TEST CODE SHEET

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1. TYPE OF TEST(S)

Endurance.

2. WATER REGULATIONS REQUIREMENTS FOR FITTINGS

Schedule 2

15-(1) …. every water system shall contain an adequate device or devices for preventing backflow of fluid from any appliance, fitting or process from occurring.

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

3.1 Fittings with 'kitemarks' which are deemed to satisfy the requirements of regulations 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:-

CHECK VALVES
DN6 to DN250.
Devices for the prevention of contamination by backflow.

(A) CHECK VALVES (Derived from prEN 164167. Clause 7.10)
DN6 to DN250.

TEST METHOD

APPARATUS The following apparatus is required.

A supply of water to achieve the test flow rates at the required temperature and pressure. (Reference Figure 08).

Flow meter.

Pressure gauges.

Control valves.

DN ≤ 50: Arrange for the remote control valves to be operated automatically so that the conditions specified in stage (2) and stage (3) exist alternately for a period of 6 seconds ± 1 second and a changeover time not exceeding 1 second with a pressure pulse not higher as 10% of the applied pressure.

DN ≥ 65: Arrange for the remote control valves to be operated automatically so that the conditions specified in stage (2) and stage (3) exist alternately for a period of 6 seconds ± 1 second, with an overall cycle time of 30 seconds. The pulse pressure shall be no higher than 10% of the applied pressure.

NOTE: For double check valves each single check valve shall be tested separately. The check valve not being tested shall be either removed or the obturator held in the open position.

PROCEDURE The procedure shall be as follows:-

(1) Install the check valve in the test rig, using appropriate adaptors, if necessary. (Reference Figure 08).

(2) With valves '1' and '2' open and valves '3' and '4' closed, adjust valve '5' to give a flow rate through the check valve equal to a flow rate as given in Table 08 (with a tolerance of ± 5%).

Table 08

Nominal size of check valve - DN	6	8	10	15	20	25	32	40	50
Endurance test flow rate – litres/s	0.06	0.10	0.15	0.35	0.65	1.0	1.6	2.5	4.0
Nominal size of check valve - DN	65	80	100	125	150	200	250		
Endurance test flow rate – litres/s	4.5	5.0	7.0	12	18	31	49		

(3) With valves '3' and '4' open and valves '1' and '2' closed, adjust the supply pressure using valve '3' to 10 ± 0.5bar (reading on P_2).

NOTE: Having achieved the correct settings in stage (2) and stage (3) the pressure gauges P_1 and P_2 may be isolated.

(4) ***For check valves of sizes DN ≤ 50***.
The temperature for the water supply shall be 90°C for one hour and then lowered to 65°C.

(5) ***For check valves of sizes DN ≥ 65***
The temperature for the water supply shall be 65°C.

5. ACCEPTANCE CRITERIA

Check valves DN ≤ 50 : Repeat this cycle 80,000 times.

Check valves DN ≥ 65 : Repeat this cycle 25,000 times.

There shall be no breakage, leakage or permanent deformation of the valve and shall meet the requirements of TCS 1111.9 and 2213.13.

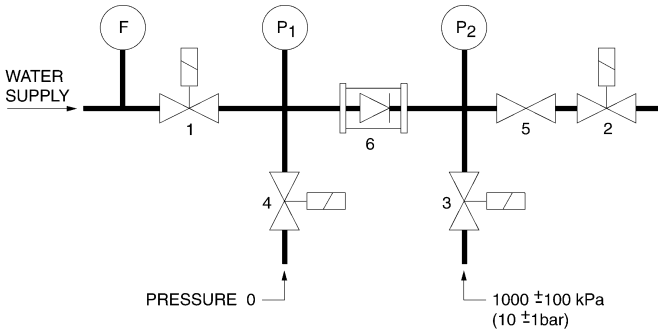

Figure 08