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Safety Instructions in the AAU Geotechnical Laboratory

(Large Yellow Box)

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DEPARTMENT OF CIVIL ENGINEERING
AALBORG UNIVERSITY

Safety Instructions in the AAU Geotechnical Laboratory (Large Yellow box)

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DCE Technical Report No. 197

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by

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October 2015

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Laboratory practise

The Laboratory practise is prepared according to information provided in <http://www.en.ses.aau.dk/Study+Boards/Civil+Engineering/Laboratory+practice> where the latest information about the safety in the laboratory can be found.

Laboratory building L (Sohngaardsholmsvej 57)

The L building is open from 7:00 – 16:00, on Monday to Friday. Outside these hours, you must use the AAU student's card. Building supervisors (*Da. betjente*) can activate the card to work in the L building. They are available in Sofiendalsvej 11 several hours every week. More information can be found in http://www.en.aaucard.aau.dk/students/access_card/

Working hours of the Laboratory staff:

Mondays-Thursdays, 8:00-16:00,

Fridays, 8:00-13:00.

Access to various test equipment is normally locked outside of the Laboratory staff working hours. If needed, a key can be borrowed.

General rules in the laboratory

Eye rinsing fluid is placed by the sinks in the labs, and an emergency shower is available in the foundation lab. Furthermore, at the entrance of the foundation lab, there is a first aid kit, defibrillator, stretcher and a fire hose. Be aware of the location of the first aid kits when you are in the laboratory.

General safety rules:

- You should always use safety shoes when working in the laboratory.
- Always read the related specifications and manuals before using the equipment.
- Ask laboratory staff for information if you are in doubts.
- Always ask for the necessary instructions regarding the use of equipment and tools.
- Clean and return a tool after borrowing it.
- Clean after yourself.
- If a tool/equipment breaks or error message appears on it, contact the laboratory staff.
- Consider others working in the laboratory.
- It is prohibited to eat or drink in the laboratory.

Contact persons

The full list of the Laboratory staff can be found by the entrance to the L building.

Head of Laboratories, Benjaminn N. Nielsen, tel. 9940 8459, bnn@civil.aau.dk.

Laboratory key, Kurt S. Sørensen, tel. 2369 4014, kss@civil.aau.dk.

Safety equipment and instructions, Anette N. Pedersen, tel. 2162 4472, anp@civil.aau.dk.

Testing equipment, mechanical problems, Kim Borup, tel. 2112 4842, kb@civil.aau.dk.

CPT equipment, Per Knudsen, tel. 2369 4824, pk@civil.aau.dk.

Electrical problems, Henrik Koch, tel. 9940 2921, hk@civil.aau.dk.

Testing procedure, Evelina Vaitkunaite, ev@civil.aau.dk, and Kristina Thomassen, kt@civil.aau.dk.

Safety instructions for the Test Set-up

The following information is provided particularly for the test set-up “*cos(Kristina)*”. However, it is similar to other foundation testing rigs in the AAU Geotechnical Laboratory.

Safety equipment

Equipment	Action
Safety shoes	To wear all the time.
Helmet	To wear when working directly with the testing rig, sand box and operating the crane.
Safety sling	To wear when standing on the sand box edge, fastening the hydraulic cylinders, climbing on the top of the testing rig.
Earmuffs/Earplugs	To wear when vibrating
Vibration gloves	To wear when vibrating
Gloves	Recommended to wear as protection against splinters or the like
Knee protections	Recommended to wear when vibrating

Safety rules during the testing procedure

Procedure	Equipment required / recommended	Comment
1. Loosening the sand	Safety shoes / Gloves.	
2. Vibrating	Safety shoes, vibration gloves, helmet, earmuffs or earplugs / Knee protections, safety sling.	1h of vibration is followed by 1h of other type work.
3. CPT testing	Safety shoes, helmet / Gloves, safety slings.	
4. Fastening hydraulic cylinders	Safety shoes, helmet, safety slings / Gloves.	
5. Operating the crane	Safety shoes, helmet / Gloves.	
6. Working with the MOOG system	-	Body parts, such as hands and fingers, can <u>never</u> be under the MOOG cylinder when the

7. Lifting equipment	heavy -	<p>pressure is “HIGH”.</p> <p>If the crane cannot be used, ask some of the laboratory staff for help with lifting, holding etc.</p>
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Consequences for the health

Testing procedure requires precaution at all times. Continuous physical and mental work results in fatigue. Therefore, it is important to take breaks and keep hydrated.

The following table describes injuries which can be caused if the previously described safety rules are not kept.

Equipment	Consequence if not used
Safety shoes	Feet or toe punctures, crushing, sprains, and lacerations. More information on http://www.ccohs.ca/oshanswers/prevention/ppe/foot_com.html
Helmet	Skull injury, focal brain injury and diffuse brain tissue injury. More information on http://www.ilo.org/oshenc/part-ii/first-aid-a-emergency-medical-services/item/119-traumatic-head-injuries?tmpl=component&print=1
Safety sling	Contusions, bruises, bone fractions, head traumas. More information on http://www.ccohs.ca/oshanswers/prevention/ppe/belts.html
Earmuffs/Earplugs	Damage to sensitive structures in the inner ear, noise-induced hearing loss. More information on http://www.ccohs.ca/oshanswers/prevention/ppe/ear_prot.html
Vibration gloves	Painful and disabling disorders of the blood vessels, nerves and joints, hand-arm vibration syndrome (HAVS), carpal tunnel syndrome. More information on http://www.hse.gov.uk/vibration/
Gloves	Splinters, infections.
Knee protections	Ligament sprains, muscle and tendon injuries.

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