



Safety and Labor Protection: USA and Russian Experience

Evgeniya M. Bronnikova^{1*}, Olga S. Kulyamina¹, Marina V. Vinogradova¹, Viktoria A. Vishnjakova¹, Lidia A. Vasilieva¹, Daniil V. Volkov¹, Anna A. Larionova²

¹Scientific and Research Institute of Prospective Trends and Technologies, Russian State Social University, Moscow, Russia

²Department of Economic Security, Audit and Controlling, Kosygin State University of Russia, (Technology. Design. Art), Moscow, Russia

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Abstract

In Russia, there is an objective need to improve the system of labor protection, it is necessary to eliminate the main causes that lead to occupational injuries and occupational diseases of workers. The study is devoted to the problem of labor protection in Russia and the USA. The aim is to compare Russian and foreign experience in the field of labor protection, to identify prospects for the application of the US experience in Russia. The study used methods of analysis, comparative and comparative analysis, generalization, systematization of data. The novelty lies in the possibility of applying foreign experience in improving the system of labor protection in Russia. The study revealed that the basis of industrial injuries, occupational diseases in the Russian Federation, is the imperfection of fixed assets and technological processes, as well as unsatisfactory organization of work and organization of jobs. In the United States, the most significant cause of fatal injuries are traffic accidents, non-compliance with safety regulations. The results can be applied in the state regulation of the system of preventive measures to reduce industrial injuries and occupational diseases.

Keywords: Labor protection, Occupational safety, Occupational injuries, Occupational diseases, The financial provision of preventive measures

1 Introduction

Modern science considers the problem of communication of public health with its performance one of the fundamental. Occupational diseases are associated with enormous losses both for workers and their families and for the economic and social development of countries. Half of the world's people are economically active and spend at least a third of their time in the workplace. Fair employment and decent work are important social determinants of health, and a healthy workforce is an important prerequisite for productivity and economic development. The state system of labor protection and insurance against industrial accidents and occupational diseases is one of the integral elements of modern industrial society. In all developed countries, these systems have come a long way of development, in particular in the United States, where there is now an effective state system of management of labor protection and social protection and assistance to victims, the formation of these systems took decades.

The aim of the study is to compare the Russian and foreign experience of labor protection and insurance against industrial accidents and occupational diseases, to identify the prospects for the application of foreign experience in Russia

In accordance with the goal, the following tasks were set:

- analyze the statistics of occupational injuries and morbidity in Russia and the United States;
- identify the root causes of injury and disease;
- consider ways to improve the system of labor protection in Russia, taking into account the experience of the United States.

The degree of elaboration of the research topic is determined by a number of publications of Russian and foreign scientists. Understanding the patterns of occupational injuries is discussed in D. Kakhki, F. Freeman and S.A. Mosher (6). Safety motivation to prevent occupational injuries is analyzed by M. Nykänen et al. (12). S.W. Bae et al. (1) considers industrial accidents and their consequences. G.H. Choi (2) reviews the industrial safety management. Occupational safety issues are covered at A.S. Zikriyov and R.A. Crane (19). The consequences of accidents and injuries at work are given in the work of S.K. Kang (7). The impact of occupational accidents on income is examined by S.W. Bae

Corresponding author: Evgeniya M. Bronnikova, Scientific and Research Institute of Prospective Trends and Technologies, Russian State Social University, Moscow, Russia. E-mail: BronnikovaEM@rgsu.net.

et al. (1). Ph. Jacobs (5) considers the cost of injury and illness. Statistics of injuries and diseases are presented on the official website of the U.S. Bureau of labor statistics (16).

Russian scientists consider the issues of ensuring safe working conditions of workers in the labor process (3), the problems of assessing industrial injuries (4). Economic incentives for employers in the field of health and safety considers (9). State control in the sphere of labor in Russia leads (17). Analysis of foreign experience of labor protection leads (14) corporate social responsibility (11). Improving preventive measures to reduce occupational injuries and morbidity analyzes (18). O.S. Kulyamina, O.V. Shinkareva and V.A. Vishnyakova (10) considers the financial provision of preventive measures. Directions for improving the system of labor protection in Russia are given in the report on research (8). Statistics of industrial injuries and morbidity in Russia are presented on the official website of the Federal state statistics service of the Russian Federation and on the website of the social insurance Fund of the Russian Federation (15).

