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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 32566-2016

Replacing GB/T 32566-2016

Welded stainless steel cylinders - Part 1: Test pressure 6 MPa and below

不锈钢焊接气瓶

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 1 of GB/T 32566 "Stainless Steel Welded Gas Cylinders". GB/T 32566 has already published the following parts.

---Part 1: Gas cylinders with a test pressure less than or equal to 6 MPa;

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---Part 2: Gas cylinders with a test pressure greater than 6 MPa.

This document replaces GB/T 32566-2016 "Stainless Steel Welded Gas Cylinders". Compared with GB/T 32566-2016, the main differences are in structural adjustments and rewriting.

Aside from the logical changes, the main technical changes are as follows.

a) The scope has been changed (see Chapter 1, Chapter 1 of the 2016 edition);

b) Added terms and definitions for "yield strength", "solution treatment", "cold working strengthening", "strain strengthening", "batch", and "minimum guaranteed thickness".

(See 3.1~3.5, 3.7);

c) The permitted materials have been expanded (see Chapter 5);

d) The wall thickness calculation formula has been modified (see Chapter 6, Chapter 5 of the 2016 edition);

e) The permitted manufacturing processes have been expanded (see Chapter 7);

f) The requirements for picking up parts during batch inspection have been changed (see Chapter 9, 6.14 and 8.3 of the 2016 edition);

g) Some manufacturing tolerance requirements have been removed (see 6.6~6.9, 6.12 in the 2016 edition);

h) The type testing coverage has been changed (see 8.1, 9.3 in the 2016 edition);

i) The non-destructive testing ratio requirement has been changed (see C.2, 6.4.2 of the 2016 version);

j) The requirement for color marking of stainless steel welded gas cylinders has been removed (see Appendix A of the 2016 edition).

This document is modified to adopt ISO 18172-1:2007 "Refillable stainless steel welded gas cylinders - Part 1: Test pressure less than..." or equal to 6 MPa.

This document has undergone significant structural adjustments compared to ISO 18172-1:2007.A comparison of the structural numbering changes between the two documents is provided below.

See Appendix A for the table.

This document differs significantly from ISO 18172-1:2007.The relevant clauses are indicated in the margins using vertical markers.

Straight lines (|) are marked. A summary of these technical differences and their reasons can be found in Appendix B.

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The following editorial changes have been made to this document.

---Some clauses have had the requirements within parentheses in ISO 18172-1:2007 changed to the requirements within the clauses themselves, i.e., the parentheses have been removed;

---Some clauses have removed the word "any" from ISO 18172-1:2007;

---The second paragraph of Chapter 1 of ISO 18172-1:2007 has been deleted, as its content is redundant with the preceding text of Chapter 1 and section 7.4.4.

---The term "stress reduction factor" has been changed to "weld joint factor";

---Added a note stating "Cylinder material and gas compatibility refer to ISO 11114-1" (see 5.1.2);

---The redundant requirement regarding material quality certificates in section 4.3.3 of ISO 18172-1:2007 has been removed (see section 5.3.3);

---The pressure unit has been uniformly changed to MPa, and the corresponding wall thickness calculation formula has been changed (see 6.2);

---Note 6.7 in ISO 18172-1:2007 has been deleted;

---The term "new design experiment" is now referred to as "type experiment" (see Chapter 8);

---The redundant requirement in ISO 18172-1:2007 that "test bottles must have an intact stamp" in sections 7.3.1.1 and 7.3.2.1 has been removed;

---ISO 18172-1:2007 does not indicate the thickness represented by 't' in Figure 7, but it is indicated in Figure 8.This document will explain the symbol 't'.

The reference illustration in the Ming Dynasty has been changed to Figure 8 (see Table 1);

---The redundant description of test items in section 8.3.1 of ISO 18172-1:2007 has been removed;

---The redundant description of the specimen sampling location for intergranular corrosion testing in ISO 18172-1:2007 has been removed (see 8.3.3);

---The reference to the informative appendix on type testing certificates in section 7.4 of ISO 18172-1:2007 has been deleted (see section 8.4);

---The reference clauses in explanatory notes 3 of Figure 5 in ISO 18172-1:2007 and the corrosion test in explanatory notes 6 of explanatory notes 5 have been amended.

Incorrect description of the number of test samples (see Figure 5);

---The symbol for the fillet dimension of the curved specimen edge in Figure 7 of ISO 18172-1:2007 has been changed.

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