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OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT IN THE INTERNATIONAL CONDITION (CONSISTENT WITH OBJECTIVES THE ISO 45001 STANDARD)

Occupational health and safety management in business organizations increasingly entails the need for improvement measures aimed at ruling out or reducing the adverse impact of threats and untoward factors on the labor force. The result of measures taken is to get the conformity with the needs and expectations of employees, recognized as internal customers of this processes.

Creation of safe and hygienic work conditions in the company is inseparably connected with the need to undertake improvement activities, which are used to eliminate or reduce the negative impact of hazards and onerousness for employees. Similar factors occur during a use of systemic requirements.

Despite the adoption of uniform principles, the management systems are a lot varied. In effect is difficult of talking about a possible of total consistency. Each of these systems, covering relevant areas the organization activities usually operates as an independent system with its own management structure. Indicated difficulties are considered as one of the causes of development the ISO 45001 standard, which is international management standard of safety and health at work.

The paper enumerates significant reasons for developing the ISO 45001 standard. It outlines the key guidelines for drafting occupational health and safety management systems based on ISO 45001 requirements and in keeping with the provisions of OHSAS 18001 and ILO guidelines[2] applied to enhance systemic occupational health and safety management.
Keywords: occupational health and safety management, standardization, ISO 45001.

1. INTRODUCTION

The development of safe and hygienic working conditions in business organizations inextricably entails the need for improvement measures aimed at ruling out or reducing the adverse impact of threats and other untoward factors on the labor force. The need for such actions follows primarily from accident profiles which show relatively high accident rates and their substantial cost[3]. Their characteristics are shown in Table. 1.

Table 1. The number of injured in accidents and accident rate in selected sectors of manufacturing.

Specification a – absolute number b - per 1000 persons employed		2011	2012	2013	2014
TOTAL	a	97222	91000	88267	88641
	b	8,3	7,78	7,54	7,45
Manufacturing	a	33431	30243	28095	28620
	b	13,70	12,47	11,64	11,59
- manufacture of wood and products of wood	a	2155	1798	1678	1725
	b	17,07	14,76	14,11	13,99
- manufacture of electrical equipment	a	1198	1080	1027	1040
	b	12,59	11,25	10,64	10,40
- repair and installation of machinery and equipment	a	1175	1189	1081	1110
	b	10,80	10,91	9,48	9,25
- manufacture of wearing apparel	a	421	346	326	296
	b	3,57	3,14	3,16	2,95
- manufacture of food product	a	6051	5735	5496	5433
	b	14,60	14,01	13,46	13,25

Source: *Accidents at work in 2010-2013*, 2011-2014.

Not only are accidents a substantial drain on budgets – they also pose serious social problems. It is therefore critical to identify tools for improving the working environment in ways similar to those employed in other fields of business so as to boost the efficiency of production, service provision and auxiliary functions. Hence, the working environment should be seen as part of the overall business environment in which an undertaking operates.

The improvement measures adopted to that end may rely on systemic management guidelines premised on the need to employ elements of the continuous improvement loop and, as a consequence, guaranteeing proper conditions for all those employed to work in the working environment. This is particularly crucial where business is conducted in the face of growing risks[4]. Once such systemic management procedures is in place, risks associated with the environment, the health and the safety of workers become targeted by formulating requirements designed to ensure the reduction of strains that result from failures to ensure proper working conditions for human operators[5].

Despite the essential significance of occupational health and safety for business efficiency, the field is yet to be unified with standards that correspond to those pertaining to quality (the 9000 series of ISO), environment (the 14000 series of ISO), food safety

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[4] M. Waters, et al., *Exposure Estimation and Interpretation of Occupational Risk: Enhanced Information for the Occupational Risk Manager*, Journal of Occupational and Environmental Hygiene, 2015, 12:sup1, pp. 99-111.

[5] A. Górny, *Zarządzanie ryzykiem zawodowym*, Wydawnictwo Politechniki Poznańskiej, Poznań 2011; J. Tabor, *Occupational Safety Management in the light of Causes Analysis of Accidents*, "Polish Journal of Management Studies", 2013, vol.7, pp.188-200; K. Kogi, *Work Improvement and Occupational Safety and Health Management Systems: Common Features and Research Needs*, "Industrial Health", 2002, vol. 40, no 2, pp. 121-133; Górny A., Rembiasz M., *Wpływ wieku zatrudnionych na wytyczne oceny i akceptowalności ryzyka zawodowego*, „Zeszyty Naukowe Politechniki Poznańskie, Seria: Organizacja i Zarzadzanie", 2015, no 64, pp. 49-64 and *Occupational Health and Safety Management. BS OHSAS 18001 moving to ISO 45001*, Rapport of International Register of Certificated Auditors, Charted Quality Institute, London 2014.

