
SAFETY ENGINEERING OF ANTHROPOGENIC OBJECTS

ENGINEERING SAFETY OF CONSTRUCTION OBJECTS – LEGAL REGULATIONS

Jerzy OBOLEWICZ

Białystok University of Technology, Białystok, Poland

ORCID: 0000-0002-7866-0039

Abstract

The article describes legal regulations regarding the safety of building objects in the process of implementing construction projects. International (International Labor Organization), EU (EU), national (Poland) and industry (Polish regulations concerning the construction industry in Poland) regulations were presented. These requirements have a fundamental impact on the safe behavior of building process participants.

Key words: construction, safety and health protection, construction works.

INTRODUCTION

Safety engineering of building objects includes knowledge in the field of engineering their safety understood as a way of designing, implementing and operating safe buildings, structures and small architecture objects, taking into account legal regulations and principles guaranteeing their safety.

The activity of participants in the life cycle of a building object consists in taking actions to make this object resistant to specific threats by: opposing the expected threats generated in the building itself, as well as in its surroundings, which can occur during its planning, creation and operation.

These activities require from them not only interdisciplinary, general technical and specialist knowledge in the field of knowledge of basic methods and tools used in solving engineering tasks related to broadly understood security, but also knowledge of the principles of safety engineering adopted in legal provisions, which are necessary to solve technical and organizational problems. and economic processes occurring in the processes of design, implementation and operation of building objects (Kowalski et al. 2000; Obolewicz 2016a, 2016b, 2016c, 2016d).

In the modern world, the need for a comprehensive approach to safety and health issues (**Safety and Health Protection – S&HP**) in the process of implementing construction projects is increasingly being discussed (Baryłka 2019a, 2019b, 2019c). This approach is supported by legal regulations changing under the influence of EU directives (Council Directive 89/391 / EEC of 12 June 1989) and examples of successes achieved by organizations using such solutions. The comprehensive approach is consistent with the philosophy of prof. Kotarbiński, in which the organization is a whole composed of parts, in which the success of the whole contributes to the success of the part and the success of the part to the success of the whole (Obolewicz 2018).

Understanding the comprehensive approach to S&HP can be different. It is generally assumed that it is synonymous with adapting to specific requirements. Using the definition of the PN-N-18001: 1999 standard, it can be assumed that S&HP issues are part of the organization - a composition of varying complexity, resources, personnel and procedures, whose components interact in an organized way to ensure the implementation of specific tasks or achieve specific purpose (Ejdys et al. 2008). The basic rules of conduct aimed at providing S&HP during the implementation of construction projects are contained in legal regulations and should be considered in the systemic framework of legal regulations: the International Labor Organization of the ILO, the European Union, EU and national and industry regulations (Kowalski et al. 2000).

1. Regulations of the International Labor Organization in the field of safety and health protection (S&HP)

The International Labor Organization (ILO) was founded in 1919. Poland has been a member of the ILO since its inception. The basic direction of this organization's activity is creating legal norms constituting an instrument of influence in order to build fair social order

in individual countries on an international scale. The basic normative act adopted by the General Conference of the ILO are normative acts of international law called conventions. These acts are binding on the Member States after ratifying them. Another legal act adopted by the ILO are recommendations, which are treated mainly as guidelines and details of adopted conventions (Ejdys 2008).

The ILO established Convention No. 31/1929 on protection against accidents at work in industry (1929), which generally regulated the basic obligations of countries and employers in the event of an accident at work. It imposed on Member States the obligation to establish national legislation on the protection of workers' life and health and regulated the activities of labor inspectorates in these matters.

The ILO established another convention No. 155/1981 regarding the safety, health of employees and the work environment (1981), which contained comprehensive solutions in the field of BIOZ of employees in the workplace. The provisions contained in the convention were divided into four parts, which defined:

- the principles of national policy in the field of occupational safety and health protection, according to which Member States were required to create and implement a coherent national policy in the field of safety, protection of workers' health and the working environment,
- tasks of the state in this respect, which concerned the implementation of national policy and included the establishment of relevant legal provisions regarding safety, health and the working environment and control bodies for the application of these provisions, equipped with appropriate sanctions;
- employer tasks at company level, which should: ensure that workplaces, machinery, equipment and work processes as well as chemical, physical and biological agents and substances used do not pose a threat to the safety and health of workers; provide protective clothing and appropriate protective equipment; establish an obligation for employers to cooperate when several companies work in one place and take action in the event of a hazardous situation, as well as to provide first aid; cause employees and their representatives to be carried out and health and safety training; inform about measures taken by the employer to guarantee work safety;
- obligations and rights of employees to ensure: cooperation in fulfilling the obligations incumbent on the employer; information on any situation that could pose a serious,

immediate threat to life and health; if the threat persists, the employer may not require the employee to take up work.

