

# **POLISH STANDARDS ON HEALTH AND SAFETY AS A TOOL FOR IMPLEMENTING REQUIREMENTS OF THE EUROPEAN DIRECTIVES INTO THE PRACTICE OF ENTERPRISES**

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## **1. Introduction**

Modern occupational safety and health (OSH) management requires implementation of an effective management system in this area. The basic rules of OSH management are stated in European directives, especially in the Framework Directive 89/391 on “the introduction of measures to encourage improvements in occupational health and safety of employees”, which has been fully implemented into Polish law. The directive defines obligatory activities related to OSH management including: occupational risk assessment, informing and training of employees in the field of occupational safety and health, monitoring working environment and making appropriate records, as well as the necessity of involving employees’ participation in activities concerning safety and health protection and the continual improvement of these activities. It is proper to add that the Polish law has been changing significantly due to its adaptation to requirements of the EU’s directives.

To help Polish companies in fulfilling the requirements of the directives and of other national regulations and to help them in implementing OSH management systems, in 1999 the Polish standard PN – N – 18001 “Occupational Health and Safety Management Systems. Requirements” was worked out. Additionally two other standards: the PN-N-18002 standard (guidelines for occupational risk assessment [3]) and the PN-N-18004 standard (guidelines for designing and implementing OSH management systems [4]) were developed. The standards are intended for voluntary implementation.

The model of an OSH management system adopted in the Polish standards and the results of study on the effectiveness of OSH management systems as a tool for accident prevention will be discussed. Additionally the main findings of research on Polish entrepreneurs’ awareness of requirements of European directives concerning OSH issues will be presented.

## 2. An OSH management system defined in the Polish standards

The main objective of the Polish standards is to provide fundamental rules for designing and implementing an effective OSH management system that supports enterprises in fulfilling legal requirements and in designing safety culture. The Polish standards are based on the rules of management systems that are common to the quality management system laid down in the PN-ISO 9000 standards and to the environment management systems laid down in the PN-EN ISO 14000 standards. The model of the OSH management system applied in the Polish standards is shown in Figure 1.

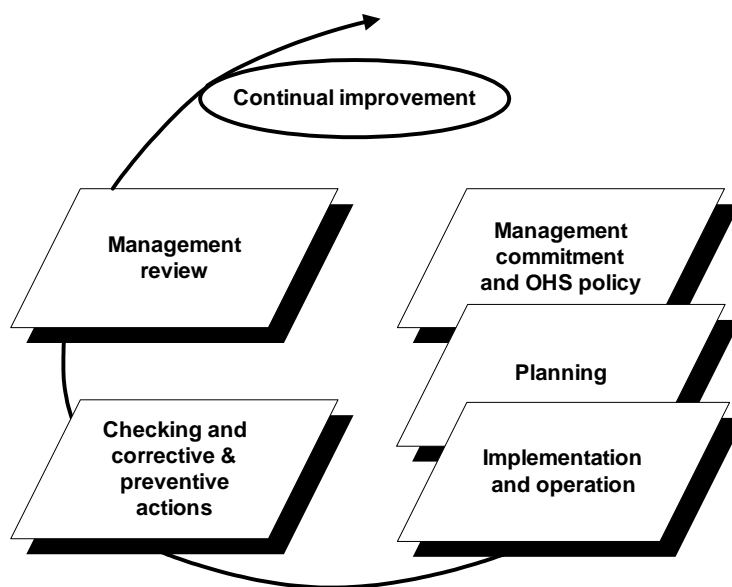


Figure 1. Model of occupational health and safety management system adopted in the Polish standards [2]

