TEST CODE SHEET

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1. TYPE OF TEST(S)

Closure.

2. BYELAW REQUIREMENT FOR FITTINGS (SEE APPLICATION LIST BELOW)

64. Every stopvalve …… shall (a) be watertight when closed ……

66. Every supply pipe in premises shall be fitted with a draining tap which (a) is watertight when closed and subjected to an internal hydraulic pressure 1.5 times the pressure to which it is normally subject ……

71. Every servicing valve shall be …… (b) watertight when closed ……

87. …… every draw-off tap …… shall (a) be capable of operating effectively at (i) any water temperature not exceeding 65°C, and (ii) any internal water pressure to which it is likely to be subject, and …… (e) be designed when new to withstand, without leaking an internal water pressure 1.5 times that to which it ordinarily be subject.

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

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

4. TEST PROCEDURE

Note Unless otherwise stated the temperature of the test fluid shall be 20 ± 10°C.

4.1 Tests applicable to the following:-

TAPS AND VALVES

Taps (all types) - including stop valves used in draw- off situations, valves, stop-various.

(A) UNDERGROUND FIRE HYDRANTS (Derived from BS 750, Clause 7.2.1, Appendix C.3.1)

TEST METHOD

Connect the underside flange of the hydrant to a pressurised water supply in accordance with Setting-up Procedure IGN 1-50-61 and close the hydrant valve. Subject the underside of the closed valve to a hydraulic pressure of 16 bar ± 0.5 bar for a time of 60 seconds ± 5 seconds.

5. CRITERIA

For the duration of the test there shall be no visible sign of leakage past the valve seat.

(B) DRAW OFF TAPS AND ABOVE GROUND STOP VALVES (Derived from BS 1010, Part 2, Clause 1.7)

TEST METHOD

Connect the inlet of the fitting to a pressurised water supply in accordance with Setting-up Procedure IGN-50-61 and close the tap (valve). Apply an internal hydraulic pressure of 20 bar ± 0.5 bar for a time of 60 ± 5 seconds.

5. CRITERIA

For the duration of the test there shall be no visible sign of leakage past the valve seat.

(C) UNDERGROUND PLUG COCKS (Derived from BS 2580, Clause 18)

(i) TEST METHOD

Connect one end of the fitting to a pressurised water supply in accordance with Setting-up Procedure IGN-50-61 and close the plug cock). Apply an internal hydraulic pressure of 20 bar ± 0.5 bar for a time of 6 ± 1 seconds.

5. CRITERIA

For the duration of the test there shall be no visible leakage past the plug cock.

(ii) TEST METHOD

Repeat this test with pressure applied at the other end of the plug cock.

5. CRITERIA

For the duration of the test there shall be no visible leakage past the plug cock.

(D) VALVES FOR HOT WATER RADIATORS (Derived form BS 2767, Clause 5.4.2.2)

(i) TEST METHOD *GATE PATTERN*

Close the valve using the standard handwheel and apply a hydraulic pressure in accordance with Setting-up Procedure IGN 1-50 - 61 successively to each side of the seat.

5. CRITERIA

For the duration of the test there shall be no leakage of water through the valve seat when subjected to 1.1 times the maximum pressure rating (1-4 bar ± 0.2 bar) (4-30 bar ± 0.5 bar) for a period of 60 ± 5 seconds.

(ii) TEST METHOD *ANGLE AND Y PATTERN VALVES*

Close the valve using the standard handwheel and apply a hydraulic pressure in accordance with Setting-up Procedure IGN 1-50-61 under the disc with the other side open to atmosphere.

5. CRITERIA

For the duration of the test there shall be no leakage of water through the valve seat when subjected to 1.1 times the maximum pressure rating (1-4 bar ± 0.2 bar) (4-30 bar ± 0.5 bar) for a period of 60 ± 5 seconds.

(E) DRAINING TAPS (SCREW DOWN PATTERNS) (Derived from BS 2879, Clause 18)

TEST METHOD

Apply an internal hydraulic pressure in accordance with Setting-up Procedure IGN 1-50 - 61 of 20 bar ± 0.5 bar under the seat with the draining tap closed and the other side open to atmosphere. The duration of the test shall be 15 minutes ± 30 seconds.

5. CRITERIA

For the duration of the test there shall be no visible leakage past the valve seat.