(ISO 22000) and others. The OHSAS 18001[6] standard, which applies internationally, falls short of fulfilling all the criteria (most of which are formal) that need to be met for the standard to be recognized as a globally applicable instrument. Therefore is worth to consider a need and scope of necessary actions, allowing indicate an action most important to take for integrating the management of occupational health and safety in international dimension. And because of the work performer for developing international standard for safety management (ISO 45001), take attempt to assess possibility of obtaining the expected benefits.

2. WORKING ENVIRONMENT IMPROVEMENTS IN BUSINESS

Improvements in the way business is done should be seen as a prerequisite for business success and an organization's survival[7]. Such improvements increase an organization's capacity to meet the needs and expectations of all concerned parties. They extend to efforts to improve the achievements of business partners and cover specifically[8]:

- products, services and processes as well as the relationships among them,
- organization structures,
- management systems,
- human and cultural considerations,
- infrastructures, working environments and technologies,
- relations with concerned parties.

Of major significance for promoting an organization's growth is for its improvement measures to be international in scope and based on international standards issued by European and global standardization bodies (ISO, CEN, ESTIM). Since organizations operate in an international corporate environment, they need to apply uniform management standards regardless of the specific countries and industries from which they stem. The most common links of this kind arise in international supply chains. In such an environment, cultural differences, laws, ethical principles, business and social practices, technologies, etc. may not significantly constrain them in their business pursuits[9].

As a consequence, organizations need to develop integrated control systems to protect them from the risk of failing to ensure the required safety levels[10]. Such protection may well be viewed as the fundamental objective in developing the international ISO 45000 standards on occupational health and safety management that are based on uniform management structures applied across multiple fields of business.

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[6] BS OHSAS 18001:2007, *Occupational Health and Safety Management*, BSi, London.

[7] S. Nenonen, *An operational model of safety management for service providers in manufacturing industry*, "The Service Industries Journal", 2013, vol. 33, iss. 1, pp. 99-114.

[8] PN-EN ISO 9004:2010, *Managing for the sustained success of an organization. A quality management approach*. Polish Committee for Standardization, Warsaw.

[9] see for example: S. Lachiewicz, M. Matejun (eds.), *Zarządzanie rozwojem organizacji w otoczeniu wielokulturowym*, Politechnika Łódzka, Łódź 2014; W. Karwowski and S. Trzcieliński (eds.), *Value Strem Activities Management*, IEA Press, Madison 2007.

[10] K. Kazutaka, *Roles of Participatory Action-oriented Programs in Promoting Safety and Health at Work*, „Safety and Health at Work", 2012, vol. 3, iss. 3, pp. 155-165; K. Kogi, *op. cit.*, pp. 121-131, and J. Tabor, J. Grabara, *Occupational Risk Management in Poland's Wooden Sector*, „Annals of Warsaw University of Life Sciences – SGGW. Forestry and Wood Technology", 2013, no.84, pp. 234-240.

The recommendation is for the improvement measures adopted by process-based organizations to be followed also on process basis, i.e. based on the PDCA (Plan – Do – Check – Act) methodology[11]. This allows them to ensure proper interactions among processes in keeping with the needs of the concerned parties. Success in completing the measures is crucial for achieving the desired maturity of an organization's management system. The improvement measures aimed at identifying a system's maturity are provided in Table 2.

Table 2. Description of improvement measures which increase management system maturity.

Maturity level	Maturity description
1	Improvement priorities are based on errors, complaints or financial criteria.
2	Improvement priorities are based on customer satisfaction data or improvement measures.
3	Improvement priorities are based on the needs and expectations of some concerned parties including suppliers and organization members.
4	Improvement priorities are based on trends and input data from other concerned parties as well as surveys of social, environmental and economic changes.
5	Improvement priorities are based on input data from concerned parties.

Source: PN-EN ISO 9004:2010, *Zarządzanie ukierunkowane na trwały sukces organizacji. Podejście wyko- rzystujące zarządzanie jakością (Managing for the sustained success of an organization. A quality management approach)*, PKN (Polish Committee for Standardization), Warsaw.

