

Triaxial Compression Test

Working Principle

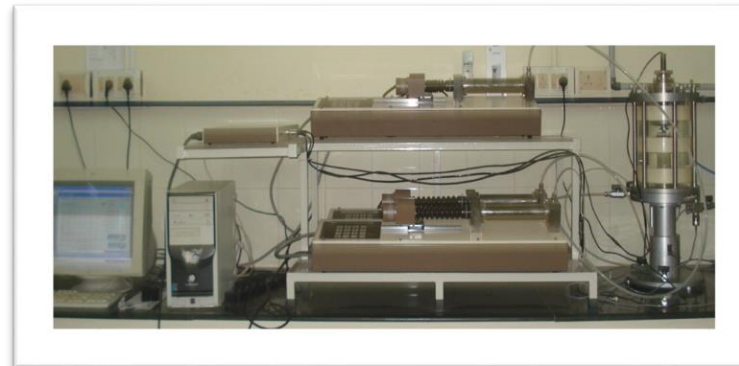
A cylindrical specimen of soil is subjected encased in a confining fluid/air pressure and then loaded axially to failure. The test is called "triaxial" because the three principal stresses are assumed to be known and are controlled.

Application

To determine the shear strength parameters of soils under controlled drainage conditions. The isotropic consolidation parameters of soils are also determined.



VJ Tech Triaxial Testing Equipment



Bishop Wesley GDS Stress Path System



Resilient Modulus Test

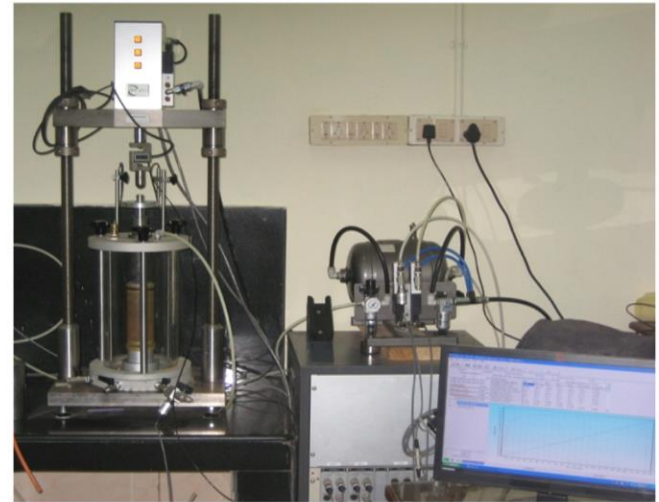
Working Principle

A cylindrical specimen is subjected to haversine loading of 0.1 s and rest period of 0.9 s for different stress states.

Application

To characterize pavement construction materials including surface, base, and sub-base materials under different stress states that simulate the conditions in a pavement subjected to moving wheel loads

Better you talk about Cyclic Triaxial– Resilient Modulus is a part of it.



Resilient Modulus test



Flexible Wall Permeability Test

Working Principle

To measure the quantity of water that flows under a given hydraulic gradient through a soil sample of known length and cross-sectional area in a given time.

Application

To determine the hydraulic conductivity of soils under different stress conditions.



Flexible Wall Permeability Test

1-Dimensional Consolidation Test

Working Principle

The decrease in soil volume by the squeezing out of the pore water on account of gradual dissipation of excess hydrostatic pressure induced by an imposed total stress.

Application

To determine the consolidation parameters that controls magnitude and time-rate of consolidation.
The permeability and the swelling behavior of soils can also be determined.



One-Dimensional Consolidation Test

CRS Consolidation Test

Working Principle

The load is applied through a controlled rate of strain (CRS).

Application

To determine the consolidation parameters that controls magnitude and time-rate of consolidation.



CRS Consolidation Test