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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 778.2-2018

Replacing GB/T 778.3-2007

Meters for cold potable water and hot water -- Part 2: Test methods

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Foreword

GB/T 778 "Drinking Cold Water Meter and Hot Water Meter" consists of the following five parts.

--- Part 1. Measurement requirements and technical requirements;

--- Part 2. Test methods;

--- Part 3. Test report format;

--- Part 4. Non-metering requirements not included in GB/T 778.1;

--- Part 5. Installation requirements.

This part is the second part of GB/T 778.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 778.3-2007 "Measurement of water flow in closed full pipes. Drinking cold water meter and hot water meter. Part 3

Points. Test Methods and Test Equipment. The main technical changes compared with GB/T 778.3-2007 are as follows.

---Modified standard name;

--- Expanded the scope of application of the standard, did not specify the maximum allowable working pressure (see Chapter 1, Chapter 1 of GB/T 778.3-2007);

--- Removed terminology (see Chapter 3 of GB/T 778.3-2007);

--- Increased the requirements for visual inspection (see Chapter 6);

--- Increased the requirement for zero flow in the static pressure test (see 7.3.3.1);

--- Removed the requirement to apply 2 times the pressure of deltap on the coaxial water meter seal in the static pressure test (see GB/T 778.3-2007)

6.4);

--- Removed the requirement that the pipe system outlet should maintain a positive pressure of 0.3 bar in the indication error test (see GB/T 778.3-2007)

5.4);

--- Removed the provisions of the error test for speed water meters (see 5.4.4.5 of GB/T 778.3-2007);

--- Increased the requirements for pressure tapping in the pressure loss test (see 7.9.2);

--- Increased the test procedure for determining the pressure loss after installation in the pressure loss test (see 7.9.3.1);

--- Increased the requirement for the test in the disturbance test for water meters that have been proven to be undisturbed (see 7.10.3);

--- Increased the requirements for the length of the intermittent flow test in the durability test and the qualification criteria for the Class 1 water meter (see 7.11.2);

--- Removed the specific test requirements for double water meters in the intermittent flow test (see 8.2.3.2 of GB/T 778.3-2007);

--- Increased the requirements for the length of the test in the continuous flow test and the qualification criteria for the Class 1 water meter (see 7.11.3);

--- Increased the requirements for static magnetic field testing of some mechanical water meters (see 7.12);

--- Added test for water meter auxiliary devices (see 7.13);

--- Increased the requirement that the water meter not marked "V" in the impact test is only tested on the horizontal axis, and the water meter with two reference temperatures is only

Requirements for testing at lower reference temperatures (see Chapter 8);

--- Modified the maximum voltage and minimum voltage applied in the DC power meter voltage test (see 8.5.3.3, GB/T 778.3-

9.5.5.4) of.2007;

--- Increased the requirements for vibration-only tests that are only suitable for mobile

installation of water meters (see 8.6.1);

--- Increased the requirement that the power supply should be cut off when the device under test is in the recovery state (see 8.6.3);

--- Increased voltage interruption and reduced time interval requirements for testing (see 8.8.3);

--- Increased additional program requirements in voltage sag and short interruption tests (see 8.8.3);

--- Increase the signal line burst test (see 8.9);

--- Revised the test procedure for electromagnetic field radiation test (see 8.12.3, 9.4.2 of GB/T 778.3-2007);

--- Increased electromagnetic field conduction test (see 8.13);

--- Increased surge test of signal and control lines (see 8.14);

--- Increased zero flow test (see 8.17);

--- Increased the test content of the type evaluation (see Table 6 in Chapter 9);

--- Increased the requirements for the evaluation of the series of water meters (see 9.5);

--- Revised the water temperature range for the first test (see 10.1.3, 11.4 of GB/T 778.3-2007);

--- Increased the eligibility criteria for the first verification (see 10.1.4);

--- Increased the first verification test content of the water meter separable parts (see 10.2);

--- Revised the content of the test report (see 11.2.1, 12.1.2 of GB/T 778.3-2007)

--- Increased the type inspection and test requirements for inspection devices for electronic devices (see Appendix A);

--- Increased the requirements of the flow disturbance test device (see Appendix C);

--- Increased the requirements for type evaluation of water meters (see Appendix D);

--- Increased the content of determining the density of water (see Appendix F);

--- Increased the impact factor and the maximum uncertainty of the disturbance measurement (see Appendix G);

--- Increased the pressure loss test pressure port and the contents of the hole (see Appendix H).

This section uses the translation method equivalent to ISO 4064-2.2014 "Drinking cold water meters and hot water meters Part 2. Test methods".

The documents of our country that have a consistent correspondence with the international documents referenced in this part are as follows.

GB/T 2423.1-2008 Environmental testing of electric and electronic products - Part 2. Test methods Test A. Low temperature

(IEC 60068-2-1..2007, IDT)

--- GB/T 2423.2-2008 Environmental testing of electrical and electronic products - Part 2. Test methods Test B. High temperature

(IEC 60068-2-2.2007, IDT)

--- GB/T 2423.4-2008 Environmental testing of electrical and electronic products - Part 2. Test method test Db. alternating heat

(12h 2h cycle) (IEC 60068-2-30.2005, IDT)

--- GB/T 2423.7-1995 Environmental testing for electric and electronic products - Part 2. Test methods Test Ec and guide. Falling

With overturning (mainly for equipment type samples) (IEC 60068-2-31.1982, IDT)

Environmental testing of electrical and electronic products - Part 2. Test methods - Vibration, shock and similar

Installation of mechanical test samples (IEC 60068-2-47.2005, IDT)

--- GB/T 2423.56-2006 Environmental testing of electric and electronic products - Part 2. Test method test Fh.

Dynamic (digital control) and guidelines (IEC 60068-2-64.1993, IDT)

---GB/T 2424.2-2005 Guidelines for the assessment of damp heat in environmental testing of electrical and electronic products (IEC 60068-3-4.2001, IDT)

--- GB/T 17214.2-2005 Working conditions of industrial process measuring and control devices - Part 2. Power (IEC 60654-2.

1979, IDT)

---GB/T 17626.1-2006 Electromagnetic compatibility test and measurement technology immunity test (IEC 61000-4-1..2000,

IDT)

---GB/T 17626.2-2006 Electromagnetic compatibility test and measurement technology Electrostatic discharge immunity test (IEC 61000-4-2.

2001, IDT)

---GB/T 17626.3-2016 Electromagnetic compatibility test and measurement technology RF