A set of comparable requirements should be incorporated into an occupational health and safety management system with proper account taken of the specific ways in which the relevant company operates and interacts with its environment. In such conditions, any irregularities as well as any ways to rectify them are linked with the need to ensure safe and healthy working conditions to workers and a proper working environment to the parties therein.

3. WORKING ENVIRONMENT IMPROVEMENTS – THE INTERNATIONAL DIMENSION

3.1. Domestic and international standardization

Despite similarities among them, various systems used to manage diverse fields of business cannot be considered to be fully consistent[12]. Each system covering an organization's specific functions tends to operate independently and command its own

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[11] A. Hamrol, Zarządzanie jakością z przykładami, Wydawnictwo naukowe PWN, Warszawa 2005, s. 113; J. Łunarski, *Zintegrowane systemy zarządzania – wspomaganie zarządzania systemami standardowymi*, Oficyna Wydawnicza Politechniki Rzeszowskiej, Rzeszów 2011.

[12] N.J. Duijm, et al., *Management of health, safety and environment in process industry*, „Safety Science", 2008, vol. 46, iss. 6, pp. 908-920.

separate management structure[13]. This is not changed by constructing systems on the basis of common guidelines or in attempts to integrate them by assigning to one system the requirements that allow one to assume they additionally apply to other fields of business.

To achieve complete consistency, one needs to combine or integrate various aspects of management into a single effective and efficient system. Such efforts have for years been taken by enterprises oriented at risk management[14] and to improve safety levels making organizations more mature in terms of protection against accidents and incidents[15].

However, international standardization bodies have so far failed to further such efforts. The integration they pursue usually involves adopting quality, environmental, food safety, information-related and other requirements in a continuous-improvement based management model[16] which only appears to be universal.

An attempt to facilitate consistent measures has been made in drafting ISO 22301[17]. The standard defined requirements on the planning, establishing, deploying, running, monitoring, reviewing, maintaining and continually improving management systems across all areas of application. ISO 22301 is designed not only to be implemented in an organization but also to guide the development of management systems that rely on common requirements. It points to the basic achievable benefits to be derived from adopting management systems. The main goal in complying with the standard's guidelines is to facilitate operation despite the occurrence of adverse events. Specifically, the effort is aimed at:

– reducing the probability of the occurrence of such events,
– preparing the organization for their occurrence,
– ensuring the organization is prepared to adopt immediate improvement measures should such events occur,
– helping the organization find its way out of a crisis situation should such adverse events occur.

The requirements are assumed to form a common framework for the development of the management systems in question, especially in areas where varied conditions restrict the pursuit of business on an international scale[18].

The international standard which first filled the gap in international occupational health and safety standards was OHSAS 18001:1999, currently replaced with OHSAS 18001:2007. Despite its global approval[19] and continuous pressures on the ISO to develop

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[13] *Occupational Health and Safety Management. BS OHSAS 18001 moving to ISO 45001*, Rapport of International Register of Certificated Auditors, Charted Quality Institute, London 2014.

[14] *How to manage work health and safety risk. Code of practice*, Safe Work Australia, Canberra 2011.

[15] J. Tabor, *Occupational Hazard Prevention in Manufacturing Systems,* „Applied Mechanics and Materials", 2015, vol. 718, pp. 227-232 and N.J. Duijm, *op. cit.,* pp. 908-920.

[16] *Occupational …, op. cit.;* J. Łunarski, *op. cit.*

[17] PN-EN ISO 22301:2014-11, *Societal security. Business continuity management systems. Requirements*, Polish Committee for Standardization, Warsaw.

[18] A. Górny, *Zarządzanie bezpieczeństwem pracy w budowaniu przewagi konkurencyjnej przedsiębiorstwa*, „Zeszyty Naukowe Uniwersytetu Szczecińskiego, Seria: Ekonomiczne Problemy Usług", 2009, no 540(34), pp. 295-302.

[19] As of to date, ca. 90,000 certificates confirming the conformity of existing occupational health and safety management systems with the OHSAS 18001 standard have been published in 127 countries (ISO/CD 45001, *Occupational health and safety management systems. Requirements with guidance for use,* BSi, London 2014).

an international standard, no set of rules that could be considered a common international standard exists today. The need for such a document prompted a proper effort. In 2013, the ISO/PC 283 Technical Committee was formed tasked with developing ISO 45001[20]. The schedule of work aimed at drafting and publishing the ISO 45001 standard is provided in Table 3.