The Convention sets out the rights of employees and their representatives. According to them, representative organizations operating in the enterprise can conduct analyzes of all aspects of security in the enterprise and for this purpose use the opinions of technical advisers, they also have the right to consult with the employer on these matters and refrain from performing work in the event of an immediate threat to life or health. All costs related to ensuring occupational health and safety must not be charged to employees in any way.

The ILO established another convention No. 187/2006 on structures promoting occupational health and safety (2006), which obliges Member States to promote continuous efforts to improve health and safety at work. These activities were to be implemented through the formulation of national policies. Each Member would establish, implement and gradually develop a national system in the field of OHS and periodically review this system. The basic elements of this system were:

- laws, regulations, collective labor agreements,
- authorities or bodies responsible for health and safety at work, designated in accordance with national law,
- mechanisms to ensure compliance with national laws and regulations covering inspection systems,
- solutions to support, at company level, cooperation between management, employees and their representatives as an essential element of workplace prevention.

When establishing national programs, Member States will have to:

- support the development of a national prevention culture in the field of health and safety,
- contribute to the protection of employees by eliminating or minimizing, where possible, occupational hazards and risks related to their work to prevent accidents and occupational diseases,
- formulate and check on the basis of analysis of the situation in the country in the field of health and safety and analysis of the national health and safety system,
- include objectives and progress indicators,

— support and support activities in the gradual creation of a safe and hygienic work environment.

2. European Union regulations in the field of safety and health protection (S&HP)

The European Union is an international body with a regional scope (includes Europe). The fact of accession to the European Union obliges Member States to implement Community law without having to ratify it. The European Community has established in the field of safety and health protection a number of directives, among which the most important is Directive 89/391 / EEC on the introduction of measures to improve the safety and health of workers at work, called the Framework Directive. The requirements it contains apply to every type of business and through its universality at all times, regardless of technical progress. The directive contains general safety principles, referring to specific directives to specific directives and sets out the tasks of parties involved in creating safe and hygienic working conditions in the workplace. The implementation of these tasks and the application of the principles of their implementation specified in the directive is to guarantee stimulation of actions not only to ensure the safety and health of employees, but also to improve it. The basic measures that the employer should take to provide BIOZ employees include: prevention of occupational risk, information, training and provision of appropriate resources and organization. These measures must always be adapted by the employer to the changing circumstances so that in each case they are the most effective, as well as to improve the existing state of affairs.

The following principles should be observed in actions to improve S&HP: risk avoidance; risk assessment that cannot be avoided; risk prevention at source; adaptation of work to a single person, especially in the process of designing work stations, selection of work equipment as well as production methods and working methods, in particular, alleviating the monotony of work and reducing the intensity of work at a forced pace and the negative impact of this type of work on the health of the employee; applying new technical solutions; replacing hazardous substances with safe or less dangerous ones; conducting a coherent and comprehensive preventive policy covering technique, work organization, working conditions, social relations and the influence of factors related to the working environment; giving priority to collective protection measures over personal protection measures and to properly instruct employees.

The directive gives great importance to the prevention of occupational risk, including the correct assessment of this risk. The assessment of the level of occupational risk is the basis for the employer's selection of work equipment, the use of chemical substances and preparations, workplace equipment and is the basis for taking preventive measures, choosing production methods and organizing work so that they ensure an increase in the level of protection of workers' safety and health and are integrated with all plant operations at all management levels. The directive also obliges the employer to develop documentation of the risk assessment carried out. The directive's provisions set out the employees' obligations.

