ANALYSIS OF THE EFFECTIVENESS OF THE DEVELOPED METHODOLOGY FOR SETTING THE TYPE AND THE VOLUME OF GUARANTEES TO WORKERS FOR WORKING CONDITIONS

Abstract. The features of the current system for establishing guarantees for workers engaged in heavy work, work with harmful and (or) dangerous working conditions in the Republic of Kazakhstan are highlighted in the article. The necessity of providing guarantees to workers engaged in heavy work, work with harmful and (or) dangerous working conditions, not only taking into account the state of working conditions, but also the state of their health is grounded. In this regard, it is proposed to introduce the Methodology for establishing the type and scope of guarantees to workers engaged in heavy work, work with harmful and dangerous working conditions, depending on the degree of occupational risk. In this article, calculations are made to provide the type and scope of guarantees to employees employed in the enterprise for the production of soft roofing and waterproofing materials, depending on the degree of occupational risk in the new developed methodology. The analysis of the effectiveness of the implementation of the proposed methodology in comparison with the current mechanism and the list approach in providing guarantees to employees was carried out. The application of the proposed methodology has a positive effect on the regulation of labor relations between employers and employees and is recommended for use in domestic enterprises.

Keywords: workers employed in heavy work, work with harmful and dangerous working conditions, provision of guarantees to employees, additional annual paid leave, increased wage, reduced working hours, professional risk assessment, degree of occupational risk.

INTRODUCTION

Studying and solving problems related to the provision of healthy and safe working conditions, measures to prevent accidents at work are a priority of the life and health of employees in relation to the results of production activities at enterprises.

According to official statistics, in 2016, 2034 employees suffered at the enterprises of the Republic of Kazakhstan, which confirms an increase in the number of accidents by 15.3%, compared with the previous year. Of the total number of casualties, 225 fatal accidents were registered [1].

At present, in the Republic of Kazakhstan, 368.8 thousand people out of 1677.0 thousand employees of the enterprises surveyed, in conditions that do not meet sanitary and hygienic requirements (norms) are employed, it is almost one of five workers[2].

The adoption of active measures to create a safe and healthy working environment is one of the international requirements specified in the International Labor Organization Convention No. 187 "On the Basics of Promotion of Occupational Safety and Health", ratified by the Law of the Republic of Kazakhstan No. 243-V of October 20, 2014 [3].

In the case of failure by officials in complying all requirements, ensuring safe working conditions, the legislation of the Republic of Kazakhstan applies a penalty in the form of a fine [4].

According to the strategic plan of the Ministry of Healthcare and Social Development of the Republic of Kazakhstan, safe workplaces and harmonious labor relations are the basis for effective employment. The basis of this work will be the strengthening the demand from organizations, conducting a special
assessment of working conditions at production facilities and the full implementation by 2020 of mechanisms for managing occupational risks in daily production practice [5].

For this category of employees at the state level, there is a mechanism for establishing various types of guarantees: an increased wage, an additional annual paid leave of at least six calendar days and no more than 36 calendar days, a reduced working time of not more than 36 hours per week, etc. [6].

Employees engaged in hard work, work with harmful and (or) dangerous working conditions are provided with guarantees in the form of additional paid annual leave and reduced working hours according to the list of industries, shops, professions and positions, the list of heavy work, work with harmful and (or) hazardous working conditions, the work in which entitles to reduced hours of work, additional paid annual leave and higher wages, and to rules of their provision, approved by the authorized body on labor (hereinafter - the List)[7, 8]. At the same time, the presence of harmful labor conditions must be confirmed by the results of attestation of production facilities according to working conditions [6].

However, based on the results of research carried out in terms of providing guarantees, it was found that these requirements are violated by employers [9].

In the process of creating an effective mechanism for economic incentives for enterprises to improve labor conditions and safety, it is necessary to designate the priority of preserving the health of the working person, and in case of loss of health at work, a worthy guaranteed compensation. The entire system of social protection, as an element of the OSH management system from the adverse consequences of professional activity, should be oriented towards the solution of these problems [10].

The instructions of the Head of State to create safe working conditions at the third stage of modernization are aimed at transiting to the implementation of an occupational risk management system. The new system is aimed at preventing occupational risks, increasing employers' responsibility for creating safe working conditions, reducing occupational injuries and occupational diseases [11].

The current mechanism for establishing guarantees on the basis of the list does not correspond to the world practice in the management of labor protection and has no connection with the results of certification of workplaces on working conditions. There is no differentiation of guarantees and compensations depending on working conditions.

