

Adaptation of Working Conditions in Poland to European Union Standards - Research and Development

(based on the publication *Safe and Healthy Work Places – Opportunities and Threats Related to the Implementation of EU Directives on Occupational Health and Safety*, Social Policy Journal, Warsaw, Dec. 2002)

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Health is a state of complete physical, mental and social well-being and not merely the absence of a disease or infirmity.
(the Constitution of the World Health Organisation)

SAFETY AND HEALTH PROTECTION IN INTERNATIONAL REGULATIONS

The basic legal regulations on occupational health and safety are at the international level defined by the International Labour Organisation (ILO), the World Health Organisation and - in the territories of its Member States – by the European Union. Specific requirements for occupational health and safety are determined through international standards (ISO) and European standards (CEN/CENELEC).

The protection of workers from occupational diseases and accidents is inscribed in the preamble of the Constitution of the International Labour Organisation. In over 80 years of functioning, the organisation has adopted 184 conventions and issued 192 recommendations. Most of those regulations are directly or indirectly related to the issue of occupational health and safety of the workers in their work place.

With regard to safety and health of employees and the occupational environment the ILO convention No. 155, adopted in 1981 is the principal document on the subject. It imposes on the signatories an obligation to define and then implement the state policy on occupational health and safety and to ensure periodic control of its functioning. The decisions of this policy – prior to their implementation – must be consulted with representative organisations of workers and employers. Convention No. 155 contains details of the criteria which, when met, guarantee the correctness of state policy on the matter. It also specifies the duties of the public authorities and the employers as well as the participation of workers in the development of the policy.

Apart from the framework convention No. 155, the ILO also adopted numerous conventions that regulate more specific aspects of occupational safety, such as: occupational risks from chemical compounds (including carcinogenic), noise and mechanical vibrations or large industrial disasters.

The ratification of ILO conventions requires changes to be introduced into national legislation if it is contradictory to them or insufficient, and periodic reports to be presented on the observance of the conventions.

The legal acts of the European Community applied most often, i.e. **Directives**, are, in accordance with Article 189 (3) of the Rome Treaty, also legally binding in terms of the intended effect for every Member State to which they are addressed, while the method of their introduction into national law of a Member State is up to the interested party. The deadline for an unconditional implementation of the directive is always contained in the act. Failure to comply with the deadline or an improper introduction of the directive to national law and practice causes specific implications for the Member State, mainly of a financial nature.

The integration of European Union Member States involves, on the basis of Articles 100a and 118a of the Rome Treaty, adopting numerous directives on occupational safety and health (Kowalski, Krzyśków 2000). They can be divided into two groups:

- directives adopted on the basis of Article 100.a of the Treaty, aim to eliminate barriers in international trade; this group also includes directives that unify legal and administrative regulations in terms of technical requirements for machinery, tools and other equipment in the work place and regulate the labelling of dangerous substances;

- directives adopted on the basis of Article 118a of the Treaty, aim to ensure social security through the establishment of minimum requirements that stimulate activities, especially in the working environment, ensuring an adequate level of occupational safety and health .

The application of minimum requirements provides basic protection in terms of occupational safety to workers. Naturally, the Member States are allowed to apply stricter regulations in their legislation than the minimum requirements contained in the directives.

Acts adopted by the European Council are also worth mentioning. The European Social Charter is the document of principal importance for occupational safety and health. The problem of occupational safety and health is regulated in items 2 and 3 of Part I (item 2 "All workers have the right to proper conditions of work" and item 3 "All workers have the right to safe and healthy working conditions"). Article 3 of Part 2 imposes an obligation on the ratifying country to conduct the following in co-operation with employers' and workers' organisations:

- define, implement and periodically assess the coherence of the state policy on occupational safety and health ,
- issue safety and health regulations,
- provide for the enforcement of such regulations by supervisory measures,
- consult, as appropriate, employers' and workers' organisations on measures intended to improve industrial safety and health.

In light of ILO and European Community regulations, the objective of the overall state policy on occupational safety and health is to improve the state of occupational safety and health and to prevent accidents and health risks during work by limiting to a minimum the reasons for them.

The comparative analysis of solutions for labour protection in Poland and in EU Member States led to the determination of tasks needed to ensure that not only the approximation of laws but also their practical application are adjusted to the level of EU Member States. These include:

- adjusting the Polish rules and technical norms on occupational safety and health in the work place to the requirements contained in European Community directives and European standards,
- developing and implementing a system for research and certification of machinery and personal protective equipment,
- developing a system of identification of documentation and assessment of occupational risk and informing the workers about it,
- developing a system for the training of employers, workers and their representatives as well as people implementing tasks related to occupational safety and health in the work place.

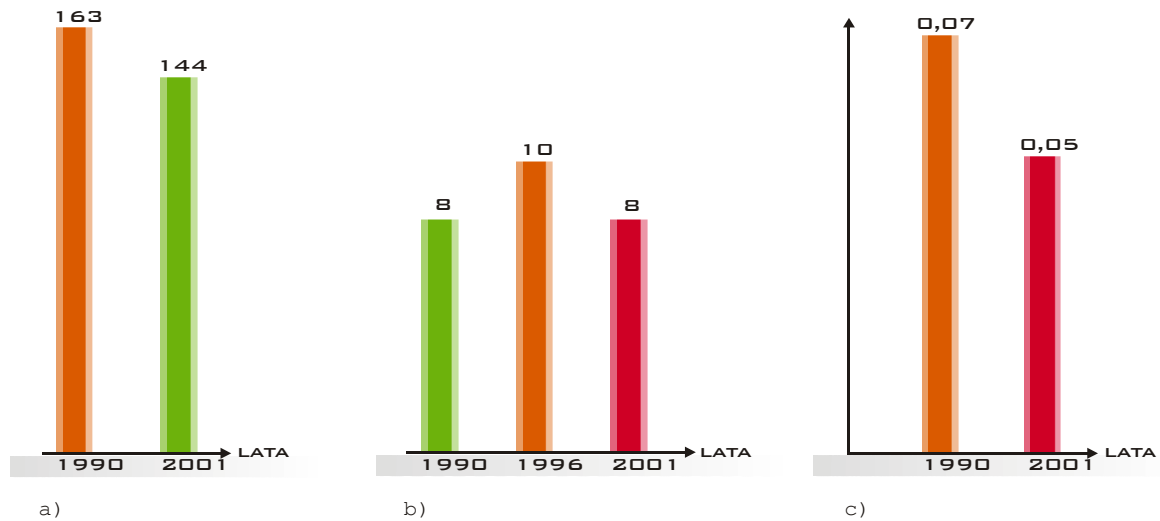
This does not mean that the above problems had not been previously addressed in Poland. However, the comparison with the solutions adopted by the EU Member States created the need to introduce certain changes, some of them significant.