The employee must:

- use for the intended purpose: machines, apparatuses, tools, dangerous substances, means of transport and other means of production;
- use the personal protective equipment that was issued to him for the intended purpose and leave it in the right place after use;
- refrain from disconnecting, changing or removing used safety devices machinery, apparatus, tools, installations and buildings, including safety devices must be used for their intended purpose;
- inform employers and employees responsible for S&HP employees about any situations that pose a serious and immediate threat to health and safety and about any shortcomings in the protection system;
- cooperate with the employer and employees responsible for S&HP to implement the tasks and requirements set by the competent authorities, ensuring S&HP employees during work, as long as it is necessary;
- cooperate with the employer and employees responsible for the safety and health of employees at work, in order to ensure the employer that the environment as well as the working conditions are safe and do not pose a threat to safety and health, as long as it is necessary;
- move away from the place of employment when they are or may be exposed to serious and inevitable danger.

Employees and their representatives also have the right to consult and participate in all activities of the employer regarding the provision of S&HP employees in the work environment. To this end, they may request from the employer all information about the

measures taken by them, as well as to take the appropriate measures and submit proposals for reducing the risks and removing the sources of these risks. In national law, employees or their representatives should also be guaranteed the right to refer to the competent authorities when they find that the measures taken by the employer are inappropriate to ensure safety and health protection at work. The framework directive includes a delegation to specific directives. The list of specific directives regarding health and safety at work is presented in Table 1.

No.	Directive No.	Name of the specific directive
1	First individual directive	Council Directive 89/654 / EEC of 30 November 1989 concerning the minimum requirements in the field of safety and health at work
2	Second individual directive	Council Directive 89/655 / EEC of 30 November 1989 concerning the minimum requirements for the safety and hygiene of the use of work equipment by employees during work
3	Third individual directive	Council Directive 89/656 / EEC of 30 November 1989 on the minimum requirements in the field of safety and health protection of workers using protective equipment
4	Fourth individual directive	Council Directive 90/269 / EEC of 29 May 1990 on the minimum requirements for the protection of health and safety during manual handling of loads in the event of a risk, in particular spinal injuries to workers
5	Fifth Specific Directive	Council Directive 90/270 / EEC of 29 May 1990 on the minimum requirements in the field of safety and health protection when working with devices equipped with screen monitors
6	Sixth individual directive	Directive 2004/37 / EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
7	Seventh individual directive	Directive 2000/54 / EC of the European Parliament and of the Council of 18 September 2000 on the protection of workers from the risks related to exposure to biological agents at work
8	Eighth individual directive	Council Directive 92/57 / EEC of 24 June 1992 on the implementation of minimum safety and health requirements on temporary or mobile construction sites
9	Ninth individual directive	Council Directive 92/58 / EEC of 24 June 1992 on the minimum requirements for safety and / or health signs at the workplace
10	Tenth Specific Directive	Council Directive 92/85 / EEC of 19 October 1992 on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding
11	Eleventh individual directive	Council Directive 92/91 / EEC of 3 November 1992 concerning the minimum requirements aimed at improving the conditions of safety and health protection of workers at mining plants extracting minerals with drilling holes
12	Twelfth Specific Directive	Council Directive 92/104 / EEC of 3 December 1992 on the minimum requirements for improving the safety and health protection of workers in the opencast and underground extractive industries
13	Thirteenth individual directive	Council Directive 93/103 / EEC of 23 November 1993 concerning the minimum requirements in the field of safety and health at work on fishing vessels
14	Fourteenth Specific Directive	Council Directive 98/24 / EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work
15	Fifteenth Specific Directive	Directive 99/92 / EC of the European Parliament and of the Council of 16 December 1999 on the minimum requirements regarding the safety and health protection of employees at workplaces where an explosive atmosphere may occur
16	Sixteenth Specific Directive	Directive 2002/44 / EC of the European Parliament and of the Council of 25 June 2002 on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (vibrations)
17	Seventeenth Specific Directive	Directive 2003/10 / EC of the European Parliament and of the Council of 6 February 2003 on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (noise)

18	18th individual directive It did not enter into force.	Directive 2004/40 / EC on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (electromagnetic fields)
19	19th individual directive	Directive 2006/25 / EC of the European Parliament and of the Council of 5 April 2006 on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (artificial optical radiation)
20	Twentieth individual directive	Directive 2013/35 / EU of the European Parliament and of the Council of 26 June 2013 on the minimum health and safety requirements regarding the exposure of workers to the hazards caused by physical agents (electromagnetic fields)

