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Safety and hygiene of work of the transport industry based on OSH management standards

SUMMARY

In Poland, most enterprises in the transport industry are beginning to pay attention to safety issues. Safety is understood as both safety of transportation of goods and safety of working conditions within this sector. In recent years, an increasing interest in the issue of occupational health and safety has been observed, especially in the systemic approach. Therefore, more and more entrepreneurs are implementing health and safety management systems and their certification, which is believed to be an expense at the beginning, but generates a large profit over time.

Key words: work safety, OHSAS system, transportation industry.

Research problem and research method

The purposefulness of applying occupational safety and health management systems in the transport industry (road transport of goods by road) has been demonstrated. An analysis of the impact of the effectiveness of the health and safety system implementation on its functioning was conducted.

Surveys were conducted based on internal and external audits (supervision and certification). The research sample is 120 people working in various positions in transport companies (road transport). The aim of the research is to assess the impact of the effectiveness of SZBHP implementation on its subsequent functioning.

1. Legal and normative regulations in the area of health and safety

In Poland, legal requirements in the field of occupational health and safety are defined, among others, in the Labor Code, which defines the rights and obligations of both employers and employees. The Ordinance of the Minister of Labor and Social Policy on general health and safety regulations regulates health and safety issues, where employers are obliged to conduct occupational risk assessment, use of preventive measures and conduct training and documentation in the area of health and safety. There are also a number of other industry requirements in which specific health and safety requirements are defined, for example construction, medical services,

railways, aviation, etc. These are legal requirements that set up health and safety and health and safety specialists in the organization. However, more and more often entrepreneurs want to take more action for work safety than legal requirements. The transport sector is increasingly reaching health and safety standards that are guidelines for building a good occupational safety and health management system. Currently, the most commonly used standards are:

- polish standard 18001¹ Occupational health and safety management systems – Requirements, which is supported by the standard 18002² Occupational health and safety management systems – General guidelines for risk assessment;
- British standard *OHSAS 18001*³ occupational safety and health management systems.

Both standards concern the systematization of activities aimed at improving the health and safety of the organization. The standards are similar to each other, that is currently working on the ISO 45001⁴ standard, which will shortly replace both standards and will be a uniform ISO standard for health and safety.

OSH management system requirements

Both the requirements of the Polish and British standards are consistent in the area of health and safety. The health and safety management standard indicates the use of a series of internal procedures, instructions and tools for monitoring health and safety status. The basic elements of building a health and safety management system are, among others:

- definition of health and safety policy;
- planning the health and safety management system, by defining criteria for risk assessment, defining legal requirements in the scope of health and safety, and formulating goals and procedures to achieve objectives in the area of health and safety;
- implementation and functioning of the occupational safety and health management system, by defining the structures and responsibilities of persons, training employees, developing and supervising specific documentation, and response plans in the event of accidents or accidents at work;
- supervision of the system and the possibility of introducing corrective and preventive actions, as well as activities enabling the assessment of the effectiveness of a functioning system through monitoring, auditing and management reviews.

In the provisions of general norms, it can be read that it is recommended that the introduction of a health and safety management system is a strategic decision of the organization. During the implementation process, the goals and needs of the constantly changing characteristics of the organization should be taken into account. The attention is paid here to the fact that the management system should be adapted to the size and capabilities of the organization and the industry in which it is introduced.

An important element of the standard is to draw attention to the process approach to managing

¹ PN-N 18001: 2004 Occupational health and safety management systems – Requirements.

² PN-N-18002:2011 Occupational health and safety management systems – General guidelines for risk assessment.

³ BS OHSAS 18001:2007 – Occupational health and safety management systems.

⁴ <https://wiedza.pkn.pl/web/wiedza-normalizacyjna/zarzadzanie-bezpieczenstwem-i-higiena-pracy>, data dostępu: 22.01.2018 r.

occupational safety and health. The process of process management can not only be understood as a transport process, but in practice we should approach process health and safety at work. The model of occupational safety and health management system is based on the concept of continuous improvement. The model used in this standard is shown in the figure.