The PN-N-18001 standard specifies basic requirements for an effective OSH management system. It is noteworthy that the standards does not lay down absolute requirements for the occupational health and safety performance, it only calls for assuming the commitment set out in the occupational health and safety policy, namely that the organization will operate in compliance with applicable regulations and agrees on continual improvement. The standard contains among others requirements for identification of hazards existing in the organization and the assessment of related occupational risk. The standard shall not define the way of taking such actions as identification of hazards and occupational risk may vary depending on the type and size of organization, technology

applied by it, size and type of hazards, etc. Such actions may be taken with the help of the guidelines laid down in the PN-N-18002 standard [3]. Practical solutions and recommendations for designing and implementing particular elements of OSH management system in a company are presented in the PN-N-18004 standard [4]. The main elements of an OSH management system defined in the Polish standards are:

- occupational health and safety policy,
- top management commitment,
- planning including:
  - hazard identification and occupational risk assessment
  - legal and other requirements,
  - objectives and targets,
  - action planning,
- implementation and operation including:
  - structure, responsibility and authority,
  - resources,
  - training, awareness, competence and motivation,
  - communication,
  - occupational health and safety management system documentation,
  - operational control of operations and activities related to significant hazards,
  - preparedness and response to occupational accidents and emergencies,
- checking and corrective & preventive actions including:
  - monitoring,
  - auditing,
  - records,
  - nonconformity and corrective & preventive actions,
- management review and continual improvement.

The standards have contributed to the popularization of the rules of occupational safety and health management in Poland and to their implementation into Polish companies. Nowadays more than 200 companies have implemented health and safety management systems in accordance with the Polish standards. Before developing the PN-N-18001 standard Polish enterprises had been designing and implementing OSH management systems by analogy to the PN-EN ISO 14001 standard [1]. Many of these companies have already improved health and safety.

### **3. An OSH management system as a tool for accident prevention**

To analyse relations between an OSH management system and the level of occupational safety and health performance specialists in occupational safety and health management systems from 180 companies of different sizes, performing different activities were asked to complete a questionnaire. 71 companies responded. The questionnaire contained questions concerning particular elements of the management system (worked out on a basis of a detailed analysis of the requirements of the PN-N-18001 standard). Additionally, the questionnaire was supplemented with questions about legal requirements not covered by the standard and the questions on the OSH management system performance, especially in relation to developed occupational safety and health culture in the company (worked out on the basis of a checklist for safety culture research in the company)

Fulfilling legal requirements on OSH ensures that the conformity of OSH performance of an organization to the requirements of the PN-N-18001 standard amounts to 60%. Elements of management system that are strongly influenced by legal regulations are: monitoring, preparedness and response to occupational accidents and emergencies, records and hazard identification and occupational risk assessment.

To analyze the relation between OSH management systems and the level of occupational safety and health average occupational accident rates for groups of companies were calculated (considering the division of companies by activities). Management system assessments were considered within the following limits: less than 60%, from 60% to 80% and more than 80%. The relations between occupational accidents and management system assessments in companies performing different activities are presented in the figures 2 a – c. The results obtained show that occupational accident rates in metallurgical companies which implemented the OSH management system according to the standard PN – N – 18001 (assessment 80 – 100%) are two times less than in companies limiting their efforts to fulfilling the legal requirements (system assessment amounts less than 60%). The accident rates are 30% lower in the trading and services companies that implemented the OSH management system according to the standard PN – N – 18001 than in companies whose conformity to the Polish standard has been assessed as low.