When analysing the requirements contained in directives on occupational safety and health, special assistance must be paid to the **Council Directive (EEC) 89/391 of 12 June 1989 on the introduction of measures to improve occupational safety and health of employees during work**, known as the **Framework Directive**. It is a directive of fundamental importance for the shaping of the policy on occupational safety and health as it regulates, similarly to ILO Convention No. 155, the basic rights and obligations of employers and workers in terms of occupational safety and health. A lot of importance was attributed to prevention and especially the elimination and minimisation of occupational risks in the work place. It also suggests activities that should be implemented to guarantee the safety and health of workers. Specifically, these include: preventing occupational risk, informing about it and training workers to enable them to avoid or minimise the risk as well as ensuring adequate protective equipment and labour organisation. The framework directive emphasises the effective participation of workers in all stages of occupational risk prevention.

CHANGES IN THE BASIC OCCUPATIONAL HEALTH AND SAFETY INDICATORS IN POLAND DURING THE PERIOD OF TRANSFORMATION (1990–2001)

The transformation of Central European states is taking place mainly in their economic system but also produces secondary consequences for the social system. The working conditions in turn, including occupational safety, are related to the functioning of that system. It should be emphasised that contrary to earlier concerns, the economic transformation in Poland has not worsened working conditions (Koradecka, Dryzek 2001; MPiPS 2002). The Main Statistical Office collected data from a population of 5,040,000 workers employed in 66,000 enterprises. The number of people employed in harmful conditions was among that population 144 people per 1000 employed in 2001 and was lower than in 1990, when it was 163 people per 1000 employed (Figure 1a). The rate of people injured in accidents, which in 1990 stood at 8 people per 1000 employed, increased in 1996–1997 to over 10 people and in 2001 came back down to 8 people (Figure 1b). The rate of fatal accidents per 1000 employed decreased in that period from 0.07 to 0.05 (Figure 1c).

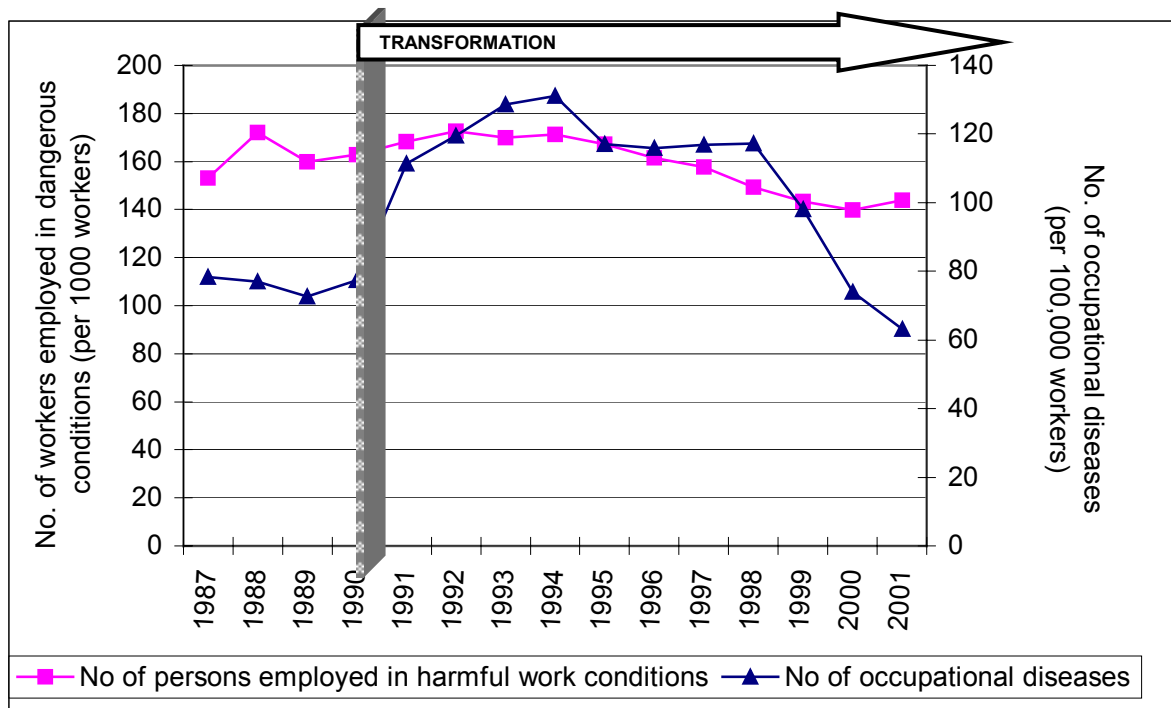
Figure 1. The number of people under threat of harmful agents in Poland (per 1,000 employed)



Number of persons exposed to harmful agents (per 1,000 employees) in Poland
 a) proportion of employees exposed to harmful agents
 b) rate of work accidents
 c) proportion of fatal work accidents

In the 1990s, however, the number of officially recognised occupational diseases increased considerably – from 80 per 100,000 employed in 1990 to 130 per 100,000 employed in 1994 until it finally returned in 2001 to the level similar to that of the 1980s (Figure 2).

