

# GEO

# Laboratory Testing >

Offshore Wind Farms



GEO offers custom-made, high quality, advanced laboratory testing for the offshore wind energy industry



## ➤ GEOLab is **advanced laboratory testing**

GEO's geomechanics laboratory, GEOLab, offers all services related to soil and rock parameter determination. We provide the geological model, the design of a laboratory test programme, standard or advanced laboratory testing and reporting leading to the final design parameters. The laboratory stands for high quality testing and the capacity to design custom-made tests in close cooperation with the client.



## ➤ GEOLab is **experience and competence**

GEOLab's engineers and technicians are highly qualified and have extensive experience from over 30 offshore wind farm projects etc. Our laboratory equipment is state-of-the-art and with a capacity that enables us to carry out test series within an optimised time schedule. We design the test programme with the client's need in focus. Test equipment can be modified in our in-house workshop to meet special requirements. GEOLab has experience with challenging soils/rock formations, such as soft soils, high plasticity clay, very stiff clay till, limestone and shale formations.



## ➤ GEO's **HSE**

Safety is our main priority along with the protection of the environment. GEO has implemented a safety management system covering Method Statements and corresponding Risk Assessments for all man/machine interface work processes. Even though GEO's activities have a negligible impact on the environment, environmental management is an integrated part of all activities. GEO is working on implementing a certified management system to comply with ISO 9001, ISO 14001 and OHSAS 18001.

## ➤ GEOLab is **your main laboratory**



Larger and more complex test series often require the involvement of several test facilities. GEOLab can act as liaison to other laboratories, providing tighter project management, a single point of communication, overall quality assurance and a single, comprehensive parameter report.

In 2009-2011 GEOLab has been in charge of the initial soil and rock mechanics testing for the Fehmarn-belt fixed link. The test programme consisted of more than 600 advanced laboratory tests on high plasticity clay, clay till and limestone.

## ➤ GEOLab is **cooperation and creativity**

When dealing with larger projects, dedicated and multi-disciplinary project teams are established. This provides the client with a group of focused employees, who are able to give a quick response to any question or request.



## ➤ GEO is **all disciplines in-house**

Founded in 1943, GEO is a Danish engineering consultancy and contractor offering services in the fields of soil and water. We are all-in-one, as we cover all aspects of investigation, including surveying and site investigations, advanced laboratory work, engineering and consulting. GEO has participated in several of Northern Europe's largest projects: The Fehmarn-belt and Oresund fixed links, Copenhagen and Malmo metros, as well as numerous offshore wind farms and offshore oil and gas installations.



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## » GEOLab is

- » Standard and custom-made laboratory testing
- » Consultancy services related to test design and interpretation
- » Improved project management, e.g. commissioning of testing at other laboratories
- » Multidisciplinary approach
- » Cost efficiency due to optimized time schedule