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Охорона праці як складова ефективного менеджменту сучасного підприємства

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Анотація. Питання охорони праці, особливо на великому підприємстві, є ключовими складовими соціально-трудової сфери, що значно впливають на роботу всього підприємства. У сучасних економічних умовах, де кожне підприємство націлене на випуск конкурентоздатної, високоякісної продукції та отримання прибутку, збереження здоров'я і працездатності кожного працівника знаходяться на пріоритетному місці. Будь-яке соціально орієнтоване підприємство зацікавлено, насамперед, у скороченні рівня аварійності, травматизму, виробничо-обумовленої та професійної захворюваності працівників. Метою дослідження стало визначення й оцінка ролі охорони праці та промислової безпеки у формуванні ефективної системи менеджменту та діяльності підприємств. У процесі дослідження було використано метод порівняння, аналогія, формалізація, структурний аналіз, діалектичний метод пізнання. У результаті дослідження було визначено, що сучасна організація охорони праці на виробництві має бути спрямована на ефективне управління промисловою безпекою всіх технологічних процесів і врахування міжнародних стандартів, зокрема OHSAS 18001, ISO 4501, ISO 9001, що є основою ефективного менеджменту підприємства загалом та сприяє виявленню й попередженню проявів несприятливих чинників та, як наслідок, мінімізує виникнення травм і професійних захворювань, втрати життя, здоров'я та працездатності загалом, виявляє та попереджає виникнення несприятливих чинників

Ключові слова: підприємство, виробництво, охорона праці, промислова безпека, ризик виникнення небезпеки для працівника, система управління охороною та безпекою праці

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Labour Protection as an Effective Management Component of a Modern Enterprise

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Abstract. Labour protection issues, especially in a large enterprise, are key components of the social and labour sphere, which significantly affect the performance of the entire enterprise. In modern economic conditions, where every enterprise is focused on producing competitive, high-quality goods and making a profit, maintaining the health and efficiency of each employee is a priority. Any socially oriented enterprise is primarily interested in reducing the level of accidents, injuries, industrial-related, and occupational diseases of employees. The purpose of the study is to determine and evaluate the role of labour protection and industrial safety within effective management system development and enterprise activities. In the course of the study, the method of comparison, analogy, formalisation, structural analysis, and dialectical method of cognition were used. As a result of the study, it was determined that the modern labour protection should be aimed at effective management of industrial safety of all technological processes and taking into account international standards, in particular OHSAS 18001, ISO 4501, ISO 9001, which is the basis of effective enterprise management as a whole and contributes to the identification and prevention of adverse factors and, as a result, minimises injuries and occupational diseases, loss of life, influences health and working capacity in general

Keywords: enterprise, production, labour protection, industrial safety, risk of danger to the employee, occupational health and safety management system

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Introduction

Labour protection and industrial safety form an integral part of an effective management system and modern enterprise management. The role of labour protection in the enterprise is as follows. First of all, it consists in validating the statement that human life and health are of the highest value. Management should not ignore labour safety, which is a priority in production. Most incidents and accidents in the workplace could have been avoided if employees had timely and fully obtained the necessary knowledge and skills to ensure safety and had been aware of labour protection principles. The main measures to organise safe working conditions even before the start of labour activity are: conducting briefings, training in safe techniques for performing professional duties. All employees, in particular heads of organisations, as well as employers-individual entrepreneurs, are required to undergo training on labour protection and test their knowledge of labour protection requirements. Organisation components of the labour protection system at the enterprise should primarily focus on the provisions of the Law of Ukraine "On Labour Protection" [1] and the Labour Code [2].