Table 1. *List of specific directives regarding S&HP. Source: Own study based on (Kowalski et al. 2000).*

Different levels of S&HP in EU countries required ordering and standardization. Work on standardizing provisions on safety and health at workplaces in countries belonging to the European Community began in 1990 with a project to harmonize European statistics on accidents at work. The aim of the project was to develop a method of collecting comparable data in the EU (Obolewicz 2011). It was mainly about harmonizing the criteria and methodologies that should be used when obtaining accident data. Employers of member states were obliged by the EU directive (Directive 89/391 / EFC / 1989) to provide S&HP employees in all aspects related to work, in accordance with the principle that all member states of the community were obliged to implement EU directives in national legislation. These activities consisted of keeping a list of accidents at work that caused the employee's inability to work for more than three days, and in accordance with national law, preparing accident reports of his employees. Work on the project covered three phases:

- The first phase of the project was launched in 1993 and involved identifying variables that are designed to identify the employer's business, occupation, age, sex of the victim, type of injury, body parts, geographical location, date and time of the accident.
- In the second phase of the project, the variables of the first phase were supplemented with preliminary information on the size of the enterprise, the nationality of the victim, the status of employment and the effects of the accident in relation to the number of employees, number of days lost, permanent inability or death as a result of the accident.
- The third phase began in 2001 and concerned other harmonized ESAW variables (European Statistics on Accidents at Work) and the classification of causes and circumstances of accidents, which allowed the promotion of an active policy for the

prevention of accidents at work, helpful in preventive measures (The political dimension of Poland's membership in the European Union 2009).

The third phase activities were part of the EU strategy on the safety and health of workers for 2000-2006, as a result of which the number of fatal accidents and absences due to accidents decreased. The next strategy for 2007-2012, which is a continuation of the first, included the implementation of the following goals: increasing the level of S&HP in the workplace (qualitative objective) and reducing work accidents by 25% (quantitative objective).

In accordance with the Europe 2020 strategy, the actions of EU Member States should promote high standards of working conditions in Europe and in the world and address the three main challenges in the field of OHS presented in the strategic framework, ie:

- obtaining improvement in the implementation of existing health and safety rules, in particular by increasing the potential of micro and small enterprises to implement effective and efficient risk prevention strategies,
- more effective prevention of work-related diseases by addressing new and emerging threats, without neglecting existing threats,
- taking into account the aging of the European workforce.

Specific challenges should be implemented through actions focused on seven basic strategic goals, which are:

- further consolidation of national OHS strategies, for example through policy coordination and mutual learning;
- providing practical support to small and micro enterprises to help them better comply with health and safety regulations;
- improving enforcement of Member States, for example by assessing the performance of national labor inspectorates;
- simplifying existing provisions, where appropriate, to remove unnecessary administrative burdens, while maintaining a high level of safety and protection of health and workers;
- addressing the problems of an aging European workforce and more effectively preventing work-related diseases to combat existing and new threats, e.g. in the nanomaterials, eco-technology and biotechnology sectors;

- improving the collection of statistical data to have better information and to develop monitoring tools;
- strengthen coordination with international organizations such as the International Labor Organization (ILO), the World Health Organization (WHO) and the Organization for Economic Cooperation and Development (OECD), as well as with partners to contribute to reducing the occurrence of accidents at work and occupational diseases, and contribute to improving working conditions worldwide.

The pursuit of the objectives will be enabled by instruments set out in the strategic framework such as social dialogue, awareness raising, enforcement of EU legislation and synergies with other policy areas (e.g. public health, education).

3. National regulations in the field of health and safety (S&HP)

The implementation of the provisions of Community law into the Polish legal order covered two periods: the pre-accession period (until May 1, 2004) and the period of notification of national legal acts and implementing EU directives (from May 1, 2004)

The pre-accession period was characterized by high intensity of legislative work. The purpose of this work was to adapt Polish law to the *acquis communautaire*. Achieving this goal required the implementation by the Sejm of 255 acts that implemented 1589 EU directives (Obolewicz 2011, 2013a, 2013b).

