



EXPRESS

Sonatrach Loading Buoys—Algeria

Project Description

Sonatrach, the national oil company of Algeria, planned for new development of offshore buoys and associated facilities at the Arzew, Bejaia and Skikda locations along the North African country's Mediterranean coast. A comprehensive geotechnical study was carried out in order to establish characteristics over a sufficient depth interval and area of coverage to enable the design of the appropriate anchor points. A total of twenty-two borehole locations were investigated from June to July of 2003.

GeoTesting Express' Role

GeoTesting Express, Inc. (GTX) worked directly for OPE Offshore International Ltd. (OPE), who was awarded the offshore installation contract. Since GTX maintains a license with the United States Department of Agriculture, we are able to accept shipments of soil from outside the country. As a result, samples were allowed to enter the U.S. without delay. GTX performed a suite of dynamic laboratory tests (totaling over

\$22,000) on eight undisturbed and re-molded soil samples from the proposed sites. Dynamic testing was required to establish seismic response in the event of an earthquake. Tests performed included

- direct simple shear
- cyclic simple shear and
- resonant column.

The results of these analyses were later used to develop soil parameters required to perform linear dynamic analysis. Results of this analysis were used to develop dynamic modification factors which were applied to static pile design data.



Cyclic simple shear test specimen



Resonant column test device

Benefits to Client

GTX was able to accept these samples and begin providing test results within days of receiving instructions for testing. We are one of the only laboratories in the world capable of performing the dynamic testing required for this project. Our fast turnaround and competitive pricing saved our client thousands of dollars in delays.

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