DOI 10.36074/logos-05.02.2021.v2.39

WORK OF THE TEACHER DURING TRAINING OF GAS AND SMOKE PROTECTORS WITH THE HELP OF THE MAZE EXERCISE MACHINE

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The "Maze" exercise machine is intended for trainings and working off of exercises on orientation and movement of gas and smoke protectors in the closed smoky space under the influence of thermal radiation. The maze consists of the following stages: a narrow manhole; hatches; ladder; movable horizontal pipe; vertical pipe. The control over the movement of the link is carried out by means of a system of step-by-step control and video displayed on the control panel.

Preparing for training. Exercise gas masks are allowed to train in gas masks after the initial training, who have passed the tests and are fit for health reasons. Training of gas and smoke detectors should be carried out under the supervision of a medical professional.

The duration of each training session should be at least two hours. The time allotted for classes is recommended to be distributed as follows: task statement, instruction – 5 minutes; performing warm-ups, exercises and standards – 50–60 minutes, of which to overcome the simulator "Maze" – 40–50 minutes; exclusion from gas masks and rest – 10 minutes; lesson analysis – 10 minutes; maintenance of insulating gas masks – 25 minutes. Training in the heat chamber is aimed at forming a psychological readiness for action to extinguish fires. They must ensure the development of professional skills by gas and smoke detectors, the application of knowledge and skills in extreme situations that are simulated.

The simulated extreme situations contain elements of risk of danger in the extreme complexity, long maximum loadings, allowing to demand at each training of pressure of physical forces, mental abilities and will.

It is recommended to distribute the time allotted for practicing exercises in the heat chamber as follows: exercises in the fresh air (warm–up) – 7–10 minutes; exercises in the simulator "Maze" – 25–30 minutes.

Training begins with a warm-up in the fresh air in special clothes without gas masks. Then gas and smoke protectors are included in gas masks and continue training in the Maze simulator. After performing the exercises, the smoke detectors rest in the antechamber without gas masks until the pulse rate is set at 100 beats per minute. If within 8–10 minutes the pulse has not recovered to the specified frequency, smoke detectors are not allowed to further training.

The head of classes creates an environment in the simulator that should be unknown to the trainees. Changes in the situation are achieved by changing the order of the modules, interference, the sequence of sound, light, smoke and heat effects.

The order of the maze. After inclusion in the devices, the link, on the platform enters the second level of the maze, falls into a narrow manhole, which forms the system of the maze of the second level. Movement in a narrow hall is done on a squat or on your knees, the direction of movement of the link should be illuminated by a

group lantern. After finding the hatch, the link through it enters the third level of the maze. The system of narrow manholes of the third level leads the link to the hatch with a ladder to the first floor, where after overcoming the movable pipe the link falls outside.

During the exercises in the simulator, the commander of the fire and rescue service unit constantly transfers the situation and his actions to the security post. Based on the data received from the unit commander, the lesson leader, if necessary, adjusts the conditions of the exercises.

Reference:

[1] Chernov, S.M. & Kovalishin, V.V. (2016). Insulating devices. Maintenance and use: a textbook. Lviv, “SPOLOM”.

[2] Recommendations for the study of air masks "Dräger" in the units of fire garrisons. (2015). Kiev: MIA of Ukraine.