Table 3. Schedule of works involved in drafting and issuing the ISO 45001 standard.

Completion time	Scope
June 2013	- draft design spec. and WD0
October 2013	- approved design spec. and WD1
July 2014	- CD for comment and ballot (3 months)
June 2015	- proposed DIS publication
July 2015	- proposed FDIS publication
October 2016	- proposed ISO 45001:2016 publication
proposed transition period	- 2-3 years from standard publication

Source: Author's work based on *Occupational Health and Safety Management. BS OHSAS 18001 moving to ISO 45001*, Rapport of International Register of Certificated Auditors, Charted Quality Institute, London 2014 and A. Kowalkow, *Norma ISO 45001. Systemy zarządzania bezpieczeństwem i higieną pracy*, „Promotor", 2014, no 11, pp. 50-52

ISO 45001 is developed on the basis of OHSAS 18001[21] and the ANSI/ASSE A 10.38-2013[22] working environment improvement guidelines. ISO 45001 authors have also referred to the occupational health and safety management system guidelines developed by the International Labor Organization[23].

The organization appointed to create the standard is the British Standards Institution. The International Labor Organization and other bodies responsible for ensuring safety at work play an important advisory role in the process, especially in areas in which differences of opinion arise and the existing rules appear to be inconsistent. One of the important sources of the difficulties are arise from the application of different national regulations in the ISO member countries. They are tailored to the specific functioning of enterprises and economic, social, local mentality and others conditions. Thus adopted with for use standard must take into account the expectations of all stakeholders and represent a consensus of these requirements. It is not an easy task.

3.2. Occupational health and safety management according to ISO 45001

The ISO 45001 standard is expected to provide guidelines for the development and application of systemic occupational health and safety principles by combining the

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[20] *ISO 45001, New International Standard for Occupational Health & Safety Management Systems*, http://www.bsigroup.com/en-GB/ohsas-18001-occupational-health-and-safety/ISO-45001 (date of access: September, 15, 2015).

[21] BS OHSAS 18001:2007, *op. cit.*

[22] ANSI/ASSE A10.38-2013, *Basic Elements of an Employer's Program to Provide a Safe and Healthful Work Environment*, The American Society of Safety Engineering, Park Ridge 2013.

[23] *Guidelines ..., op. cit.*

provisions of OHSAS 18001 and OHSAS 18002. This aspiration is reflected in the standard's official name of "Occupational health and safety management systems. Requirements and guidelines" (draft number: ISO/CD 45001[24]). The currently disclosed version of the document is provided for information only as aid in the adequate interpretation of the requirements and their applicability in business practice with a view to reducing the cost of failures to ensure safe and healthy working conditions. The standard is structured in keeping with the rules currently enshrined in ISO 14001 (EMS) and ISO 9001 (QMS) and covers 10 key chapters, as shown in Table 4.

Table 4. Proposed new chapters of the ISO 45001 standard.

Chapter titles
1. Scope
2. Normative reference
3. Terms and definitions
4. Context of the organization
5. Leadership
6. Planning
7. Support
8. Operation
9. Performance evaluation
10. Improvement

Source: Author's research based on ISO/CD 45001, *Occupational health and safety management systems. Requirements with guidance for use.* BSi, London 2014 and A. Kowalkow, *Norma ISO 45001. Systemy zarządzania bezpieczeństwem i higieną pracy – wymogi i wytyczne stosowania,* „Promotor", 2014, no 12, pp. 39-40.

The approach to systemic management adopted in the standard relies on the PDCA loop of continuous improvement centered on leadership and the responsibility of the management for an organization's actions. The structure of this approach and the relationships found in ISO 45001 are shown in Figure 1.