To establish the connection between the results of attestation of production facilities by labor conditions by the volume of the provision of the guarantees above within the framework of scientific research, dedicated to implement the occupational risk management system in the Republic of Kazakhstan, a Methodology was developed for establishing the type and scope of guarantees for workers engaged in heavy work, work with harmful and dangerous working conditions depending on the degree of occupational risk (hereinafter - Methodology)[12].

The methodology proposes to determine the scope of guarantees depending on the degree of occupational risk, which is a complex numerical characteristic of the hazards and hazards of the working environment and the work process, the risk of morbidity, the safety of production equipment and the provision of personal protective equipment. The degree of occupational risk is calculated according to the methodology of calculating the individual indicator of the degree of occupational risk [13, 14].

The methods above were developed by the Institute and passed the state registration of intellectual property rights in the form of a scientific works (№ 2258 and № 2259 of 03.10.2017).

The proposed approaches to establishing guarantees in the form of increased wages, additional paid annual leave and reduced working hours, and the determination of their volume were tested in 2017 using the example of six enterprises [15].

This article presents the results of approbation of the methodology and appropriate work by the example of one of the enterprises, the main activity of which is the production of soft roofing and waterproofing materials (“23993” by the general classifier of economic activity).

MAIN PART

According to statistics for 2016 (report 1-1), enterprises for the production of soft roofing and waterproofing materials employ 97 people, of whom 37 workers are involved in harmful and (or) dangerous working conditions, including 4 women.

According to the staff list, the vocational qualification structure of the enterprise consists of 47 professions, 14 of them are administrative and managerial personnel (14 people), 8 professions of production personnel (25 people) and 25 auxiliary personnel professions (58 people).
The technological process of the enterprise, manufacturing bitumen and waterproofing materials includes: firstly, the delivery of oil bitumen; secondly, the production of modified bitumen, which goes either to further processing for the production of waterproofing materials (including bitumen primer, bitumen mastic, roofing materials), or for sale in the form of bitumen blocks, packing bitumen into a sack; thirdly, the packaging of finished waterproofing materials in metal drums, cloak-takers and their stock for storage and realization.

The main occupations of industrial nature are: the operator of the technological line for bottling bitumen № 1, 2; the operator on impregnating aggregates of a line on manufacturing of a soft roof; operator of the technological line for the production of soft roofing; operator of the technological line of bitumen fanning.

In order to determine the effectiveness of the implementation of the developed methodology, a comparative analysis of the provision of a guarantee was made in the context of the unit according to the operating mechanism, according to the list and the proposed methodology from three positions:

a) in accordance with the requirements of the current legislation of the Republic of Kazakhstan, i.e. on the basis of the results of attestation of production facilities in accordance with the list;

b) according to the approach applied at the enterprise;

c) on the basis of the results of occupational risk assessment.

Employees of 14 professions are employed in the administrative-management division. Comparison of the current guarantee mechanism with the List showed that the professions of this department do not provide guarantees in the form of additional leave and reduced working hours.

According to the current system, employees of the administrative and management unit have not had any kinds of guarantees for working conditions.

To provide a justified guarantee on the developed methodology, it was determined that employees of 14 professions are entitled to no less than 6 calendar days of additional paid annual leave and an increased wage of at least 4%, since they are related to the second risk degree (low risk).

It should be noted that, according to the developed methodology, workers, whose profession and (or) professional group refers to the 1-, 2- and 3-degree of occupational risk, are not provided by reduced working hours [12].

Employees of 8 professions are employed in the main production divisions at the enterprise. According to the List, employees of 4 professions have the right to additional paid annual work leave up to 6 calendar days. The reduced duration of working hours for employees of the main unit is not provided.

In 2016, the company established and provided guarantees in the form of 6 calendar days of additional leave to 6 professions, an increased wage in the amount of at least 4% of employees in 2 professions and at least 8% of employees in 2 professions.

According to the developed method of establishing guarantees for special working conditions for employees of the five professions of the main unit, at least 6 calendar days of additional paid annual leave and a high wage of at least 4% are required. Employees of 3 professions (the chief of production, the chief technologist, the master of the shift) have at least 12 calendar days of additional paid annual leave and an increased wage of at least 8%.

In the auxiliary units, employees of 25 professions are employed, of which according to the Schedule, an additional paid annual leave is granted up to 6 calendar days for workers of 4 professions, up to 12 calendar days for employees of 1 profession of the auxiliary unit. The reduced duration of working time is no more than 36 hours, it is assigned to an employee of 1 profession (gas electric welder).