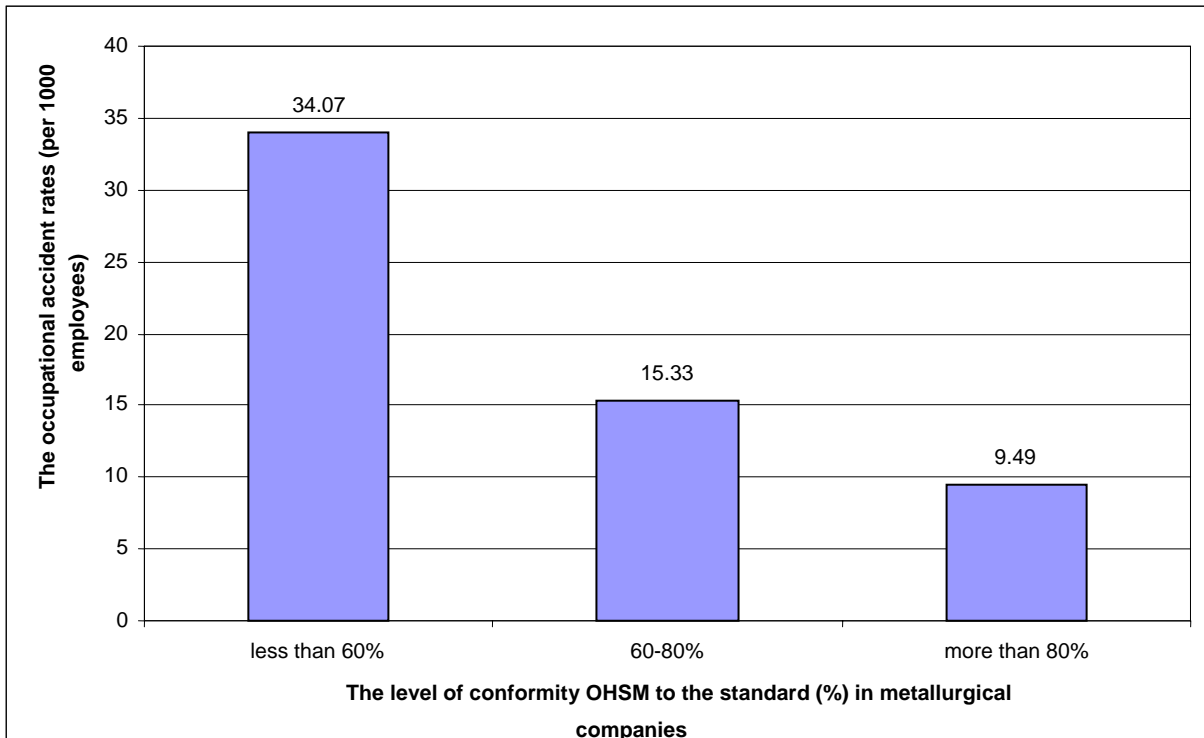


Figure 2a The occupational accident rates according to the level of conformity of the OHS management system to the standard PN-N-18001 (metallurgical companies)

