

Abdazimov Sh.Kh.

Ph.D.,

Mekhmonboev Utkirbek

Yakhshiqulova Mokhinur

Soliyev Tokhirbek

Students

Tashkent State Transport University

CONSEQUENCES OF AN EMERGENCY TECHNOGENIC CHARACTER ON RAILWAY TRANSPORT

Annotation: This article is considered to ensure fire safety in freight rolling stock, it is important to constantly monitor the quality of the preparation of wagons for the carriage of goods, especially fire and explosive goods, as well as the fulfillment of the requirements by shippers. When inspecting and preparing wagons for loading, special attention should be paid to the serviceability of the body and roof, to the tightness of doors and hatches, to the serviceability of constipations. Carriages loaded with highly hazardous and flammable cargo require careful inspection and acceptance on trains.

Key words: Fire safety, Flammable cargo, Openings in the car body, Rolling stock., Train formation station.

Fires are also technogenic emergencies. The main causes of fires and explosions in railway transport are careless handling of fire, sparks from locomotives, car furnaces - heating boilers, passenger car heating boilers, as well as technical malfunctions. This group of causes accounts for more than 60% of the total number of fires and explosions. Approximately 10% each fall on violations of state standards and loading rules (causing spontaneous combustion, friction of packing wire, etc.), on the ingress of an unidentified ignition source into wagons and containers or on open

rolling stock. Further, in decreasing order, there are electrical equipment malfunctions, oversight of heating devices and their malfunction, accidents and crashes, electric welding sparks and other reasons.

It should be noted that the largest number of fires occurs on rolling stock (approximately 80% of the total number of fires on railway transport). This necessitates the development of more effective measures to prevent fires in freight and passenger cars, as well as on locomotives.

To ensure fire safety in freight rolling stock, it is important to constantly monitor the quality of the preparation of wagons for the carriage of goods, especially fire and explosive goods, as well as the fulfillment by consignors of the requirements of the Rules for loading and transporting in wagons, including when accompanied by conductors. When inspecting and preparing wagons for loading, special attention should be paid to the serviceability of the body and roof, to the tightness of doors and hatches, to the serviceability of locks. Carriages loaded with highly hazardous and flammable cargo require careful inspection and acceptance on trains. When cracks and holes are found in the car body, leaks in doors, hatches, oven cuts, etc. malfunctions are immediately eliminated or cargo is reloaded into serviceable wagons.

In the rolling stock, it is necessary to check the serviceability of heating devices, lighting devices and electrical wiring at the train formation stations, and on the way to monitor the observance of fire safety rules by passengers, especially in relation to the carriage of dangerous goods prohibited for carriage in passenger cars.

On locomotives, diesel and electric trains, it is necessary to monitor the good condition of electrical networks and electrical equipment, as well as auxiliary devices and equipment. Special care must be taken in the battery rooms of diesel and electric locomotives, avoiding the use of open fire there.

Before embarking on a voyage, the locomotive and train crew are obliged to carefully check the presence and serviceability of fire-fighting equipment and other protective equipment established by fire-prevention standards.

At enterprises and warehouses that do not pose a particular fire hazard, general measures are taken to prevent fires and explosions: they limit the daily rate of consumption of fuel and flammable liquids used in the production process;

collect used cleaning and other materials impregnated with oil, kerosene, fuel oil, etc in metal boxes;

The premises are cleaned and all combustible production wastes are removed from them after the end of the work; they strictly control the condition of the electrical networks of lamps, electrical equipment and heating devices;

make sure that after the end of work, all fire-operating devices and lighting, except for the one on duty, are turned off;

keep the attic rooms clean;

transport safety

The danger of the influence of poisonous substances

Harmful substances include various gases, vapors and dust emitted during technological processes.

The severity of labor and the meteorological parameters of the air environment significantly increase the effect of industrial hazards on the human body, since the volume of respiration increases sharply. For example, when performing work related to walking, the speed of movement of 5 km / h is considered normal. But even with a slight acceleration of walking (the severity of labor) up to 6.2 km / h, the volume of respiration increases 1.5 times.

