LIFE SAFETY

Scientific article
UDK 331.546

ASSESSMENT OF THE EFFICIENCY OF THE WORK OF THE SPECIALIST IN LABOR SAFETY

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Abstract. The article is devoted to the problem of the lack of a comprehensive assessment methodology for a labor protection specialist. The paper reviewed and analyzed the existing methods for evaluation. The optimal model for evaluation using a three-level «safety ladder» was chosen, and the principle of calculations was described using a single indicator. Based on the results obtained, shortcomings in the work of the specialist in question were identified and recommended measures were proposed to change the approach to assessment.

Keywords: labor protection, efficiency of a specialist, assessment indicators, reasons for a low indicator, recommendations for assessment

For citation: Yakovleva O.G. Assessment of the efficiency of the work of the specialist in labor safety // Supervisory activities and forensic examination in the security system. 2023. № 2. P. 114–118.

Introduction

Occupational safety specialist (OT) is an official responsible for compliance with regulatory requirements and safety requirements at workplaces and in production processes with the participation of workers [1–3]. Occupational health and safety professionals take on many key responsibilities to help keep workers safe [4, 5]. They analyze and review the work environment and procedures, develop preventive programs to keep workers safe, investigate incidents and identify causes, train workers in emergencies, and investigate all aspects of the workplace [6]. Their job is to make the workplace a safe and optimal environment for every employee [7].

Based on the tasks assigned to this profession, the work of an OT specialist implies a high level of training, skills and judgment to assess a wide range of different situations in the field of OT [8]. HSE professionals must be knowledgeable and trained to review every aspect of the work environment for existing risks as well as potential risks in the future. To cope with a serious workload, professionals must be technically educated, have excellent communication skills, be attentive to detail, possess physical stamina and apply problem-solving skills. After all, OT specialists are a kind of line of defense against unnecessary accidents and tragedies. They work mostly behind the scenes, protecting employers and employees from unseen or unknown dangers, as well as working to prevent emergencies entirely. It is a rewarding job with many career options focused on specific areas and environments [9].

However, it is not always possible for a specialist to take a responsible approach to the performance of his labor functions in order to increase the level of labor protection at the enterprise. This was the basis for choosing this research topic.

The relevance of the work lies in the need to evaluate the effectiveness of an OT specialist, which will allow, depending on the result obtained, adjusting the work of an employee to achieve positive results in the functioning of the OT system in an organization. Therefore, the purpose of the work is to evaluate the effectiveness of an OT specialist.

Research methods

To achieve the goal of the study, the existing assessment methods were considered:

– assessment by the number of accidents;

– KPI (Key Performance Indicators) system;

– standard GOST 12.0.230.3–2016 «System of labor safety standards. Occupational safety management systems. Evaluation of effectiveness and efficiency» [10];

– Order of the Ministry of Labor and Social Protection of the Russian Federation dated September 22, 2021, № 656n «On approval of an indicative list of events to prevent cases of damage to the health of workers (during the performance of work (rendering services) in the territory under the control of another employer (another person)» [11].

When conducting a comparative analysis of the methods under consideration, both their advantages and disadvantages were identified. On this basis, the selection of the main criteria (indicators) for evaluating the work of an OT specialist was made. For a comprehensive assessment, quantitative indicators were selected and their significance weight was taken into account.

The performance indicators from GOST 12.0.230.3–2016 were taken as the basis for the evaluation model for quantitative indicators. These indicators are typical and not all criteria proposed in this document are suitable for this calculation.

The proposed indicators were classified in terms of their belonging to the following selected blocks, which are guided by the inspection in accordance with the Order of the Ministry of Labor and Social Protection of the Russian Federation № 656n. The following three blocks have been identified:

– block-1 – organizational indicators;

– block-3 – PPE (indicators for the timely provision of personal protective equipment);

– block-4 – treatment-and-prophylactic and sanitary indicators.

Since there are no sufficiently important indicators related to technical measures in GOST 12.0.230.3–2016, they were added in accordance with Order № 656n and combined into «block-2 – technical indicators».

To process the criteria described above, a single indicator E_p was chosen, which characterizes some separate property (attribute) of activity in the field of OT. The indicator can be both dimensional and dimensionless. For clarity of presentation, a single indicator is used in a relative dimensionless form on the interval from -1 to 1. For calculation, the value «yes» is assigned to the indicator as a positive assessment. If the indicator is not met, then it is considered negative with the value «no».

The calculation of a single indicator was carried out according to the formula:

$$E_n = \frac{(n^+ - n^-)}{(n^+ + n^-)},$$

where E_n – single indicator; n^+ – the number of indicators with a positive value («yes»); n^- – number of indicators with a negative value («no»).

Considering this, the number of completed or unfulfilled OT activities can only ascertain the effectiveness of the work of an OT specialist, since this approach does not take into account the difference in the weight of the impact of the identified shortcomings in the work.

Therefore, for a better assessment, it was decided, in addition to calculating indicators, to take into account the impact of the work of an OT specialist on the overall level of the process of ensuring safety and spreading the OT culture among all employees of the organization. To do this, some weighting coefficients for the activities identified above have been introduced.

