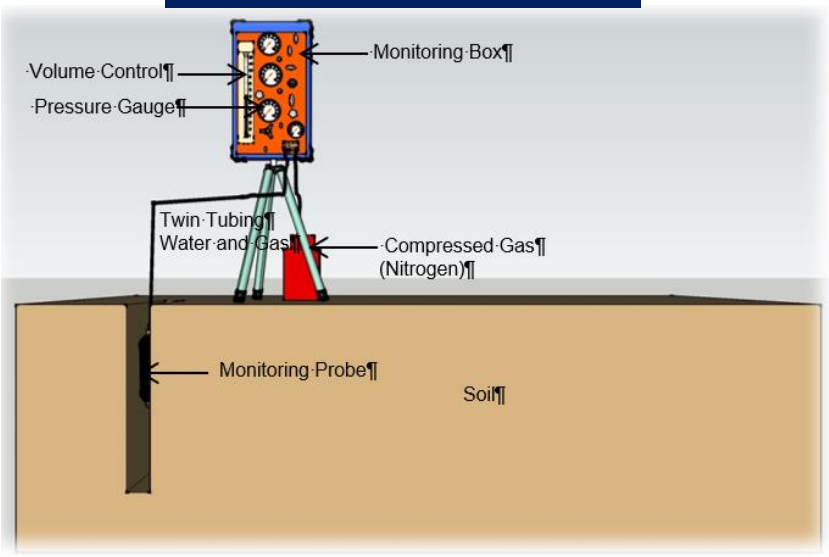
PRESSUREMETER TEST

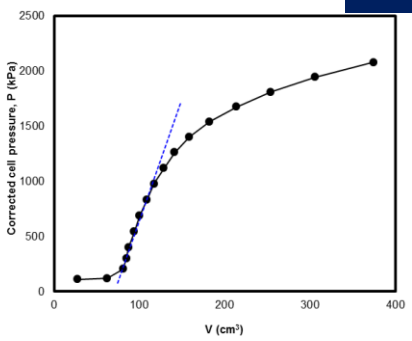
ALFA GEOTECH

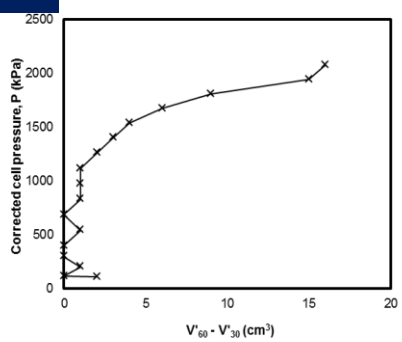
Schematic of Pressuremeter Test



Field Test

Results





Pressuremeter test is an in-situ test that is performed to obtain the in-situ stress-strain behaviour of the soil. This test provides deformation modulus, undrained shear strength for clays or weak rocks, angle of shearing resistance for sands, angle of dilation for sands and in-situ total horizontal stress.

Pressuremeter test is carried out in accordance with ASTM D4719 Procedure A “The Equal Pressure Increment Method” by using Menard-type borehole pressuremeter. Menard-type pressuremeter includes the read-out units that are placed on the ground surface and the probe that is inserted to the borehole.

Calibration of the pressuremeter is carried out before each testing as it is the vital part of testing. The pre-borehole is drilled by using the rotatory drilling and the diameter of the cavity is maintained between 1.03 ~ 1.2 times diameter of the probe to get the satisfactory test cavity. The 0 volume reading (V_0) of the uninflated probe at atmospheric pressure is accurately measured before the testing. The probe is placed at the test location in the borehole. Gas pressure which is controlled at the surface is applied by equal increment to a central measurement cell filled with water. Each increment is maintained until the expansion of the probe exceeds about 0.25 V_0. The applied pressure and the change in volume are recorded with time. After applying the maximum test load, the test is terminated by deflating the probe to its original volume and the probe is removed from borehole.

A load-deformation diagram and soil characteristics can be deduced by using the applied pressure and change in the volume of the expanding membrane.

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