

Triaxial Test System

CAPABILITY SHEET · SOIL FEELS THE STRESS THE WATER LEAVES · PORE PRESSURE MEASURED AT THE SPECIMEN

THE ONE IDEA

PRINCIPLE	Soil feels the stress the water leaves.
WHY IT MATTERS	The water in the pores carries part of the total stress, so the system controls the stress on the specimen, measures the pore pressure inside it and proves the specimen is saturated before the test.

THE SYSTEM

FRAME & CELL	A rigid loading frame with an axial actuator and a load cell, and a triaxial cell that applies cell pressure all round the specimen.
PRESSURE CONTROL	A cell pressure controller and a back pressure and volume controller, so that the volume that moves is the volume change of the specimen.
TRANSDUCERS	A pore pressure transducer at the specimen base with no air in the line, and a displacement transducer that reads the specimen and not the frame.
SOFTWARE & RECORD	Software that runs the saturation, consolidation, shearing and cyclic stages and keeps a record of every test, saturation check included.

THE METHOD

ORDER	Specify, frame, control, build, test and prove. Reading the pore pressure at the specimen and proving the saturation check works are what a quick order skips.
LIMITS	Pressures, rates and tolerances come from the method the customer names and from the soil, and are not printed here.

CONFIGURATIONS

STATIC TRIAXIAL SYSTEM	A frame, a cell and pressure controllers for saturation, consolidation and shearing in drained and undrained tests.
COMBINED STATIC AND CYCLIC	The same cell and controllers with an actuator and a control loop fast enough for cyclic loading.
CONTROLLER SET	Cell pressure and back pressure controllers, transducers and software for a customer's own frame.

STANDARDS & SCOPE

STANDARDS	Public methods: ASTM D2850, D4767, D7181 and D5311 for unconsolidated undrained, consolidated undrained, consolidated drained and cyclic triaxial tests.
SCOPE BOUNDARY	It is the triaxial test system: not a servo-hydraulic fatigue test system, not a deep ocean pressure simulator and not a pressure calibration bench.
STATUS	Neometrix has quoted against successive triaxial test system requirements, and no delivered triaxial test system is claimed.

DEFENCE PROGRAMMES DESK

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