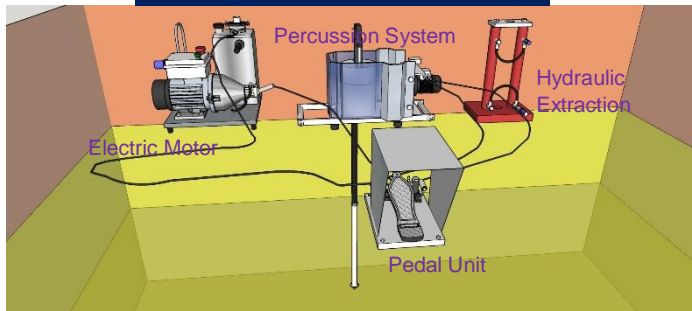


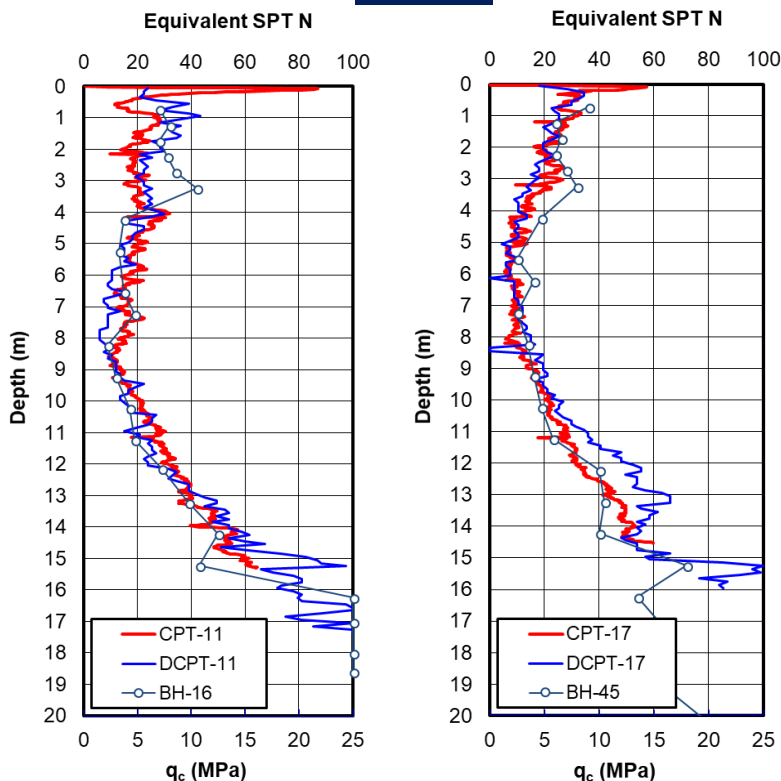
Schematic of Portable DCPT



Portable DCPT Equipment



Results



Portable dynamic cone equipment is used to determine the in-situ strength of undisturbed soil or compacted material which is small in size. The advantage of this equipment with other Dynamic Cone Penetration (DCP) equipment is that it can be easily used in the places that are inaccessible to normal machines further more it is motor driven unit powered by 220V electrical motor. It is carried out in accordance with ASTM D6951. The DCP equipment comprises of a 60° cone, driving rods, measuring tape or ruler and a rammer with specified weight of 30 kg with drop height of 20 cm.

The percussion system with 30kg hammer with a fall height is placed at designated location. Then all the other accessories like power unit (electrical engine), pedal command unit and hydraulic extraction unit are connected. Then, the electric motor is started and following that, the pedal command unit is executed manually. Then the cone which is fitted to the percussion system is driven into the ground by hammering action of the rammer. The penetration per blow soil is recorded for each 10 cm. After the test is completed to given depth, the rod is extracted by hydraulic extraction unit.

The equivalent SPT N obtained from DCPT results when compared with cone penetration test results and SPT N showed good consistency. The blow count from DCP can be correlated with the soil properties and the other in-situ testing such as SPT and CBR, etc to determine the required soil parameter.