2 Methods

The study uses methods of analysis, comparative analysis, comparative analysis, generalization, analysis and systematization of data. The theoretical and empirical method of the analysis allowed to reveal interrelations in dynamics of industrial traumatism and occupational diseases with system of labor protection in the USA and Russia. Application of the method of comparative analysis allowed to find regularities in the system of labor protection of the studied countries. The method of comparative analysis made it possible to study trends in the dynamics of injuries and morbidity, taking into

account existing state measures. The method of generalization allowed to consider the prospects of application of the US experience in the Russian reality and to formulate the practical significance of the study. The method of analysis and systematization of data allowed to structure the results obtained in the course of research on the dynamics of occupational injuries and occupational morbidity in Russia and the United States and to identify areas of improvement of the labor protection system in Russia, taking into account foreign experience. The object of the study is the system of labor protection in the United States and Russia.

3 Results

According to the statistics of industrial injuries in the world, workplace accidents are one of the most significant problems for most countries. About 125 million industrial accidents occur in the world every year. On average, about 220 thousand people die. Mortality from injuries sustained in the workplace, today ranks third in the world. Often employers hide the facts of accidents, for fear of incurring administrative or criminal liability. Many workplace injuries and deaths remain unaccounted for. Most accidents occur in Japan, Germany, USA, France and Russia. Statistics of industrial injuries prove that almost half of accidents are caused by employers, they do not provide workers with means of protection. It is interesting to compare the situation in the field of industrial injuries and occupational diseases in Russia and the United States. In the Russian Federation, the number of accidents at work and the number of occupational diseases have been decreasing in recent years (8), there is a slight increase in the number of accidents in the United States (Figure 1).

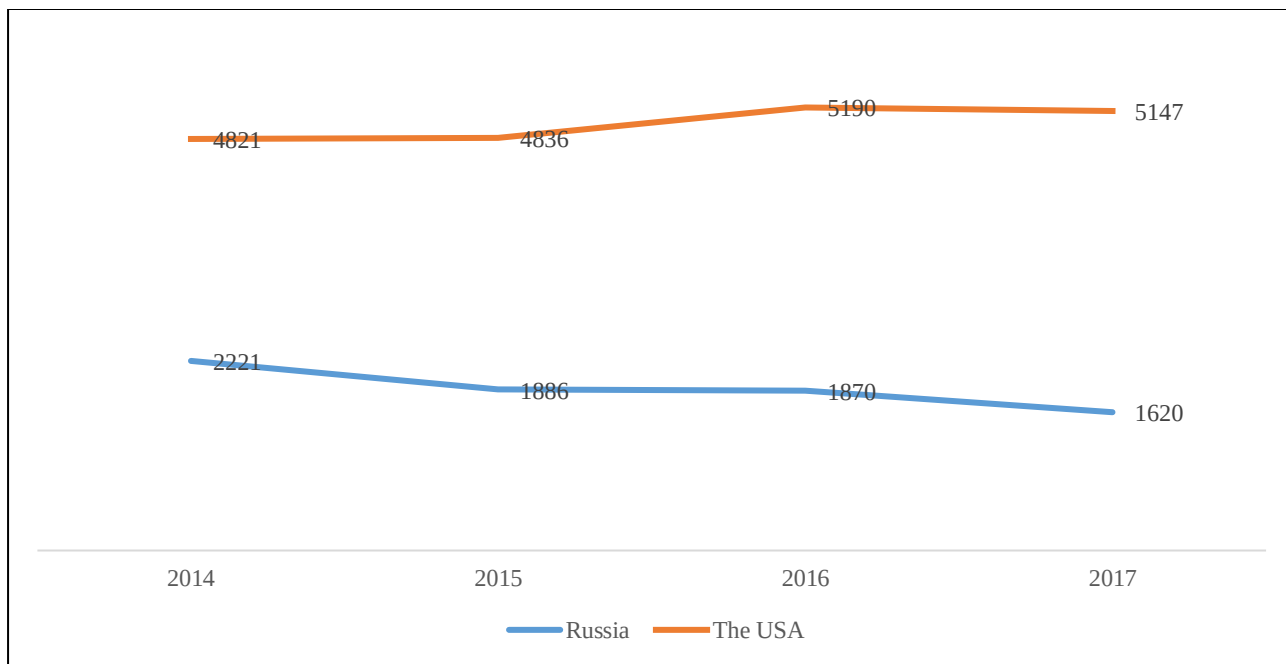


Figure 1: Dynamics of fatal industrial injuries in Russia and the United States in 2014-2017

