamless gas cylinders (hereinafter referred to as "cylinders"),

Technical requirements, test methods, inspection rules, signs, packaging, transportation, storage, product certification and batch inspection quality certificates.

This section applies to the design, manufacture, nominal working pressure is not more than 30MPa, nominal volume is not more than 150L, the use of ambient temperature is

-40°C to 60°C for refillable mobile steel cylinders containing compressed gas or liquefied gas.

This section does not apply to bottle-type pressure vessels attached to vehicles and equipment.

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 version (including all amendments) applies to this document.

GB/T 196 common thread basic size (ISO 724)

GB/T 197 Common thread tolerance (ISO 965-1)

Finished chemical composition tolerance of GB/T 222 steel

GB/T 223 (all parts) Steel and alloy chemical analysis method

GB/T 226 steel low magnification microstructure and defect acid etching test

GB/T 228.1 Tensile test of metallic materials Part 1. Test method at room temperature (ISO 6892)

GB/T 229 Charpy impact test method for metallic materials (ISO 148-1)

GB/T 230.1 Rockwell hardness test for metallic materials - Part 1. Test methods (A, B, C, D, E, F, G, H, K, N, T

Foot (ISO 6508-1)

GB/T 231.1 Brinell hardness test for metallic materials - Part 1. Test method

GB/T 232 bending test method for metallic materials (ISO 7438)

GB/T 1172 ferrous metal hardness and strength conversion value

GB/T 1220 stainless steel rod

GB/T 1979-2001 structural steel low magnification defect map

GB/T 4334-2008 Corrosion of metals and alloys. Test method for intergranular corrosion of stainless steel

GB/T 5777-2008 Seamless Steel Pipe Ultrasonic Inspection Method

GB/T 7144 cylinder color sign

GB/T 8335 cylinder special thread

GB/T 8336 cylinder thread gauge

GB/T 9251 cylinder pressure test method

GB/T 9252 cylinder fatigue test method

GB/T 11170 Determination of multi-element content of stainless steel Spark discharge atomic emission spectrometry (conventional method)

GB/T 12137 gas cylinder air tightness test method

GB/T 13005 Cylinder Terms

GB/T 13296 Stainless steel seamless pipe for boiler and heat exchanger