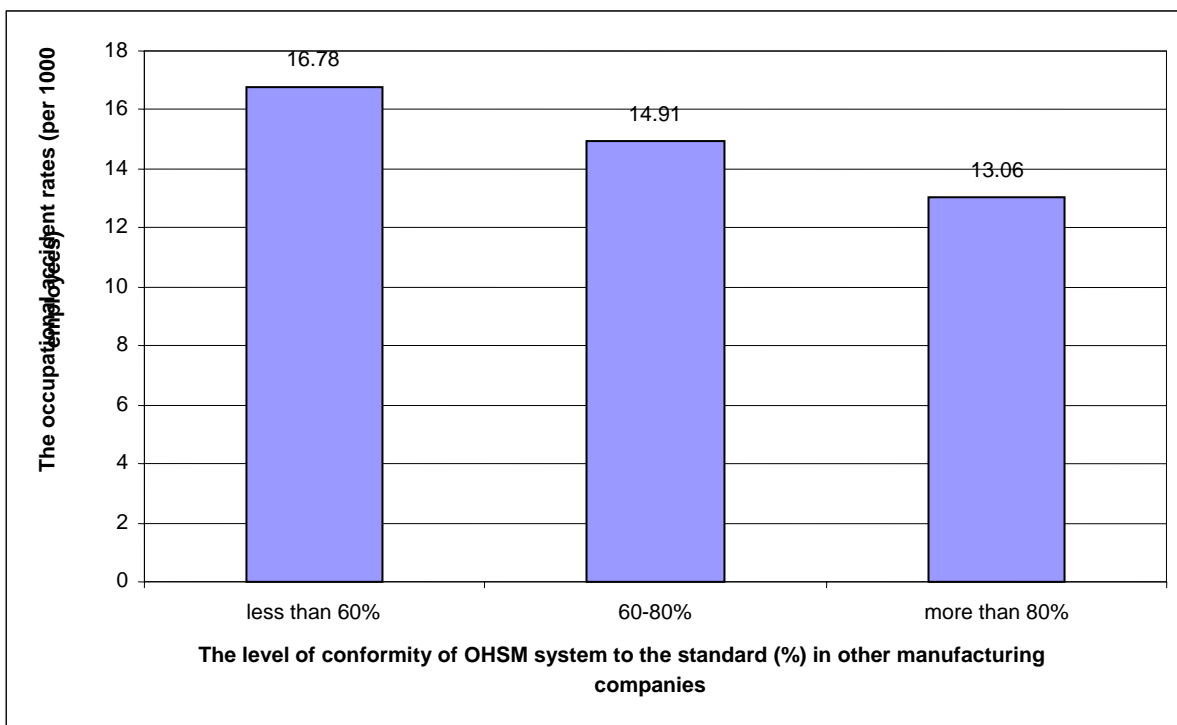


Figure 2b. The occupational accident rates according to the level of conformity of the OHS management system to the standard PN-N-18001 (other manufacturing companies)

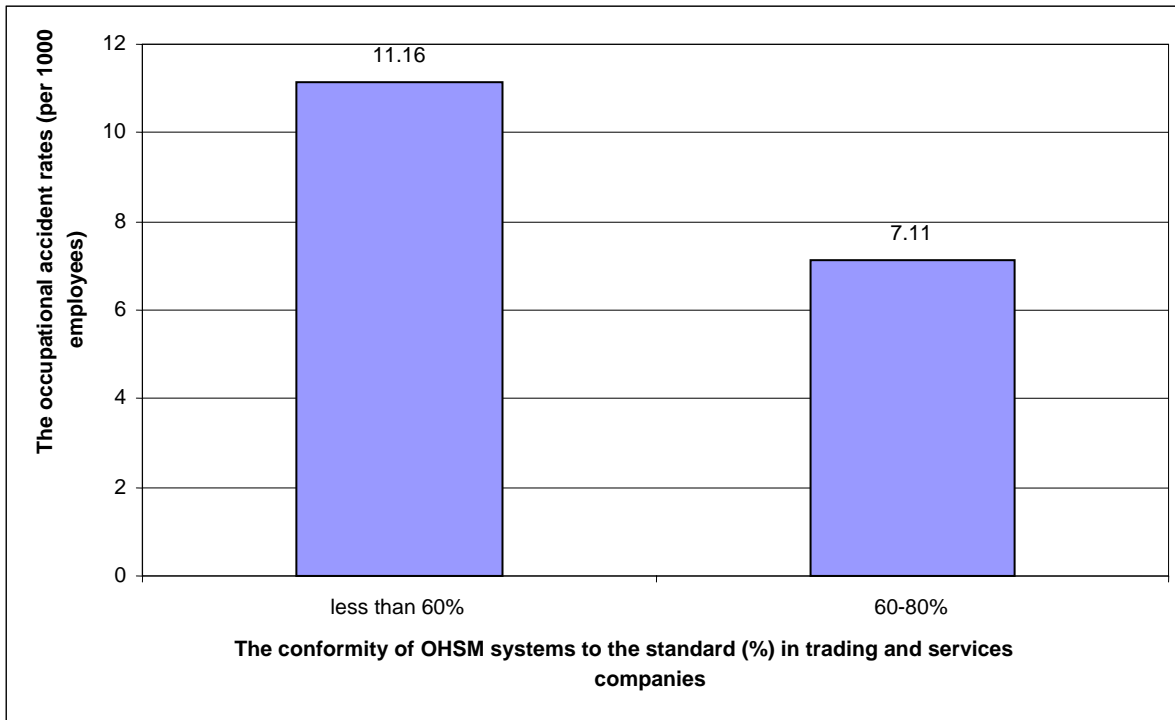


Figure 2 The occupational accident rates according to the level of conformity of the OHS management system to the standard PN-N-18001

It is noteworthy that the experiences in management systems in other areas (quality management, environmental management) have positive influence on OSH management. Among the respondent companies, in companies that have implemented quality management system and environmental management system conformity of OSH management systems to the requirements of the standard PN-N-18001 was higher (figure 3). These findings confirm the compatibility of the PN-N-18001 standard to standards referring to other management systems.

