



Test method T1210

Adhesive bond strength of pavement markers

NOVEMBER 2012



Revision Summary

Ed/Rev Number	Clause Number	Description of Revision	Authorisation	Date
		Reformatted and Revision Summary Added	D. Dash	June 2001
Ed 2/ Rev 0	All	Reformatted RMS template	J Friedrich	November 2012

Note that Roads and Maritime Services is hereafter referred to as 'RMS'.

The most recent revision to Test method T1210 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

Test method T1210

Adhesive bond strength of pavement markers

1. Scope

This test method sets out the procedure for the measurement of the adhesive bond strength of pavement markers to an approved adhesive.

2. Apparatus

- (a) Tensile testing machine with a capacity of at least 45 kN and a loading rate capability of 0.37 kN/second.
- (b) Bond strength fixture as shown in the attached drawing.
- (c) Steel plugs of 50 mm diameter 57 mm long, sand blasted on one end and with a threaded hole in the other end.

3. Material

Supply of pavement markers and adhesive approved for pavement marker installation.

4. Procedure

- (a) Condition test plugs, pavement markers and the approved adhesive at $23 \pm 2^\circ\text{C}$ for a minimum of four hours before preparing for testing. The test plugs should be kept clean and dry and free from corrosion.
- (b) Mix the approved adhesive according to the manufacturers recommended procedure in the correct proportions until the mixture shows no streaks or signs of inadequate mixing. Discard the mixture if it shows signs of premature breaking or of the pot life having been exceeded, i.e. formation of a stringy mass in the centre of the mixing container or undue stiffness.
- (c) Place a small amount of the adhesive on the centre of the bottom surface of the marker and spread over an area of approximately 50mm in diameter.
- (d) Place a thin layer of adhesive on the sand blasted surface of the steel plug and press the plug firmly onto the centre of the bottom surface of the marker with a slight twisting action.
- (e) Carefully remove any excess adhesive that extrudes from under the plug and cure the assembly for a least 24 hours at $23 \pm 2^\circ\text{C}$, the markers not being moved until the adhesive bond is strong enough to resist slippage between the plug and the marker.
- (f) At the end of the 24 hour curing period, determine the bond strength by exerting a tensile force at a rate of 0.37kN per second until failure occurs using the bond strength test fixture. Record the result.
- (g) Determine the tensile stress by dividing the force recorded in (f) by the area of the test plug (1963.5mm^2)

5. Reporting

Report the tensile stress required to cause rupture of the test piece in kN/m^2 and the type and location of the failure