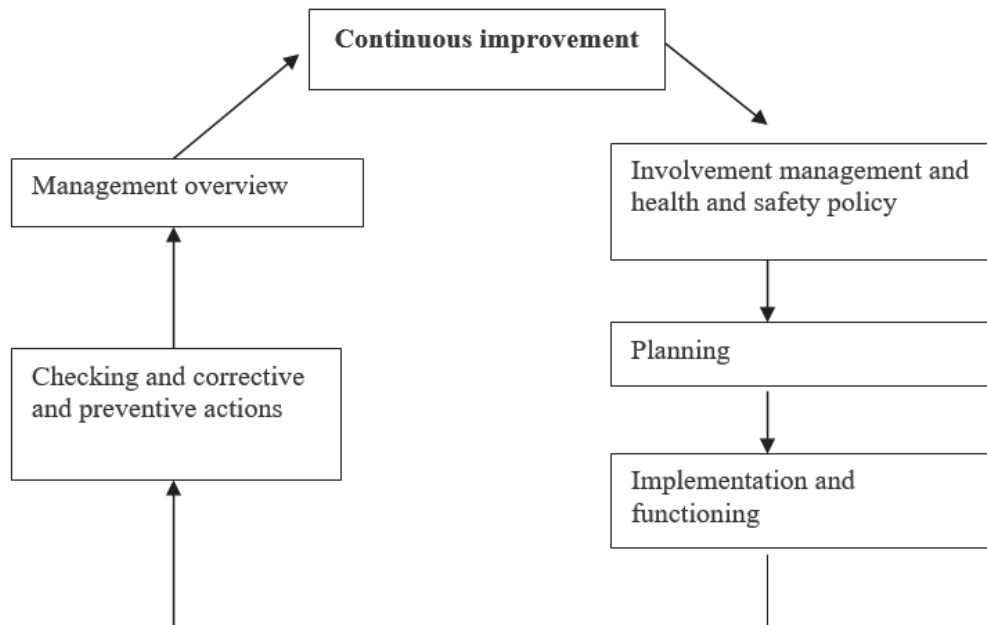


Figure 1. Model of management system according (development according to PN-N 18001)⁵.

Stages of effective implementation of the occupational safety and health management system in the transport industry

Audit observations show that in order to correctly and effectively implement the occupational safety and health management system, the implementation activities should be divided into stages and implemented in succession as follows:

Stage I – Implementation Team – appointment of the SZBHP implementation team (System Specialist, Department Managers, Health and Safety Specialist) together with the determination of responsibility for the implementation of the SZBHP and related rights.

Stage II – Training – organizing and conducting training for the managerial staff to ensure an understanding of the requirements of the occupational health and safety management system and the involvement of staff in the implementation of the system (the basics are provided by this presentation) and training of the rest of the employees.

Stage III – Identification of legal requirements – it is necessary to prepare a list of applicable legal acts, responsibilities in this respect and the manner of providing information and to assess whether the enterprise meets the updated requirements (if it is not required to initiate actions needed to meet them).

Stage IV – Initial review – development of questionnaires (anonymous) on the health and safety status for production workers, collecting data from surveys to look at the problems

⁵ PN-N 18001: 2004 Occupational health and safety management systems – Requirements.

exchanged during filling out checklists, appointing people for the initial screening, conducting a preliminary review and summarizing the results of the initial review.

Stage V – Health and safety policy – developing a health and safety policy project – consulting policy with employees, establishing health and safety policy and publishing health and safety policy to all interested parties. Health and safety policy is the focus of actions on the prevention of accidents and occupational diseases, which is the most effective action to reduce the effects of health and safety.

Stage VI – Definition of general and specific objectives for health and safety – presentation of proposals for general health and safety objectives, setting and validation of general goals and preparation of plans for their implementation. Development of a form for documenting the detailed objectives planned and their settlement.

