

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

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 working standards of length conforming with this specification.

This specification supersedes WM 246 (March 1971), but any working standard already in use may continue in use until further notice.

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Department of Trade & Industry

STD 5243

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SPECIFICATION FOR WORKING STANDARDS OF LENGTH

RIGID LINE STANDARDS

NOMINAL LENGTHS

1 The nominal lengths covered by this specification are:

| Imperial | Metric |
|-----------------|---------------|
| 1 inch | 1 decimetre |
| 1 foot | 0.5 metre |
| 2 feet | 1 metre |
| 1 yard | 2 metres |
| 2 yards | |

MATERIAL

2 Rigid line measures shall be made of material which is stable, hard wearing and suitable for the purpose. Suitable materials include: hard brass, stainless steel and carbon steel. Carbon steel rules shall be protected from rusting.

CONSTRUCTION

3 Line measures shall be made of rigid bars of metal, which shall be substantially straight and parallel.

GRADUATIONS

4 The nominal length shall be between two scale marks or between an end and one scale mark. 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 shall not exceed 50% of the spacing.
- (b) The scale marks should be numbered continuously in inches or centimetres.
- (c) 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 5(9) of the Weights and Measures Act 1985, as shown below.

Metric: Limits of error (\pm)
0.3 mm plus 0.2 mm per metre of length

Imperial: Limits of error (\pm)
0.012 in plus 0.008 in per yard of length.