Furthermore, each person in the enterprise is valuable precisely as an employee who has certain knowledge and skills. In the conditions of properly organised labour safety provision, the discipline of employees at the enterprise and labour productivity significantly improves, the number of accidents, equipment failures, and other emergency situations decreases – all this has a positive impact on the enterprise productivity. Labour protection and industrial safety in the company's management system, along with the safety of employees in the performance of their official duties, also considers the prevention of occupational diseases, the organisation of proper nutrition and rest during breaks, providing employees with the necessary personal protective equipment, special clothing, sanitary and hygienic facilities, the implementation of certain social benefits and guarantees [3].

It is the standard-compliant approach to the organisation of labour protection, fair and effective use of material and non-material incentives that give employees a sense of stability, protection of their rights and interests, and demonstrate management's attention to their employees. Well-established labour protection reduces staff turnover, which, for its part, has a positive effect on enterprise stability. Certainly, there are other, less considerable forms of occupational safety and enterprise management system. However, the above is enough to realise the importance of quality support for occupational safety at the enterprise. The present forces recognising the issues of labour protection and industrial safety as more relevant than ever. After all, the emergency situations can permanently stop the production, cause not only emotional and physical stress in the work of the team, but also bring substantial financial costs for the manager. In this regard, timely recognition of hazards and solving existing and possible issues from the standpoint of labour protection, leading to injuries at the enterprise and occupational diseases become the priority. The labour protection and industrial safety issues, first of all, include untimely and poor-quality training of employees, lack of professional competence. Measures that prevent these difficulties include conducting briefings and training in safe methods of performing work. In some cases, the presentation of material should be changed: it may be advisable to add video and audio accompaniment to the text of training programmes, to create visual diagrams and models of situations, and to more actively use modern technologies in training and testing knowledge regarding labour protection. For all employees, including managers of economic activities and employers-individual entrepreneurs, the primary responsibility should be to complete training with subsequent knowledge testing on labour protection requirements as a part of successful enterprise management and its industrial safety.

Thus, *the purpose of the study* is to determine and assess the role of labour protection and industrial safety in the development of an effective management system and enterprise activities.

Literature Review

Research on aspects of labour protection and safety was conducted by such scientists as: M.P. Handziuk, E.P. Zhelibo, M.O. Halimovsky [4], Z.M. Yaremko, S.V. Timoshuk, O.I. Tretyak, R.M. Kovtun [5], A. Blackham [6], G. Gogitashvili [7], I.O. Shashkova-Zhuravel [8], M.I. Inshin [9]. The study of A.P. Bochkovsky [10] proposed priority areas for improving the Occupational Health and Safety Management System (OHSMS) in the industrial complex of Ukraine based on the analysis of the effectiveness of its functioning over the past five years. The analysis was carried out by studying the dynamics of changes in the main indicators that characterise the effectiveness of the OHSMS, namely occupational injuries and diseases, the condition of production equipment, buildings, and structures, as well as compensation for material damage to victims of accidents.

The study of V.B. Zagornyak, A.P. Kovalchuk and D.R. Kostinyuk is devoted to the development of a unified model of industrial labour safety management [11]. The need to apply professional standards in the development of the organisation's personnel policy and the establishment of a wage payment system is considered in the study of M. Chizhova and L. Khairullina [12]. The

authors note that the professional standard can be used during employee certification. Professional standards also play a key role in the preparation of employment contracts.

It is also worth paying attention to the world scientific community opinions on the issue of labour protection and industrial safety during the population's labour activity. G. Janet's study focused on the analysis of occupational health and safety in medical institutions [13]. Although this is not an issue of industrial safety, it is still extremely relevant. The studies of G. Garnikaa and G. Barigaa [14], as well as P.A. Schulte et al. [15] cover the main obstacles to the implementation of occupational safety and health management systems within small businesses from the point of view of owners, managers, labour auditors, and occupational safety consultants, especially taking into account the OHSAS 18001 standard. K. Van, K. May, S. Liu, J.Zhang [16] determine their study as a mechanism to promote national and international occupational health and safety improvements for small and medium-sized enterprises (SMEs) in China within internal and external resources. Researchers L.-I. Choka and L. Ivask consider the IT components in the issue of ensuring labour protection and safety at European enterprises [17]. In addition, the study of Swedish researchers E. Hagquit, S. Winberg, S. Toivanen, and B.J. Landstad considers the role of labour protection inspectors in compliance with industrial safety and labour protection standards in Swedish enterprises [18].

