

TEST MANUAL FOR FOLDING SCALES LINEAR MEASURES

1.0 GENERAL

This manual deals with wooden folding scales.

2.0 DENOMINATION

The denominations of folding scales shall be of 1 m and 0.5

3.0 MATERIALS

- (a) The scales shall be made from strips or sheets of wood. They shall be reasonably uniform in width and thickness throughout the entire length.
- (b) The scales shall be made of any suitable timber species.
- (c) The timber shall be thoroughly seasoned and radially sawn. The moisture content of the timber shall be between 8 and 12 per cent. The Timber shall be free from knots, cracks, sap wood, snakes and other visible defects such as decay, insect attack, etc. and shall be fairly straight-grained.

4.0 MANUFACTURE

- (a) General – The scales shall be reasonably straight and flat, the edges parallel to each other and the ends reasonably square.
- (b) No point on any of the edges shall be more than 0.5 mm distant from the straight line connecting its extremities. No point on the surface of a scale shall be more than 0.5 mm distant from the plane of the surface.
- (c) The scales shall consist of four pieces hinged together and it shall be an end measuring scale. First and last graduation shall be the end face. The joints shall work smoothly without undue play and shall be sufficiently free from the folds to be opened and closed without strain. The brass caps shall closely fitted and strongly secured to the blades. They shall be made flush with the sides of the scales.
- (d) A protective layer of suitable lacquer or varnish or any other suitable material shall be provided.

5.0 DIMENSIONS

The principal dimensions of the scale blanks shall be as follows:-

Length of Graduated part (m)	Width Max. (mm)	Min. (mm)	Thickness (mm)
0.5	15.0	14.5	4 + or - 1
1	20.0	19.0	5 + or - 1

6.0 GRADUATIONS

- (a) Graduation marks shall be made at every millimeter with a longer line at every 5 mm and centimeter. The length of the graduation lines shall be as follows:-
 - Centimeter marks 6 mm
 - 5 mm mark 4 mm
 - 1 mm mark 2.5 mm

- (b) The lines shall be fine and clear, of uniform depth and thickness, and perpendicular to the edges. The thickness of lines shall be not more than 0.2 mm for stamped scales and 0.1 for engine divided scales. The lines shall be of sufficient depth to be legible and indelible.
- (c) The lines shall be filled in blank and natural background or with a suitable colour which shall contrast with the colour of the base to ensure legibility.
- (d) Every centimeter shall be numbered in international form of numerals. The height of the figures shall be between 2.0 and 2.5 mm.

7.0 PERMISSIBLE ERROR

The cumulative error for the entire graduated part shall not exceed + or – 0.50 mm. Further, over any 10 cm length scale, the error shall not exceed + or – 0.2 mm.

8.0 MARKING

- (a) The denomination shall be stamped on the un-graduated side of the measure at a distance about one-third of the total length from the beginning of the measure. The manufacturer's name or trade mark shall be indicated indelibly at the same distance from the other end of the measure. The markings shall be finished in the same manner as the graduations.
- (b) In indicating the denominations the numerals shall be followed by the word 'metre'

9.0 STAMPING

The Inspector's seal shall be affixed either on the metal strip at the ends or the central hinge as may be convenient.