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

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by

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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

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

Safety rules during the testing procedure

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

- pressure is “HIGH”.
- If the crane cannot be used, ask some of the laboratory staff for help with lifting, holding etc.

**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.

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Consequence if not used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibration gloves</td>
<td>Painful and disabling disorders of the blood vessels, nerves and joints, hand-arm vibration syndrome (HAVS), carpal tunnel syndrome. More information on <a href="http://www.hse.gov.uk/vibration/">http://www.hse.gov.uk/vibration/</a></td>
</tr>
<tr>
<td>Gloves</td>
<td>Splinters, infections.</td>
</tr>
<tr>
<td>Knee protections</td>
<td>Ligament sprains, muscle and tendon injuries.</td>
</tr>
</tbody>
</table>
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