Figure 2. Number of people employed in hazardous conditions and the number of recognised occupational diseases in Poland in the years 1987–2001

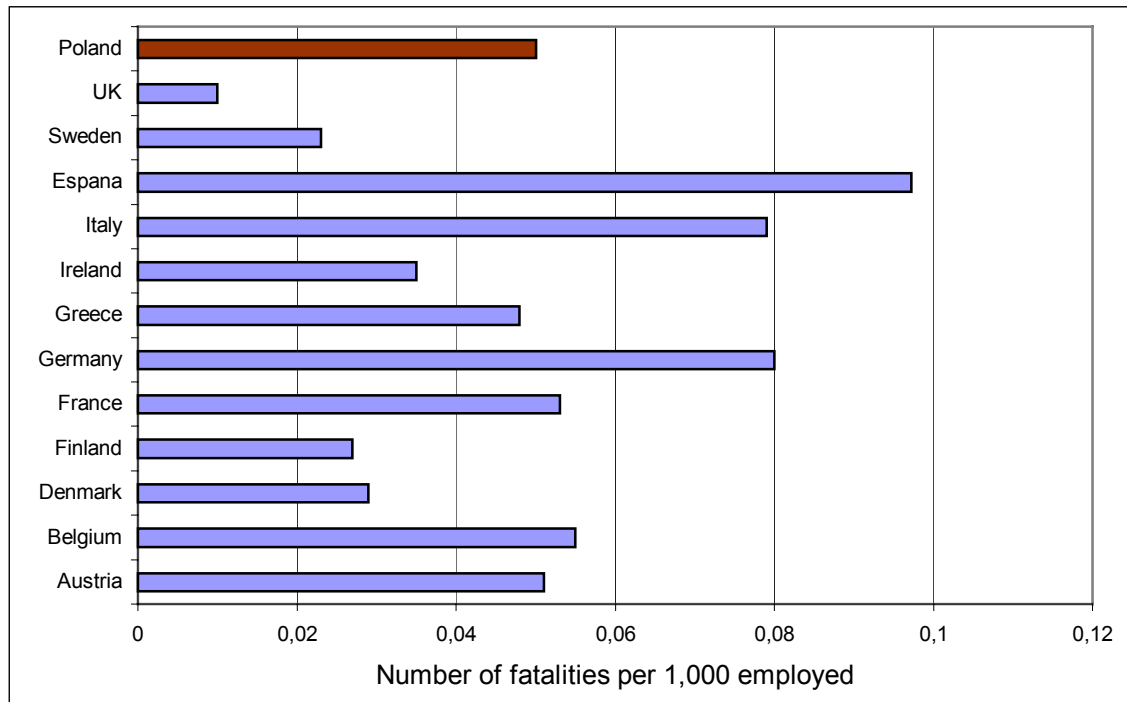


This temporary increase in the number of occupational diseases is related most of all to the restructuring of many branches of heavy industry that “generate” occupational diseases. It was also for social reasons that occupational diseases were being diagnosed in laid off workers whose general health was not good.

However it is the indicators on occupational safety and health in developed countries, especially in EU Member States, that should be used as a point of reference by Poland as it is preparing for EU accession. Attention should naturally be paid to the incomplete comparability of the data resulting from methodological differences.

At present, the European Union and its agency EUROSTAT as well as the International Labour Organisation are conducting intensive work on the unification of definitions and the rules for registering accidents at work and occupational diseases (Takala, 2002). This will in the near future enable comparisons of respective indicators in various countries. Currently one can attempt to compare data on the rate of fatalities in accidents at work per 1,000 employed (Figure 3).

Figure 3. *Rate of fatalities in accidents at work per 1,000 employed in selected EU Member States and Poland in 2001*



The data mentioned above could therefore suggest that the transformation in Poland did not have a negative impact on the basic indicators of the state of occupational safety and health.

The research of the National Safety Foundation (USA), conducted in Poland together with the Central Institute for Labour Protection in the 1990s (Szejnwald Brown, Angel, Broszkiewicz, Krzyśków 2001; Broszkiewicz, Szejnwald Brown 2002) confirmed this thesis, even though the initial prognosis of the American scientists provided for a negative impact of the transformation on the system of labour protection.

What is most important is the fact that the transformation contributed to the launching of activities aiming to implement systemic changes in occupational safety and health. This should be regarded as the fundamental opportunity used by Poland during the implementation of European Union directives.

SYSTEMIC CHANGES IN THE SHAPING OF ADEQUATE WORKING CONDITIONS RESULTING FROM THE IMPLEMENTATION OF EUROPEAN COMMUNITY DIRECTIVES IN POLAND

In 1994 the Polish government made a decision to establish the strategic government programme (SPR) "Occupational safety and health in the working environment" (implemented in the years 1995–2001). The main aim of the programme involved establishing an effective system of occupational safety and health in the working environment as part of the social and economic policy of the state in view of the accession of Poland to the European Union. The programme was co-ordinated and implemented by the Central Institute for Labour Protection.

The programme consisted of the following actions:

- improvement of the legal, organisational and economic solutions for the protection of workers in the work place with reference to the requirements of international law,
- development and implementation of a modern system for the determination and assessment of occupational risks,
- modernisation of the system of technical prevention of occupational risks and optimisation of working conditions,

- development and implementation of modern medical prevention and health promotion in the work place,
- introduction of a modern system of information, education and training in occupational health and safety.