A three-level «safety ladder» was chosen to be used. An approximate view of such a ladder is shown in the figure.

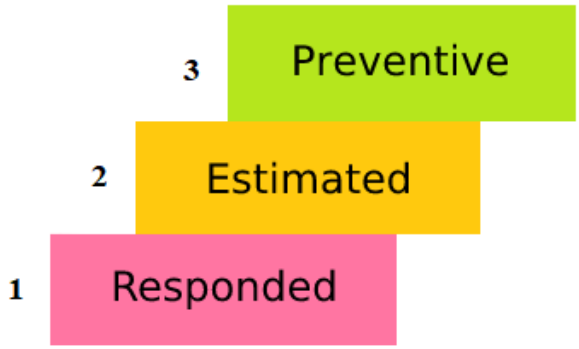

Fig. **Model for determining the level of «safety culture»**

Responsive (1st) level: implies that the work of the OT specialist is mainly related to the implementation of corrective actions only after an accident has occurred. Also, all incidents are caused by a poor level of control.

Estimated (2nd) level: implies that the OH specialist develops documentation, activities and technical controls based on risk. Incidents are being investigated. Root causes are being identified. It is believed that the organization has an occupational safety and health management system (OSMS). Employees of the enterprise see that active paperwork is being carried out.

Preventive (3rd) level: The work of an OT specialist goes beyond formal procedures. Issues related to OT are considered as a whole. Safety is managed through the problems that exist in the workplace and in the OSMS. Employees are open about the problems they see. The employer receives more accurate information. Employees trust management and appreciate the openness of the employer.

Each level of the «safety ladder» is assigned a weighted score:

– 1 point – reactive level;

– 2 points – calculated level;

– 3 points – preventive level.

Depending on the importance of the qualitative and quantitative indicator of evaluation, one or another number of the «safety ladder» level was assigned for clarity and further calculation.

The calculation was made by summing up all completed (with a positive value of «yes» – numbers from one to three with a «+» sign) and unfulfilled (with a negative value «no» – numbers from one to three with a «–» sign) of assessment indicators and summation of points for each level (number). Also, each level has its own share coefficient:

– reacting level = 1;

– calculated level = 2;

– prophylactic =3.

Research results and their analysis

According to the results of the calculation, Block-1, related to organizational indicators, turned out to be the lowest in terms of efficiency. His single indicator was E_{n1}= -0,13. In this block, a sufficiently large number of indicators of negative assessments is due to the fact that OSH activities are carried out either only by 85 %, or at all are not fulfilled. This is likely to lead to subsequent negative ratings. Violations identified as a result of inspections.

The next with a slightly better score is Block-2 with technical indicators, its single indicator was E_{n2}=0,27. Based on the indicators, it can be seen that the main shortcomings in this block are that there is no work done by the OHS specialist to check the health of working equipment.

Further, in Block-3, a single efficiency indicator was E_{n3}=0,33. The block consisted of three indicators, of which one, related to with the development of new work regulations for the recorded changes.

The maximum efficiency of a specialist can be observed in Block-4. The block includes treatment-and-prophylactic and sanitary indicators. Almost all of the presented indicators have a positive assessment of «Yes». Only the indicator related to the implementation of corrective and preventive actions, which must be carried out as a result of the analysis and determination of the causes of all accidents, accidents, incidents and occupational diseases, received a negative assessment.

The obtained values of the indicators, taking into account the weighting coefficient of the direction of work of the OT specialist, were redistributed by the levels of the «safety ladder» as follows:

– Block-1' and Block-2' remained with the same category «satisfactory», but Block-1 received a lower mark $E_{p1.1}$=-0,2, and Block-2', on the contrary, a higher $E_{p2.1}$= 0,4.

– Block-3' moved from the «satisfactory» category to the «good» category with a score of $E_{p3.1}$= 0,5, and Block-4', on the contrary, from «good» to «satisfactory» $E_{p4.1}$= 0,6.

Analyzing the obtained data of qualitative and quantitative indicators of the effectiveness of specialist N for each block, possible reasons were identified for the presence of a large number of negative ratings for indicators:

– lack of one OT specialist to perform such a volume of duties at the enterprise in question;

– lack of motivation of the OT specialist in ensuring safety in the organization, unsatisfactory attitude of the OT specialist to his work.

Conclusion

So, in the course of the work, the goal was achieved – an assessment of the effectiveness of the work of a labor protection specialist was carried out. Based on the identified shortcomings for each of the blocks of assessment of an OT specialist, the following recommended measures can be proposed to change the approach to performance assessment, namely:

– to divide the non-fulfillment of the OT activity into blocks;

– to use a correction (weighting) coefficient in the assessment to place the significance and priority of one or another OT activity;

– increase the staff of the OT service, taking into account all the statistical data.

The implementation of the proposed activities at the enterprise can help the OT specialist to at least perform his labor functions in a quality, timely manner and effectively, and as a maximum – to increase their contribution to the development of safe working conditions in the organization.

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Information about the article: the editors received the article: 14.12.2022;
accepted for publication: 11.05.2023

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