In Poland, institutional solutions were used to implement Community law. The adjustment process worked well and in many cases Poland was an example to follow for other countries in the pre-accession period. At that time, the Sejm European Commission was responsible for adjustment work in Poland, which imposed a fast pace of adopting laws in the Sejm. An important factor in this period was the agreement of major political groups regarding Poland's priority accession to the EU.

The period of notification of Polish legal acts implementing the provisions of EU directives was in turn characterized by a slowdown in implementation work. Pursuant to Community provisions, the General Secretariat of the European Commission submitted every two months reports on the progress of Member States in notification of national legal acts implementing directives, and the European Commission, based on information provided by Member States, prepared reports on the state of transposition of EU directives.

After accession, Poland had the necessary institutional solutions for timely and correct implementation of EU law. The Act on the Committee for European Integration was in force,

headed by the Prime Minister. The committee's tasks included issuing opinions on draft legal acts, both implementing EU law and those concerning national issues. As a result of these opinions, many projects were subject to laws that brought them into compliance with EU law. Despite the above activities and the possibility of using the experience of other countries, Poland's results in the implementation of European law have deteriorated. The Office of the Committee for European Integration has identified the main reasons for this (Act of 26 June 1974 Labor Code).

Political changes came first. After achieving the goal of joining the EU, legal adjustments moved to the background. The Polish government's legislative plans were not fully implemented in the timely adoption of draft laws implementing EU law, and delays increased.

Secondly, no quick decisions were made at the political level regarding socially sensitive issues, and problems were postponed.

Thirdly, there were administrative changes. After Poland's accession, the Parliamentary Committee on the European Union was replaced by the European Commission, which completely dealt with Poland's participation in the EU decision-making process and stopped dealing with the legal adjustments of Polish law to Community law. Therefore, the laws implementing EU law were referred to sectoral committees and the adjustment process was decentralized.

Fourthly, the number of obligations of the Polish public administration responsible for preparing draft legal acts increased over time, while the administrative potential did not increase in relation to the needs.

Fifthly, the system of Polish law, in comparison with the systems of other Member States, did not allow directives to be transposed without amending the Act.

In Poland, OHS issues have been identified with accidents for many years. In distant times it wasn't a big problem. Workshops were in most cases driven by human or animal muscle strength. In many cases, wind or water was also used. A significant breakthrough came in the nineteenth century, when, energy accumulation, large clusters of employees, a small workspace caused the emergence of new, previously unknown dangers, which in many cases led to accidents. State intervention was needed. In this way, the first forms of state supervision over the health and safety of workers were created, because accidents contributed to significant losses in industry. There was no doubt that it was necessary to supervise the safety of people and the safety of devices used in industry. In the 1950s, over 40 laws, decrees and ordinances regarding labor protection, occupational safety and occupational diseases were in force in Poland. The right to safe working conditions in Poland was constitutionally

guaranteed to everyone who performed work, regardless of the legal basis for its provision. Systemic solutions contained in constitutional articles referred to broadly understood labor protection. They concerned technical machines and devices, where the employer was obliged to ensure that the used machines and technical devices ensure safe and hygienic working conditions and take into account the principles of ergonomics (Labor Code Act 1974; MPiPS Regulation of 26 September 1997 on general health and safety regulations work; Obolewicz 2010). The EU directives were a supplement (Council Directive 89/391 / EEC of 12 June 1989 on the introduction of measures to improve the safety and health of workers at work).

The basic legal act dealing with the right to safe and hygienic working conditions in Poland is the Constitution of the Republic of Poland, which guarantees this right to everyone. The manner of implementing this right is specified in the Labor Code and implementing acts developing the provisions of the Code and other acts regarding supervisory bodies over working conditions and health and safety conditions in large areas of activity, as well as Polish standards. Layout labor regulations, such as collective agreements or work regulations, can be helpful in interpreting labor law. Sources of legal bases in Poland in the field of occupational health and safety are presented in Table 2.