The results of research and development work as well as of the implementing activities conducted as part of the programme have been considered during the introduction of the necessary changes to the basic functions of the system of labour protection in Poland.

As the continuation of SPR, by the resolution of the Council of Ministers (No. 82/2001 of 27 June, 2001) National Programme „Adaptation of working conditions in Poland to European Union standards” for the years 2002 – 2004 was adopted. The Central Institute for Labour Protection is the main coordinator and performer of the Programme, performed in cooperation with 13 scientific-research units in Poland.

The main aim of the programme is to develop and disseminate legal, organizational and technical solutions supporting the attainment in Poland of the level of occupational safety and health in accordance with the European Union directives requirements.

The programme is composed of two parts. The first part covers the realization of **research** and development works:

- identification of hazard factors and limitation of occupational risk.
- development of safety engineering in working processes.
- advancement of personal protective equipment.
- applications of ergonomics in working processes.
- prevention of hazards to the working and living environment related to major industrial accidents.
- development of a system of economic incentives and methods of managing working processes to shape safety culture and the efficiency of quality of manufacturing.
- development of the system of education, information and promotion of new occupational safety and health solutions.

The other part covers **implementation** works:

- establishment of occupational safety and health standards
- creation of bases for obtaining the status of a body notified in the European Union for conformity assessment in the area of occupational safety and health
- development of a system of testing personal protective equipment in the area of directive 89/686/EEC
- development of a system of testing machines, tools and collective protective equipment in the area of directive 98/37/EEC
- development of a system of product conformity assessment with safety and health protection requirements (on a voluntary basis)
- advancement of an information system in the field of occupational safety and health
- development of education in the field of occupational safety and health
- development of occupational safety and health management systems

The expected results of research and development as well as of implementation works are as follows: Establishment of the values of maximum admissible concentrations (MAC) and intensities (MAI) of factors harmful to health in the working environment as well as testing methods and assessment criteria for these factors.

1. Establishment of methodical standards in the field of air purity at workstations.
2. Development and maintenance of technical-organizational competence for carrying out laboratory tests, product certification and metrological control of measuring instruments used in the assessment of working environment processes.
3. Development of safety engineering and new solutions of personal protective equipment.
4. Ergonomic optimisation of working conditions and work stations
5. Dissemination of methods, techniques and advanced tools supporting effective occupational safety and health management, adapted also to the needs of users in small and medium enterprises.
6. Development of educational system in the field of safety and health protection
7. Development of the resources of professional databases in the field of safety and health protection

The national programme presented above constitutes support for the realization of the priorities of the National Programme of Preparation for Membership in the European Union and, moreover, it is in accordance with research priorities indicated for the nearest years by international and European organizations. At the same time, it is directed to increasing the effectiveness of preventing accidents at work and occupational diseases and decreasing the costs borne by the Social Insurance Institution and the state budget as well as by entrepreneurs and persons suffering as a result of the work performed. The programme realization will allow to develop and disseminate legal, organizational and technical solutions

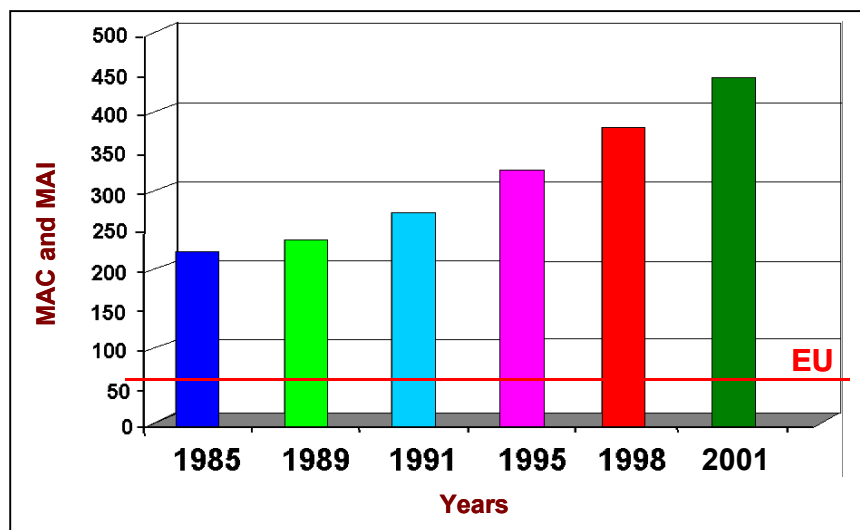
ensuring the Polish employers and employees to reach the level of occupational safety and health in accordance with the requirements of European Union directives.

Standards in occupational health and safety in Poland and in EU Member States

The basic standards that need to be observed in the work environment are the maximum admissible concentration (NDS) and intensity (NDN) of noxious agents (Pośniak, Skowroń, 2000).

The current list of compounds and values of their concentration in the working environment that is binding in the EU contains at present 63 items. Following the results of the government programme co-ordinated by the Central Institute for Labour Protection it can be stated that the Polish list of noxious agents covers all agents contained in the EU list. It should also be emphasised that the Polish list has been intensively broadened (Figure 4) and additionally covers 359 agents.

Figure 4. The determination and verification of maximum admissible concentration of noxious chemical agents harmful to health in the working environment in Poland



The principle, in place since 1983, that full documentation must be prepared for the mechanisms of absorption and the impact on the human body of individual chemical compounds and for the rules of medical and technical prevention of their negative implications is especially important for its users.

What also deserves attention is a part of the list covering the maximum admissible concentration and intensity values of physical factors, such as: noise, infra- and ultrasound noise, vibrations affecting the human body through upper limbs and vibrations with a general impact on the human body, hot and cold microclimate, infrared, ultraviolet and visible radiation, laser radiation, electromagnetic fields and radiation in the frequency range of 0 Hz – 300 GHz.

