

# Geotechnical Testing for Offshore Engineering

## Capabilities of GeoTesting Express' Offshore Engineering Testing

GeoTesting Express, Inc. (GTX), provides state-of-the-art advanced and dynamic soil testing services for offshore applications.

Our advanced and dynamic soil-testing laboratory is equipped with some of the best automated equipment available in the industry.

It works around the clock, seven days a week to provide fast turnover of high quality results.

GTX's advanced and dynamic soil testing staff and equipment can help determine: shear strength, stress path, strains, damping, liquefaction characteristics and post-cyclic shear strength for a wide variety of offshore problems including foundation design, slope stability, movement from cyclic loading, dynamic response oil damping, liquefaction and shear strength associated with gravity structures, pipelines, suction caissons, anchor holdings, pile capacity, windfarms, and other offshore developments.

Our advanced and dynamic soil testing capabilities include:

- Triaxial shear (undrained, consolidated undrained and consolidated drained)
- $K_0$  triaxial consolidation with shear
- Stress path triaxial along any stress path
- Cyclic triaxial (drained and undrained)
- Multi-axial cyclic triaxial (drained and undrained)
- Direct shear
- Direct simple shear
- Cyclic direct simple shear
- Incremental consolidation
- $K_0$  consolidation
- Constant rate-of-strain consolidation
- Resonant column/ torsional shear
- X-ray of undisturbed samples to identify anomalies and disturbance

The modular design of our automated equipment allows us to reconfigure our test stations to meet the day-to-day scheduling demands of offshore projects. Our staff has offshore experience in the North Sea, Mediterranean Sea, Sea of Japan, Atlantic Coast, Pacific Coast, Gulf of Mexico, and the Orinoco Basin.

We can provide you with appropriate shipping containers and procedures to safely transport undisturbed sea floor samples from anywhere in the world to our Massachusetts facilities. Final test results can be provided electronically to help meet the demanding schedules of offshore

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