Stage VII – Occupational risk assessment – developing a risk assessment procedure and conducting analyzes as to whether occupational risk assessment is carried out in accordance with the developed procedure.

Stage VIII – Communication on health and safety matters – development of a communication procedure in health and safety matters, including the involvement of employees in the communication process and consulting with them on health and safety measures, the implementation of the procedure to the culture of the enterprise.

Stage IX – Health and safety monitoring procedure – development and implementation of health and safety monitoring procedures, health and safety monitoring procedures taking into account OSH aspects, forms and frequency of monitoring them.

Stage X – Internal audits procedure – development of an audit procedure defining the competences of internal auditors, scope and frequency of audits, audit methodologies and the method of documenting results.

Stage XI – Procedure for corrective and preventive actions – development and implementation of the procedure

Stage XII – Overview of the Occupational Health and Safety Management System – a review to assess the system. The results of the review should be documented, inform employees or their representatives and the health and safety committee about them

Stage XIII – Certification Audit – conducting an external audit on compliance with the requirements of the standard to confirm that the health and safety system has been implemented and is effectively maintained.

4. Difficulties in implementation and benefits from the implementation of the occupational health and safety system in the transport industry

Before examining the implementation of the above stages, it is important to consider what are the difficulties and the benefits of implementing the health and safety system. Barriers related to the implementation of the Occupational Safety and Health Management System are inevitable. The haste and time pressure is also not conducive to the effective implementation of the health and safety system. The surveyed employees of road transport companies as the biggest barriers to implementation indicated:

- low awareness and lack of involvement of employees at all levels of the organization in matters of health and safety
- operational difficulties in meeting normative requirements
- pressure of time and customers

- costs of implementation, maintenance and improvement of safety.

Indeed, the system implementation costs are felt by entrepreneurs. They include the costs of conducting the initial screening, training, external consultancy, preparation and implementation of documentation (staff working time), purchase of necessary infrastructure and certification and maintenance of the certificate. The costs defined by entrepreneurs are in principle consistent with what the literature indicates (figure 2)

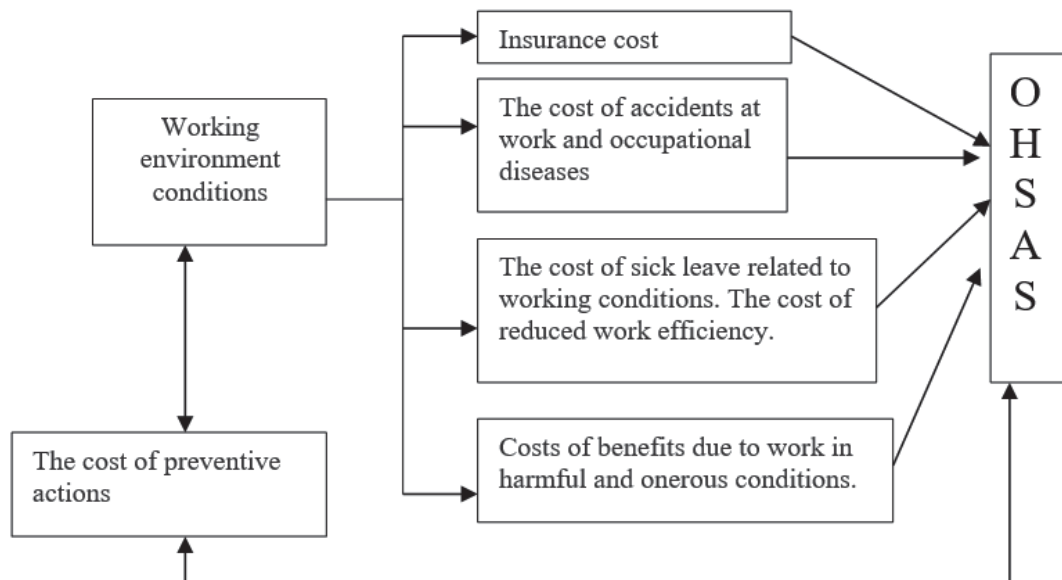


Figure 2. Costs components of health and safety⁶.