In the United States, the most significant cause of fatal injuries are traffic accidents, non-compliance with safety regulations, which led to a fall from a height, a high proportion of violence at work (figure 2). In 2017, there were the highest number of falls from heights in the last 26 years of keeping statistics of fatal accidents at work. The number of accidents related to drug overdoses and alcohol abuse during working hours has increased. A marked decrease in mortality caused by contact with equipment and machinery (16). The greatest increase in the number of fatal accidents in 2017 in

Russia was observed due to the unsatisfactory technical condition of buildings, structures and territory (figure 3). Due to the lack of instruction on labor protection, an increase in the number of accidents is noticeable. A significant impact on the reduction of these indicators had preventive measures to reduce industrial injuries and occupational diseases, including a special assessment of working conditions. Fatal industrial injuries, according to the Federal service for labor and employment, the last 10 years has a steady downward trend (8).

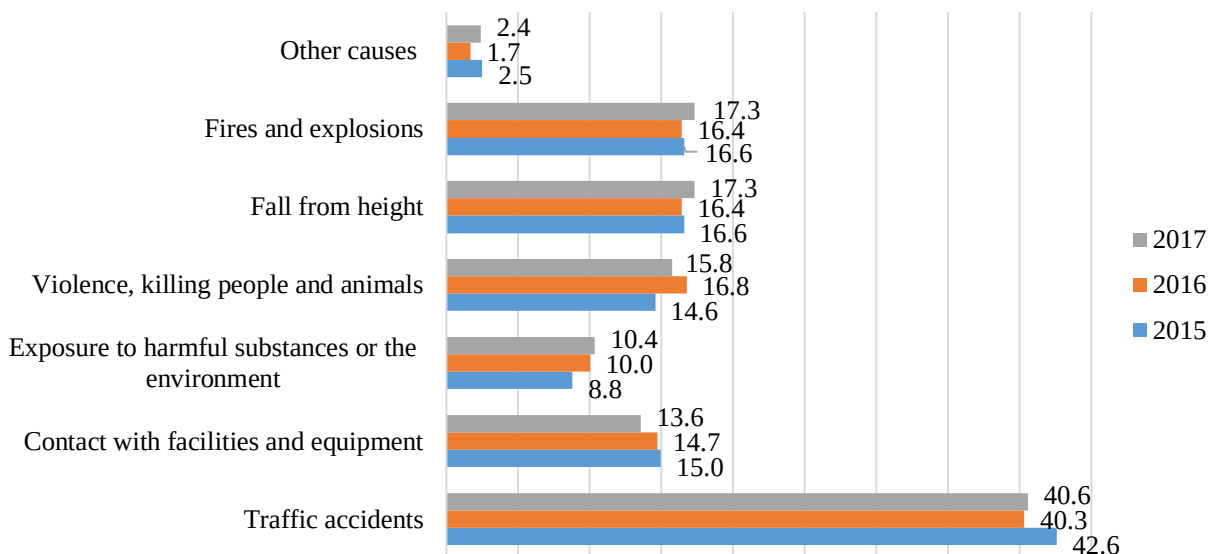


Figure 2: Structure of severe fatal accidents caused by accident in the United States, %