Materials and Methods

The methodological basis of the study included the dialectical method of cognition, which allows studying the development issues of management and administration in labour protection and industrial safety, their interrelation and interdependence. The study was performed based on general scientific and special methods of cognition: comparison, analogy, formalisation, structural analysis, expert assessments and opinions, factor analysis, institutional analysis, as well as analysing the causes of occupational injuries and diseases. Upon research, it was predicted that the development of safe working conditions is influenced by a large number of factors: the type of work performed and working conditions, design and engineering solutions in the workplace and the enterprise as a whole, the quality of technologies used and technological discipline level, the overall organisation of the labour process, and others. The safety of technological, production, organisational and labour processes within enterprises is ensured by assessing the degree and type of the negative impact of dangerous and harmful production factors on employees' health [19]. The development and implementation of measures to reduce or prevent them is an effective mechanism for improving working conditions.

The initial information of the study is various guidance documents on labour protection: laws, codes, standards, provisions, lists and regulations, requirements and instructions, and so on. The existing level of ensuring labour protection of the enterprise can be determined by various assessments. The most common methods and means can be considered the following: preliminary analysis of hazards, analysis of hazards and employees' labour productivity, the use of checklists (surveys), the method of system risk analysis, analysis of errors/failures, analysis of the forms and consequences of failures, analysis of violations of labour protection regulations.

Results and Discussion

The emergence of the OHSAS-18000 standard "Occupational Health and Safety Management Systems" (hereinafter referred to as the occupational safety management system) was due to the need to implement measures to prevent major industrial accidents within the world community and ensure occupational health and industrial safety in general. The most successful development was the OHSAS 18000 series of standards by the British Standards Institute, which consisted of two standards – OHSAS 18001 and OHSAS 18002. OHSAS 18001 is the main standard. It contains requirements for creating, maintaining, and improving an occupational safety system. OHSAS 18002 completely repeats OHSAS 18001 in structure, however, unlike its "counterpart", it does not contain requirements, but includes explanations and additional information on the implementation of certain provisions of OHSAS 18001 [20].

When referring to OHSAS 18001 standard, it is worth noting that it is built on such principles as: voluntariness and universality, which consist in the fact that it does not have to be applied at all enterprises, but if the management has decided to meet modern requirements in the field of security management, then this standard can be used and implemented in any organisations, regardless of the number of employees, the size of structural divisions, activity types, organisational structure, and ownership forms. In practice, the OHSAS 18001 standard is easily linked to other management systems of organisations, since some of its requirements repeat points from the quality management system, environmental management.

It should be understood that the implemented occupational safety management system has exclusively administrative requirements, which is expressed in the fact that the OHSAS 18001 standard sets only safety requirements, answering the question "What to do?", but it does not define what actions and tools should be used to implement these requirements. The standard also does not replace or cancel other applicable regulatory

requirements in the field of safety and labour protection. The requirements of the OHSAS 18001 standard can be used both to assess the compliance of the occupational safety management system by the enterprise or organisation (internal occupational safety audit) and by external parties (external occupational safety audit). At the enterprise, personnel safety and its health protection can also be organised through certification. In certification, dangerous and harmful production factors, production hazards, personnel health, the organisation itself, occupational safety and health protection can be the study subjects. These factors are evaluated for compliance with certain requirements of the OHSAS 18001: 2007 standard. Certification is usually carried out by an independent accredited body that issues a certificate of conformity to the enterprise – a document confirming that the organisation cares about the employees' safety and controls production risks. The certificate is valid for three years, subject to annual supervisory audits by the certification body.

