

Improvement of Methods for Improving the Effectiveness of Fire-Rescuers ' Mental Training

Turdiev Sardor Utkir ugli

Applicant of the Academy of the ministry of emergency situations of the Republic of Uzbekistan

***_____

Annotation: Today, in 193 countries around the world, 7-8 million fires occurevery year, resulting in the loss of 85-90 thousand people, while the volume of material damage is billions of US dollars. Based on these statistics, there is a sharp increase in the number of fires. The increase in the number of such fires has a serious impact on material damage and the environmental environment. In order to prevent fires that may occur, to ensure a quick and easy shutdown, there are still studies on increasing the effectiveness of the organization of emergency rescue work, as well as on the provision of technical means. In particular, the use of innovative methods in eliminating emergency situations, fire extinguishing is required to increase the effectiveness of fire extinguishing by improving technical means and methods. At the same time, the development of new categories of fire extinguishing technical means, further improvement of their effectiveness is required.

Keywords: Improvement, Mental Training.

Today, in countries around the world, the rapid and effective disposal of fires requires the proper selection of fire extinguishing agents and their adequacy with the accuracy of the composition of the burning product, the effectiveness of any fire extinguishing agents and the transmission in different currents through the fire extinguishing rods. At present, in the Republic, it is also required to stage–by-stage complete localization of fire extinguishing technical means and methods, to increase the efficiency, to ensure the wide introduction of new sample fire extinguishing technical means in the future in the extinguishing of fires that occurred. The practice of extinguishing fires that have occurred in the world in recent years shows that in the future, ensuring the timely and effective extinguishing of fires that can occur in various buildings and structures, in the movement of Fire–Rescue units towards the fire furnace, improving the use of supports, which are technical means of fire extinguishing, is of urgent importance.

At present, the garrisons will touch upon the current problems, taking into account the various shortcomings of the participation of the Fire-Rescue components in the Department of emergency situations in the practical training of each quarter; we can cite the following examples:

- personal content will always have to reach and return to the place of the current training session, taking into account their participation in the training session with their own combat clothing and personal protective equipment;
- in some cases, it takes an excessive amount of time to bring and re-bring participants to the planned training with the employees of the fire and Rescue Service;
- and the participants of the training, who are on duty, stay until the evening, have a negative impact on the rules of labor protection and Technical Safety;
- The involvement of special bus and fire extinguishing techniques in training is observed in the consumption of more than the norm of fuel products.

And in all Fire-Rescue parts of the Republic the training is not provided with buildings and grounds, and the choice of land, construction and permanent capital repairs are economically costly.

© 2022, IJOT | Research Parks Publishing (IDEAS Lab) www.researchparks.org | Page 1

Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY). To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/



At the same time, Fire-Rescue Garrison leads to an inefficient expenditure of excessive time, effort and fuel resources in preparation for the conduct of practical training in the corridors of mental training with its personal composition, in the heat and smoke chambers.

In the successful elimination of fires, it is of great importance that the personal composition of the Fire-Rescue Service is always ready, that they are fully technically equipped and have high professional skills, experience and mentally prepared. Fire-rescuers have a negative impact on external mental factors, such as high temperatures, the formation of a dangerous amount of decomposing smoke and toxic substances. In such cases, special attention was paid to the fact that each firefighter underwent a mental preparation to cope with all the dangerous omens that caused the strongest excitement (stress).

Further work on mental training was carried out with the help of exercises and exercises. Training with firerescuers will be brought closer to the actual combat situation, with unexpected obstacles and elements of danger included. The main condition for bringing the exercises closer to the combat position is the use of tools that can provoke a real fire situation.

In the future, in order to achieve a comprehensive and effective implementation of practical training of Fire-Rescue garrisons in the corridors of mental preparation, heat and smoke chambers, and, most importantly, in the Prevention of such shortcomings as excessive expenditure on the economic aspect, we carried out scientific research on the creation of the "fire-rescuers' car of flame exercise " and achieved positive results, , the Kamaz-53229 chassis of the AKP-30 fire-fighting elbow-lift car, which is spiritually obsolete and unused, has been reequipped (picture 1), cargo containers have been installed instead of the truck, and permission has been obtained from the relevant authorities in the modification of the car chassis.



1-picture. On the proposed Kamaz-53229 chassis is a re-equipped "flame-training car".