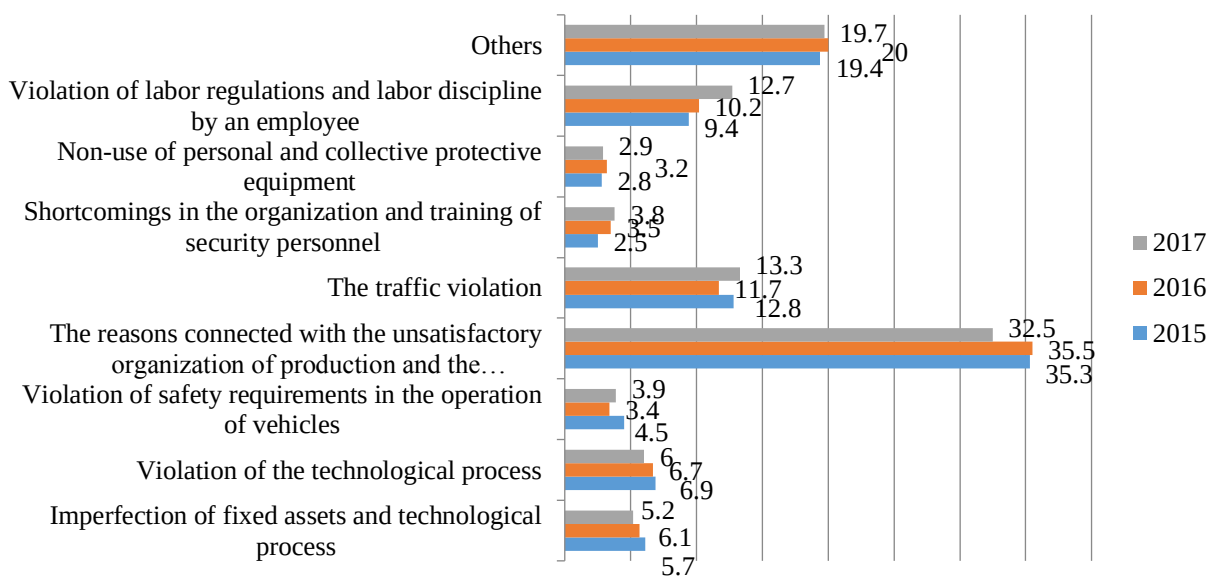


Figure 3: Structure of accidents with severe consequences with fatal outcome due to the causes of the accident in Russia, %

In 2017, 882,730 work-related injuries and illnesses were reported. The number of cases involving overvoltage during ascent or descent has increased. There was a decrease in the number of cases involving workers affected by objects or equipment (figure 4). The main occupational injuries are sprains and bruises (16). In Russia in 2017, the most common types of accidents with severe consequences were the impact of moving parts and mechanisms and falling from a height (Figure 5). In the general structure of the causes of accidents

at work with severe consequences, the majority are due to reasons associated with poor organization of work and organization of workplaces (8). In general, the causes of industrial injuries in Russia and the United States are similar.

In 2017, the overall morbidity rate in the manufacturing industry decreased (figure 6). In the areas of production, Finance and insurance, there has been a decline in occupational morbidity (16).

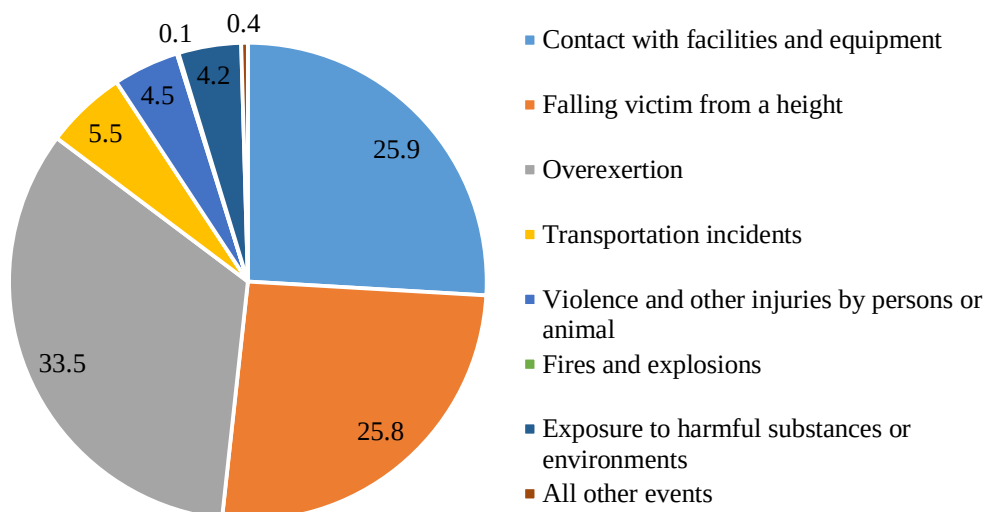


Figure 4: Structure of non-fatal accidents by accident causes in 2017 in the United States, %

