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Types of Emergency Situations on Railway Transport and Their Causes

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ABSTRACT: Rail transport, carrying out huge volumes of passenger and cargo transportation, including dangerous and especially dangerous, is one of the sectors of the national economy with an increased risk of emergency situations. The overwhelming majority of those working on the iron sheet shows a high degree of consciousness, impeccably perform their duties and try to ensure trouble-free operation of the railway system. At the same time, on a number of railways, the situation with traffic safety is deteriorating, the level of labor and technological discipline is declining, and the number of crashes and accidents is growing.

I.INTRODUCTION

Railway transport, which has a huge volume of passenger and cargo transportation, including dangerous and especially dangerous, belongs to the sectors of the national economy with an increased risk of accidents. The vast majority of railway workers are highly conscientious, perform their duties flawlessly and try to ensure trouble-free operation of the railway system. At the same time, on a number of Railways, the traffic safety situation is deteriorating, the level of labor and technological discipline is decreasing, and the number of crashes and accidents is increasing. Therefore, in the complex of measures aimed at ensuring traffic safety and mitigating the consequences of crashes and accidents on the railway transport, it is important to have prompt human intervention in further measures to eliminate the consequences of accidents. Until recently, Railways were considered the safest mode of transport.

However, the study shows that the railway ranks third after road and air transportation in terms of safety. Static data from recent years shows that the number of victims has increased as a result of passenger train accidents. Emergencies during the transportation of dangerous and especially dangerous goods by rail lead to serious damage, infection and damage to people by a significant amount of underground toxic substances. In addressing the consequences of such phenomena, in addition to providing medical assistance to the victims, comprehensive measures are needed to protect the environment.

The most common emergencies on the railway transport which lead not only to the death of passengers but, as well as others, are the following types of accidents:

- derailment of trains with people;
- derailment of trains with cargo;
- collision of trains;
- fires and explosions on the railways;

The reasons for the above emergency situations can be different but we give the main reasons, such are the following reasons::

- violations of the rules of operation and wear;
- damage to equipment and railway tracks;
- error in decision-making in the preparation of schedules railway transport;
- reasons beyond the control of the people involved in the process work on the railway;
- natural factors (prolonged heavy rains, hurricanes and squally winds, etc.);
- natural wear and tear of technical equipment;
- complication of technology;

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And also on railway transport the big role is played by the internal human factor which leads to emergency situations.:

• failure to comply with the rules of the road;
* drunk or unhealthy condition of the driver;
* presence of strangers in the driver's cabin;
* negligence of the spreading switch movement;

As well as external human factors:

* increase the number, power and speed of vehicles petty hooliganism;
* placing foreign objects on the rails;
* accidents and suicides;
* non-compliance with the rules of the road on the railway track by land transport, etc.

All accidents require management and operational intervention of the railway network, and the service life and stability of the railway system depend on this. The dispatcher must immediately make the right decision, choose a strategy and calculate the most useful tactics, not to mention the incident on the entire railway. The person responsible for the chosen security strategy in their actions faces the problem of risk. The driver urgently needs nearby stations in an emergency to eliminate the risk of further error that could lead to further accidents on the railway. (For example, if the responsible person does not specify the time of the round trip or waiting for the train after the emergency train, the following collision and a number of other railway accidents may occur.

For three years, positive results of organizational, technical and medical measures to improve safety on the railway tracks of JSC "UTY"were studied. If we analyze the accidents that occurred in 2017-2019. If for the last 2017-2019 years (as of August) there were 68 accidents, by 2018 this figure increased by 23, compared to last year (in 2017-by 20) - by 3. In 2019 (a total of 25 in 2019), 2 more accidents were added.

Information on accidents at enterprises, organizations and institutions related to labor protection of JSC “UTY " in 2017-2019 (as of August).