The binding maximum admissible concentration and intensity values in Poland are in conformance with the values contained in EU directives and international and European norms. This also includes methods of their measurement and assessment.

It could therefore be stated that the first module of medical prophylactics, comprising the details of the maximum admissible concentration values for noxious chemical agents harmful for the health and life of employees, is being implemented in Poland in accordance with global standards. Significant progress in this respect has taken place during the period of transformation. No threats are expected during the implementation of the amended Commission Directive EC/2000/39 of 8 June 2000, which contains the first list of standard boundary values, thus implementing the Council Directive EC/98/24 of 7 April 1998 on the protection of health and safety of employees from risks related to exposure to chemical compounds during work. We have in Poland an effective mechanism for the determination of hygiene standards by the Inter-Ministerial Commission for the Maximum Admissible Concentration and Intensity Values of Agents Harmful to Health in the Working Environment (*Międzyresortowa Komisja do spraw Najwyższych Dopuszczalnych Stężeń i Natężeń Czynników Szkodliwych dla Zdrowia w Środowisku Pracy*) (Journal of Laws No. 124, pos. 789; JoL No. 8, pos. 108), established on the basis of the Prime Minister's Regulation of 28 May 1996.

Standardization of safety and ergonomics requirements

The basic requirements for work safety and ergonomics established on the basis of the work of the Special Development Programme underwent an adequate standardization procedure as part of the work of 5 Standardization Problems Commissions (NKP) located in the Central Institute for Labour Protection in accordance with a decision of the Chairman of the Polish Standardization Committee. The attainments of those Commissions are presented in Table 1.

Table 1. *Number of standards on occupational health and safety (as for 2002)*

Area of Standardization	Number of Standards
Methods for testing chemical substances at the workplace	559
Testing methods concerning acoustics and vibration	55
Requirements concerning processes, machines and devices	60
Requirements concerning ergonomics	21
Requirements and methods for testing personal protective equipment	111
Methods for testing electromagnetic fields	8
Occupational safety management	3
Total	817

30% of the standards are equal to European and international standards while the rest are procedures that enable the laboratories to conduct uniform assessments of the working environment in all of Poland. Such progress in the standardization of requirements related to occupational safety and ergonomics was also significantly assisted by (apart from the aforementioned research programme) the following:

- participation of 29 experts of the Central Institute for Labour Protection in European and international standardization works, 13 technical committees and 23 respective working groups
- comparative inter-laboratory research in co-operation with the main research centres of the EU Member States.

The process of association between Poland and the European Union thus became an opportunity for progress in the area of standards and requirements for occupational safety and ergonomics.

Testing and certification of hazardous machines and tools and personal protective equipment in accordance with the requirements of EN-45000 and ISO-9000 standards

Another important task of the system of labour protection during the transformation period involved establishing know-how and technical foundations for a state system of testing and certification of products seriously affecting occupational safety and health in the working environment.

Work in this area was initiated in the Central Institute for Labour Protection in close co-operation with EU Member States and especially testing and certification centres in Germany and France.

As a result of this work, 17 laboratories of the Institute were granted in 1995 the necessary competence, confirmed by audits (including an audit by EU experts), to conduct tests of products related to occupational safety and health (personal protective equipment, collective protective equipment, machinery and production tools as well as general application ladders) in order to issue certificates and to measure the parameters of the working environment (vibro-acoustic, microclimatic, electro-magnetic fields, lighting, infrared radiation) in the work places, concentration of noxious chemical compounds as well as physiological parameters of humans in the working environment. Furthermore, the Institute received accreditations in the state quality assurance system as:

- a unit certifying collective and personal protective equipment, machines and tools, high voltage insulating and protective equipment and ladders (1994),
- a unit certifying quality management systems and occupational safety and health management systems (2000).

The Figures present the increase in the number of tests performed as part of the accreditation (Figure 5) and the certificates issued (Figure 6) in the years 1997–2000.

Figure 5. Tests on the fulfilment of occupational health and safety requirements, performed in accredited laboratories of the CIOP

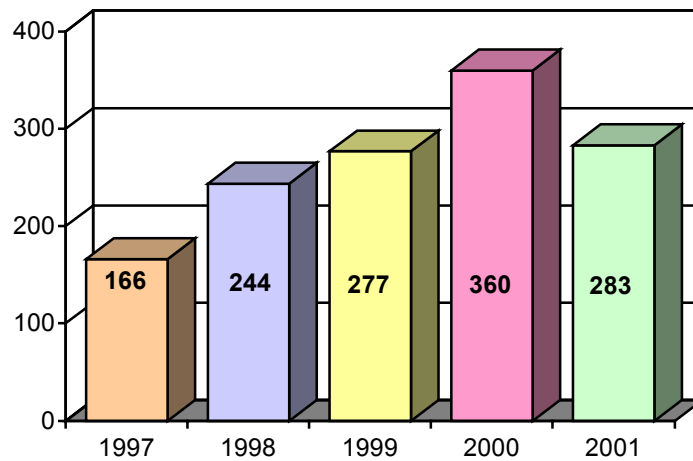
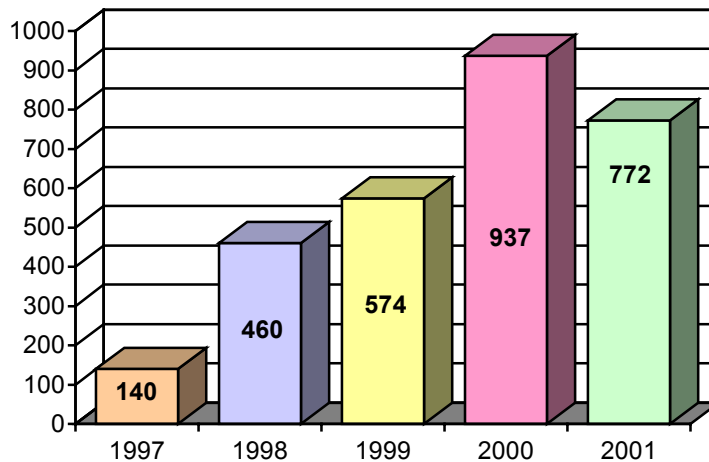


