

| | | | | | |
|---------------------------------------|----------|----------|----------|----------|----------|
| Test Code Sheet Number | 1 | 3 | 1 | 2 | 3 |
|---------------------------------------|----------|----------|----------|----------|----------|

TEST CODE SHEET

1. TYPE OF TEST(S)

Bending strength.

2. WATER REGULATIONS REQUIREMENTS FOR FITTINGSSchedule 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 $20 \pm 10^\circ\text{C}$.

4.1 Tests applicable to the following:-

CHECK VALVES

DN6 to DN100.

Devices for the prevention of contamination by backflow.

(A) **CHECK VALVES** (Derived from BS 6282 Part 1 : 1982. Clause A.8)
DN6 to DN100.

APPARATUS The following apparatus is required.

A supply of water to achieve the test flow rates at the required pressure.

Sight glass, scale graduated in mm

Pressure gauges

Control valves.

The example of the test equipment shown in the Figure 06 is for guidance only.

Laboratory equipment must be designed to ensure that the valve can be tested to verify the requirement.

PROCEDURE The procedure shall be as follows:-

- (1) Mount the device in the test system in its normal working position. (Reference Figure 06).
- (2) Close all valves.
- (3) Open valves '3', '4', '6' and '7'.
- (4) Open valve '1' and fill the system, exhausting air through valve '7' and tubes '10' and '11'.
- (5) Close valve '7' when bubble-free water emerges from tube '11'.
- (6) Close valve '1' slowly and create a convex meniscus at the top of tube '11'.

| | | | | | |
|------------------|----------|----------|----------|----------|----------|
| Test Code | | | | | |
| Sheet | 1 | 3 | 1 | 2 | 3 |
| Number | | | | | |

Issue No: 6
Date of issue: July 2000

Sheet 2 of 3

(7) Close valve '4'.

NOTE: The water level in glass tube '10' should now be at same level as the meniscus in tube '11'.

- (8) Apply a load W, relative to valve size, as shown in Figure 06 to produce the bending moment given in Table 06. In calculating the bending moment, make due allowance for the mass of the pipework, valves and any loads imposed by the test equipment.
- (9) Close valve '6'.
- (10) Open valve '5' and apply a pressure of 16 bar, the pressure to be gradually built up over a period not exceeding 1 minute.
- (11) Maintain this pressure for 10 minutes and then reduce gradually to a pressure of 0.2 bar. Observe the level of water in glass tube '10' whilst carrying out these operations.
- (12) Reduce the pressure to zero.
- (13) Remove the load W.
- (14) Repeat procedures (2) to (7).
- (15) Open valve '2' slowly and allow the level in glass tube '10' to fall 30 mm below that of meniscus in tube '11'. Close valve '2' and observe meniscus at the top of tube '11'.
- (16) Apply a load W, relative to the valve size, as shown in Figure 06.
- (17) Hold the load W for 5 minutes.

Table 06

| Nominal size DN | | 6 | 8 | 10 | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
|-----------------|---------------------------|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|------|
| Bending Moment | Threaded and flanged ends | 16 | 30 | 40 | 80 | 150 | 300 | 400 | 500 | 600 | 750 | 950 | 1300 |
| Nm | Compression ends | 30 | 30 | 30 | 50 | 85 | 125 | 160 | 200 | 300 | na | na | na |

5. ACCEPTANCE CRITERIA

There shall be no breakage, permanent deformation or leakage of the body of the valve.

16 bar test

There shall be no leakage across the valve at any time, as verified by the water level in glass tube '10' remaining constant.

30 mm test

There shall be no leakage across the valve for a period of 5 minutes as verified by the water level in glass tube '10' remaining constant.

| | | | | | |
|------------------|----------|----------|----------|----------|----------|
| Test Code | | | | | |
| Sheet | 1 | 3 | 1 | 2 | 3 |
| Number | | | | | |

Issue No: 6
Date of issue: July 2000

Sheet 3 of 3

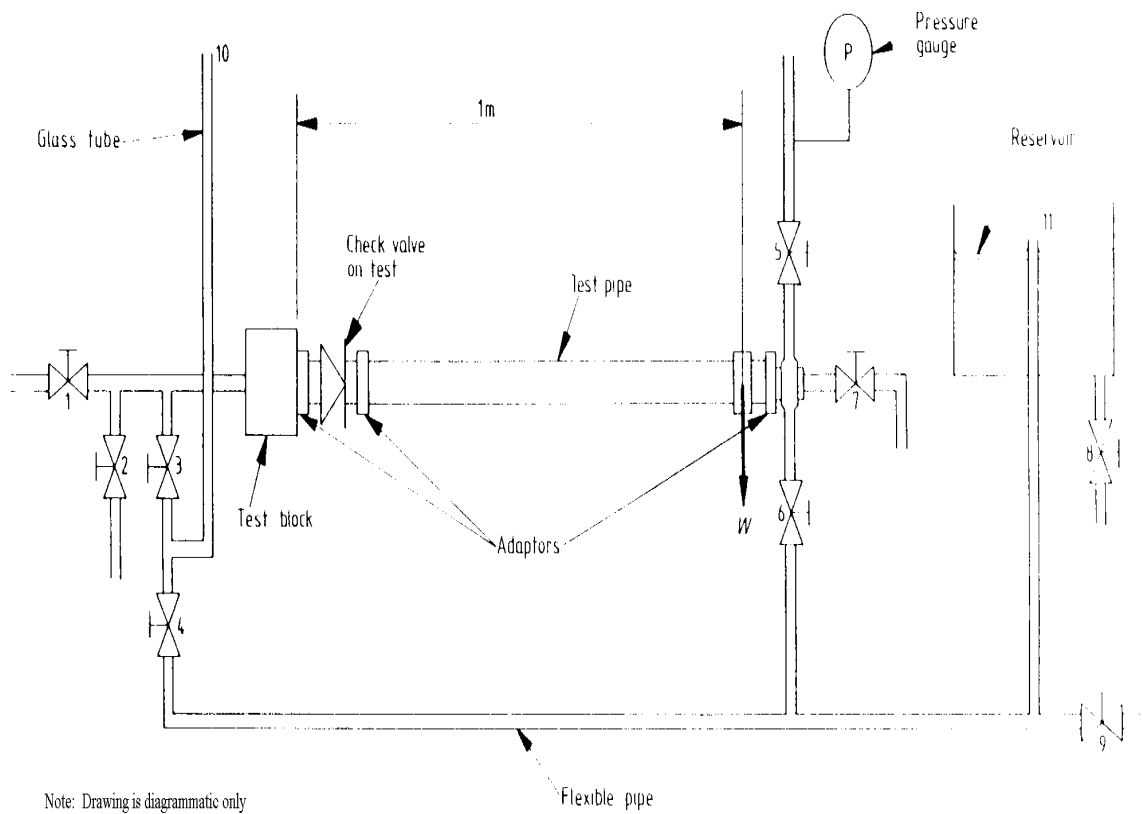


Figure 06