It is worth noting, however, that despite the costs related to the implementation and maintenance of the health and safety system, entrepreneurs believe that such action positively affects the employees' awareness of safety, reduces the number of accidents and has a very positive effect on the company's image. The owners of companies as the most important benefits for the enterprise from the implementation of the occupational health and safety management system directly:

- compliance with legal requirements in the field of health and safety,
- real improvement of working conditions,
- improving the company's image and increasing its competitiveness,
- increasing the amount of time spent on production in connection with the improvement of health and safety,
- active involvement of employees in the self-control program,
- increased awareness and motivation of the crew- interest in work in connection with the improvement of quality, productivity and work safety,
- better organization of work and improvement of information system in the course of production and problems of daily work of employees,
- a professional risk assessment carried out in a useful and legible manner,
- prevention of potentially accidental events (so-called "sleeping accidents"),

⁶ J. Żuchowski , *TQM philosophy in sustainable development*, Radom University of Technology, Radom 2008, p. 311.

- reduction of costs related to employee accident insurance,
- reduction of employee turnover,
- identification of health and safety processes and procedures in the organization,
- development and implementation of the documentation of the Occupational Safety and Health Management System,
- internal audits of the Health Management System,
- training for employees and internal auditors,
- Health Management System certification increases the company's reputation and can serve as a marketing element.

After carrying out analyzes of the implementation and functioning of occupational health and safety management systems, survey companies have been carried out for transport companies. The questions were asked 120 people working in various positions. One of the questions is: what were the real reasons for implementing the health and safety system. The results of the research indicated the following answers:

- compliance with the law – 34%
- obtaining a competitive advantage of – 16%
- downtime – 12%
- avoiding fines – 11%
- protection of the company's image – 11%
- reduction of premiums in branch insurance companies – 8%
- conditions imposed by industry insurance companies / insurers – 6%
- ethical reasons – 2%

Results

The collected results from the audits of occupational safety and health systems in the area of the transport industry indicate that it is justified to introduce a systematic approach to the management of the health and safety area. Awareness and motivation for accident prevention decreases the accident rate, and the costs incurred pay back already in the first years of system operation, which the entrepreneurs show in the summary of the management system in the Management Review reports.

Conclusions and summary

Analyzing the costs of consultants, the involvement of health and safety services, training time costs, implementation time of occupational health and safety management systems, they are relatively acceptable, not great in terms of direct benefits such as health and safety of employees, benefits resulting from the lack of downtimes caused by accidents and economic benefits compliant with theory, it is cheaper to prevent than repair the effects (especially if we talk about health). It should be concluded that it is appropriate to implement a systemic approach to OSH also in the transport industry. Well-implemented systems raise the awareness of the staff in the area of occupational health and safety, which significantly affects the reduction of accidents. The introduction of preventive measures and the activities of more frequent periodic inspections has a significant impact on increasing the safety of work in supervised areas – and this is the goal of systemic management of occupational health and safety.

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STRESZCZENIE

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Bezpieczeństwo i higiena pracy branży transportowej w oparciu o standardy zarządzania BHP

W Polsce większość przedsiębiorstw branży transportowej zaczęła zwracać uwagę na bezpieczeństwo. Bezpieczeństwo jest rozumiane zarówno jako bezpieczeństwo przewozu towarów, jak i bezpieczeństwo warunków pracy z tym sektorem związane. W ciągu ostatnich lat odnotować można, między innymi w branży transportowej, wzrost zainteresowania tematem bezpieczeństwa i higieny pracy, zwłaszcza w ujęciu systemowym. Stąd też coraz częściej przedsiębiorcy decydują się na wdrażanie systemów zarządzania BHP oraz ich certyfikację, co potwierdzają jest kosztem na początku, ale i dużym zyskiem wraz z biegiem czasu.

Słowa kluczowe: bezpieczeństwo pracy, BHP, system OHSAS, branża transportowa.

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