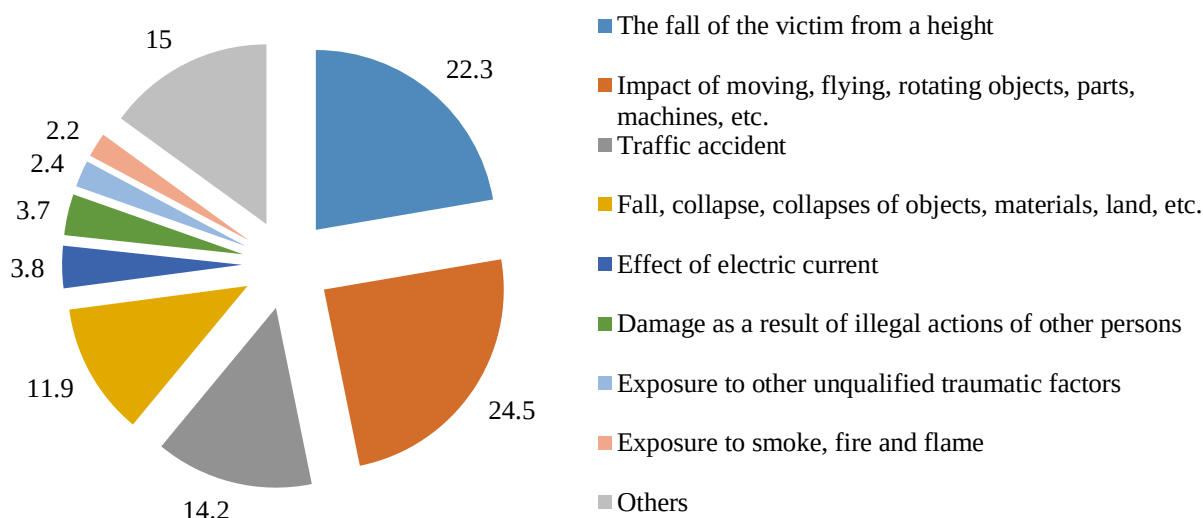


Figure 5: Distribution of accidents with severe consequences by types of accidents in 2017, %

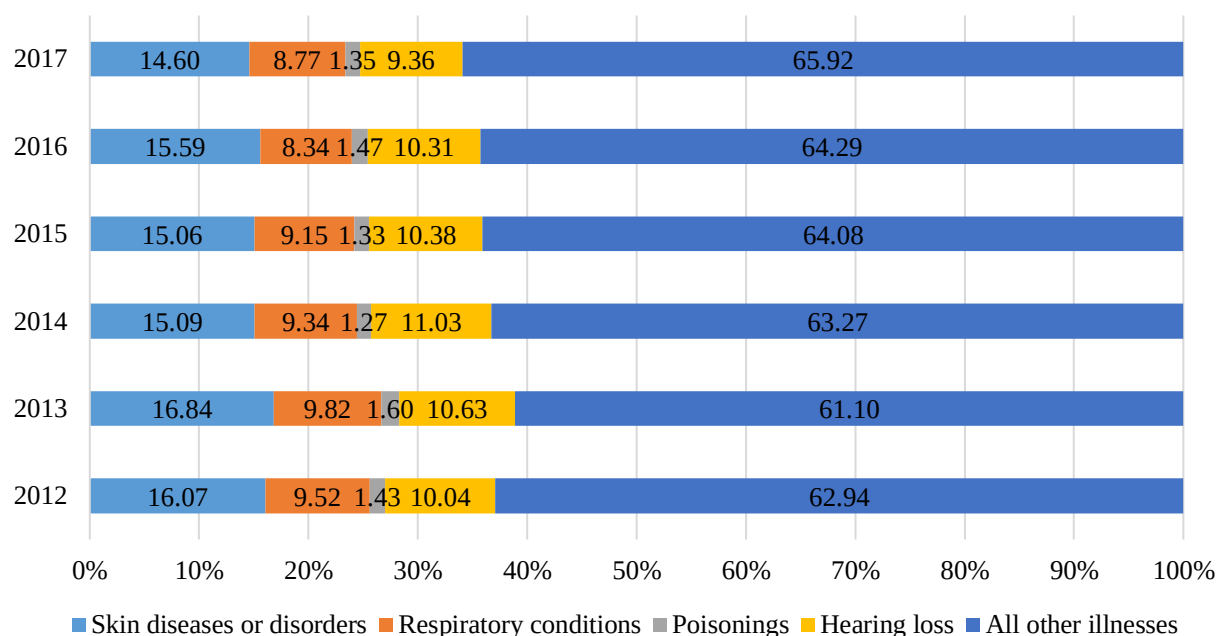


Figure 6: Structure of occupational diseases and poisonings depending on influencing factors of labor process in the USA, %