At least 6 calendar days of additional leave are provided to 22 professions, not less than 12 calendar days for employees of 2 professions of an auxiliary division. According to the current mechanism, a 4% wage is paid to employees of 8 professions, 8% to employees of 4 professions and 16% to employees of 1 profession (gas electric welder).

In accordance with the method of establishing guarantees for working conditions, employees of 8 professions do not rely on any type of guarantees. Employees of the 16 profession are guaranteed in the form of current current current of additional leave and a higher pay at least 4%. An employee of 1 profession (boiler house operator) who is exposed to an average occupational risk is entitled to an additional leave of at least 12 calendar days and an increased wage of at least 8%.
A comparative analysis of the provision of additional annual paid leave for employees in accordance with the operating mechanism / according to the List / according to the proposed methodology / in the context of the three divisions is shown in Figure 1.

![Bar chart](image)

Figure 1 - Comparative analysis of the provision of additional annual paid leave for employees

A comparative analysis of the granting of an increased wage to employees at the current mechanism / according to the List / according to the proposed methodology / in the context of the three divisions is shown in Figure 2.

According to the list and the current system, no guarantees are established to the professions of the administrative and management unit. The new methodology offers an additional leave of at least 6 calendar days to all professions in the administrative and management unit (14 professions, 100%).

If according to the list of professions of the main department, only half of the 8 professions (50%) are eligible for additional leave of no more than 6 calendar days, 6 professions (75%) according to the current system of 6 calendar days, then the procedure suggests an additional leave of at least 6 and 12 calendar days to all professions of this unit (100%).

In accordance with the list, only 20% of the professions of workers in the auxiliary units are entitled to an additional leave of no more than 6 and 12 calendar days. The current system establishes an additional leave of 6 and 12 calendar days for 24 professions (96%), while the developed methodology proposes to establish an additional leave of at least 6 and 12 calendar days for 17 professions of auxiliary units (68%).
On a comparative analysis of the provision of a high wage for the provision of a high wage, it can be seen that the current system does not establish a higher wage for the professions of the administrative and managerial unit, while the methodology offers a 4% higher salary for all professions in this unit (100%).

Under the current system, a 4% and 8% increase in the amount of remuneration is set in half of the professions of the main unit (50%). The proposed methodology establishes an increased wage at least 4% and 8% for all professions in this unit (100%).

The current system of guarantees for working conditions increased the amount of labor compensation in the amount of 4%, 8% and 16% to half of the professions of this unit (52%). According to the developed methodology, an increased wage in the amount of 4%, 8% is proposed to establish 17 professions of the support unit (68%).

Thus, the data on the assessment of occupational risks for 2016 were analyzed and according to the methodology:
- for 8 professions (17%), no type of guarantee is applied (1 - the degree of occupational risk);
- guarantees for 35 professional jobs (74.5%) in the form of an additional annual paid leave for at least 6 calendar days and a high wage at least 4% (2 - the degree of occupational risk);
- 4 professions (8.5%) are entitled to guarantees in the form of an additional annual paid leave for at least 12 calendar days and a high wage not less than 8% (3-degree of occupational risk).

Thus, according to the analysis of the effectiveness of the proposed methodology, it was revealed that in the explored enterprise, workers who are engaged in the production of soft roofing and waterproofing materials are not provided with full guarantee. The current mechanism for providing additional vacations to the administrative and managerial and substantive divisions corresponds with the approved list. In the auxiliary units, in fact, it is provided much more than required from the list. The provision of guarantees to professions according to the proposed mechanism (83% of the profession) increased, in comparison with the list (19% of the profession) and the operating mechanism (64% of the profession). This is due to the fact that in the workplace were identified risks in some professions, during the evaluation.
CONCLUSION

In general, the use of the entire system of occupational risk assessment and methods of providing guarantees are an integrated measure in the OSH management system in the enterprise. The assessment allows to identify the main risks in the workplace, as well as the method of guarantee, which can be guaranteed individually by profession, regardless to whether there is a data list of the profession in the List.

Considering the harmful and dangerous production factors of the type of economic activity that the selected enterprise deals with and the calculation of the assessment of occupational risks, the enterprise generally refers to low risk(2-risk).

In order to eliminate risks in the production or reduce this indicator (in case of impossibility to eliminate risks, to reduce the risk to the possible minimum), it is necessary to develop an action plan for each profession individually.

