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

GB/T 22755-2026

Replacing GB/T 22755-2008

**Brass fittings with press compression sleeves for piping
systems**

卡压式铜管路连接件

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6 Requirements

6.1 Appearance The product was tested according to

7.1 and meets the following requirements.

- a) The pipe fitting body and metal ferrule should be free from cracks, pores, bubbles, shrinkage, foreign matter, and other defects that may affect performance;
- b) The surface of the plastic base should be smooth, free of burrs, flash, and cracks;
- c) The contact surfaces between the fittings and the pipes should be smooth and free of burrs;
- d) The thread surface should be smooth and free from obvious defects such as dents or broken teeth.

6.2 Threads The test shall be conducted according to 7.2, and the pipe threads of the pipe fittings shall conform to GB/T 7306.1, GB/T 7306.2 or GB/T 7307-2001. The external thread should meet or exceed the accuracy requirements of Class B in GB/T 7307-2001.

6.3 Dimensions

6.3.1 The schematic diagram of the pipe fitting body nozzle structure is shown in Figure

2. The basic dimensions should conform to the contents of Table 4.

6.5.2 Hydrostatic Performance According to the test conditions specified in Table 7, a hydrostatic test shall be conducted in accordance with 7.5.1. There shall be no leakage at any connection point during the test.

6.5.4 Cyclic Pressure Shock Performance According to the test conditions specified in Table 9, a cyclic pressure impact test shall be conducted in accordance with 7.5.3. There shall be no leakage at any connection point during the test.

6.5.5 Pull-out resistance According to the test conditions specified in Table 10, the pull-out test shall be conducted in accordance with 7.5.4. No relative axial pull-out shall occur at the connection between the fitting and the pipe. move.

6.5.6 Bending performance According to the test conditions specified in Table 11, a bending test shall be conducted in accordance with 7.5.5. During the test, there shall be no leakage at any connection point.

6.5.7 Vacuum performance According to the test conditions specified in Table 12, the vacuum performance test shall be carried out in accordance with 7.5.6, and the change in vacuum pressure shall not exceed

0.005 MPa.

6.6 Torsional resistance For pipe fittings with threaded connections, the test shall be conducted according to 7.6. The torque specified in Table 13 shall be applied to the threaded connection end; there should be no breakage or deformation. It complies with the provisions of 6.4.

6.7 Resistance to stress corrosion This clause applies to high-risk scenarios such as shipbuilding and chemical industries, and copper alloy pipe fittings should have resistance to stress corrosion. Copper alloys that meet the following conditions are considered to have resistance to stress corrosion and do not need to undergo stress corrosion resistance testing.

---Copper alloy pipe fittings with a zinc content of less than 10%;

---Copper alloy pipe fittings made of copper-tin-zinc alloys (such as CuSnZnPb) and copper-zinc-silicon alloys with a silicon content of not less than 2%;

---The Brinell hardness measured according to GB/T 231.1 shall not exceed 110HBW2.5/62.5, or the Vickers hardness measured according to GB/T 4340.1 shall not exceed 110HBW2.5/62.5. Copper alloy pipe fittings with a strength not exceeding 134HV5.

6.8 Hygiene performance According to section 7.8, the hygienic properties of materials in direct contact with drinking water in pipe fittings shall meet the requirements of GB/T 17219.

7 Test Methods

7.1 Appearance The inspection should be conducted visually. Visual inspection should be performed under natural diffused light or under clear, white light with no reflected light; the illuminance should not exceed [a certain level]. Less than 300 lx (equivalent to the illuminance of a 40W fluorescent lamp at a distance of 500mm).

7.2 Threads Pipe thread accuracy is tested using thread gauges of the corresponding accuracy.

7.3 Dimensions Use a measuring tool with a graduation of

0.01 mm for inspection.

7.4 Air tightness performance Install the pipe fitting body on a dedicated pressure testing machine, immerse the pipe fitting body in a water tank at room temperature, and slowly inject [something] into the pipe fitting body. Use clean compressed air at $0.8\text{MPa} \pm 0.05\text{MPa}$, maintain the pressure for more than 15 seconds, and observe whether any bubbles appear.

7.5 System Applicability

7.5.1 Hydrostatic performance The test medium inside and outside the test assembly is water, and the test is conducted in accordance with the provisions of GB/T 6111.

7.5.2 Thermal cycling performance Proceed in accordance with GB/T 19993.

7.5.3 Cyclic Pressure Shock Performance The test shall be conducted according to the cyclic pressure impact performance test method specified in GB/T 18992.2.

7.5.4 Pull-out resistance The test shall be conducted in accordance with the provisions of GB/T 15820.

7.5.5 Bending performance The bending performance test shall be conducted according to the method specified in GB/T 18992.2.

7.5.6 Vacuum performance The test shall be conducted according to the vacuum performance test method specified in GB/T 18992.2.

7.6 Torsional resistance

7.6.1 Test Instruments The torque wrench used for the torsional performance test has a range of

1.5 to 3 times the test torque and an accuracy of $\pm 1\%$.

7.6.2 Test Procedure The experimental steps are as follows:

a) Fix the pipe fitting to be tested in the position shown in Figure 5;

- b) Screw the torque wrench through the thread of the adapter into the threaded end of the pipe fitting being tested; the thread length of the pipe fitting being tested should be at least longer than the corresponding thread length. The adapter's thread length is 2mm;
- c) Apply torque smoothly and gradually using a torque wrench, and hold for 10 seconds after reaching the torque value specified in Table 13;
- d) After removing the torque, conduct an airtightness test as specified in 7.4, and determine whether the result meets the requirements of 6.6.

7.7 Resistance to stress corrosion The test shall be conducted according to the ammonium chloride test method specified in GB/T 10567.2.

7.8 Hygiene Performance Proceed according to GB/T 17219.

8 Inspection Rules

8.1 Inspection Classification Inspection is divided into factory inspection and type inspection.

8.2 Factory Inspection

8.2.1 Inspection Items Products must pass the manufacturer's inspection before leaving the factory. The inspection items are

8.2.2 Batching and Sampling Principles Pipe fittings produced continuously using the same raw materials, process, and specifications constitute one batch, with each batch not exceeding 20,000 pieces, and continuous production lasting 7 days. When production volume is less than 20,000 units, each batch is considered as 7 days' worth of production, and samples required for factory inspection are drawn from the batch. This is done according to GB/T 2828.1. Sampling will be conducted using a special inspection level of S-3 and a single sampling plan for normal inspection.

8.2.3 Judgment Rules The Acceptable Quality Limit (AQL) for inspection items

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8.3 Type Testing

8.3.1 Inspection conditions Type testing shall be conducted under any of the following circumstances.

- a) Initial production or production transferred to another factory;
- b) If significant changes occur in the process after formal production, potentially affecting product performance;
- c) Resumption of production after a one-year hiatus;