Figure 6. The number of safety mark certificates issued by CIOP (for machinery and personal and collective protective equipment)



The Central Institute for Labour Protection (CIOP) constantly monitors whether the certificate holders maintain the standards for the tested products. The level and the dynamics of the development and constant improvement of the system were a subject of a special audit by an EU expert which led to the EU accreditation of the Central Institute for Labour Protection as a unit authorised to test and certify products that are of fundamental importance for safety and hygiene of work places.

The System of Education and Training in Occupational Health and Safety

The activities in this area were for years conducted by many training centres in Poland. However, there was a need to address new challenges of making both the occupational health and safety experts and the social partners – employers and workers – aware of the new requirements in safety and health protection that resulted from EU directives as well as international and European standards. This presented new challenges to the Polish educational system.

These focused on three main areas: contents, forms and scope of modern education and training in work safety and ergonomics. The results of the government programme work were important also in this respect. The development of modern multimedia educational aids led to the launching of the Educational Centre of the CIOP. It operates under the auspices of the Minister of Labour and Social Policy, the Minister of Education and the Chief Labour Inspector. The Centre provides post-graduate studies as well as basic, periodic and specialist training. Approximately 1,500 people study at the Institute annually. Furthermore, a distance-learning system was also developed (basic studies offered in co-operation with the Warsaw Technical University, post-graduate studies and training offered by the Institute alone).

The assurance of an adequate teaching level was possible with the co-operation and support mainly from the UNDP/ILO and Sweden (the SIDA programme).

In the year 2000 a Centre for the Certification of Human Resources Competence, the first one in Poland, was accredited at the Institute. The Centre evaluates and confirms the competence of lecturers, industrial hygienists, occupational safety and health services and auditors of management systems.

The System Occupational Safety and health Management

The elements of the system of labour protection described in the previous chapters became a basis for a consolidated systems of occupational safety and health management at the level of enterprises. Specific Polish standards of the PN-18000 series were prepared. The Institute gained the acceptance of the Centre for the Certification of Products and Management Systems (2000).

The implementation and promotion of those systems are conducted jointly with the State Labour Inspectorate. What should be emphasised is the extraordinary importance of the implementation of those systems in Polish enterprises (Podgórski, 2000). This is due to their logical integration with quality management systems (ISO-9000) and protection of the natural environment (ISO-14000).

The largest foreign manufacturers operating in Poland have this subject area included in their strategies. This approach is also becoming apparent to the largest Polish producers. The achievements of the Institute in the area of management of occupational safety and health were a basis for inviting Poland to participate in the work on a ILO manual on "Guidelines for ILO-OSH 2001 occupational safety and health management systems". Improvements to those systems are undoubtedly a foundation for future development of labour protection at the level of enterprises.

Economic Aspects of the Implementation of the Requirements on Occupational Health and Safety

The costs resulting from inadequate working conditions are still considerable. They can be assessed mainly through the prism of benefits paid out by the Social Insurance Institution (ZUS). According to the ZUS data, 2440 new incapacity for work pensions resulting from industrial injuries have been granted in the year 2001 (29.4% less than in 1999) along with 2,658 new incapacity for work pensions resulting from occupational diseases. In total, the ZUS benefits (invalidity pensions and one-time compensation) related to accidents and occupational diseases (together with pensions paid out with invalidity pensions) amounted in 2001 to approx. 5 billion 259 million zloty (Figure 6). This amounts to around 0.8% of GDP (Pawłowska, Rzepecki 2000).

According to the data supplied by among others the International Labour Organisation, the indirect costs of industrial accidents and occupational diseases (not covered by insurance and not registered by insurance institutions) are around 4 times higher than the direct costs. If one accepts this assumption and taking into account the above costs of benefits paid out by the ZUS it can be approximated that the total costs of work accidents and occupational diseases in Poland amount to around 4% of GDP. According to the latest data of the European Agency for Occupational Safety and health in Bilbao (2001) the total costs of industrial accidents and occupational diseases amount in the EU Member States to around 3% of GDP.

The transposition of the decisions of EU directives into Polish law and their practical implementation should serve to limit socio-economic losses caused by inadequate working conditions.