Specially developed measures to eliminate risks, taking into account harmful and dangerous production resources to enterprises producing soft roofing and waterproofing materials that are engaged in the selected enterprise, allow to significantly increase material costs for enterprises and lead to education. Material resources, saved as a result of the risk reduction measure, can be sent to the company for repair, supply of workplaces with upgraded equipment and automation of the labor process, etc.

Advantages of the proposed approach are to use a more complete basis for differentiating of guarantees to workers, not only taking into account the state of working conditions, but also the health status of employees. The methodology determines the relationship between the guarantee to workers and the assessment of occupational risks.

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АНАЛИЗ ЭФФЕКТИВНОСТИ ПРИМЕНЕНИЯ МЕТОДИКИ УСТАНОВЛЕНИЯ ВИДА И ОБЪЕМА ГАРАНТИЙ РАБОТНИКАМ, ЗАНЯТЫМ НА ТЯЖЕЛЫХ РАБОТАХ, РАБОТАХ С ВРЕДНЫМИ И ОПАСНЫМИ УСЛОВИЯМИ ТРУДА В ЗАВИСИМОСТИ ОТ СТЕПЕНИ ПРОФЕССИОНАЛЬНОГО РИСКА НА ПРИМЕРЕ ПРЕДПРИЯТИЯ ПО ПРОИЗВОДСТВУ МЯГКИХ КРОВЕЛЬНЫХ И ГИДРОИЗОЛЯЦИОННЫХ МАТЕРИАЛОВ

Аннотация. В статье отмечены особенности действующей системы установления гарантий работникам, занятых на тяжелых работах, работах с вредными и (или) опасными условиями труда в Республике Казахстан. Обоснована необходимость предоставления гарантий работникам, занятым на тяжелых работах, работах с вредными и (или) опасными условиями труда не только с учетом состояния условий труда, но и состояния их здоровья. В этой связи, предлагается внедрить Методику установления вида и объема гарантий работникам, занятым на тяжелых работах, работах с вредными и (или) опасными условиями труда в зависимости от степени профессионального риска. В данной статье приведены расчеты по предоставлению вида и объема гарантий работникам, занятым на предприятии по производству мягких кровельных и гидроизоляционных материалов в зависимости от степени профессионального риска по новой разработанной методике. Проведен анализ эффективности внедрения предлагаемой методики в сравнении с действующим механизмом и сопоставлен подходом в предоставлении гарантий работникам. Применение предлагаемой методики имеет положительный эффект в регулировании трудовых отношений между работодателями и работниками и рекомендуется к использованию на отечественных предприятиях.

Ключевые слова: работники, занятые на тяжелых работах, работах с вредными и опасными условиями труда, предоставление гарантий работникам, дополнительный ежегодный отпуск, повышенный размер оплаты труда, сохраненная продолжительность рабочего времени, оценка профессионального риска, степень профессионального риска.

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«Казахстан Республикасы әнбек және халықты өлеуметтік қорғау министрлігінің Еңбекти қорғау жөнінде республикалық қызметкіштер және қызметкерлер ықтималдығын қауіпті қауіпсіздіктың құрылысы әдісі деп» Астана қ., Казахстан Республикасы
денсаулык жағдайларыңыз есепке алу үрек екенінің ескілдірлесілген. Сол себепті, зиянды және (немесе) қауіпті еңбек жағдайларында жұмыс істейтін әрекетлерге қауіпдіктерден тұрләр мен мәлімдерін қосібі тәуекелге байланысты тағайындау Әдістемесін ендірі ұсынылады. Осы мақалада әрекет әрекет гидрооқшаулығы материалдарды өңдіретін қосымындағы зиянды және (немесе) қауіпті еңбек жағдайларында жұмыс істейтін әрекетлерге қауіпдіктерін тұрләр мен мәлімдерін қосібі тәуекелге байланысты тағайындау әрекет Әдістемесі бойынша есептелері әрілген. Әрекетлерге қауіпдіктерін қолданыстығы механизм тізімдік тәсілмен тағайындау және ұсынылып отырған әдістемені іске асырудың тиімділігін салыстырылып тұрдың таңдауы жарқетілген.

Түйін сөзлер: ауыр, зиянды және қауіпті еңбек жағдайларында істейтін әрекетлер, әрекетлерге қауіпдіктер бере, ықыл сайынға әкы тәлінетін қосымша еңбек демалысы, еңбектін жүйеңгілілігі мәлімдерде әкы телесу, еңбек үәкетінің қасқарылған құқықты, қосібі тәуекелді бағалау, қосібі тәуекелді әрекетсі.

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