After the creation of this device, the excess time and costs of the units were allocated to the barn. Practical training based on the plan set out in each Fire-Rescue section of the region, the training of fire-rescuers was carried out in spiritual preparation. The containerized body of the car is divided into 2 parts, which are designed for the following. The place of management – observation, control - is the main place of work of the head of the training, it is intended to record the performance of the tasks assigned to the participants of the training, in order to monitor them and work in an environment that is not suitable for breathing, it is equipped with doors, observation holes, imitation instrument control equipment, working table for Heat-smoke camera - is intended for carrying out psycho-preparedness activities for the place of training, as well as carrying out the assembly-portable devices of the corridor and performing the functions of the heat-smoke camera in the process of training, provided with flame and smoke-generating equipment, finishing equipment (wall, barrier) for the occurrence of a fire situation (Picture 2).



INTERNATIONAL JOURNAL ON ORANGE TECHNOLOGY

https://journals.researchparks.org/index.php/IJOT e-ISSN: 2615-8140 | p-ISSN: 2615-7071 Volume: 4 Issue: 8 |August 2022



2-picture. "Performing a fire extinguisher exercise in a fire-fighting vehicle.

In this fiery exercise car, a training exercise consisting of several fire-rescue parts in one direction and a set of devices - a mental training corridor and a hot-smoke chamber, which are embodied in the playgrounds directly in the territory of the part, will be able to restore the polygon and conduct practical training on the mental preparation of individual content in one In addition, it creates conditions for training the cooperation of the members of the Department. Consumption of energy resources sharply decreases, and the possibility of productive use of the suspended technique arises. The drawbacks such as excessive cost and time spent were taken. The main thing is that all the tasks set out in the training program have been fulfilled, and positive results have been achieved in terms of increasing mental training and conditioning of fire-rescue specialists (picture 3).



3-picture. The training process in the hot smoke condition

The tactical and technical classification of this vehicle complex consists of 4 special devices, all of which are made of metal with high durability. The functions of the devices are as follows:

1-device (picture 4): Two-Way movement in the form of a maze, in the entrance-exit corridor (length 12 meters, height 2 meters, width 7,2 meters, Eni 1,2 meters of corridors) there is an opportunity to perform movement exercises in an environment where the individual composition is unsuitable for breathing and the level of vision is limited. 7 containers designed for the installation of flammable liquids that form flames and fumes are installed and reflect the fire area intended for the Real situation.



4-picture. Maze-shaped two-way movement barrier.

© 2022, IJOT | Research Parks Publishing (IDEAS Lab) www.researchparks.org | Page 3

Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY).To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/



2-device (picture 5): in the middle part of the oil products bottling and pouring Pier (length 8 meters, width 0,8 meters, height 2 meters), a volume of 1 M3 with a height of 3 meters, a capacity of 0,6 m2 with a surface of the lid installed. To create flames and smoke, the E of the staircase range is provided with arcs of 0,1 meters.



5-picture. Oil products bottling-spill Pier pipeline.

3-device (picture 6): individual composition through a grid bridge installed on a concrete pool for passage of flames (length 6.5 meters, width 0,9 meters, height of the pavement supports 1 meter) fire hazard factors: exercise is performed such as increased temperature and smoke exposure. On the sides of the bridge there is a fire extinguisher dry pipeline with connection spikes, the diameter of which is 77 mm.



6-picture. A grid bridge mounted on a concrete pool to pass through the flames.

4-device (picture 7): movement of individual contents through a movable foam, connected to each other by a chain at an angle of 30-40 degrees, exercises the movement of the transition in the influence of flames and smoke. Dangerous factors of fire for individual composition: flames, high thermal effect and excitation of the bridge during flushing.



7-picture. Drive Foam connected to each other using a chain at an angle of 30-40 degrees.

In this device created, a fiery corridor training of Fire-Rescue units is conducted. Preparation of Fire-Rescue units for the execution of complex conditions and long - term work in the immediate fire furnace and territory is the main goal of training in the fiery corridors. In the process of preparing for training - mental preparation all personal components involved in the passage of the fiery corridor are explained Ways and methods of passing obstacles, compliance with the requirements of labor protection rules when extinguishing a fire in the fiery

© 2022, IJOT | Research Parks Publishing (IDEAS Lab) www.researchparks.org | Page 4

Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY). To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/



corridor must be strictly controlled. The fact that the head of the training could understand and practice the exercise in the fiery corridor positively affected the psyche of the individual.

