

INSITU VANE SHEAR TEST

The Insitu Vane Shear Test gives the in place shearing resistance of soft, saturated clays which are sensitive and are susceptible to sampling disturbances. The test gives undrained shear strength of soil, along a cylindrical surface without change in volume or soil structure.

The test consists of pushing a vane with four blades into soil and rotating it till the cylindrical surface in soil fails in shear. The torque or turning moment required to cause this failure is measured on a Torque Meter.

The maximum moment of the total shear mobilized about the axis of rotation is equal to the applied torque. The unit shear resistance of the cylindrical surface can thus be computed.

IS : 4434 specifies two methods, namely testing at the bottom of a bore hole and testing by direct penetration from the ground surface. HS 34.140 is used in bore holes and HS34.145 for direct penetration from ground surface.

●● HS34.140

Insitu Vane Shear Apparatus

The apparatus is suitable for testing at the bottom of a bore hole.

This consists of Torque Applicator mounted on a detachable stand. By applying torque, deformation of torque ring can be read on a dial gauge. From the calibration curve, deformation can be converted into torque in Kg. Cm.

The complete outfit consists of :-

- i) Torque applicator assembly, 2000 kg cm - 1 No.
- ii) Vane 37.5 mm x 75 mm high complete with vane rod and one dummy rod - 1 set.
- iii) Vane 50 mm dia x 100 mm high, complete with vane rod and one dummy rod.

- iv) Extension rods one meter long threaded, quick coupling type. 25 Nos.
- v) Extension rods half meter long threaded, quick coupling type 10 Nos.
- vi) Spikes - 4 Nos.

HS34.140.8 Dummy rod corresponding to HS34.140.7

HS34.140.9 Guide with ball bearing arrangement for proper alignment of rods when in use. Suitable for use with 100 mm dia. casing pipe.

HS34.140.10 Guide similar to HS 34.140.9 but for use with 150 mm dia casing pipe



HS34.140

SPARES & ACCESSORIES

HS34.140.1 Vane 37.5 mm dia x 75 mm high with vane rod

HS34.140.2 Vane 50 mm dia x 100 mm high with vane rod.

HS34.140.3 Extension rod as specified 1 meter long.

HS34.140.4 Extension rod as specified 0.5 meter long, set of 10.

HS34.140.5 Dummy rod corresponding to 37.5mm dia vane

HS34.140.6 Dummy rod corresponding to 50mm dia vane

HS34.140.7 Vane 75mm dia x 150mm high with vane rod.