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WBS TEST & ACCEPTANCE CRITERIA PD.

Issue No: 4
Date of issue: July 1994

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TEST CODE SHEET

1. **TYPE OF TEST(S)**

Deflection

2. **BYELAW REQUIREMENT FOR FITTINGS**

Byelaw 52

Every water fitting shall be constructed of materials, the nature, the strength and thickness of which..... will prevent, so far as is reasonably practicable, damage from: (a) any external load; (b) vibration, stress (d) internal and external temperatures.

3. **BRITISH STANDARDS OR WATER SPECIFICATION, DEEMED TO SATISFY BYELAW REQUIREMENTS**

(See Water Supply Byelaw Guide)

3.1 Fittings with 'kitemarks' which are deemed to satisfy the requirements of byelaws are listed in the directory.

4. **TEST PROCEDURE**

Note Unless stated otherwise the temperature of the test fluid shall be $20 \pm 10^\circ\text{C}$.

4.1 Tests applicable to the following: fittings-

**CISTERNS, COLD WATER STORAGE
CISTERNS, FEED AND EXPANSION**
- plastics materials

(A) **COLD WATER STORAGE CISTERNS, FEED AND EXPANSION CISTERNS (POLYOLEFIN OR OLEFIN COPOLYMER)** (Derived from BS 4213, section 8.2, Appendix C)

TEST METHOD

Deflection test.

Note: these fittings are not suitable for continuous use in contact with hot water.

1. Place the cistern on a flat level base, with a copper tube of 12.5mm nominal bore (see BS 2781) and length 305mm attached to the wall at the inlet position as shown in Figure 1.
2. Fit any backing plated if supplied with the cistern.
3. Fill the cistern to the top with water at a temperature of $23 \pm 2^\circ\text{C}$.
4. Apply a force of 37N vertically downwards at the end of the tube.
5. Take a reading on the scale immediately.
6. Maintain the force for 1 hour \pm 5 minutes and take a further reading. The difference between the two readings is the deflection.

NOTE: Cisterns without a backing plate are also subject to this test. Test Code sheet 1311.3 is applied to cisterns failing this test criteria.

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5. **ACCEPTANCE CRITERIA**

The deflection, measured at the end of the tube after one hour, shall not exceed 32mm.

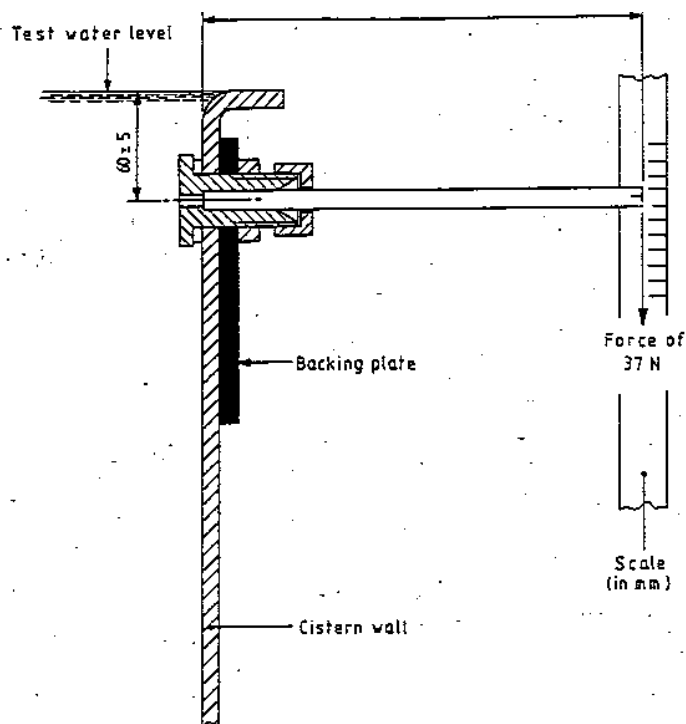
(B) **ALL OTHER TYPES OF STORAGE CISTERNS NOT REFERRED TO IN (A)**

TEST METHOD

Fittings, whether for continuous use in contact with hot water or not, shall be tested as in (A) above except that the temperature of the water in the tank shall be the manufacturer's claimed maximum operating temperature $\pm 5^{\circ}\text{C}$.

5. **ACCEPTANCE CRITERIA**

The deflection, measured at the end of the tube after one hour, shall not exceed 32mm.



All dimensions are in millimetres.

Figure 1 Arrangement for the deflection test