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[24] ISO/CD 45001, *Occupational health and safety management systems. Requirements with guidance for use,* BSi, London 2014.
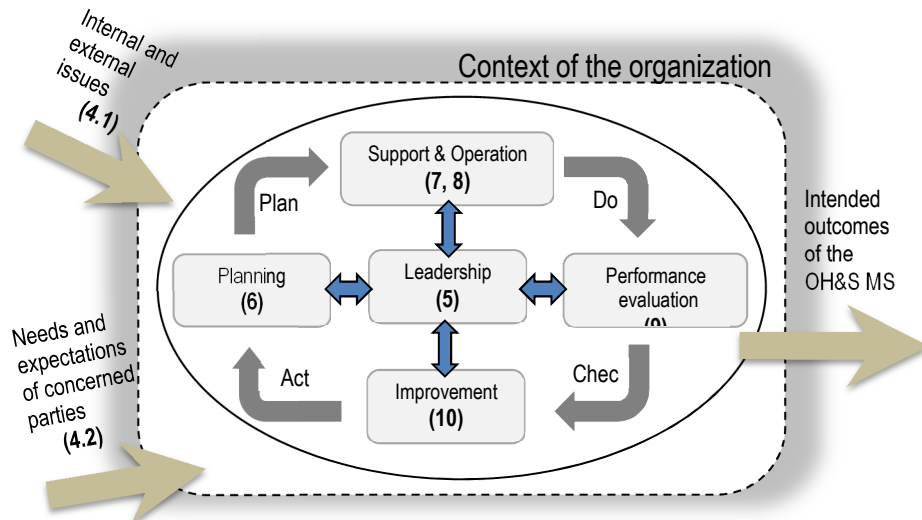
Figure 1. Diagram of interdependencies in the ISO 45001 standard.
Source: own elaboration based on CD/ISO 45001, *Occupational health and safety management systems. Requirements with guidance for use*. BSi, London.

Under the adopted approach, the standard attributes a significant role to an organization's context associated with its environment. To comply with the standard, organizations are obliged to constantly monitor their impact on their neighbors (such as the residents of the local community in which they do business). For conformity with system requirements, businesses are expected to view issues broadly rather than limiting themselves to the mere assessments of risks or to exercising operational control over their activities. It is essential to work closely with the local community and consult all concerned parties[25]. This is in keeping with the guideline that requires that organizations be socially responsible[26]. This new approach has been applied to risk assessment also beyond the strict bonds of occupational health and safety. The risk assessment is described as essential for ensuring proper conditions for the operation of humans in the working environment. To secure such conditions, one needs to identify the influence of uncertainty on the organization's footprint as well as the organization's ability to ensure its efforts are effective and to assess such efforts to measure its effectiveness accordingly to its managerial maturity (see Table 1). In order to ensure that the requirements have been met, businesses need to employ assessment indicators. The standard relies on dual evaluation of such effects which incorporates system effectiveness and system efficiency assessments covering:

  − the organization's management and specifically its activities, the products it makes and the services it provides,

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[25] K. Kazutaka, *op.cit.*, pp. 155-165.

[26] PN-ISO 26000:2012, *Guidance on social responsibility*, Polish Committee for Standardization, Warsaw and A. Górny, *Influence of corporate social responsibility (CSR) on safety culture*, „Management", 2014, vol. 18, no. 1, pp. 43-57.

     – occupational health and safety and specifically preventing worker injuries and ill health.

Notably, not all proposals made in the standard are consistent with European and Polish legislation. Workers, at whom the efforts under the standard are targeted, are defined as all members of the organization, all concerned parties and persons in the organization's care. However, occupational diseases which provide a measure of the effectiveness of the efforts made are treated as equal to any other health issues. The same applies to accidents at work which are defined to include incidents that do not constitute accidents per se. This approach is in keeping with the American view.

Particular emphasis has been placed on system scope, the organization's context, leadership, the concerned parties and information records. A brief outline of selected fields of systemic occupational health and safety management in line with ISO 45001 guidelines is shown in Table 5.

Table 5. Selected requirement areas in ISO 45001.

Section in ISO/CD	Chapter title	Nature of requirements and sample issues incorporated into management system
4.3	Scope of the OHS management system	The occupational health and safety management system extends to all activities, products and services whose delivery in keeping with systemic guidelines affects safety levels within an organization. Such activities should be monitored and assessed in terms of the identified impacts. The duty to monitor and evaluate the impacts includes any functions that have been outsourced and any external processes which affect an organization's operations. The organization has a duty to assess the severity of such impacts. Sample issues: – in adhering to the adopted occupational safety guidelines, an organization needs to account for existing and potential threats to the occupational safety of workers performing outsourced work and conducting activities, producing products or providing services to the organization, – supplies-related requirements must be drafted with due account taken of existing and potential threats to the organization's workers performing outsourced work and conducting activities, producing products or providing services to the organization.
4.1	Context of the organization	The measures undertaken are aimed at ensuring that essential issues are properly understood. This applies in particular to issues having either a positive or a negative impact on the occupational health and safety management system in place and the