In spite of a high level of the conformity of OSH management system in comparison to the standard in some companies, the occupational accident rates are high. Results of research conducted in these companies do not significantly influence the results of research obtained for all companies studied. They can only indicate inappropriate OSH management system assessment in the companies where the OSH management system is being implemented. The main reason for the majority of such cases is the fact that the system has been implemented for a short time and people who are working on implementing are more concentrated on preparing formal procedures than on ensuring the proper performance of the system. The reasons for ineffective OSH management system performance can be identified during additional research or audits, which should be concentrated not only on the analysis of documentation but also on the practical performance of procedures.

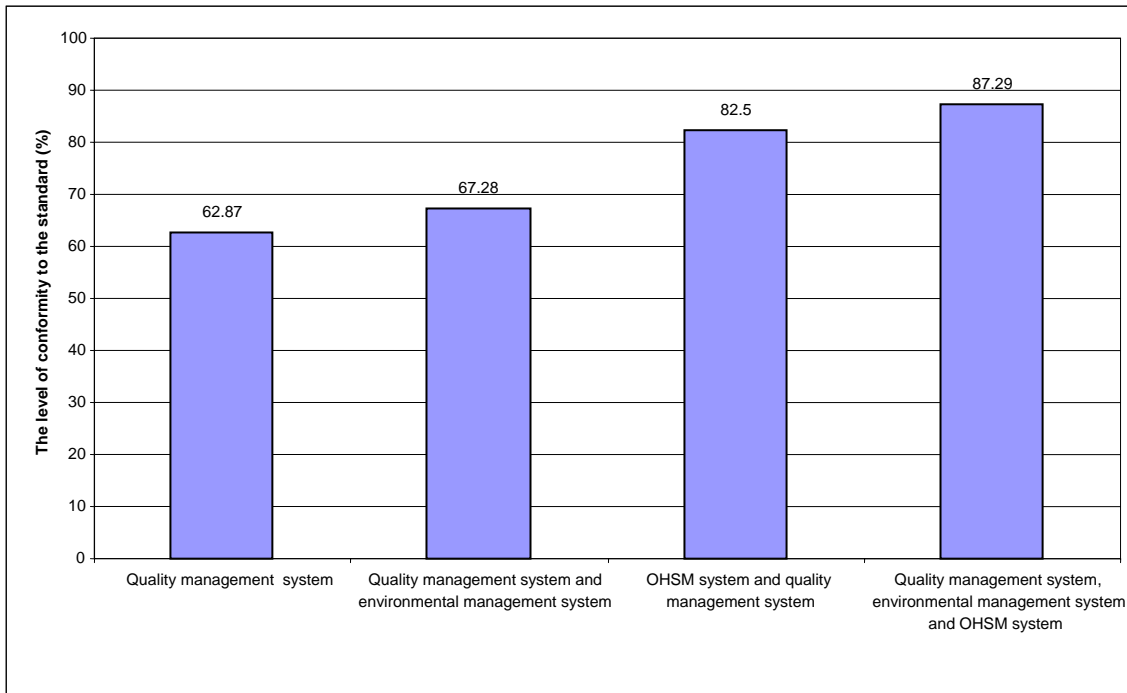


Figure 3. The assessment of conformity OHS management system to requirements of the standard in the companies studied implementing different management systems

#### 4. Awareness of Polish employers of European directives' requirements

This year Polish entrepreneurs were asked to complete a questionnaire concerning their awareness of implementing requirements of the UE's directives into the Polish law. 100 employers answered. The questionnaire consisted of questions related to the following directives:

- the 90/269/EEC directive on minimum criteria of manual handling operations,
- the 90/270/EEC directive on work with use of display screen equipment (DSE),
- the 89/656/EEC directive on personal protective equipment (PPE),
- the 89/655/EEC directive on work equipment.

