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WBS TEST & ACCEPTANCE CRITERIA PD.

Issue No: 2
Date of issue: January 1990

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TEST CODE SHEET

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

Flow rate

2. **BYELAW REQUIREMENT FOR FITTINGS**

Byelaw 85

- (1) Every bath, wash basin, sink or similar apparatus shall be -(b) provided with a watertight and readily accessible plug or some other device capable of closing the water outlet.
- (2) Paragraph (1) (b) shall not apply to any (b) apparatus to which water is delivered at a rate not exceeding 3.6 litres a minute

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

(See Water Supply Byelaw Guide)

BS 5388 Clause 12 and Appendices B and C.

- 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:-

SPRAY TAPS

- (A) **SPRAY TAPS** (Derived from BS 5388)

TEST METHOD

Carry out the tests described in BS 5388, but solely to determine the maximum rate of discharge of the fitting.

Clause 12 - Rate of flow test.

- 12.1 Spray taps with fixed flow restrictors. When tested by the method specified in Appendix B, spray taps with fixed flow restrictors shall deliver water at a rate of not more than 0.05 litre/s when the spray tap is opened through 180° from the commencement of flow. When the spray tap is fully open the flow shall not increase by more than 10% from the flow obtained at 180° of opening.
- 12.2 Spray taps with adjustable flow restrictors. When tested by the method specified in Appendix C, spray taps fitted with adjustable flow restrictors shall, when the restrictor is suitably adjusted and when the spray tap is opened through 180° from the commencement of flow shall not increase by more than 10% from the flow obtained at 180° of opening.

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APPENDIX B

Method of measuring the rate of flow through spray taps fitted with a fixed flow restrictor.

B.1 Object

The object of the test is to determine whether or not the specimen spray tap will deliver water at the specified rates.

B.2 Apparatus

The following are required.

- B.2.1 A water supply having a minimum pressure of 4.50 bar and a minimum rate of flow, when the supply pipe is open to atmosphere, of 0.10 litre/s.
- B.2.2 A stopvalve.
- B.2.3 A pressure regulator capable of reducing the supply pressure to the test pressures required.
- B.2.4 A flowmeter, graduated in ml/s and accurate to $\pm 2\%$.
- B.2.5 A pressure gauge, graduated in bar and accurate to $\pm 2\%$.
- B.2.6 A copper tube of 15mm outside diameter in accordance with BS2871: Part 1.
- B.2.7 Fittings necessary to complete the test apparatus shown in Figure 3. The bore of any fitting shall be at least equal to the bore of the copper tube (see B.2.6) used in the apparatus to avoid constriction of the waterway.

B.3 Procedure

Connect the apparatus to the water supply. Install the number 1 restrictor in the spray tap. Connect the spray tap to the rest apparatus.

With the stopvalve fully open, and the spray tap closed, adjust the supply pressure to the test pressure specified in Table 1 for number 1 flow restrictors. Open the spray tap by rotating its hand control through 180° from the commencement of flow. Record the rate of flow. Open the spray tap fully. Record the rate of flow.

Repeat the procedure with number 2 and number 3 flow restrictors installed in the spray tap and using the appropriate test pressures specified in Table 1.

B.4 Recording

Record whether or not each combination of spray and fixed restrictor will deliver water at the specified rates.

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APPENDIX C

Method of measuring the rate of flow through spray taps fitted with an adjustable or self adjusting flow restrictor.

C.1 Object

The object of the test is to determine whether or not specimen spray tap will deliver water at the specified rates.

C.2 Apparatus

The apparatus shall be as specified in B.2.

C.3 Procedure

Connect the apparatus to the water supply. Connect the spray tap to the apparatus.

With the stopvalve fully open, and the spray tap closed, adjust the pressure regulator to give a supply pressure of 0.27 bar. Open the spray tap by rotating its hand control 180° from the commencement of flow. Adjust the flow restrictor until the rate of flow specified in 12.2 is achieved. Record the rate of flow. Open spray tap fully. Record the rate of flow.

Repeat the above procedure using a supply pressure of 3 bar.

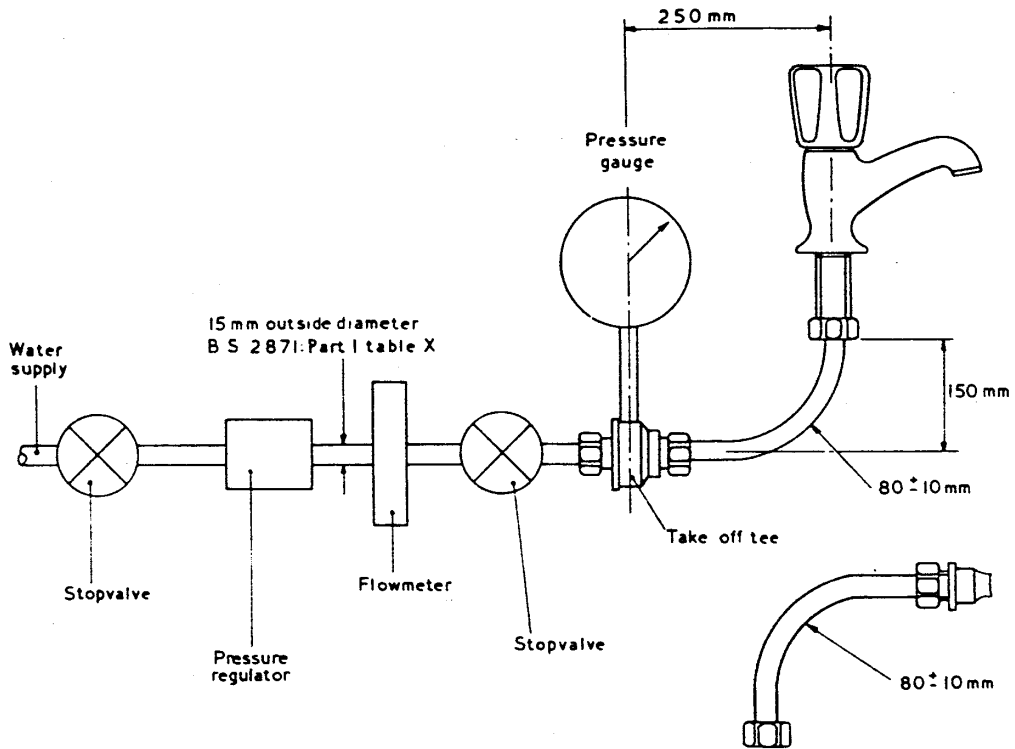
C.4 Recording

Record whether or not spray tap, with the adjusted restrictor, will deliver water at the specified rates.

BS flow restrictor number	<u>Working pressure range</u>		Test flow pressure bar
	Min	Max	
1	0.27	0.60	0.40
2	0.60	1.35	0.90
3	1.35	3.00	2.00

Table 1 - Working pressure ranges and test pressures for fixed flow restrictors

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NOTE. Drawing is diagrammatic only.

Figure 3. Diagram of rate of flow test apparatus

5. ACCEPTANCE CRITERIA

The maximum rate of discharge of the fitting shall not exceed 3.6 litres a minute.