Section in ISO/CD	Chapter title	Nature of requirements and sample issues incorporated into management system
		employed workers. It is critical that the organization achieve its intended occupational health and safety goals pertaining to its commitments in the field, recognize the laws and other regulations the organization agreed to comply with, identify threats and find ways to prevent them. Sample issues: – external features (culture in the business environment, social issues, political factors, legal requirements, available funding and technologies, business environment, international, domestic, regional and local competition), – internal features and conditions affecting the organization's operation (management, organizational structure, role and responsibility of workers, organization culture).
5	Leadership	The management are responsible for ensuring a complete integration of business processes with system requirements. The management are to display a commitment to act systemically to improve occupational safety. Such commitment should include the direct involvement of the management in any actions undertaken. Such involvement may not take the form of delegating tasks to other people expected to represent the management. Sample issues: – incorporation of the efficiency of occupational health and safety management in strategic planning, – keeping concerned parties up to date on increases in management system efficiency achieved while ensuring compliance with relevant requirements, – support for persons striving to improve the efficiency of the occupational safety management system, – guidance extended to individuals who strive to improve the efficiency of the occupational safety management system, – the selection (from among top management executives) of a person directly responsible for occupational health and safety policies and the running of the occupational health and safety management system.

Section in ISO/CD	Chapter title	Nature of requirements and sample issues incorporated into management system
4.2	Concerned parties	The organization is obliged to identify all parties whose actions affect the operation of the occupational health and safety management system and define the requirements that such parties are to meet. It is also essential to identify requirements, specify when they will apply and assess and acknowledge conformity. Once adopted, the measures are to be seen as mandatory. Sample issues: – mandatory requirements (principles) and legislative rules (primary laws and implementing acts), – voluntary commitments by concerned parties (whose adoption has been approved by the organization).

Source: Author's work based on *Occupational Health and Safety Management. BS OHSAS 18001 moving to ISO 45001*, Rapport of International Register of Certificated Auditors, Charted Quality Institute, London 2014 and A. Kowalkow, *Norma ISO 45001. Systemy zarządzania bezpieczeństwem i higieną pracy – wymogi i wytyczne stosowania*, „Promotor", 2014, no 12, pp. 39-40.

In outlining the ISO 45001 guidelines[27], one can note a close similarity to guidelines applying to the management of other fields of enterprise activities. The ISO/CD 45001 standard offers a number of new requirements which have not been seen in the existing documents used as a basis for its drafting and which are insignificant for compliance with ISO 9001. ISO/CD 45001 does not discuss the use of corrective or preventive actions but rather refers exclusively to improvement measures. This should be viewed as part of the concept of the uniform approach to improvement measures in other management systems (applicable to quality and the natural environment). However, the adopted principles may not be considered to be exactly the same as the systemic management guidelines governing other fields of a business organization's activities. The reason for the substantial number of differences is that the rules need to account for specific requirements pertaining to individual fields of management.

3.3. Benefits of employing principles of systemic management of occupational health and safety

The implementation of systemic occupational health and safety management principles is the most effective way to improve safety at work and modify worker behaviors and consequently shape an organization's safety climate and culture[28]. However, to achieve

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[27] ISO/CD 45001, *op. cit.*

[28] K. Frick, *Worker influence on voluntary OHS management systems – A review of its ends and means*, „Safety Science", 2011, vol. 49, iss. 7, pp. 974-987; B. Fernández-Muñiz, et al., *Safety management system: Development and validation of a multidimensional scale*, „J. of Loss Prevention in Process Industries", 2007, vol. 20, iss. 1, pp. 52-68, and A. Górny, *Zarządzanie bezpieczeństwem pracy jako czynnik przewagi konkurencyjnej*

the desired results, the workers and the management and occupational health and safety experts need to join forces and make shared commitments[29].

By applying a system approach to occupational safety at work based on international standards, organizations stand to gain a number of benefits which will be enjoyed by all parties affected by the standard's requirements. A number of these benefits tie directly to systemic measures. The systemic measures require and allow organizations to[30]:

– formulate their improvement policies thereby setting the organization's OHS-related goals helping them to complete safety improvement tasks,
– launch and complete actions based on the PDCA improvement model which is aligned with the improvement principles applying to other fields of an organization's activities providing for more unity across management systems,
– attribute a special significance to continuous improvements and the need to ensure effectiveness thereby reducing the burden of accidents and health issues at work,
– proactively engage in improving the effectiveness of occupational-health-and-safety-related measures aimed at preventing injuries and ill health,
– promote health education while treating training as part of continuous improvement crucial for the effectiveness of measures,
– take systemic measures, most commonly in the form of an internal audit or a management review,
– adopt the necessary internal and external solutions and apply measures to prevent hazards and strenuousness accordingly to their nature – such measures should be seen as facilitating systems integration,
– address inconsistencies and the need to take improvement measures on a continuous basis – this too should be seen as a boost to management system integration,
– make the management responsible for compliance with laws and other regulations to which the organization has committed itself to adhere,
– view risk assessment as a pivotal issue determining the effectiveness of continuous improvement and the successful establishment of safe working conditions,
– as part of ensuring readiness for proper response in case of failures, take proper action to prepare for emergencies and plan and test viable emergency procedures.

Defined in the above manner, the achieved benefits result from deploying improvement measures in five key areas, i.e.:

– the identification of internal and external issues,

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przedsiębiorstwa, „Zeszyty Naukowe Politechniki Poznańskiej, Seria: Organizacja i Zarządzanie", 2009, no 54, pp. 15-25.

[29] A. Górny, *Zarządzanie bezpieczeństwem pracy jako …, op. cit.*, pp. 15-25 and J. Grabara, *Proceduralno-podmiotowy model zarządzania bezpieczeństwem i higieną pracy*, in: J. Tabor (red.), *Zarządzanie bezpieczeń-stwem i higieną pracy. Techniczne, organizacyjne i ludzkie uwarunkowania bezpieczeństwa pracy*, vol 3, pp. 178-196, Sekcja Wydawnictw Wydziału Zarządzania Politechniki Częstochowskiej, Częstochowa 2012.

[30] A. Górny, *Humanistyczne aspekty zarządzania bezpieczeństwem pracy*, „Zeszyty Naukowe Uniwersytetu Szczecińskiego, no 849, Studia i Prace Wydziału Nauk Ekonomicznych i Zarządzania", 2015, no 39, vol. 4, pp. 43-56; A. Górny, *Use of Quality Management Principles in the Shaping of Work Environment*. in: C. Stephanidis (ed.), Posters Extended Abstracts: International Conference, HCI International 2015 (part II), „Communications in Computer and Information Science", 2015, vol. 529, pp. 136-142 and *Occupational …, op. cit.*

- elimination of risk in view of the nature of threats and strain and the feasibility of specific improvement measures,
- commitment on the part of the organization to comply with relevant laws and regulations,
- preparedness for an immediate emergency response, proceeded by emergency risk analysis and testing in simulated conditions by applying emergency response procedures.

The hierarchy of improvement measures should reflect commonly applied guidelines and be approved by the workers, their supervisors and auditors. For their proper implementation, the measures need to be preceded by operational planning and proper controls. Contrary to OHSAS, where the measures are seen as optional, ISO/CD 45001 stipulates them as mandatory.

The range of benefits described hereinabove is designed primarily to eliminate or mitigate risks. Under OHSAS, many actions are seen as compulsory - these include the need to apply a specific hierarchy of the measures designed to reduce risks and improve safety[31] and the need for the political engagement of the management in risk control. Of particular importance in ISO 45001 is[32]:

- risk management,
- ongoing risk assessment,
- measures aimed at preventing and/or reducing the impact of the existing threats,
- the need for verifying continually maintained compliance of the occupational health and safety status with legislative and other requirements,
- safety oversight exercised during the performance of outsourced processes,
- the application of assessment indicators to oversee the effectiveness of occupational health and safety measures,
- the monitoring, measuring, analyzing and evaluating of actions pertaining to occupational safety improvements (in terms of effectiveness, current status and trends).

The outcomes of the measures taken should be seen as benefits derived from employing systemic occupational health and safety management to improve worker health[33].

4. SUMMARY

Once adopted, the international standard ISO 45001 will undoubtedly facilitate the development of proper working conditions. Although having the standard in place alone will not suffice to improve occupational safety[34], the standard may be viewed as a tool enabling an organization to implement improvements while easing its integration with the management systems that are already in place[35]. Considerable similarities can be seen

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[31] A. Górny, *op. cit.*; A. Junevičius, D. Gelžinyte, *Employees health and safety requirements and regulations in the European Union*, „European Integration Studies", 2009, iss. 3, pp. 76-85 and rozporządzenie Ministra Pracy i Polityki Socjalnej z dnia 26 września 1997 r. w sprawie ogólnych przepisów bezpieczeństwa i higieny pracy; tekst jedn.: Dz. U, 2003, nr 169, poz. 1650, ze zm.

