

CONE PENETROMETER

BE 08

The liquid limit (LL) of soil is a key Atterberg limit that defines the moisture content at which soil transitions from a plastic to a liquid state. Two primary methods are used for its determination: the Casagrande method (percussion cup method) and the Cone Penetrometer method (also known as the Fall Cone test). In the Casagrande method, a soil pat in a cup is grooved, and the number of blows (typically 25) required for the groove to close over 12 mm is measured to plot against moisture content. In contrast, the Cone Penetrometer method involves dropping a standardized cone (e.g., 80 g mass, 30° angle) onto a soil sample for 5 seconds and measuring the penetration depth (typically 20 mm for LL).

Ease of Performance

Dependence on Apparatus and Operator

Applicability to Soil Types

Repeatability and Consistency

Time and Effort

Shear Strength Basis

STANDARD FOLLOWING

IS 2720 (Part 5) BS:1377

DESCRIPTION

BE 08-01	Universal Type	Operated For Automatically
BE 08-02	Penetration Cone	cone has a tip angle of 60 degrees and a base area of 10 cm ²
BE 08-03	Penetration Cup	55 mm dia x 40 mm deep



ERPRISES



BE 08-01
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