No	Kategoria przepisów	Recipe category	Implementing acts	Examples of specific provisions
1	Commonly applicable provisions	Polish Constitution		
		Labor Code (division X)	Implementing acts to art. 273 of the Labor Code	General health and safety regulations
				Industry health and safety regulations
				Inter-branch health and safety regulations
			Implementing acts to chapter X	
		Other Acts	Concerning the state supervision authorities over working conditions	Act on the National Labor Inspectorate
				Act on the State Sanitary Inspection
Act on technical supervision				
Atomic Law				
	Concerning health and safety conditions in various spheres of activity	Mining and geological law		
	Concerning various spheres of activity	Construction Law		
	Concerning various spheres of activity	Specific provisions		
2	Arrangement work regulations	Collective labor agreements	For various industries	Specific provisions
		Work regulations	Dotyczące różnych rodzajów pracy Concerning different types of work	Specific provisions and regulations

3	OHS rules	Other Acts	Regulations ...	Specific regulations
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Table 2. *Legal bases in the field of health and safety protection (S&HP). Source: own study based on (Labor Code Act; Obolewicz 2015, Rak 2014).*

The term 'health and safety at work' is used in the Polish constitution (Polish Constitution, Article 66) and this term is obligatory in Poland. Meeting the requirements of EU directives in the field of occupational health and safety, occupational health and safety should be treated more broadly as health and safety protection in a historical context and in the area of labor protection.

Nomenclature in the field of S&HP has practically changed when Poland joined the European Union. According to the EU directive (Bojanowski 2005) and the specific directives (Table 1), Member States were required to introduce improvements in the field of S&HP for employees on their territory. To this end, the employer should have taken the necessary measures to provide S&HP to employees, including the prevention of risks related to work performed, information and training, as well as the provision of necessary organizational measures. The introduction of improvements to improve S&HP in the workplace was due to the fact that the risk of accidents at work and occupational diseases was still too high and the legal systems of the Member States in the field of safety and health at work differed significantly and needed improvement.

International law sets out provisions to provide S&HP employees in the work process. It resulted from the understanding of labor protection in the sense of all labor law norms and referred to as workers' safety and health regulations. Polish law adopts the term - occupational health and safety regulations. Despite the convergence of the names used in international and Polish law, the term contained in Polish law refers to the subject of regulations (applies to work or working conditions), while in international law these provisions protect the entity that is the employee (Council Directive 89/391 / EEC of June 12, 1989 on the introduction of measures to improve the safety and health of workers at work; Bojanowski 2005).

Ensuring safe and hygienic working conditions, which in Polish law has taken the form of a constitutional principle (Article 66 of the Polish Constitution), is in international law only a means to achieve the goal of safety and health protection of an employee (Kowalski et al. 2000).

In Polish construction practice, there are different views on the purpose of labor protection. Some believe that the primary goal of labor protection is to protect the health and

life of the employee, and the mere fact that the employee is healthy gives him a guarantee of his ability to work. Others believe that the purpose of labor protection is to protect the life and health of the employee in the work environment to protect his ability to work, that is, to guarantee the employee economic and social security.

Polish science also draws attention to the dual understanding of the concept of "job protection". In the narrower sense of the term, labor protection is a set of legal norms aimed at ensuring employers' safety and ensuring the health of employees in the work process. The subject of labor protection is to protect the employee against the harmful effects of the work environment on his health and against the threat to his life. In a broad sense, this term is equated with the protective function of labor law, understood as protection of employee interests covering all labor law norms and provisions regulating the obligations and principles of liability for non-compliance or labor law norms that have a protective nature, e.g. protection of the duration of the employment relationship, remuneration for work, setting a maximum working time or setting a minimum leave.

In both approaches (from the point of view of practice and learning) in Polish legislation one can distinguish two subsystems of labor protection: legal and organizational. The first of them, which is an integral part of labor law, contains legal norms and their location in the hierarchy of sources of law regarding safety and health protection. The second one illustrates the system of work protection organization at the state, plant and institution level involved in creating and controlling occupational health and safety in Poland. It can be clearly stated that the Polish legal system in the field of construction is consistent with EU law. However, there are different views on the subject of labor protection in Polish practice. In the light of international regulations, the protection of employees against occupational diseases and accidents at work is part of the historical mission of the International Labor Organization. According to J. Somalia (Director General of the International Labor Organization), technological progress and strong competitive pressure are causing rapid changes in working conditions, work processes and work organization in the modern world and the legislation is not able to keep pace with changes and take into account all new threats (Guidelines for management systems occupational health and safety (ILO-OSH. 2001). The protection of employees against occupational diseases and accidents at work should be the primary goal of both employers and employees of the European Union. Taking into account the definition of health of the World Health Organization (WHO), it can be concluded that health is a state of physical, mental and social well-being, and not just a lack of disease.