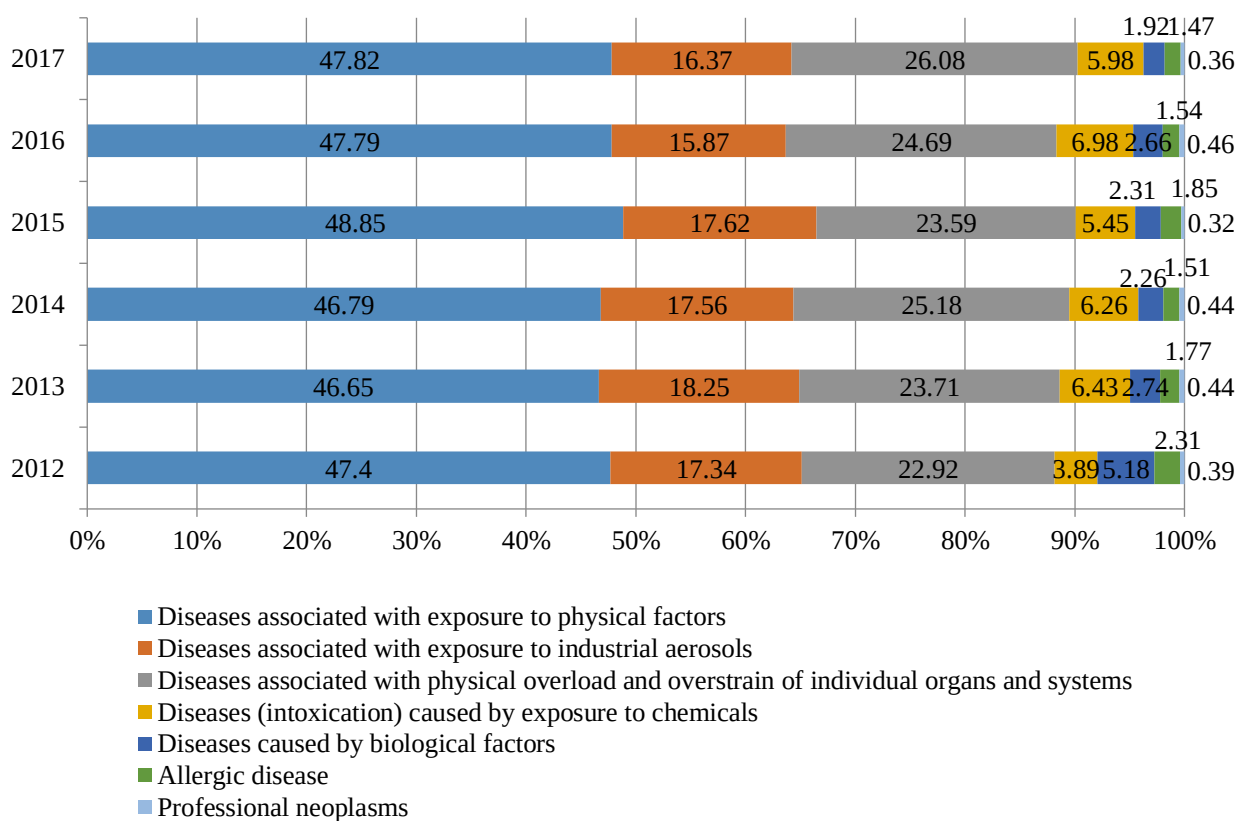


Figure 7: Structure of occupational diseases and poisonings depending on influencing factors of labor process in Russia, %

The largest share in the structure of occupational diseases and poisonings is occupied by occupational pathologies associated with the impact of physical factors of the labor process. Physical overload and overvoltage of individual organs and systems occupy a significant share (13, 23, 24).

In recent years, Russia has been working to improve the system of social insurance against industrial accidents and occupational diseases. In order to find the best ways to solve this problem, it is necessary to study the practical experience of foreign countries. Russia is interested in the experience of the United States, where the legal basis of the current state system of labor protection is the law on occupational safety, according to which the Federal Agency for occupational safety Management was established. To help victims in the United States created a state system of insurance of industrial injuries. It provides cash benefits and medical assistance to victims and their families. The basic principles of occupational injury insurance programs in the United States are identical in different States. The difference is in determining the amount of benefits, methods of administrative regulation, conditions of implementation of programs. The amount of cash payments in different States ranges from 66% to 100% of the previous average weekly salary of the employee, but not above the maximum. Individual state programs are administered by occupational injury insurance commissions or special units of labor departments. Insurance premiums for occupational injuries are collected from employers. Employers involved in insurance bear the burden of paying for work-related injuries. Insurance benefits are also provided in connection with death resulting from an industrial accident.