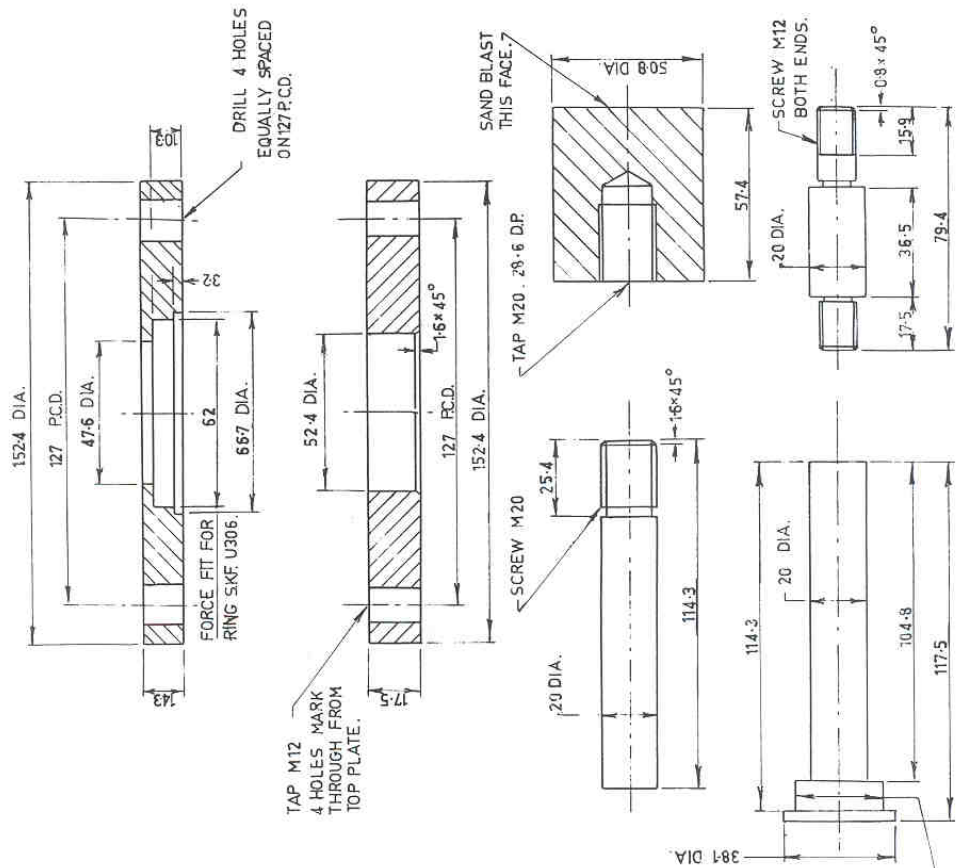
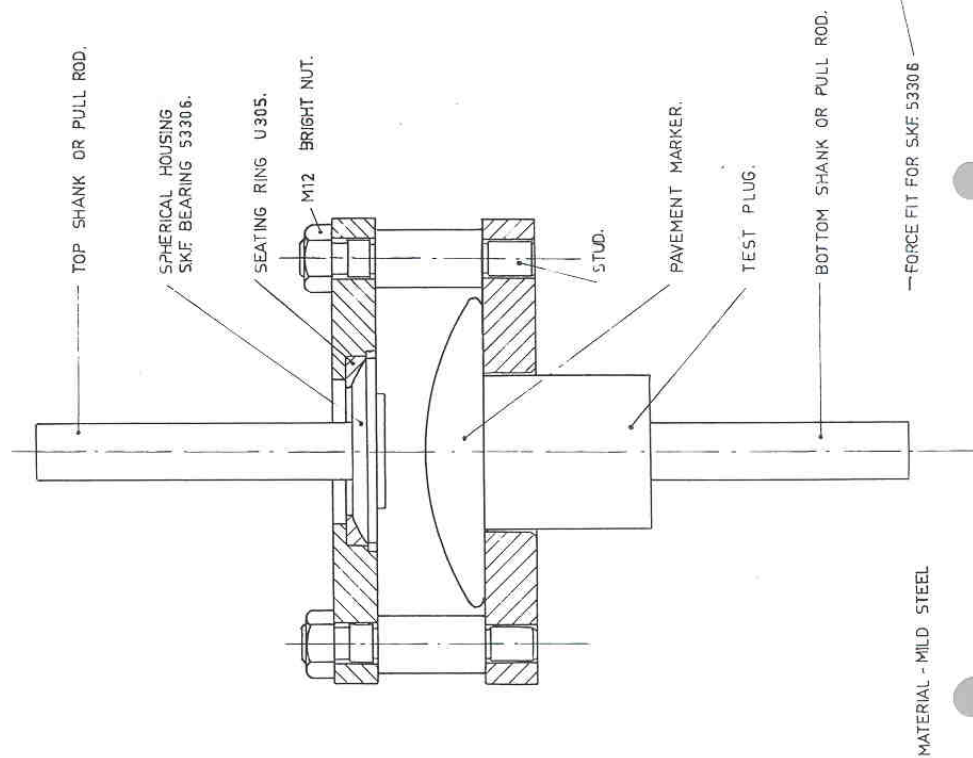


Fig. 1. - BOND STRENGTH FIXTURE



MATERIAL - MILD STEEL

FORCE FIT FOR SKF 53306