AGH Research Offer

Triaxial machine

Technical description:

The apparatus is equipped with: three advanced triaxial cells (Tri-Cell Plus), an apparatus for automatic measurement of sample volume changes and a module for testing effective stress. The device allows the user to control the triaxial effective stress tests manually or automatically.

Trade name: Controls triaxial load machine

More details: /equipment/aparat-trojosiowy/

Access type: External

Type of accreditation / certificate: Not applicable

Contact person: Rembiś Marek

Contact person url: https://skos.agh.edu.pl/osoba/marek-rembis-2798.html

Responsible body: Department of Hydrogeology and Engineering Geology

Group / laboratory / team: Laboratory of Geotechnical and Geomechanical Research

Last update date: May 27, 2023, 3:21 p.m.

Year of commissioning: 2014

IDUB research areas:

(PRA 4) Technical solutions: from fundamental research, through modelling and design, to prototypes. The application of mathematical, information technology, and electronics tools to macro-, micro-, and nanoscale problems

Research capabilities:

The apparatus allows to determine soil strength parameters (internal friction angle and cohesion). The test procedures are in accordance with PN-EN ISO 17892-8:2018-05 and PN-EN ISO 17892-9:2018-05. The obtained parameters are used to determine the bearing capacity of the soil under the foundations of buildings, to analyze the stability of slopes, to design excavations, embankments, landfills, etc. The device also allows to determine the filtration coefficient.

Measurement capabilities:

The apparatus allows determination of mechanical properties of soil in consolidated drained (CD), consolidated undrained (CU) and unconsolidated undrained (UU) conditions under a load of up to 50 kN.

Conditions for providing infrastructure:

The device is only available in the laboratory. Only employees of the Department of Hydrogeology and Engineering Geology of the AGH University of Science and Technology are authorized to provide service. Laboratory works for external entities are carried out on the basis of a formal order (form available at: http://home.agh.edu.pl/~labgg/dokumenty/) after registration at the Administrative Office of the WGGIOŚ. The implementation of the research requires the consent of the Head of LBGiG.