Occupational injury insurance in all States provides two types of compensation: medical fees and cash benefits to victims. The programs provide for payment by the employer of medical services for the treatment of injuries. Many States have limits on the length of treatment, no more than 6 months, and the total amount of medical expenses.

The U.S. has an industry-wide occupational safety administration, which operates a hotline to collect complaints about violations. The employee has the right to appeal to the administration on the issues of occupational health and safety in the workplace. Inspections are carried out on the basis of complaints. Also imposed fines in the amount of 250 thousand dollars. for the first violation, up to 500 thousand dollars. for the following (14, 20). Special simplified information and regulatory and methodological materials have been developed for small and medium-sized businesses. These materials facilitate the perception and assimilation of safety regulations and the main responsibilities of the employer and employee for risk management. Each state has adopted laws and created Executive bodies in the field of safety and health, issued regulations to limit the use of hazardous materials, requirements for ventilation, water supply, storage of industrial waste. Employers are obliged to inform employees about the dangers of production processes, to teach safety, to record cases of industrial injuries and loss of working time as a result of accidents at work.

Russian legislation has an approved procedure for the investigation of an industrial accident in the Labor code of the Russian Federation. The employer is obliged to create a

Commission that investigates the circumstances of the incident and establishes the reasons. Based on the results of the investigation, the Commission proposes methods and solutions aimed at preventing such incidents in the future. At the moment, Russia has a system of measures for financial, credit and tax policy, contributing to the economic interest of employers to improve working conditions and safety, preservation and promotion of worker's health. In particular, there is a system of additional rates of insurance premiums for compulsory pension insurance in the Pension Fund of the Russian Federation to Finance the insurance pension associated with the established results of a special assessment of working conditions. Insurance against accidents and occupational diseases is carried out by additional multipliers of insurance premiums depending on the level of danger. The amount of funds allocated for the financial provision of preventive measures may not exceed 20% of the amounts of insurance premiums in the FSE of the Russian Federation for the previous year less the costs of payment of security for this type of insurance made in the same year. Enterprises are turning to the social insurance Fund for reimbursement of the costs of preventive measures.

4 Discussion

The study revealed that the basis of industrial injuries, occupational diseases in the Russian Federation, is the imperfection of fixed assets and technological processes, as well as unsatisfactory organization of work and organization of jobs. In the United States, the most significant cause of fatal injuries are traffic accidents, non-compliance with safety regulations.

In Russia, there is an objective need to improve the system of labor protection, it is necessary to eliminate the main causes that lead to occupational injuries and occupational diseases of workers. There is an urgent need for the possibility of sending the organization of insurance premiums for the replacement, modernization or repair of equipment and buildings that are in a high degree of deterioration. The renewal of industrial equipment should be economically stimulated, and companies should be given the opportunity to replace or repair obsolete equipment not only at their own expense, but also by financing preventive measures (10). At the same time, it is necessary to determine the conditions for the possibility of sending contributions for compulsory social insurance against industrial accidents and occupational diseases for replacement, modernization or repair of equipment (18, 21, 22).

The US experience in the field of administrative regulation of the labor protection system can be applied in the Russian reality. It is possible to apply a system of penalties for enterprises whose employees have identified problems with labor protection.

It is necessary to improve the functioning of Federal programs of labor protection, the development of methodological materials on labor protection and measures to inform workers about the dangers. It is also possible to allow employers to Finance the part of insurance premiums for training of employees who are engaged in the organization of the production process. It is necessary to train employees in the skills of rational and safe organization of the workplace

and the implementation of the production process. This will prevent a significant number of accidents and incidents and strengthen the rule of law in the field of occupational safety.

5 Conclusion

There is a need to amend the current legislation in the Russian Federation in the field of labor protection, it is necessary to take into account the best practices of the United States. It is necessary to allocate part of the social insurance Fund contributions for the purchase of new equipment and training of employees. It is possible to use a system of fines, similar to the functioning in the United States, and has shown its effectiveness. There is an objective need to improve the list of preventive measures financed by insurance contributions of employers, it is necessary to eliminate the main causes that lead to occupational injuries and occupational diseases of employees of various activities.

The results of the study can be used to improve the system of preventive measures to reduce occupational injuries and diseases. Ultimately, this will help to improve working conditions, reduce economic losses and reduce the overall rate of industrial injuries and occupational diseases in Russia.

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