

# ESTONIAN MARITIME ACADEMY'S DIESEL POWERPLANTS LAB (MA2-001) RULES FOR INTERNAL ORDER AND OCCUPATIONAL SAFETY

- [Estonian Maritime Academy](#)

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Managed by: the lecturer responsible for the laboratories and workshops of the Centre of Maritime Education and Training of the Estonian Maritime Academy

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- [V5-1/ 11 Full text](#)
- [Form V5-1/0 Review Sheet of the Internal Work Procedure and Occupational Safety Rules](#)

## 1. General safety requirements

1.1. All individuals must undergo occupational safety instruction before commencing work in the Marine Diesel Powerplants Lab. A person who has completed occupational safety instruction confirms, by signature, that he/she has read the regulations and the requirements set out in it and undertakes to comply with them. ([Form V5-1/0](#)).

1.2. Occupational safety instruction shall be conducted in accordance with the Internal Work Procedure and Occupational Safety Rules of the Marine Diesel Powerplants Lab, the requirements of which must be adhered to by all the persons in the lab.

1.3. During the occupational safety instruction, the persons commencing work in the lab will be informed about the Internal Work Procedure and Occupational Safety Rules, the risk factors in the work environment and the use of personal protective equipment, ergonomically correct working positions and techniques,

laboratory work procedures, fire and electrical safety requirements, the locations of first aid equipment and fire extinguishing equipment, the safety signs used at the workplace and the locations of the emergency exits and routes.

1.4. Occupational safety instruction is conducted by a supervisor/lecturer.

1.5. The lecturer responsible for the laboratories and workshops of the Centre of Maritime Education and Training is responsible for the maintenance of the equipment of the Marine Diesel Powerplants Lab.

1.6. An access card is required to enter the lab; students are allowed to enter only with the permission of the supervisor/lecturer.

1.7. Users of the lab are required to promptly inform the supervisor/lecturer and other lab users of any detected deficiencies or equipment malfunctions. Working with malfunctioning equipment is prohibited; in the event of a hazardous situation, work must be halted immediately.

1.8. Users of the lab are not permitted to operate independently any equipment without prior safety instruction and approval to commence work granted by the supervisor/lecturer . If you have any doubts or questions, please contact the supervisor/ lecturer.

1.9. If you notice another lab user engaging in improper or prohibited behaviour, you should inform him/her thereof and, if necessary, also notify the supervisor/lecturer thereof .

1.10. It must be safe to work in the lab, it is recommended that you move around in the lab only when necessary and without haste, so as not to disturb others. Move with caution to avoid slipping or falling, as well as to prevent injuries and damage to lab equipment. Engaging in activities that interfere with studies in the lab is prohibited.

1.11. The working environment must be organised to ensure safe and ergonomic working conditions. Remove unnecessary and disturbing objects from the work area.

1.12. In the event of failure to comply with the requirements set out in the Internal Work Procedure and Occupational Safety Rules, the lab user shall be immediately removed from the work being performed. In the event of repeated non-compliance, the lab user shall be removed from all works.

1.13. Any material damage to the university resulting from the intentional violation or negligence in the fulfilment of the requirements set out in the Internal Work Procedure and Occupational Safety Rules shall be compensated in full by the person who caused the damage.

1.14. The supervisor of the work/lecturer shall be informed immediately of any accident/injury or fire occurring during laboratory work. Appropriate measures must be taken depending on the accident.

1.15. In case of an accident involving a victim, the victim shall be removed from the danger zone, and if necessary, first aid providers or an ambulance (phone number 112) must be called, and it must be ensured that first aid is provided to the victim.

1.16. In the event of a serious accident, the inviolability of the workplace and equipment shall be ensured until the arrival of the chief working environment specialist, the representative of the Labour Inspectorate or the police, and until obtaining permission from them to resume work.

1.17. If it is not possible to ensure inviolability of the workplace and equipment, their condition at the time of the accident must be recorded.

1.18. In case of a serious and imminent risk of an accident, actions shall be taken by applying one's knowledge and available technical means to prevent potential consequences, even if it is not possible to immediately contact the supervisor/lecturer.

1.19. In case of a serious or unavoidable risk of an accident, the persons working in the lab must leave the workplace quickly and safely; a person who leaves without permission must not be punished or placed at any disadvantage.