In order to improve the efficiency of this flame training car, a training and methodological plan was developed, which were divided into three parts (preparation, main and final parts):

- the preparatory part is 30 minutes, in which the tasks and objectives of the training are explained, A certificate was issued on the rules of labor protection and a light-weight body-training exercise was conducted;
- The main part is 60 Minutes; the correct passage through the fiery corridors and barriers, the individual composition was allocated to improve the methods of operation with fire extinguishing equipment and technical weapons in conditions as close as possible to the fire situation. In the main part, the physical weight was adjusted according to the repetition of the exercises, taking into account the readiness of the individual composition, as well as the conditions for their performance;
- The final part is 30 minutes, the end of the training session is drawn up and the actions of each participant are analyzed in detail, the results are published, tasks for individual preparation are assigned. After that, the fire extinguisher technical weapons and plugs used during the training are assembled.

It was taken into account that the measures taken during training on labor protection should not turn into a gift, should not interfere with the regular improvement of the skills of personal composition, the formation of preparation for correct and bold action in dangerous situations and conditions.

Before conducting the exercises directly, the methods of passing each obstacle with the help of experienced firerescuers of the garrison should be shown in practice, after which the participants should be allowed to perform the exercises. After personally convinced that the head of the training had mastered the methods of passing obstacles of personal composition, passed the stages confidently, calmly and coldly, the spiritual preparation was ordered to prepare for the passage of the fiery corridor, from it under the influence of fire and smoke.

Before the passage of the personal composition from the fiery corridor under the influence of dangerous factors of fire (fire, smoke, high heat), the main attention was paid to the fact that the head of the training checked their correct passage through the barriers, the observance of extremely dangerous shells and safety techniques. The exercises, which were conducted under the influence of smoke in the fiery corridor, were carried out after a combat examination, in which the upper respiratory tract was completely knocked out, wearing face masks. In ensuring the control of compliance with the requirements of technical safety in the preparation of fire-rescuers in training and training complexes, the Ministry of Emergency Situations of the Republic of Uzbekistan and its system, in accordance with the order on approval of the rules for the protection of Labor, determines the system of measures aimed at creating conditions that ensure the Work on mental training of participants was carried out-in training and training, providing all-round Security, bringing the conditions in them closer to the actual state of fire, elements of tension, unforeseen risks were introduced.

Testing experimental work is carried out on fire extinguisher combat clothing, in some cases it is possible to use special clothing that gives a heat return. Before the start of the training, the leader checked the readiness and setting of each device in the fiery corridor of mental training.

The head of the training is obliged to perform the following actions before training:

- transfer to the personal composition of the departments a certificate of the order of execution of exercises in the projectile;
- setting a single alarm to inform about the risk;
- > to determine the state of health of the educators;

© 2022, IJOT | Research Parks Publishing (IDEAS Lab) www.researchparks.org | Page 5

Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY). To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/



To verify that the technological equipment in the landfill and the projectiles in the fiery corridor are in a quiet state.

In conclusion, it should be noted that in ensuring that the fire is close to the Real state, it is allowed to apply nontoxic fire-hazardous liquids, as a means of fire and smoke, to use combustible liquids such as impregnated fabrics, etc., as well as non-toxic smoke-like substances.

Literature:

- 1. A. H. Qo'ldoshev, E.E.Sabirov, S.S.Sultonov. Yong'in o'chirish taktikasi. Darslik. O'zbekiston Respublikasi IIV Yong'in xavfsizligi instituti, -T.: Cho'lpon nomidagi NMIU. 2017. -658 b.
- 2. A.H.Qo'ldoshev. Yong'in xavfsizligi asoslari. [Matn]: O'quv qo'llanma. O'zbekiston Respublikasi IIV Yong'in xavfsizligi instituti, -T.: Cho'lpon nomidagi NMIU. 2018.
- 3. Артемьев, Н.С. Глубина тушения пожара водяными струями / Н.С. Артемьев, А.В. Подгрушный // Материалы одиннадцатой научно-технической конференции "Системы безопасности" СБ-2002. М.: Академия ГПС МЧС России, 2002. С. 228–231.
- 4. Brushlinsky N.N., Ahrens M., Sokolov S.V., Wagner P. World Fire Statistics. Report №20. Center of Fire Statistics, 2015. 63 p.
- 5. Брушлинский Н.Н.Пожарные риски. Вып. 2. Динамика пожарных рисков М.: ФГУ ВНИИПО МЧС России, 2005. 82 с.