#### WRc - NSF Ltd, Evaluation & Testing Centre

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WRAS TEST & ACCEPTANCE CRITERIA

Issue No: 1

Date of issue: August 2005

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TEST CODE SHEET

### 1. $\underline{\text{TYPE OF TEST(S)}}$

48 hour hot water test.

# 2. WATER REGULATIONS REQUIREMENTS FOR FITTINGS

# Schedule 2

24. No supply pipe or secondary circuit shall be permanently connected to a closed circuit for filling a heating system unless it incorporates a backflow prevention device in accordance with a specification approved by the regulator for the purposes of this Schedule.

# 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>

4.1 Tests are applicable to the following fittings:

 ${\bf SINGLE\ FEED, MAINS\ WATER\ SUPPLY\ PRESSURE, UNVENTED\ HOT\ WATER\ STORAGE\ SYSTEM}$ 

# (A) SINGLE FEED, MAINS WATER SUPPLY PRESSURE, UNVENTED HOT WATER STORAGE SYSTEM

# **TEST METHOD**

Carry out the following procedure on indirect units and packages.

- 1. Ensure required equipment is within calibration. Record the equipment used.
- 2. Install the apparatus as stated in the manufacturers instruction manual and in accordance with Diagram 1. Connect the apparatus via stop valve, flow meter and thermocouple (B) to the mains inlet of the apparatus. Fit thermocouple (A) to the outlet or such as where the normal stat is positioned or so that the temperature at the top of the storage vessel can be measured. Install the connection from the hot water outlet, sized in accordance with the manufacturers instruction manual (at no size smaller than the outlet) to drain via a spherical valve.
- 3. Add 0.5 litres of fluroscene into the primary side of the cylinder.
- 4. Connect the primary flow and return to either a boiler or a heat source, with the correct size pump fitted to either the flow or return (as per the manufacturers instructions). Install thermocouple (C) on the primary flow within 500mm of the heat source. Connect so as to ensure any control circuits are used as per the manufacturer's instructions or are wired so as all electric components operate in the same way as in the manufacturers instructions.
- 5. Open the stop valve on the water supply to the apparatus under test, ensure the mains pressure supply is greater than the pressure setting of the pressure reducing valve. Check for leaks.
- 6. Open the spherical valve on the hot water outlet.
- 7. When apparatus is full check for leaks.
- 8. Close spherical valve on hot water outlet.
- 9. Fill the primary side and check for leaks ensuring the pump and motorised valves are working.
- 10. Increase the temperature within the boiler or heat source to ensure the primary flow is at  $80 \pm 2^{\circ}$ C. Take measurement on thermocouple C. Continue heating until a temperature of  $80 \pm 2^{\circ}$ C is measured on thermocouple A. (Start the timer).
- 11. Ensure that this temperature is maintained for 48 hrs (-0 + 0.5).
- 12. Open valve on hot outlet.

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# 5. <u>ACCEPTANCE CRITERIA</u>

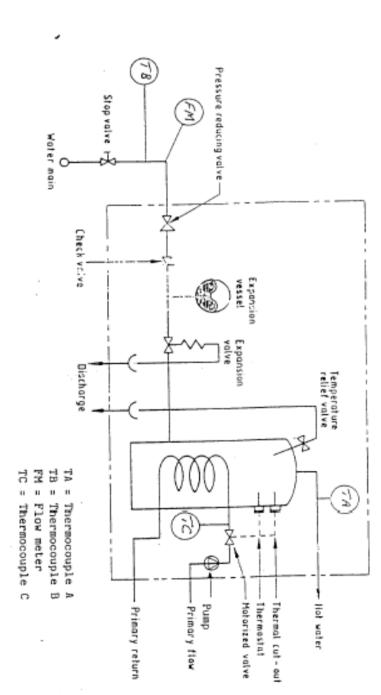
No mixing of the primary and secondary waters shall occur. This is confirmed by checking that the water discharged from the hot water outlet is not contaminated with fluroscene.

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DIAGRAMAN.