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KEY ACTIONS TO IMPROVE SUSTAINABILITY OBJECTS OF RAILWAY TRANSPORT

Abstract: This article provides information on the disinfection of railway rolling stock in emergency situations. Indication is given for the partial deactivation of rolling stock during transport. Indication is given for degassing and disinfection during the spread of toxic substances and during the spread of bacteria.

Key words: points for preparing cars for transportation, mechanized points for comprehensive preparation of cars for transportation (MPKPV), disinfection-washing stations (DPS), disinfection-washing stations (DPP), washing and steaming stations (PPS).

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Introduction

Measures to improve the sustainability of railway facilities

Measures to ensure the sustainability of railway facilities should be, first of all, should be aimed at:

- protection of workers and employees from the devastating effects of emergency situations and military conflict;
- preparation and conduct of rescue and emergency rescue operations at the lesion sites.

This is due to the fact that ensuring the safety of human reserves and successfully eliminating the consequences of an enemy attack in the lesions by carrying out measures to ensure the stable operation of the national economy directly during emergencies and military conflicts is practically impossible.

Improving the sustainability of the objects of the national economy is one of the main tasks of civil

protection, which is solved by the joint conditions of sectoral and territorial bodies of civil protection and links of the national economy in close cooperation with local government.

The basis for increasing the sustainability of the functioning of the objects of the national economy is created by such principles as:

- lead time;
- differentiated approach;
- necessary sufficiency;
- the complexity of carrying out protection measures;
- equidistance to the damaging factors of emergency sources of all the main elements of the facility.

A number of requirements are presented to measures to increase the sustainability of the operation of facilities. The main one is the development and

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implementation of measures in advance in peacetime in the general complex of production activities and the development of facilities provided for by long-term and current national economic plans. Measures to increase sustainability are developed and carried out throughout the country, paying special attention to important objects of the national economy.

The main directions of increasing the stability of the national economy are:

- protection of working personnel and members of their families, ensuring their livelihoods;
- protection of the engineering complex;
- limitation of secondary factors of damage;
- improving the reliability of industrial and economic relations;
- improving the reliability of management;
- preparation for the restoration of disturbed production.

Protection of working personnel and members of their families, ensuring their livelihoods, includes:

- accumulation of the fund of protective structures;
- evacuation of workers, employees, members of their families from hazardous areas;
- provision with personal and medical protective equipment;
- maintaining the alert system in readiness;
- training of the population in protection methods and actions in emergency situations;
- development and equipment of a suburban area (evacuation area) and other activities.

Protection of the engineering complex involves:

- construction of important frame-type objects from reinforced concrete structures;
- placement of objects underground in mine workings;
- construction of buildings, structures of a semi-sunken type, low altitude;
- replacement of vertical structures, horizontal;
- increase in rigidity of structures;
- fencing and deboning of buildings and structures, including from secondary factors;
- installation of equipment in buildings with lightweight fireproof enclosing elements, structures;
- ensuring the stable operation of energy, water, gas, heat supply systems (backup, autonomous sources, etc.);
- creation of reserves according to established standards of equipment, its inventory materials, etc. ;
- export to the suburban area and the organization of reliable storage of raw materials, materials, spare parts, components, etc.

The limitation of secondary damage factors should include:

- development of plans for the implementation of protective measures in areas of possible flooding;
- development of plans for the elimination of industrial accidents, disasters;

- reduction of stocks of SDYaV, explosive, flammable substances, materials, organization of their storage;

- the construction of dams, bypass channels, obvalivanie structures, storage facilities, etc. ;
- construction of emergency releases, trap devices in places of storage and use of potent toxic substances;
- installation of automatic disconnecting devices, shutoff valves, gate valves, etc. ;
- carrying out a wide range of measures for production support (the availability of modern fire extinguishing means, automatic fire extinguishing lines), the estimated debit of water, prepared units, etc.

Improving the reliability of industrial and economic ties, involves:

- The maximum reduction in production relations with suppliers in emergency situations;
- the organization of the search for industrial relations in its economic region and at the facilities of neighboring republics;
- availability of sustainable backup suppliers in emergency mode;
- Development of facility support systems with a possible transfer to stand-alone autonomous sources;
- accumulation of mobile emergency supplies;
- the organization of cooperative supply with other facilities in the same industrial zone (electricity, water, gas, steam, and other types of support);
- creation of emergency reserve reserves;
- organization of protective and dispersed storage of stocks of raw materials;
- duplication and ringing of communications.

Improving the reliability of facility management provides:

- creation of a system of control points (main, spare and mobile), their equipment and acquisition;
- organization of interaction of all management bodies (facility, district, city), the coordinated use of communication and warning systems;
- Organization of a reliable communication and notification system;
- collection, synthesis and processing (analysis) of emergency data, timely organization of rescue and other urgent operations;
- remote control equipment for remote control of some production participants, units;
- production of duplicates of technical documentation and their reliable storage.

Preparation for the restoration of disrupted production includes:

- development of options for possible damage to the object and determination of the nature and scope of restoration work (during research);
- development of recommendations on the organization and methods of conducting restoration work, as well as on the restoration of industrial buildings and structures using lightweight building

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structures, materials destroyed during natural disasters;

- preparation for mass production of products and structures from lightweight, durable, fireproof materials that meet the conditions for the restoration of buildings and structures in a short time;
- training of forces and means for carrying out restoration work;
- Creation of the necessary reserves of raw materials and materials for the restoration of production and their placement in safe places;
- ensuring reliable safety of construction and technological documentation.

