TEST CODE SHEET

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1. TYPE OF TEST(S)

Contamination - mixing of primary and secondary circuits.

2. BYELAW REQUIREMENT FOR FITTINGS

Byelaw 15 .

No pipe forming part of a cistern fed vented primary circuit shall be connected to any pipe forming part of a secondary system.

Byelaw 37

(1) No single feed indirect cylinder shall be connected directly to any supply pipe.
(2) Every such cylinder shall..... (b) be so constructed & installed that no water in the primary circuit shall mix with water in the secondary circuit.....when operating at a sustained temperature not exceeding 80°C.

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

(See Water Supply Byelaw Guide)

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

CYLINDERS,
-indirectly heated, single feed type.

(A) **SINGLE FEED INDIRECT CYLINDERS** (Derived from BS 1566 Part 2)

TEST METHOD

The apparatus shall be arranged as shown in Figure 6. The single feed test cylinder "A" shall be connected to a cold water feed cistern and to a cylinder "B" provided with a 3kW thermostatically controlled immersion heater for heating the primary water. Cylinder "B" shall also be provided with a thermometer to measure the water temperature.

Before the test is carried out, adjust the thermostat on the heater in cylinder "B" so that the temperature of the primary water does not exceed 80 °C.

Fill the entire system with cold water from the feed cistern, close valve "C" and drain out the secondary water by opening draining tap "D". Switch on the heater for long enough to enable the thermostat to be adjusted so that the water temperature in the cylinder does not exceed 80 °C. Switch off the heater and drain out the primary water by opening draining tap "E".

Open valve "F" and pour in approximately 10g of fluorescein aniline dye dissolved in 0.5L of water. Close valve "F". Slowly open valve "C" and fill the system at a normal rate.

The feed to the float operated valve shall be direct from the main cold water storage tank and the temperature of the feed water shall not exceed 16°C.

Switch on the heater and leave in operation for 8 hours ± 15 mins.

Allow the system to cool over a period of not less than 72 hours. Switch on the heater again and leave in operation for a further 8 hours ± 15 mins.

Draw off a quantity of water equal to the storage capacity of the cylinder "A" through tap "H". This water shall not show any sign of green staining.

At the end of each intermediate stage of the test it is possible to draw-off, through tap "H", a maximum of 1L. If this shows any sign of green staining the test shall be abandoned.

5. **ACCEPTANCE CRITERIA**

The cylinder shall show no sign of mixing of primary and secondary water as indicated by green staining of the water drawn off at any stage during the test.

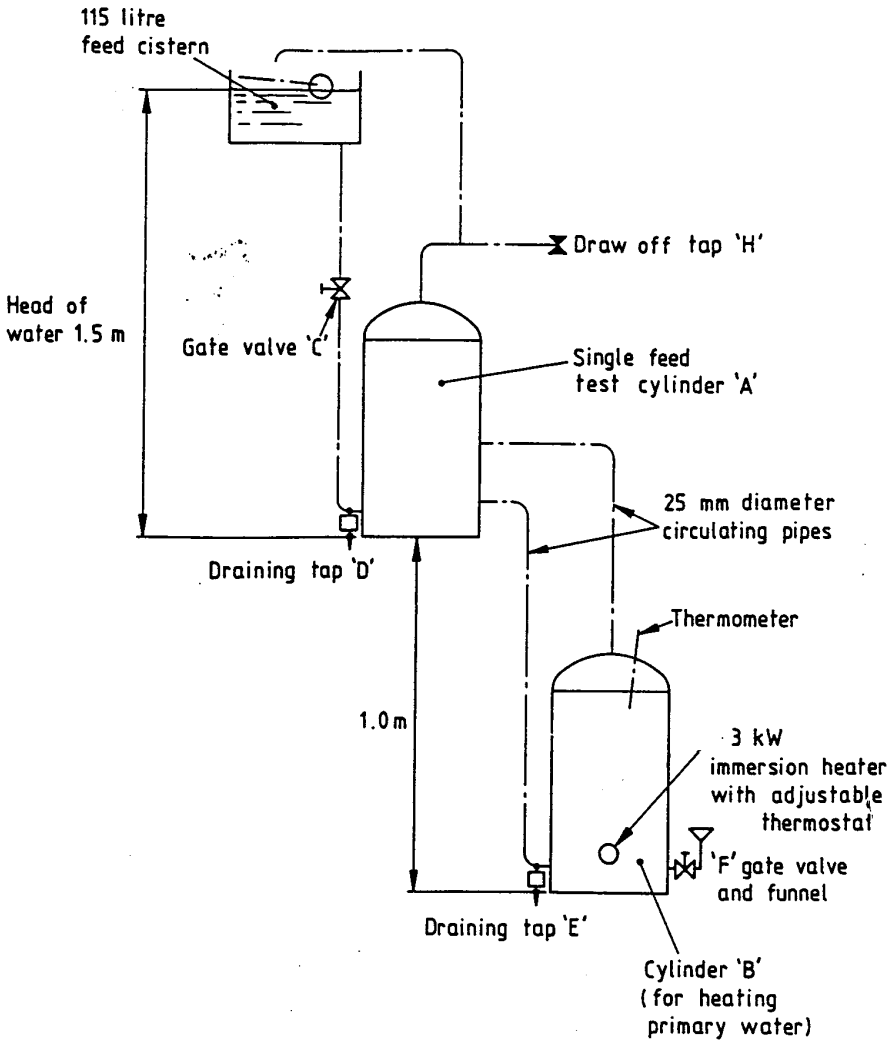

Figure 6. Isolation testing apparatus