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The Essence of Humanitarian Demining

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Each of us has heard many times of such cases: a little boy found a bullet in the forest; shells from the time of the war were found; a mine was found while plowing. None of the above is a toy or a safe item. But if you are unlucky to find such a thing, then what should you do with it?

In any case, you should not try to get rid of these objects, move or touch them. The situation seems hopeless, but in fact everything is much simpler. There is a special group for humanitarian demining.

Humanitarian demining is an activity carried out outside the combat areas in cooperation with the territorial administration, leading to the elimination of the risks associated with Explosive Ordnance, including conducting a full survey of the area and objects for the presence of Explosive Ordnance, mapping, searching for and neutralizing Explosive Ordnance, preparing documentation after demining, including the transfer of cleared areas [1].

From this definition, we can conclude that everything is not as simple as it seems at first glance. Humanitarian demining is not “just removing a mine”, but a whole range of activities.

Explosive objects - unexploded ordnance (aircraft ammunition, shells, mortar and engineering mines, fuses, blasting caps and other ammunition) that were somehow prepared for use and used for their intended purpose and were supposed to explode, but did not explode [1].

Their impact can lead to an explosion and cause harm to life, health, property or the environment.

As a rule, explosive objects contain an explosive substance.

An explosive substance is a chemical substance or a mixture of such substances capable, under certain conditions, under the influence of external influences, of a rapid self-propagating chemical transformation (explosion) with the release of a large amount of heat and gaseous products.

In addition to explosive objects and substances, the environment itself can be hazardous.

An explosive atmosphere is a mixture with air under atmospheric conditions of flammable substances in the form of gas, vapor, mist, dust, fibers or flying particles, in which, after ignition, self-sustaining flame propagation occurs.

Let us clarify the term “explosiveness”. Explosiveness is the ability of a waste or waste mixture to chemically react with the release of gases at such a temperature and pressure and at such a speed that cause damage to surrounding objects [1].

The main goal of a military engineer is demining, which can be achieved in two ways: detonate the object in a controlled manner and with minimal damage, or make it explosion safe and remove it from the area.

Explosion safety - the state of the object, in which the possibility of an explosion is excluded or, in the event of its occurrence, the impact on people of the dangerous and harmful factors caused by it is prevented and the protection of material assets is ensured.

Naturally, such an activity cannot be performed with bare hands. In fact, there is a large amount of special equipment.

An armored vehicle with mine protection is designed to transport personnel of mine clearance teams, in particular through dangerous areas with a high probability of mines.

The rapid response vehicle is designed to help in emergency situations and is a transport vehicle and a kind of replacement for an ambulance, the crew consists of special personnel: a group commander, a paramedic, a driver, three or five military engineers.

The optical positioning system is designed to obtain coordinates without direct contact with the terrain, which is important in this craft.

Heavy and light personal protection kits provide protection against explosions and fragments of mines.

Mine and bomb detectors speak about their mission by their very name. Also, the demolition kit includes a large number of rather important small things (hooks, fishing lines, etc.).

All military engineers who are engaged in humanitarian demining have completed additional courses in demining and have an EOD 3 specialization level according to the International IMAS standards [2].

In the process of clearing the area from mines, the latest means of communication are used, which allow military engineers to quickly respond to various situations, make the right decisions in the process of work.

The use of radio facilities, satellite and Internet communications, mobile and fixed telephone networks in the complex ensures reliable communication between the project manager and the site managers and the enterprise management.

References:

1. Law Dictionary [Electronic resource]. – Mode of access: <http://multilang.pravo.by>. – Date of access: 07.04.2022.
2. Humanitarian demining [Electronic resource]. – Mode of access: <https://ru.uos.ua>. – Date of access: 07.04.2022.