Figure 1 presents the advantages of implementing a management system for industrial safety and labour protection of personnel at the enterprise. Table 1 provides criteria for modern industrial safety management.

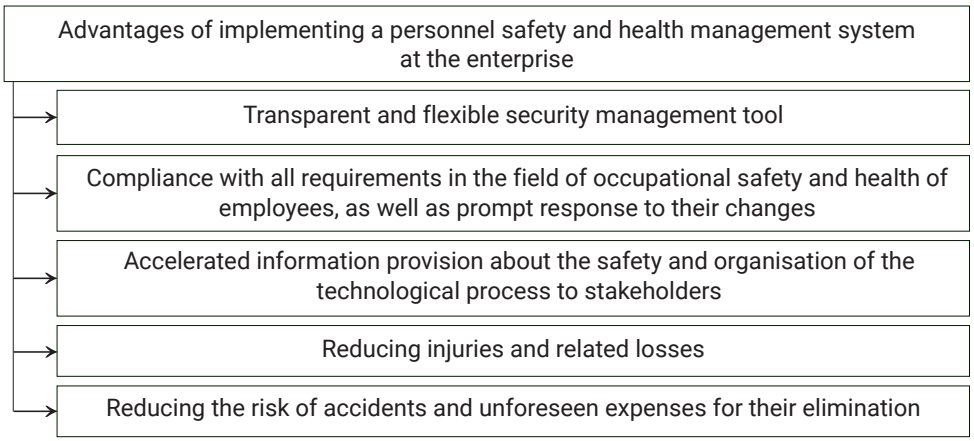

Figure 1. Advantages of implementing a personnel safety and health management system at the enterprise

Table 1. Criteria for modern industrial safety management

Criteria	Characteristics of criteria
Consistency	Consistency and timeliness of steps when building a security management system
Transparency of investments – labour protection expenses	Prevention costs and expenses that include direct material losses, i.e. expenses for the elimination, neutralisation, and compensation of already committed violations in the field of industrial safety and labour protection (post-expenses)
Adequacy	Search for the optimal ratio between probable losses and acceptable costs to prevent or minimise losses
High degree of fault tolerance	Minimising the human impact on the operation of the entire production safety system, flexibility during modernisation, functionality, and the possibility of integration regarding equipment and technological processes
Legality	Compliance of measures applied during the creation of the security management system with the current regulatory acts and legislation of Ukraine
Integration	Combining existing and newly implemented elements of security management into a single system and its harmonious integration into the enterprise's business activities

Security management is based on the principle of continuous improvement, which is described as Plan – Do – Check – Act, PDCA cycle [21]. The PDCA cycle makes it possible to:

- take into account the requirements of all stakeholders in developing and implementing the system;
- create and configure a management system for the needs of a specific company;
- promptly respond to any changes (new legislation, new internal standards, joining holdings, launching new equipment and products) and include them into the occupational safety management system.

Developing an industrial safety management system based on OHSAS 18000 standards is a long and

complex process. According to statistics, approximately 50% of implemented projects end in failure, and many projects were not effective and did not give the results that they were originally designed for. It should be understood that OHSAS standards are aimed at establishing an industrial safety management system in an organisation or enterprise, which is quite difficult to do without special knowledge. Even if the implementation of such a system is carried out by third-party specialists, it will be necessary to maintain its working condition by the internal forces of the enterprise.

The implementation of OHSAS takes place in several stages, each of which requires using the knowledge obtained during training. In addition, when implementing the industrial safety management system of production, it is worth paying attention to the fact that along with the economic growth of the enterprise, methods and approaches to ensuring labour safety and personnel health should also be capable of dynamically and flexibly transforming since the modern industrial safety system becomes one of the components of business process management at the enterprise. Therewith, it should be taken into account that divisions of a large enterprise can be considered separate organisations, each of which can implement a labour safety management system.

