

**SPECIFICATION
FOR
LOCAL STANDARDS
OF
LENGTH
RIGID LINE STANDARDS**

In accordance with the provisions of section 4(2) of the Weights and Measures Act 1985, the Secretary of State hereby approves the material and form of local standards of length conforming with this specification.

This specification supersedes A3 (October 1912) and WM 246 (March 1971), but any local standard, in respect of which a certificate has been issued under section 4(4), will continue to be accepted for re-certification until further notice.

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Department of Trade & Industry

STD 5243

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SPECIFICATION FOR LOCAL STANDARDS OF LENGTH**RIGID LINE STANDARDS**

Note: Length measures made to OIML IR 24 comply with this specification in so far as it relates.

NOMINAL LENGTHS

1 The nominal lengths covered by this specification are:

Imperial	Metric
1 inch	1 decimetre
1 yard	metre
2 yards	metres

MATERIAL

2 Rigid line measures shall be made of material which is stable, hard wearing and corrosion-resistant. Suitable materials include: hard brass, stainless steel.

CONSTRUCTION

3 Line measures shall be made of rigid bars of metal, which shall be substantially straight and parallel. The graduated edges should be bevelled at a suitable angle to leave a vertical edge of approximately 0.5 mm.

To facilitate reading, a magnifying lens may be carried on a slider bar fitted to the line standard. The method of attachment of the slider bar should be such as to prevent distortion of the standard due to unequal expansion. Suitable handles may be provided to facilitate handling of the standards. These should be so designed that transfer of heat from the hands is minimised.

GRADUATIONS

4 The nominal length shall be between two scale marks. All scale marks shall be clear, permanent, straight, at right angles to the axis of measurement, all of the same thickness and constant throughout their length.

- (a) The lengths of the scale marks may vary to indicate various scale intervals. The thickness of the scale marks should be appropriate to the accuracy of measurement required and should not exceed 0.2 mm in width.
- (b) The scale marks should be numbered continuously in inches, centimetres or millimetres.
- (c) There shall be a plain ungraduated portion beyond each terminal scale mark of the measure. Where an inch or centimetre before zero is provided it must be subdivided. Metric standards may be divided into decimetres, centimetres and millimetres. Imperial standards may be divided into inches and eighths, sixteenths, thirty-seconds and sixty-fourths or tenths and hundredths of an inch. The terminal scale intervals may be more finely subdivided.

INSCRIPTIONS

5 Measures should carry the following inscriptions:

- (a) The nominal length
- (b) The reference temperature: 20 °C
- (c) The name of the local authority
- (d) A serial number
- (e) The maker's or supplier's name or trade mark.

LIMITS OF ERROR

6 The permissible errors in length at 20 °C shall not exceed the amount specified in Regulations made under section 4(5) of the Weights and Measures Act 1985, as shown below.

Imperial	Limits of error (\pm)
1 inch	0.004 in
1 yard	0.008 in
2 yards	0.012 in
Metric	Limits of error (\pm)
1 cm	0.05 mm
1 dm	0.1 mm
1 metre	0.2 mm
2 metres	0.3 mm