CUSTOMER SPOTLIGHT: : NORWEGIAN GEOTECHNICAL INSTITUTE (NGI)

USERS: NORWEGIAN GEOTECHNICAL INSTITUTE (NGI) LABORATORY IN OSLO

The Norwegian Geotechnical Institute (NGI) is Norway's leading geotechnical specialist community. We leave no stone unturned when we research and solve projects for private and public clients both at home and abroad.

NGI's laboratory in Oslo including associated workshop and model testing facility measures a total of 2,000 square metres. The laboratory is one of the cornerstones of the NGI's operations and represents the basis for many of NGI's areas of expertise.

NGI has laboratories for soil mechanics, geotechnical engineering, rock mechanics, geo-environmental engineering, instrumentation and model testing. NGI's Oslo laboratory has been credited by Norwegian Accreditation in accordance with ISO/IEC 17025.

Website Link:
www.ngi.no

NGI GEOTECHNICAL LABORATORY

The NGI laboratory in Oslo is equipped with a wide range of advanced testing facilities, including static and cyclic CAU/CAD Triaxial, static and cyclic Direct Simple Shear, Constant Rate of Strain Oedometer, Resonant Column, Bender Elements and Ring Shear. Testing can also be performed at a wide range of temperatures, from in situ temperatures to above 100°C.

Since the start of laboratory testing at NGI in the 1950's, the quality of work has given NGI's laboratory international acclaim. The laboratory has highly skilled personnel with extensive testing experience. Several of the senior staff are also involved in international standardisation work. The combination of quality equipment and a high level of expertise a provides a unique basis for developing new types of experiments, equipment and testing procedures for soil and rock.

The Schmertmann Research Laboratory (SRL) at NGI opened in 2012. This is a geotechnical research laboratory with advanced testing equipment for investigating the fundamental behaviour of soil. The SRL attracts researchers and students from all over the world.

Fig.1 GDS' Electromechanical Direct Simple Shear apparatus in NGI laboratory in Oslo.

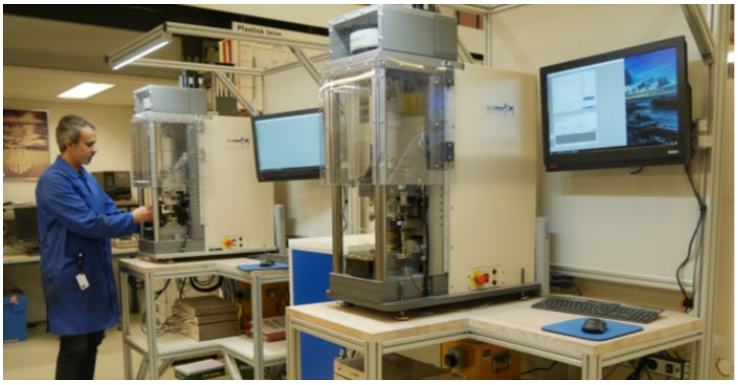
NGI AND GDS

The NGI laboratory in Oslo utilises a number of GDS products including:

- Cyclic/Dynamic Direct Simple Shear EMDCSS
- Dynamic Triaxial DYNTTS
- Pressure Volume & Pneumatic Controllers
- Force Actuators
- Load Frames
- Virtual Infinite Stiffness Load Frame VIS500 for rock testing
- LVDT Local Strain Transducers
- Bender Element System

The GDS equipment has been extremely valuable for providing monotonic and cyclic laboratory test results on which the geotechnical design of onshore foundations and offshore structures, for instance the foundations on which platforms and windfarms, are based. The equipment has also been used for laboratory testing research, including studies of fundamental soil behaviour and evaluation of laboratory testing techniques.

NGI and GDS have a close working relationship in order to evaluate and provide high quality testing equipment. An example is one of the GDS EMDCSS devices NGI uses. GDS modified the equipment and software to include an additional vertical LVDT between the test specimen end platens, according to NGI specifications. With this modification the device can perform more accurate active height control constant volume Direct Simple Shear tests. The LVDT upgrade is now offered on all EMDCSS' as an option.



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