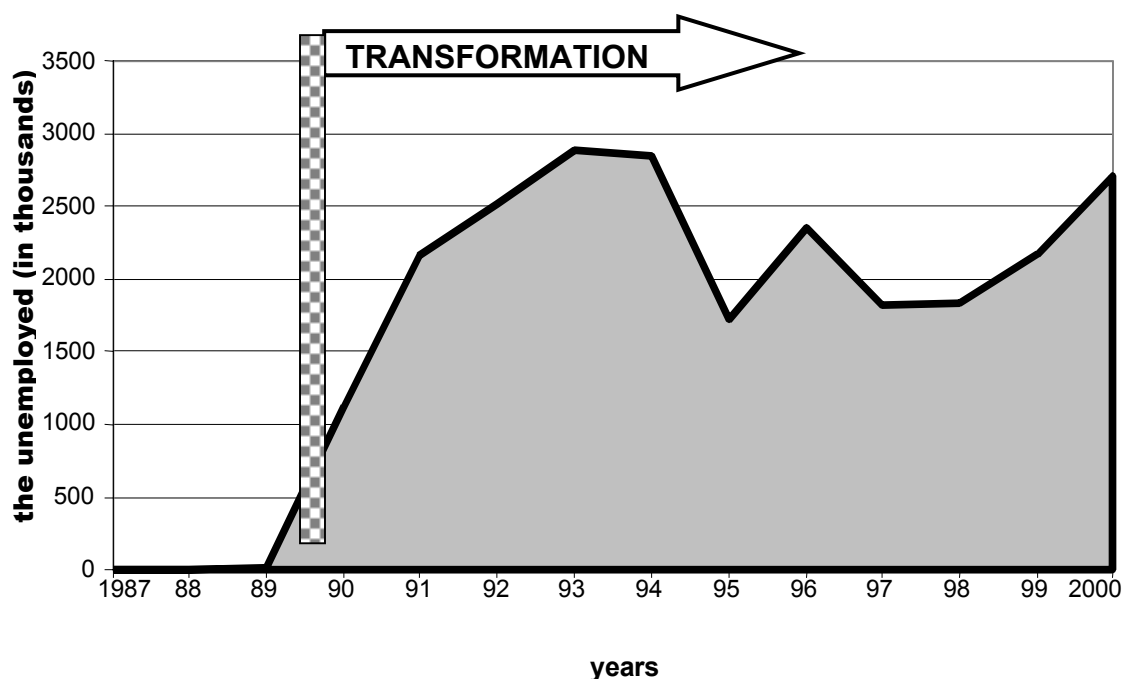
The implementation of the new requirements is nevertheless related to costs that have to be born by enterprises. The problem became important in view of the Polish accession to the EU. Research into the costs of the introduction of legal changes resulting from the decisions of EC directives on occupational safety and health, conducted by the Central Institute for Labour Protection in co-operation with experts from the United Kingdom and then from France suggests that those of the Polish enterprises that have no problems with the observance of the current Polish law, will not incur additional costs related to the implementation of the decisions of EC directives. For example, the costs for enterprises of adjusting machines and other equipment (not including self-propelled machines and equipment) to the requirements of Directive EEC/89/655 have been approximated in the entire country to amount to 312 million zloty, while the cost of adjusting to new requirements not yet implemented into the Polish law amounts to just 44 million zloty. In the case of other directives on occupational safety and health, the costs of adjusting to their requirements (not hitherto present in the Polish law) are far lower.

It is expected that the Law on Insurance Against Occupational Accidents and Diseases will become an economic incentive for improvements in the conditions of occupational safety and health by following in the footsteps of some of the EU Member States and introducing a mechanism of diversifying the contributions from enterprises as to the level of occupational safety and health. The introduction of such incentives is a very important opportunity for occupational safety and health protection in the work place.

POSSIBLE THREATS FOR THE PROCESS OF IMPLEMENTATION OF EC DIRECTIVES ON OCCUPATIONAL SAFETY AND HEALTH

The positive tendencies in the shaping of occupational safety and health in Poland, outlined above, may be hampered by numerous threats. The first of those is the rise of the unemployment rate in Poland. Statistical data showed this increase in 1989 and in recent years unemployment has started to rise significantly (Figure 7).

Figure 7. *Unemployment in Poland in 1987–2000*



Unemployment became the main social problem during the transformation period. The fear is that in the near future this phenomenon may have a negative impact on the level of work safety as well. In a situation of an over-supply of the workforce the employers may care less about the maintenance of safety standards and the employees will agree to work in arduous, harmful or dangerous conditions. The analysis of this phenomenon and combating its negative effects will steadily become more important.

Serious threats to ensuring occupational safety and health in the working environment are also a result of other changes in the labour market, such as: the growth of the number of working hours and the growth of the number of positions involving shift or night work, part-time work, self-employment or outsourcing.

An overview of the research conducted in 11 countries and covering various types of industry and various employment size in enterprises proves that the aforementioned changes to the organisation of work cause negative effects in terms of occupational safety and health protection of employees. Such effects were discovered in 76 out of 93 studies in different countries (Quinlan, Mayhew, Bohle 2001). To be able to prevent those effects, one needs to discover the reasons for them. These are most of all related to the fact that temporary employment is often related to economic pressure and/or changes in the wage system. It was also discovered that temporary (outsourced) workers are often entrusted with dangerous tasks. This is known as the so called *counter-cutting effect*. Excessively intensive work and longer working hours cause excessive work load which in turn contributes to an increase in the number of illnesses and work-related accidents.

Temporary employment may also cause such dangerous phenomena as work disorganisation and difficulties in adequate training of temporary workers, especially if these are young and inexperienced people or those who often change jobs. Multi-purposefulness, typical for the current labour processes, may also produce an additional risk if the workers are not comprehensively prepared and not given adequate in-service training. Temporary employment often weakens the position of the worker who is unable to voice their concern about occupational hazards and health risks in their working environment. As a result the employer is unable to ensure adequate prevention. *Outsourcing* also results in the introduction of 'alien' people to job positions thus negatively affecting the informal communication flow and knowledge

about safety in the company, which in turn leads to complications and produces doubts as to the hitherto binding safety rules and procedures.

More and more common are large undertakings, grouping a number of companies for one project (e.g. in the construction industry). In such ventures in spite of the requirement to appoint an occupational safety and health co-ordinator the responsibility of individual employers is becoming 'blurred' and the risk of accidents increases. Decreasing employment may in turn lead to the loss of the knowledge about accident prevention as the older and more experienced workers are laid off. Such mechanisms are taken into account during the evaluation of the 'black series' of accidents in the Polish mining industry this year.