[32] *Occupational …, op. cit.*

[33] A. Górny, *Influence …, op. cit.*, pp. 43-57 and K. Frick, *op. cit.,* pp. 974-987.

[34] K. Frick, *Ibidem*, pp. 974-987.

[35] A. Górny, *Application of quality shaping methods in the work environment improvement. A case of theoretical frames*, „Management Systems in Production Engineering", 2014, no. 3(14), pp. 106-111.

between OHSAS 18001 and ISO/CD 45001. Such similarities result from approaching OHSAS 18001 as a basis for drafting the ISO standard. The need for integration was a central aim pursued by its authors driving changes in occupational health and safety management systems. However, in many areas, the new standard proposes an approach that is specific for the field of occupational health and safety. For instance, the requirements concerning documentation and the obligation to keep records have been placed in a single section and subdivided into the three areas of:

- − general requirements,
- − principles governing the drafting and updating of documents,
- − control over documented information.

The above category encompasses not only documents and records but also information stored in e.g. smartphones, tablets or other electronic media, which brings the standard up to date with today's technological advances. By doing so, the ISO 45001 standard accommodates the needs of contemporary enterprises.

Nevertheless, significant discrepancies need to be noted between the standard and existing laws. The most substantial of them appear to be the definitions of risk, workers and the workplace. Such discrepancies will certainly require elaboration and interpretations to restore consistency between the standard and the existing laws.

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ZARZĄDZANIE BEZPIECZEŃSWTEM I HIGIENĄ PRACY W WYMIARZE MIĘDZYNARODOWYM (ZGODNYM Z ZAŁOŻENIAMI NORMY ISO 45001)

Realizowane w przedsiębiorstwie zarządzanie bezpieczeństwem i higieną pracy wymaga wprowadzenia a następnie doskonalenia rozwiązań pozwalających wyeliminować lub ograniczyć negatywny wpływ zagrożeń i uciążliwości na zatrudnionych. Zazwyczaj stosowane w tym celu rozwiązania oparte są na zasadach systemowego zarządzania, wykorzystujących pętlę ciągłego doskonalenia, tym samym umożliwiając realizację zadań na coraz wyższym poziomie jakościowym. Efektem podejmowanych działań jest uzyskanie zgodności z potrzebami i oczekiwaniami zatrudnionych, uznawanych za wewnętrznych klientów realizowanych procesów. W podejmowanych działaniach pracownicy mogą być traktowani zarówno jako ich adresaci oraz weryfikatorzy ich skuteczności.

Kształtowanie bezpiecznych i higienicznych warunków wykonywania pracy w przedsiębiorstwie nierozerwalnie związane jest z koniecznością podjęcia działań doskonalących, służących eliminacji lub ograniczeniu negatywnego oddziaływania zagrożeń i uciążliwości na zatrudnionych. Analogiczne uwarunkowania występują podczas stosowania wymagań systemowych.

Pomimo stosowania jednolitych zasad systemy zarządzania różnią się w istotny sposób, czego skutkiem jest trudność mówienia o możliwej całkowitej spójności systemów. Każdy ze stosowanych systemów, obejmujących adekwatne obszary działań organizacji zazwyczaj funkcjonuje jako niezależny system z własną strukturą zarządzania. Nie zmienia tego podejmowanie prób integracji systemów, będącej najczęściej przypisaniem do jednego systemu wymagań pozwalających przyjąć, że obejmują również inne obszary działalności.

Wskazywane trudności traktowane są jako jedna przyczyn opracowania normy ISO 45001, będącej międzynarodowym standardem zarządzania dotyczącym bezpieczeństwa i higieny pracy.

W opracowaniu wskazano na istotne powody rozwijania standardu ISO 45001 (określającego zasady stosowania systemowego zarządzania bezpieczeństwem i higieną pracy). Opisano podstawowe wytyczne dotyczące opracowywania systemów zarządzania bezpieczeństwem pracy oparte na normie ISO 45001 oraz wymagania zgodne z wytycznymi OHSAS 18001 i MOP, stosowanymi w celu wzmocnienia znaczenia systemowego zarządzania bezpieczeństwem i higieną w przedsiębiorstwie.

Słowa kluczowe: zarządzanie bezpieczeństwem i higieną pracy, normalizacja, ISO 45001.