Table 1

years	Category of accidents			
	general	deadly	*he avy*	*no t heavy*
2017	**20**	**5**	***10***	***8***
2018	**23**	**5**	***11***	***7***
2019	**25**	**7**	***9***	***9***

But after the analysis of the occurrence of accidents on rail transport, it was revealed that one of the causes of accidents is the "human" factor information about accidents at enterprises, organizations and institutions related to labor protection remains crucial. Many crashes and accidents occurred as a result of negligent attitude of personnel to their official duties, insufficient control over the implementation of existing requirements for the operation of rolling stock, the lack of systematic work on the prevention and elimination of various technical malfunctions. Most of the incidents are due to erroneous actions of locomotive drivers. It is known that working on a locomotive requires the driver to maximize the mobilization of psychological, emotional and volitional capabilities. According to our long-term

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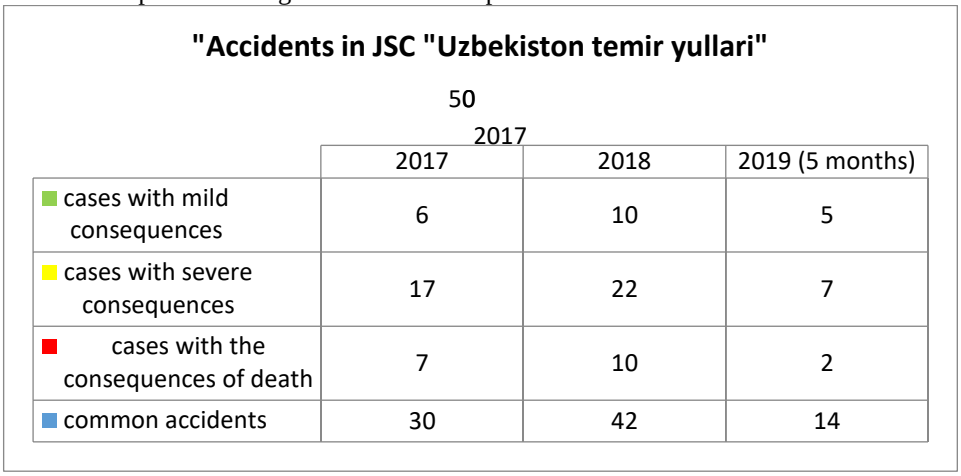
observations, consistent with the data of other researchers, the activity of the driver is characterized by a high level of tempo and emotional tension, and stresses in the work are commonplace. In such conditions, the reliability of the driver is sharply reduced, resulting in errors in management decisions. Even professionally selected and well-trained for many years, the specialist, working at the limit of their capabilities, often allows unpredictable and difficult to explain deviations from the prescribed algorithm of activity.

In this regard, it remains urgent to further increase the level of professional selection, pre-flight control and psychophysiological assessment of the state of employees of the leading professions of the industry. This should form the basis of preventive work to prevent emergencies in rail transport.



	2017	2018	2019 (5 months)
cases with mild consequences	6	10	5
cases with severe consequences	17	22	7
cases with the consequences of death	7	10	2
common accidents	30	42	14

Figure 1. Accidents at “Uzbekistan Temir Yollari” JSC

Objective difficulties in the work of the medical service are mainly associated with a variety of specific conditions and factors affecting both the magnitude of the consequences of railway wrecks and accidents, and the nature and extent of the medical care provided. The main ones are:

- a significant contingent of victims (often fatal) among railway personnel and passengers on trains, on passenger platforms and in train station buildings, as well as the population of the surrounding territories;
- structural features of railway injuries by location, nature and severity;
- the need to work in conditions of a deficit of own forces and means for providing medical care in a timely manner and in the proper amount;

A more difficult task facing the healthcare sector is the creation and development of an operational response system to provide the necessary medical assistance to victims, especially in case of large-scale emergencies. As the analysis of many years of experience shows, not a single crash or accident on the railways has practically no analogues. Therefore, managers and other participants in emergency response usually have to make innovative decisions in each case.

REFERENCES

1. 3. Improving traffic safety at road crossings by rail / E. H. Cat. // Bulletin of BelGUT: science and transport.-2005.-№ 1.
2. 4. Analysis of traffic safety in level crossings managed “Lithuanian Railways”. - Vilnius: Plc. State Railway Inspectorate under the Ministry of Transport and Communications, 2010, 13 p.
3. 5. Savage, I. Does public education improve rail highway crossing safety? / I. Savage // Accident Analysis and Prevention. - 2006. - Vol. 38. - No. 2. - P. 310–316.