Pre-Cast Concrete Flags - Transverse Strength

Lab Test Reference 307
British Standard Reference
BS 7263 : 1990 Appendix B

Principal Apparatus

Compression Testing Machine - Lab Invent No. xxx (BS1610 Part 1; Grade A)

1. Preliminaries

1.1 The compression testing machine has a transverse unit attached, which is used for determining tensile strength of concrete products. The two supporting rollers at the bottom of the unit are adjustable so that the width between them can be varied. Pre-drilled holes are used to position the rollers to the appropriate width. The central upper member of the transverse units is spherically seated to provide a vertical tension free axial load is positioned at the centre of the spanned specimen under test.

1.2 The area designated as the Concrete Laboratory will be used to perform this test and the equipment shall be checked before the test proceeds.

1.3 Check the Calibration Certificate for the Compression Testing Machine is valid.

1.4 Check the sample number and the Test Schedule correspond and obtain test worksheet 307.

2. Standard Test Method

2.1 The specimen to be tested is placed symmetrically on the roller of the transverse unit with its shorter side parallel to the beams. The rollers are set at a distance apart dependent on the plan size of the flag. This is 450mm for Types A, B, C and D, 375mm for Type E, 350mm of the Type F and 250mm for Type G (ref Appendix B and Table 9).

A hardwood fillet - 50mm wide is placed on the upper surface of the flag and the midpoint of the span and extending the whole width of the specimen parallel to the supporting rollers.

2.2 Load is applied steadily by switching the compression testing machine into transverse mode by operating the lever between the frame and console. The pacer on the console is preset to a rate not exceeding 16.5N/sec for each 100mm of width as tested until the specimen fails at which point, the maximum load is recorded by the compression tester, or until the capacity of the machine is reached.

2.3 The individual failing load is recorded to the nearest 0.1 kN except when a specimen does not fail under the upper limit of the testing machines in which case record the failing load as 'greater than .....kN".