4. Construction industry regulations in the field of safety and health protection (S&HP) in Poland

The basic legal act informing about the right to safe and hygienic working conditions in Poland is the Constitution of the Republic of Poland, according to which everyone has the right to safe and hygienic working conditions and to health protection. The manner of implementing this right is specified in the Labor Code. Code regulations are universally binding legal acts.

According to the Labor Code (Labor Code Act 1974), the employer, employee and person managing employees are responsible for health and safety.

Each of them is obliged to know the provisions on labor protection, including health and safety rules and regulations to the extent necessary to perform their work and obligations related to it.

The employer is responsible for the state of health and safety and is obliged to protect the health and life of employees by providing safe and hygienic working conditions with appropriate use of the achievements of science and technology. These obligations can be grouped as: general, information, cooperation, in the field of health and safety, in the event of the possibility of a direct threat to the health and life of employees. The employer's general obligations in the area of safety and health protection include:

- ensuring compliance with health and safety rules and regulations and issuing orders to remedy deficiencies in this respect;
- improving the existing level of BIOZ employees taking into account the changing conditions of work;
- prevention of accidents at work and occupational diseases taking into account technical issues, work organization, social relations and the impact of work environment factors.

The employer's information obligations relate primarily to provide information on:

- health and life hazards occurring at the construction site, at individual work stations and during works, including the rules of conduct in the event of a breakdown and other situations threatening the health and life of employees;
- preventive and protective measures to eliminate or reduce existing hazards;
- employees designated to provide first aid and perform actions in the field of fire fighting and evacuation of employees.

The employer's obligations to cooperate occur when employees employed by different employers perform work in the same place at the same time and include:

- between employees;
- appointing a coordinator to supervise OHS of all employees employed in the same place;
- establishing cooperation principles that take into account the procedures to be followed in the event of a threat to the health or life of employees;
- informing each other and employees or their representatives about activities in the field of preventing occupational hazards while performing their work;
- if employers of various employers perform work on the construction site, an obligation on the employer to provide general information for the purpose of providing it to their employees.

The employer's obligations in the field of health and safety include primarily:

- providing the necessary resources to provide first aid in emergencies, fight fires and evacuate employees;
- appointing employees to provide first aid and perform actions in the scope of fire fighting and evacuation of employees;
- ensuring communication with external services in the scope of emergency first aid, emergency medical services and fire protection;
- adapting the number of employees, their activities as well as training and equipment to the type and level of threats.

The employer's obligations if there is a possibility of a direct threat to the health and life of employees include:

- immediately informing employees about threats and taking action to provide them with adequate protection;
- providing employees with instructions enabling, in the event of imminent danger, to stop work and move away from the danger to a safe place;
- suspending work in the event of an imminent danger and issuing an order to move away from the place of danger to a safe place and preventing resumption of work until the threat is removed.

The employee is obliged to comply with health and safety rules and regulations, in particular:

- know health and safety regulations, take part in trainings and instructions in this area and undergo the required tests;

- perform work in accordance with health and safety rules and regulations and follow instructions and instructions issued by superiors;
- take care of the proper condition of machines, devices, tools, equipment as well as order and order in the workplace;
- use collective protection measures and use personal protective equipment, work clothing and work footwear for their intended purpose;
- undergo initial, periodic, follow-up and other prescribed medical examinations and follow medical indications;
- notify a supervisor of an accident or threat to human life or health, and warn co-workers, as well as other people in the danger area, of imminent danger;
- cooperate with the employer and supervisors in fulfilling their obligations regarding health and safety at work.

The person managing the employees is obliged to:

- organizing a workplace in accordance with health and safety regulations and rules;
- ensuring the efficiency of personal protective equipment and its use as intended;
- organization, preparation and conduct of work, including protection of employees against accidents at work, occupational diseases and other diseases related to working environment conditions;
- taking care of the safe and hygienic condition of the workplace and technical equipment as well as the efficiency of collective protection measures and their use as intended;
- enforcing compliance by employees with health and safety regulations and rules;
- ensuring that the recommendations of a healthcare practitioner are followed.

