WRAS TEST & ACCEPTANCE CRITERIA

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TEST CODE SHEET

1. <u>TYPE OF TEST(S)</u>

Endurance test.

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. <u>BRITISH STANDARDS OR WATER SPECIFICATION, DEEMED TO SATISFY WATER REGULATIONS</u> <u>REQUIREMENTS</u>

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

4. <u>TEST PROCEDURE</u>

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

4.1 Tests applicable to the following:-

ANTI VACUUM VALVE DN8 to DN80.

Devices for the prevention of contamination by backflow.

(A) <u>ANTI VACUUM VALVE</u> (Derived from prTC W1 111 : 1998. Clause 11.6.3)

DN8 to DN80.

TEST METHOD

<u>APPARATUS</u> The following apparatus is required.

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

Sight glass, vacuum supply, scale rule graduated in mm.

Pressure gauges, control valves, transparent hose, water reservoir.

NOTE: A new anti vacuum valve is used for each endurance test.

PROCEDURE

Test 1

- (1) Mount the device in the test system in its normal working position. (Reference Figure 45A).
- (2) Set up Test Specimen Number 1 as shown is Figure 45A, and purge the system of air, then cut off the flow of water with the hose raised.
- (3) Subject Test Specimen Number 1 to a 500 mm head of water for 14 days.
- (4) Open valve '3' to drain the water and lower the end of the tube into the water reservoir '4'. Fill the water reservoir with water via a separate pipe. Close valve '3'. The water column in the water reservoir and in the transparent tube must be equal. Open valve '2' slowly and apply an absolute pressure below 0.5 bar. Record the height of the water level in the tube.

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<u>Test 2</u>

- (1) Mount the device in the test system in its normal working position. (Reference Figure 45B).
- (2) Set up Test Specimen Number 2 as shown is Figure 45B, and purge the system of air, then close valve '2'. Increase the pressure to 5 bar ± 1 bar. Close valves '1', '3' and '4'.
- (3) Leave Test Specimen Number 2 unoperated for 14 days whilst pressure is maintained at 5 bar \pm 1 bar.
- (4) After 14 days reduce the pressure with a maximum rate of 1 bar per 10 seconds down to 1 bar.
- (5) Close valve '1'. Open valve '3' to drain the water, then open valve '4' slowly to drain the rest of the water. Fill the water reservoir via a separate pipe. Connect a transparent tube to valve '4' with the free end placed in the water reservoir.
- (5) Close valve '3'. The water column in the water reservoir '5' and in the transparent tube must be equal. Open valve '2' slowly and apply an absolute pressure of below 0.5 bar. Record the height of the water level in the tube.

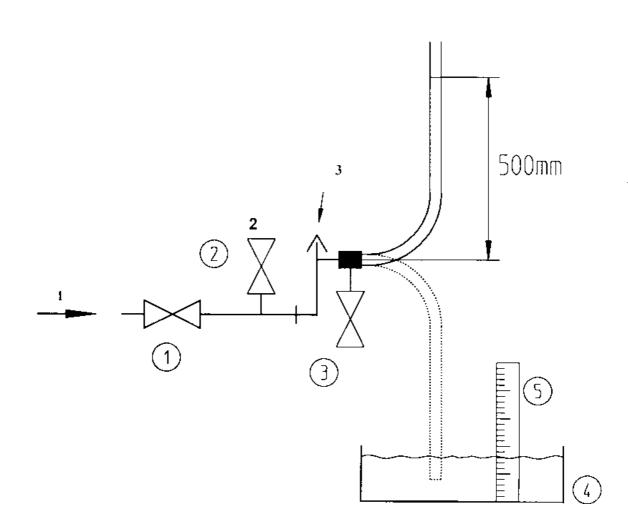
5. <u>ACCEPTANCE CRITERIA</u>

- <u>*Test 1*</u> The water column in the transparent hose and in the water reservoir must be equal.
- <u>*Test 2*</u> The water column in the transparent hose shall not exceed 100 mm (0.01 bar).

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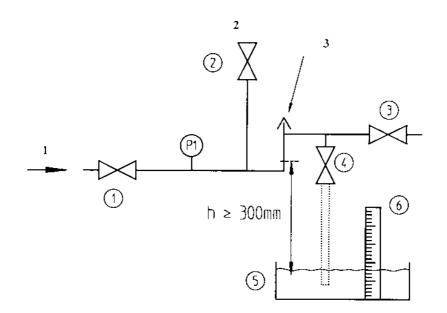
Key

- 1 Water supply
- 2 3
- Vacuum Test specimen

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Key

- Water supply Vacuum 1
- 2
- 3 Test specimen

Figure 45 (B)