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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 11638-2020

Replacing GB/T 11638-2011

Acetylene cylinders

Issued on: December 14, 2020 **Implemented on: July 1, 2021**

Issued by: State Administration for Market Regulation, China National Standardization Administration

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1:1-2009:

This standard replaces GB/T 11638-2011 "Dissolved Acetylene Cylinders":

Compared with GB/T 11638-2011, the main technical changes of this standard are as follows except for editorial changes:

---The upper limit of the volume of the acetylene cylinder is adjusted from 60L to 100L;

---Added relevant requirements for DMF solvent acetylene gas cylinders;

---Increase the compressive strength of the packing from 1:8MPa to 2:0MPa;

---The impact stability test in the type test was modified to only apply to deep-drawn welded acetylene gas cylinders;

---Increase the requirement of type test coverage;

---Added relevant requirements for solvent-free acetylene gas cylinders;

---Added an alternative calculation method for acetone solvent acetylene gas cylinder water bath heating test;

---The recumbent time requirement of the tempering test is revised to a minimum of 24h, and the requirement for the pressure in the bottle after the water bath before the tempering test is added;

---Added the requirements for picking up the filler strength test block during the type test;

---Deleted the requirements for the performance test of acetylene gas cylinders, and increased the safety operation requirements for the use of acetylene gas cylinders:

This standard uses the redrafting method to refer to ISO 3807:2013 Basic Requirements and Type Tests for Gas Cylinders and Acetylene Cylinders:

The consistency of ISO 3807:2013 is non-equivalent:

Please note that certain contents of this document may involve patents: The issuing agency of this document is not responsible for identifying these patents:

This standard was proposed and managed by the National Gas Cylinder Standardization Technical Committee (SAC/TC31):

Drafting organizations of this standard: Jiangsu Tianhai Special Equipment Co:, Ltd:, Ningbo Meike Acetylene Bottle Co:, Ltd:, Beijing Tianhai Industry Co:, Ltd:,

China Special Equipment Inspection and Research Institute, Dalian Boiler and Pressure Vessel Inspection and Inspection Institute Co:, Ltd:, Shenyang Special Equipment Inspection and Research Institute,

Taicang Jinyang Gas Co:, Ltd:, Zhejiang Jindun Pressure Vessel Co:, Ltd:

1 Scope

This standard specifies the specification series, technical requirements, test methods, inspection rules, marking, coating, packaging and filling, transportation,

Storage and use:

This standard is applicable to the maximum limit pressure of 1:56MPa when the reference temperature is 15 degrees C, the maximum allowable temperature is 40 degrees C, and the nominal volume

<=100L, mobile refillable acetylene gas cylinder with porous filler inside:

Note: The pressure in this standard refers to gauge pressure:

2 Normative references

The following documents are indispensable for the application of this document: For dated reference documents, only the dated version applies to this article

Pieces: For undated references, the latest version (including all amendments) applies to this document:

GB/T 5099:1 Steel seamless gas cylinders Part 1: Steel cylinders with tensile strength less than 1100MPa after quenching and tempering treatment

(GB/T 5099:1-2017, ISO 9809-1:2010, NEQ)

GB/T 5099:3 seamless steel gas cylinders Part 3: Normalized steel cylinders (GB/T 5099:3-2017, ISO 9809-3:

2010, NEQ)

GB/T 5100 steel welded gas cylinder (GB/T 5100-2020, ISO 4706:2008, NEQ)

GB/T 6026 Acetone for industrial use

GB 6819 dissolved acetylene

GB/T 7144 Gas cylinder color mark

GB/T 8335 special thread for gas cylinder

GB/T 8337 Fusible alloy plug device for gas cylinders

GB/T 10879 Dissolved acetylene gas cylinder valve

GB/T 12137 Air tightness test method for gas cylinders

GB/T 13005 Gas cylinder terminology

GB/T 13591 Dissolved Acetylene Filling Regulations

HG/T 2028 Industrial Dimethylformamide

3 Terms and definitions

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

3:1

Acetylene cylinder

Equipped with bottle valves and other accessories, containing porous fillers and solvents (or solvent-free) that are easy to dissolve acetylene, used to store and transport acetylene gas cylinders:

3:2

Bottle shel

A pressure-bearing shell suitable for filling porous fillers, solvents and acetylene gas:

3:3

Porous material

Fill the acetylene gas cylinder to absorb the solid porous material of the solvent/acetylene solution: