

# CASE STUDY: UPGRADE OPTIONS FOR EXISTING TRIAXIAL SYSTEM

## MANUAL CONTROL AND AUTOMATED LOGGING TO A FULLY AUTOMATED TESTING SYSTEM

A common setup of a basic triaxial system found in a laboratory has manual control and automated data logging. Data logging is performed using a logger which accepts an analogue voltage from transducers such as load cells, displacement transducers and pressure transducers.

Control is limited to constant rate of strain only, and is initiated by the user setting the speed and direction. No automatic safety stops are in operation, and as such there is a reliance on the operator to stop the system either at the end of a test stage or for safety reasons.

### UPGRADE TO AUTOMATED LOGGING AND CONTROL

Upgrade your existing system to a GDS Triaxial Automated System (GDSTAS) with the addition of the following components:-

- 2 x GDS pressure/volume controllers for application of cell and back pressure and measurement of back volume.
- GDSLAB control and data acquisition software and a PC.

Assuming the existing load frame and the data logger are compatible with GDSLAB Software (which most load frames and many loggers are), then you can enjoy the benefits of automated control and logging:-

### FULLY AUTOMATED CONTROL AND DATA LOGGING

- Tests can be started and stopped automatically, either on a particular user defined value (max strain or max deviator stress for example), or for safety reasons (load limits violated).
- Data can be obtained at user defined intervals.
- Test stages can be pre-programmed such that multi stage tests can continue 24 hours a day.

### TEST TYPES

- Tests can be performed beyond basic UU, CU and CD tests. Complex stress paths, anisotropic loading and even slow cyclic tests can now be performed.