Thus, a systematic approach to monitoring (analysis) and management of industrial safety will eliminate the randomness of taking measures to build an industrial safety and labour protection management system aimed at preserving the life and health of personnel. With regard to the safety of employees, it should be noted that an educated, professionally trained, economically interested employee a priori will not make mistakes that can lead to emergencies, fires, and consequences that arise from this. According to A. Fayol (a researcher who published fundamental issues on industrial safety in the 19th – early – 20th centuries), predictions, organisation, coordination, control, and orders regarding processes form the main content of administrative management [22]. The organisation of industrial safety management at the enterprise will have the following form (Table 2):

Table 2. The organisation processes of industrial safety management at the enterprise

Process	Process characteristics
Predictions	Forecasting (planning) emergency situations at each workplace and the enterprise as a whole, based on physicochemical and flammable properties of substances and materials used in the production scheme, and assessing the possibility of hazards to their sources. Planning can be long-term (with a deadline of more than one year), current (with a deadline of the current year); it can provide for two levels: planning at the enterprise in general (long-term and current planning); planning at the level of production structural divisions (workshops)
Organisation	Building a double (material and social) mechanism of the enterprise to prevent possible accidents. In addition, the establishment of work methods and techniques in accordance with the production technology; the provision of favourable working conditions; prompt elimination of identified shortcomings with an accurate indication of the completion deadline
Order	Organisational and administrative measures to force personnel to constantly and strictly comply with the safety rules and standards established at the enterprise
Coordination	Association, linking, harmonisation of all joint actions of the company's personnel to build a high-quality industrial safety system: training the employees in safety rules regarding the functioning features of the technological process in production (briefings, training, activities of labour protection commissions, etc.)
Control	Monitoring the security system of each workplace, site, workshop, and enterprise as a whole. The implementation of action plans for labour protection and industrial safety can be controlled by the labour protection service along with the trade union committee and labour protection commissions; in production structural divisions, services – by managers and specialists of these structural divisions. The implementation of measures can be periodically reviewed at security meetings. Reports on the implementation of action plans, treaties, and collective agreements are reviewed by managers during planned reports

Thus, the function of planning measures to ensure industrial safety management is to set requirements for the safety of equipment, workplace, technological process, to check the compliance with these requirements during installation and adjustment, to plan production control measures, preventive work to maintain the reliability and safety of the equipment. Planning should be accompanied by operational security management, which includes regulating the security level by taking various measures (for example, monitoring security

parameters; comparing security parameters with acceptable values; evaluating the possibility of changing parameters to acceptable ones or changing trends; making a decision on security management and implementing the decision in practice) in accordance with the plans.

It is also necessary to note that accounting and analysis in the implementation of forecasting measures in the industrial safety management system provide for the accumulation of all data on the safety state, the results of measures performed, accidents, diseases, and funds spent on ensuring safety. Considering the accumulated data, a quantitative and qualitative analysis of the security status should be conducted periodically, the results of which allow clarifying and, if necessary, adjusting the security action plan.

Conclusions

Therefore, production safety management should be strategically focused on the development and preservation of the most important intangible resource – human capital, which in the modern world is becoming the main wealth of countries, corporations, and firms. To do this, employees – holders of human capital – need to create safe working conditions and maintain the necessary level of technical knowledge in them. Obviously, this is the main objective of enterprise security management in modern production conditions as a factor of the successful operation within an enterprise.

The role of labour protection and industrial safety is of great importance, disregard for the principles and rules of which often leads to unfavourable consequences. At present, the issues of occupational safety and health are important and relevant for any enterprise. Labour protection is one of the main elements in enterprise management. Therefore, the establishment and transformation of a high-quality occupational health and safety management system, within management and administration issues at the enterprise, which acts as a link between the various elements of the occupational health and safety system and its issues, should be one of the main priorities of social policy of any enterprise and the state in general.

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