The findings show that the employers are aware of requirements of the directives (the less known The requirements of the directive on work equipment are known the worst (by 45% of respondents) and the requirements of the directive on DSE are known the best (by 84% ). The respondents were asked if implementing requirements of these directives into the practice of enterprises would bring them any benefits. Most employers expect, first of all, reducing number of occupational accidents and diseases and increasing productivity and quality of goods and services (Figure 4).

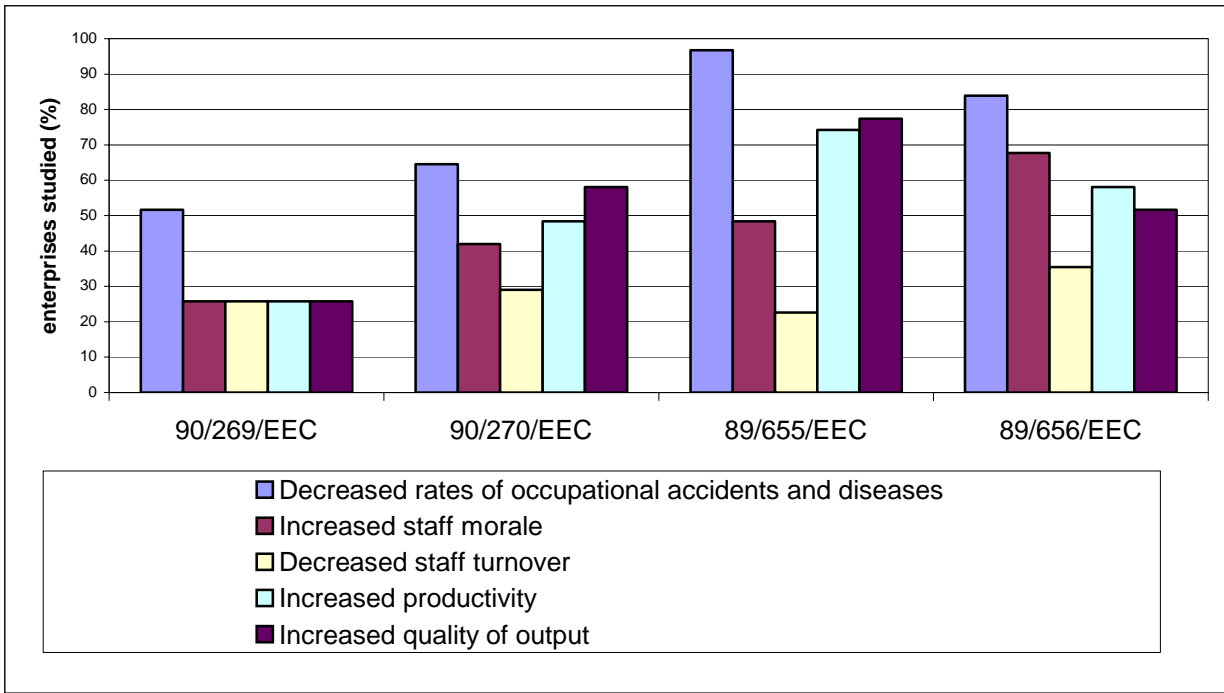


Figure 4. Benefits resulted from implementing the requirements of the directives into the practice of enterprises