(F) **BUTTERFLY VALVES** (Derived from BS 5155, Clause 12)

TEST METHOD

Seat test. Apply a hydraulic pressure in accordance with Setting-up Procedure IGN 1-50 - 61

(i) Fill the valve with the test fluid.
(ii) Move the obturator to the closed position.
(iii) Apply the test pressure of 1.1 times the maximum permissable working pressure at 20°C ± 10°C; tolerance on pressure (1-4 bar) ± 0.5 bar for the following time period:-

NOMINAL VALVE SIZE DN	METAL	ELASTOMERIC
	Seconds	Seconds
Up to and including DN 50	15 ± 2	15 ± 2
DN 65 upto & including DN 200	30 ± 5	15 ± 5
DN 250 upto & including DN 450	60 ± 10	30 ± 10
DN 500 & greater	120 ± 10	60 ± 10

5. **CRITERIA**

For the duration of the test there shall be no visible sign of leakage past the valve seat.

(G) **PREDOMINANTLY KEY-OPERATED CAST IRON GATE VALVES**
(Derived from BS 5163, Clause 8, 18.2, 19.1, 19.2)

Design working pressures. Valves shall be designed for maximum permissible working pressures at 20°C ± 10°C of one of the following.

(i) 10 bar for PN10 valves;
(ii) 16 bar for PN16 valves;
(iii) 25 bar for PN25 valves.

TEST METHOD

Apply an internal hydraulic pressure in accordance with Setting-up Procedure IGN 1-50 - 61. The test pressure shall be 1.1 times the maximum permissible working pressure (PN) ± 0.5 bar for seat testing.

when tested in the 'open end' condition, the test pressure for seat testing shall be equal to the maximum permissible working pressure (PN) ± 0.5 bar.

The duration of the testing times shall be : - Nominal size DN50 upto and including DN200 - 10 minutes ± 30 seconds. Nominal size DN250 upto and including DN600 - 15 minutes ± 60 seconds.

5. **CRITERIA**

For the duration of the test there shall be no visible leakage past the valve seat.

(H) **DRAW-OFF TAPS WITH METAL AND PLASTIC BODIES** (Derived from BS 5412, Clause 8.2.2)

TEST METHOD

Valve seat.....test. Apply a torque of 1.5Nm for size ½ taps and 2.5 Nm for 3/4 taps, to the operating member closing the oburator onto the body seating.

Note Where the watertightness of the headwork is ensured by a stuffing box, the packing gland is loosened.

With the outlet open and turned downwards apply a hydraulic water pressure in accordance with Setting-up Procedure IGN 1-50 - 61 of 16 ± 0.5 bar for 60 ± 5 seconds.

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5. CRITERIA

For the duration of the test, there shall be no leakage past the valve seat.

(J) UNDERGROUND STOP VALVES (Derived from BS 5433, clause 8)

TEST METHOD

Connect the valve inlet to a pressurised water supply in accordance with Setting-up Procedure IGN 1-50-61 and fully close the valve with the other side open to atmosphere. Apply an internal hydraulic pressure of 21 bar ± 0.5 bar for a time period of 60 ± 5 seconds.

Note Spherical ball type stopvalves shall be hydraulically pressure tested in both directions if the fitting has no direction of flow arrow visibly marked on it.

5. CRITERIA

For the duration of the test there shall be no visible leakage past the valve seat.

(K) SERVICING VALVES (COPPER ALLOY) (Derived from BS 6675, clause 12)

TEST METHOD

Connect the valve inlet to a pressurised water supply in accordance with Setting-up Procedure IGN 1-50 - 61 and fully close the valve with the other side open to atmosphere. Apply an internal hydraulic pressure of 20 bar ± 0.5 bar for a time period of 15 minutes ± 30 seconds.

Note: Spherical ball type stopvalves shall be hydraulically pressure tested in both directions if the fitting has no direction of flow arrow visibly marked on it.

5. CRITERIA

During the test there shall be no visible indication of leakage from the valve seat.

(L) ALL OTHER TYPES OF VALVES/ FITTINGS NOT REFERRED TO IN THE FOREGOING TO BE ASSESSED IN ACCORDANCE WITH THE FOLLOWING PROCEDURE:-

TEST METHOD

Connect the valve inlet to a pressurised water supply in accordance with Setting-up Procedure IGN 1-50 - 61 and fully close the valve with the other side open to atmosphere. Apply an internal hydraulic pressure of 1.5 times the claimed maximum operating pressure rating (± 0.5 bar within range 4-30 bar) for a test duration as follows:-

Fittings upto and including a nominal size of 50mm - 60 ± 5 seconds. Fittings above 50mm upto and including a nominal size of 150mm - 15 minutes ± 30 seconds. Fittings of nominal size above 150mm - 60 ± 5 minutes.

5. CRITERIA

For the duration of the test there shall be no visible leakage past the valve seat.