The plan of basic measures to improve the sustainability of the national economy is being developed in accordance with the recommendations of a higher governing body (associations, departments, ministries).

The first part of the Plan defines the activities carried out in peacetime by facilities, ministries and, if necessary, provides for activities requiring government decision.

The second part of the Plan defines the activities carried out during possible emergencies by economic entities, ministries and activities requiring government decisions.

The plan is worked out by chief specialists, leaders of research groups under the supervision of a research leader.

Measures to increase the sustainability of the facilities and production associations can be divided into:

- organizational;
- research;
- technological;
- engineering and technical.

Organizational measures include plans for the protection of production personnel in emergency situations with collective and individual protective equipment, medical means, the method of evacuation and life support (protection of food, water, material assets).

Research activities are aimed at organizing scientific research in academic research institutes on the problems of forecasting anthropogenic and natural emergencies that are characteristic of the economy and territories of the country, protecting the population and increasing the sustainability of the functioning of industries, critical facilities and the economy as a whole. The coordination of these works is carried out by the Ministry of Macroeconomics, the Ministry of Emergency Situations and the Academy of Sciences of the Republic of Uzbekistan.

Technological measures developed taking into account the specifics of the stability of the facility, requiring large capital costs and time to implement them.

Engineering measures are developed taking into account the stability assessment of the facility itself,

i.e. its engineering and technical complex and are to determine its ability to withstand secondary factors that arise in emergency situations. The engineering complex includes buildings, protective structures, utilities and energy networks, machine tools, equipment, technological communications and other structures.

BASIC METHODS OF STABILITY OF FUNCTIONING OF OBJECTS OF RAILWAY TRANSPORT

Under the object of railway transport (OZHDT) is understood a railway station (junction) with enterprises, institutions, organizations of railway transport located in its area.

The most important elements of railway transport include:

- main railway lines;
- automation, communication and signaling devices;
- turnouts;
- artificial constructions;
- power supply devices and others.

For local, sorting, cargo and other similar stations, depending on their purpose and nature of work, the important elements are:

- constructions and devices of locomotive and carriage facilities;
- sorting, cargo and other devices.

The stability of railway facilities depends on many factors, including the location of the facility relative to emergency sources, the nature and importance of the work performed, the sustainability of the engineering complex (buildings, structures, equipment, devices).

It should be noted that the stability of the operation of railway facilities is somewhat different from the stability of other objects of the national economy.

Thus, the stability of the engineering and technical complex (ITC) of a national economy is understood as the leading elements on which the production (transportation) process depends to a decisive extent, and its stability is the ability of its elements to withstand the effects of damaging factors from various sources. For example, at industrial facilities, the sustainability of the main workshops will determine the sustainability of the entire facility.

At railway transport facilities, stability is determined by those elements on which the operation of the facility for its intended purpose depends. Suppose the main element for the overtaking station is the track, and for the local station, the locomotive and carriage facilities, in the event of failure of which it loses the function of the local station, but can work as an intermediate station, provided the tracks are preserved.

Since it is impossible to ensure absolute stability of an object to all damaging factors, one of the leading damaging factors is chosen. Most often, it is a shock

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wave as the main factor of destruction. The legitimacy of this choice is justified by the fact that if a building (structure, equipment) receives complete or severe destruction, then there is no need to assess the impact of heat and other damaging factors.

Ways to improve the sustainability of railway facilities include:

- evacuation and dispersal of objects over a large territory;
- duplication and dispersal distribution of the most important objects or individual elements of the object;
- reservation of some of the most important capacities, devices of the facility in case of failure of the main capacities and devices;
- direct protection of the facility, its elements, maintenance personnel from damaging factors.

Each of the above ways to increase the stability of an object and its elements includes a large number of measures to increase stability. These activities are developed and carried out in the process of design, construction, reconstruction and operation of facilities.

In maintaining the necessary level of security of the railway transport infrastructure, the coordinated activity of departmental security groups and transport police plays a crucial role.

As additional tasks, departmental security carries out the prevention of unlawful interference in the activities of the railway transport, including providing practical assistance to prevent terrorist acts, and also participates in liquidating the consequences of emergencies in railway transport.

One of the most important tasks of the facilities is the prevention and suppression of fires in rail transport. Today, dozens of inspectors and other firefighters work on the railway network, who check wagons and containers with dangerous and flammable cargoes. Due to this, they manage to keep the situation under control, to exclude cases of large fires and fires with serious consequences.

Among the goods transported by rail, there are those that are considered dangerous. This is a cargo that, due to its inherent physicochemical properties, under certain conditions of transportation, can cause an explosion, fire, chemical infection. Such goods include transported explosive materials, light petroleum products, alcohols, etc. Cars with explosive materials must be escorted under appropriate guard.

The progress of trains containing dangerous goods includes constant dispatch control. Any changes related to the non-scheduled stop of trains with dangerous goods at intermediate stations are transferred by the train dispatcher to the security units of the service site to take measures to strengthen the protection of these goods.

Thus, the essence of enhancing the sustainability of the objects of the national economy lies in the development and early implementation of a set of organizational, scientific research, technological and engineering measures aimed at minimizing possible losses and destruction, creating conditions for rescue and other urgent work and ensuring release of established types of products according to the plans of the national economy of the country, in emergency situations and during wartime.

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