The number of Small and Medium-sized Enterprises (SMEs) is rising as a result of changes to the forms and organisation of employment. There are advantages to that process, such as improved mobility and flexibility in dealing with various production tasks or services. However, it also contributes to increased occupational risk. There are cases where neither the employers nor the workers have any knowledge of occupational risks. They are unable to identify the risk factors correctly, especially when launching new tasks under serious time pressure. The lack of awareness of the tragic implications leads to a lack of interest in the existing methods of technical, organisational and medical prevention. This lack of knowledge in turn produces larger costs needed to prevent significant hazards.

The study by a German employers' insurance institution (*Berufsgenossenschaften*) suggests that the number of accidents in companies employing less than 19 workers is significantly higher than the average number of accidents in large enterprises with a similar business profile (Eichendorf 2002). It was determined that if this number were lowered to that of the large companies, then the costs of financial compensation of the effects of accidents born by insurance institutions would be reduced by as much as 30%. As a result of the introduction of the so-called concept of "model employer" was launched in Germany. According to the recommendation of the Federal Minister of Labour and Social Issues it is being applied in companies employing less than 50 workers (in extraordinary cases less than 100).

There are the following rules for the functioning of this model:

- 1) employer is motivated to improve the level of occupational safety and health and is informed about the measures that should be employed to achieve this,
- 2) employer is supported by an insurance institution in the identification of occupational risk,
- 3) risk assessment conducted by employers is supported by external consultants if necessary,
- 4) employer receives the necessary training.

Even though it is excellent in terms of theory, the model is very difficult to implement in practice, even as an experiment. The problem of reaching SMEs with the knowledge adequate to their needs is organisationally extremely difficult. Other EU Member States, boasting great traditions and solutions for occupational work and safety protection in the working environment, are also struggling with this phenomenon.

Occupational safety and health lists seem most appropriate and are very important for SMEs as they enable them to check the work processes they apply and thus to comply with the requirements of the Framework Directive on preventing occupational risk. Filling in such lists facilitates the identification and assessment of occupational risks and is a basis for the information for employees on what is most important in effective prevention of occupational hazards in an enterprise.

The Central Institute for Labour Protection elaborated such lists as part of the government programme for around 40 production and services processes, most common in SMEs. They have been very well received by employers. The State Labour Inspectorate forwards such lists to employers during its first control visits, enabling familiarisation with the requirements and explanation of the methods of meeting the requirements.

The national policy on occupational safety and health of workers is also extremely important. New Zealand in the years 1985-2000 may serve as an instructive example of negative changes in occupational safety and health protection at the level of the entire country (Wilson 2002). The energy crisis and a drop in the trade exchange with the United Kingdom when it became a member of the European Community led New Zealand to look for cuts in labour costs, especially in the area of occupational safety and health. It was decided that occupational safety and health would be governed exclusively by the employer, without any participation from employees or their representatives for safety. The number of regulations and implementing regulations in this area was cut and the inspectorate responsible for monitoring working conditions suffered from under investment. The privatisation of insurance for occupational accidents and diseases in 1998 resulted in particularly negative changes. It is estimated that this moved New Zealand back 30 years in terms of progress in employment relations, including occupational safety and health protection. Such a situation would not have been possible had the country been a member of the European Union. In 2000 New Zealand returned to the previous model – ensuring minimum occupational safety and health standards in line with the requirements of the ILO convention.

It is worth remembering this bad experience when undertaking reforms of the labour law and its implementation in Poland. The European Commission rigorously monitors the state of implementation of EU law in the field of occupational safety and health in EU Member States.

The judgments of the European Court of Justice point to the need for due diligence in the transfer of European Union directives into domestic law and practice. The judgments on the transposition of the Framework Directive in France, Germany and Italy are very important for the field of occupational safety and health. The European Court of Justice decided on 7 February 2002 that the transposition of the Framework Directive in Germany is incorrect as it excludes employers that employ less than 10 workers

from the requirement of having documentation certifying the results of risk assessment. In the case of Italy the Court challenged the rule that employers who employ less than 10 people and family companies are allowed to conduct self-assessment of risks without the need to produce any written documentation of the assessment. Moreover the necessity of having adequate competence to conduct risk assessment was emphasised – should such competence be absent, the employer is obliged to use its own occupational safety and health services or external consultants.

The example helps to underline the necessity of significant changes to the Polish system of labour protection which has to include SMEs – as they constitute 90% of the total number of enterprises in EU Member States (Koradecka 2001).

In view of the threats signalled above, it seems that to take advantage of the opportunities related to EU accession for Poland the following efforts modifying the Polish system of labour protection are needed so as to:

- introduce to the system of education the necessary elements of knowledge about the limited psychophysical capabilities of a human being and the related risk as well as methods of limiting it,
- strengthen the economic interest of employers in improving working conditions, both in the economic aspect (e.g. diversified insurance contribution) and the growth of competitiveness of enterprises (e.g. certification of the quality of products and services and the competence of staff),
- strengthen the participation of employees in the shaping of safe working conditions.

In my opinion the first of the above tasks is especially important as it is a condition for the success of the other two. It is very important that education is not directed to occupational safety and health specialists exclusively but rather – which is self evident – to the society at large.

The change in the forms of employment, typical of developed countries is now dynamically affecting Poland. Everyone should have a minimum of the necessary knowledge to be able to protect their life and health. The knowledge will be useful during work but also at home, in travel or during sports activities. Overall, the information activities should promote the so called “safety culture” which is all the more desired in the conditions of growing stress related to work (Widerszal-Bazyl, Cooper, Sparks, Spector 2000).

Education in its modern multimedia forms should focus on all teaching levels (from primary to the academic) and the transferred knowledge should be updated as science makes progress. Distance learning may play an extremely important role in the age of computers. What is fortunate, modern multimedia educational materials developed by the Central Institute for Labour Protection for the subject “Labour studies – safety, hygiene, ergonomics” have an option of acquiring knowledge through distance learning.

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