1.20. In case of fire, safety of people and their quick evacuation or rescue from the danger zone must be ensured.

1.20.1. A person who discovers fire is obliged to immediately call the emergency number 112 and provide the following information to the rescue centre:

1.20.1.1. the exact address where the fire is located, details on what is burning, and the person reporting the fire;

1.20.1.2. answers to the questions asked by the rescue official;

1.20.1.3. the person must not end the call until permission to do so

is granted.

1.21. As far as possible, begin extinguishing the fire using basic fire extinguishing equipment and close the doors and windows to prevent the spread of fire.

1.22. When the rescue team arrives at the scene, the person who discovered the fire or the representative of the possessor of the site shall inform the head of the rescue team of the following:

1.22.1. the source and extent of the fire;

1.22.2. the potential hazard to people;

1.22.3. other potential hazards arising from the fire (explosions, hazardous chemicals, electrical equipment, etc.).

## **2. Safety requirements before commencing work in the lab**

2.1. Storing unnecessary objects, handling open flames, storing and consuming food and beverages and smoking in the lab is prohibited.

2.2. Before commencing any task, a student must acquaint himself/herself with the content of the task and read the user manual of the concrete device, paying particular attention to occupational safety requirements.

2.3. A student must make sure that the device is in good condition (the existence and secure fastening of protective covers for rotating and moving parts, as well as the existence of protective covers for contactors and starters, etc.).

2.4. Prepare the workplace, remove unnecessary and extraneous objects to prevent tripping or falling.

2.5. Select the tools and measuring instruments necessary to perform the task and check their condition.

## **3. Safety requirements while working in the lab**

3.1. A student must wear special work clothing, as well as a safety helmet and, if necessary, headphones, safety goggles and work

gloves.

3.2. Before starting a mechanism, you must prepare it and present it to the task supervisor/lecturer. A mechanism must not be started without having obtained permission from the supervisor/lecturer.

3.3. The supervisor/lecturer activates the power supply to the electrically driven mechanisms.

3.4. All the operations related to starting, operating and stopping the engines and mechanisms must be carried out in adherence to the instructions provided by the supervisor/lecturer and the user manual of the device.

3.5. In case of any abnormalities, malfunctions, or suspicions thereof during mechanism operation (e.g., abnormal noise, shocks, vibrations, leaks in pipelines, temperatures, or pressures exceeding permissible limits), stop the mechanism and notify the supervisor/lecturer immediately.

3.6. Students are not allowed to independently perform lifting and hoisting operations using a crane.

3.7. Touching the moving parts of the working mechanisms is prohibited. To gauge the temperature of warm components (such as crankcase hatches of a running engine, cooling water pipes, reducer housings, etc.), cautiously use the back of the hand for touching, not the palm. To prevent burn injuries, touching the non-insulated parts of hot components of working mechanisms (such as engines and exhaust gas pipes of the boiler unit) is prohibited.

3.8. Tightening of pipe connections and replacing valve seals under pressure is prohibited.

3.9. Entry into the service room behind the main distribution board and unauthorized manipulation of the switches is prohibited.

3.10. When working in poorly lit areas, you can use of up to 24 V portable lamps or battery operated lamps.

## **4. Safety requirements after completing work in the lab**

4.1. Notify the supervisor/lecturer about the completion of the task and present the work results in accordance with the specific task requirements.

4.2. Clean and organise the workplace.

4.3. Return the tools and equipment received to the supervisor/lecturer.

## **5. Electrical safety**

5.1. Electrical wires can only be connected when the power supply has been switched off.

5.2. Before using an electrical device, make sure that the sockets, cables and plugs of the electrical devices are undamaged and that the device is suitable for the electrical supply with which it is going to be used

5.3. Do not touch grounded metal objects with the other hand when turning an electrical device on or off.

5.4. If you detect a burning smell, see sparks, or notice unexpected heating of a device or any of its parts when using an electrical device, stop the work immediately, disconnect the device from the mains and inform the supervisor of the laboratory work.

5.5. A burning electrical device must be disconnected from the power supply at the electrical panel without touching the device.

5.6. Burning electrical equipment must not be extinguished with water. Use a dry powder or CO<sub>2</sub> fire extinguisher to extinguish the fire.

5.7. If a device functions differently than usual upon operation, it may be a sign of technical malfunction of the device. In such cases, switch off the device or unplug the cord, and immediately notify the supervisor/lecturer.