

**SPECIFICATION
FOR
TESTING EQUIPMENT**

REFERENCE METERS FOR WATER

In accordance with the provisions of section 5(5) of the Weights and Measures Act 1985, the Secretary of State hereby approves the material and form of testing equipment of the following description for use by inspectors of weights and measures when testing metered cold potable water supplies.

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Department of Trade & Industry

STD 4827

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SPECIFICATION FOR TESTING EQUIPMENT**REFERENCE METERS FOR WATER****MATERIAL**

1 Reference meters for water shall be constructed of non-porous materials which are compatible with the requirements for connection to cold potable water supplies.

FORM

2 Reference meters shall be of the positive displacement, semi-positive displacement or turbine type and shall be fitted with a quantity-indicating mechanism reading in litres and/or cubic metres. The quantity-indicating device may be analogue, digital or a combination of analogue and digital. A return to zero facility is desirable.

3 The resolution of the indicator shall be such that 0.2% of the quantity delivered in the test shall be capable of accurate determination.

4 The meter shall be sealed to prevent unauthorised adjustment or tampering.

INSCRIPTIONS

5 The following data shall be marked permanently, legibly and conspicuously on the meter:

- (a) the direction of flow;
- (b) the manufacturer's name;
- (c) a serial number or other unique identification number;
- (d) the nominal flowrates (Q_n values) and the metrological classes that it is designed to test.

Other data which may be marked include:

- (e) a pattern approval number;
- (f) the liquid of use (water);
- (g) the reference temperature;
- (h) the coefficient of cubical expansion of the meter.

NOTE FOR THE GUIDANCE OF TRADING STANDARDS OFFICERS

6 A reference meter for water must be accompanied by a calibration chart giving its error as a function of flowrate. In testing a suspect water metering system by series connection the known errors of the reference meter must be applied as corrections.