Simultaneously with the polluted air, a large amount of harmful substances enters the human body, some of which are not removed with the exhalation of air. This primarily applies to aerosols that are deposited in the alveolar canals of the lungs. Gases and vapors inhaled with air dissolve in the lung fluid. Gradually, there is an accumulation of these hazards and their adverse effect on the human body increases. Therefore, harmful substances with a cumulative ability (the ability to accumulate in the body), with their constant action on the body, even in small doses, cause chronic poisoning. The accumulation of harmful substances occurs in the vital

organs of a person (liver, spleen, bones and muscles), as a result of which their organic changes are observed.

Chronic harmful substances include, as a rule, aerosols, lead, mercury, manganese, silicon oxide and organosilicon compounds. Chronic damage to the body occurs as a result of the action of dust containing free dioxide, which causes the development of silicosis, which manifests itself in the form of fibrous degeneration of the connective tissue of the lungs. An example of the physiological action of substances is carbon monoxide poisoning, which is an industrial poison that acts on the circulatory system. Once in the bloodstream, carbon monoxide destroys the oxygen carrier - hemoglobin. As a result, the body is deprived of normal oxygen supply and oxygen starvation occurs, accompanied by headache, nausea, vomiting and other phenomena. In especially severe cases of poisoning, death can occur. With the rapid cessation of exposure to carbon monoxide, a person fully recovers, since hemoglobin does not lose its ability to carry oxygen.

Most of the industrial hazards enter the human body through the respiratory system and are absorbed by the pulmonary alveolar canals. A correct breathing pattern in a workplace requires workers to breathe through their noses. This regime is often violated by hard work, improper workplace organization and high temperature conditions. When breathing through the mouth, harmful substances are swallowed along with saliva, which causes diseases of the gastrointestinal tract and liver.

Harmful substances such as benzene, xylene, toluene and others penetrate the body through the skin.

The removal of harmful substances from the body occurs in various ways: they are exhaled with air, with sweat, urine, bile, but some of them have a cumulative capacity.

Railway transport enterprises are distinguished by a variety of production processes and technological operations. In terms of the emission of harmful substances, the most dangerous are the production facilities, in which they carry out painting, babbit-filling, polymer processing, battery charging, galvanic, welding and

others, as well as the main workshops of crushed stone and sleepers impregnation plants.

When painting a rolling stock, a complex complex of hazardous hazards (toluene, xylene, paint aerosol) is emitted into the air, the content of which exceeds the permissible standards during the spray painting method. In the process of welding and surfacing, carbon monoxide, manganese and iron oxides, and fluorine compounds are released. In this case, air pollution with certain substances depends on the type of coating of the electrodes used. The smallest contamination is observed in automatic submerged arc welding and electroslag welding.

During the processing of polymers in the air, a complex complex of gaseous chemicals is found: carbon monoxide, organochlorine compounds, carbon chloride, unsaturated hydrocarbons, hydrogen cyanide, organic acids, ethers, aromatic hydrocarbons of total action (benzene, acetone, etc.). These hazards are released at certain complexes at different temperatures from 60 to 250 C as a result of thermal action from various polymeric materials. Dust is generated during mechanical processing of plastics.

Air pollution with vapors of oil aerosol, benzene, toluene, xylene is observed in the engine room of the locomotive, in the stall part of the depot, in the fuel equipment repair department and in other rooms. The air in the forging and forging - spring sections is polluted with carbon monoxide and sulfur dioxide, nitrogen oxides, metal aerosols, and in the mechanical section - with carbon monoxide, an aerosol of iron oxides and lubricating - cooling liquid and others.

References

1. "Labor protection in railway transport", Yu.G. Sibarova; Moscow, "Transport", 1995.
2. "Traffic safety in railway transport", V.I. Gapeev, F.P. Pishchik, V.I. Egorenko, Minsk, Polymya, 1996.
3. "Railways" general course, M.M. Uzdina, Moscow, "Transport" 1991.