The basic legal regulations regarding S&HP in construction are presented in Table 3. Access to legal provisions is possible in the database "online system of legal acts" published on the website of the Sejm of the Republic of Poland (www.isap.sejm.gov.pl), containing bibliographic descriptions and texts of legal acts published in official publications: Dziennik Ustaw and Monitor Polski - issued by the Prime Minister. Normative and other legal acts are announced in the form of an electronic document within the meaning of the Act of 17.02.2005 on the computerization of the activities of entities performing public tasks (Journal of Laws of 2005 No. 64, item 565, as amended). Among them stand out:

- provisions of the Construction Law (Act of 7 July 1994 Construction Law) together with executive provisions;
- building regulations - related to the provisions of the above Acts, colloquially referred to as "building-related regulations" (Baryłka 2015; Baryłka et al. 2019).

No	Legal act	Content characteristics
1	Construction Law	It regulates activities covering matters of design, construction, maintenance and demolition of building objects, and sets out operating principles. The Act covers the following issues: General provisions independent technical functions in construction, rights and obligations of participants in the construction process, proceedings preceding the commencement of construction works, construction and commissioning of construction works, maintenance of construction works, construction disaster, architectural and construction administration and construction supervision authorities, Criminal provisions, professional responsibility in construction.
2	Regulation of the Minister of Infrastructure of February 6, 2003 on occupational health and safety during construction works	It defines basic terms related to health and safety at work and regulates issues related to: conditions for preparing and conducting construction works, development of the construction site, social and hygienic conditions, requirements for jobs located in buildings and in buildings undergoing renovation or reconstruction, power installations and equipment, machines and other technical devices, scaffolding and mobile working platforms, works at heights, earthworks, impregnation and fungal treatment, masonry and plastering, carpentry, reinforcement and concrete works, assembly, welding, roofing and insulation, demolition and performed using explosives.
3	Regulation of the Minister of Infrastructure of June 23, 2003 regarding information on safety and health protection as well as a health and safety protection plan	It defines the scope and form of information on safety and health protection, safety and health protection plan, and a detailed scope of types of construction works that pose threats to human health and safety.
4	Regulation of April 12, 2002 on the technical conditions to be met by buildings and their location	Determines the technical conditions to be met by buildings and related equipment, their location on a construction plot and development of plots for development. The provisions of the Regulation apply to the design and construction (reconstruction, extension, superstructure, reconstruction and changes in the use of buildings and structures)
5	MI Regulation of June 26, 2002. on the construction, assembly, demolition log, information board and announcement containing safety and health protection data	It defines the manner of keeping the construction, assembly and demolition log, persons authorized to make entries, data contained in the information board, and an advertisement containing data on safety and health protection.
6	Regulation of July 3, 2003. on the subject of building book	It presents the template, content, manner of keeping the building object book and the list of documentation (reports on periodic inspection of the technical condition of the object, technical studies, failure and disaster reports, permits to change the way the object is used) attached to the object book along with their characteristics.
7	Environmental Protection Act	Specifies the terms and conditions for the use of its resources, taking into account the requirements of sustainable development, in particular: <ul style="list-style-type: none"> • rules for determining: conditions for the protection of environmental resources, conditions for the introduction of substances or energy into the environment and the costs of using the environment,

		<ul style="list-style-type: none"> • sharing information about the environment and its protection, • public participation in proceedings regarding environmental protection, • obligations of administrative bodies, • liability and sanctions.
8	Specific regulations	<ul style="list-style-type: none"> • Ordinance of the Minister of Infrastructure of 12 April 2002 on the technical conditions to be met by buildings and their location, • Ordinance of the Minister of Infrastructure of February 6, 2003 on occupational health and safety during construction works, • Regulation of the Minister of Health of April 20, 2005 on tests and measurements of factors harmful to health in the work environment, • Ordinance of the Minister of Health of December 18, 2007 amending the ordinance on tests and measurements of factors harmful to health in the work environment, • Ordinance of the Minister of Health of December 18, 2007 amending the ordinance on tests and measurements of factors harmful to health in the work environment.

Table 3. *Basic legal regulations in the field of safety and health protection (S&HP) in construction. Source: own study.*

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