WRc Evaluation & Testing Centre Ltd

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WRAS TEST & ACCEPTANCE CRITERIA

Issue No: 3

Date of issue: July 2000

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TEST CODE SHEET

1. TYPE OF TEST(S)

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. 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. <u>TEST PROCEDURE</u>

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

4.1 Tests applicable to the following:-

AUTOMATIC DIVERTER HC

Devices for the prevention of contamination by backflow.

(A) <u>AUTOMATIC DIVERTER HC</u> (Derived from CEN TC 164 AHG 1 FEB : 1999 TAPS)

TEST METHOD

APPARATUS The following apparatus is required.

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

Pressure gauges, Fouling wire, Control valves, Transparent hose, Water reservoir, Counting device and Water trap.

Type 1: Assembly operating range 0.5 to 10 bar.

Type 2: Assembly operating range 0.1 to 10 bar, (recommended range 0.1 to 2 bar).

PROCEDURE The procedure shall be as follows:-

(1) **Diverter with automatic return**

Install the tap, as supplied, on the test rig and connect it to the supply circuit.

(2) Taps for a supply system of *Type 1*

Adjust the static water pressure of both hot and cold circuits to 4.0 ± 0.2 bar, and connect a hydraulic resistance (Class A = 0.25 l/sec. at 3 bar) to the shower outlet.

(3) Taps for a supply system of *Type 2*

Adjust the static water pressure of both hot and cold circuits to 0.20 ± 0.2 bar in the flow-to-bath mode..Restrict the flow to the diverter to the minimum that permits proper functioning.

(4) In the flow-to-shower mode, if the flow exceeds 0.1 l/sec; adjust the flow to a flow rate of 0.066 to 0.1 l/sec. by restricting the diverter outlet. Subject the diverter to a test of 30 000 cycles.

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(5) '1 cycle' is defined as follows:

With the diverter in the bath position, allow the water to flow through the nozzle for 5 ± 0.2 seconds. Change the diverter to the shower position.

Allow the water to flow through the shower outlet for 5 ± 0.2 seconds.

Use the quick-acting valve to cut off the supply, allowing the diverter to return to the bath position and then to reopen the supply.

(6) Throughout the test, supply the tap alternately with cold water $\leq 30^{\circ}$ C for 15 ± 1 minutes and then hot water 65 $\pm 2^{\circ}$ C for 15 ± 1 minutes.

5. <u>ACCEPTANCE CRITERIA</u>

During the test there shall be;

No rupture of the elements, no blockage of the mechanism.

No leakage on the nozzle or shower side, or at the diverter control joint.

After completing the endurance test, the valve shall be capable of complying with TCS 1111.5 and 2212.6.