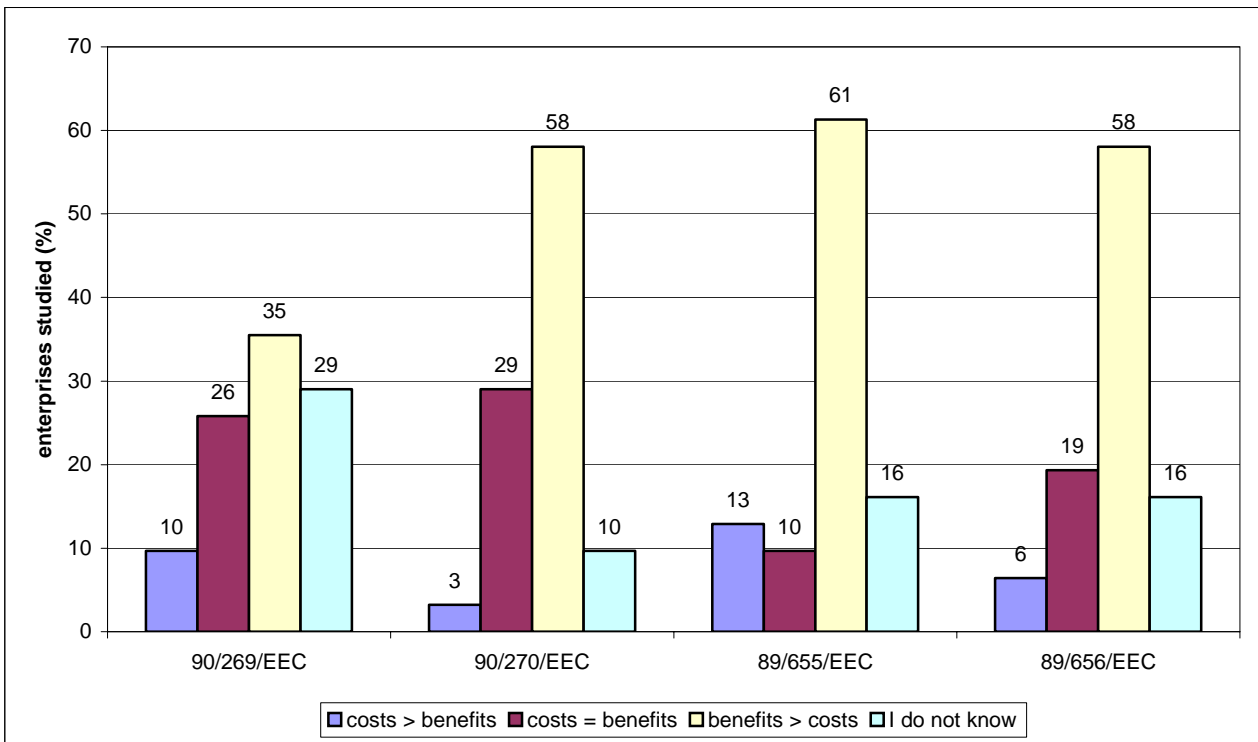


Figure 5. Relative of costs and benefits of implementing the requirements of the directives

Respondents were also asked to assess the relative of costs of benefits of implementing the requirements of these directives by judging whether the costs would outweigh the benefits, the



benefits would outweigh the costs or the costs and benefits would break even. Most employers expect that the benefits will outweigh the costs (Figure 5).

#### **4. Conclusions**

Implementation of an effective OSH management system according to the requirements of Polish PN-N-18001 standard helps enterprise to fulfil requirements of the European directives and other national regulations. In particular the effective OSH management system enables to identify and implement into the practice of a company all new regulations concerning OSH issues.

The research confirms that an OSH management system could be an effective tool for accident prevention. In particular the research shows that there is a relation between conformity of the OSH management systems to the Polish standard and OSH performance level in Polish enterprises. Higher assessment of the OSH management system (higher level of conformity to requirements of the standard) means usually lower occupational accident rates. The research also shows that the formal implementation of an OSH management system cannot ensure employees' safety and health protection if it is not followed by activities aimed at implementing the system into practice. It is noteworthy that implementation of quality management system and environmental management system induces increase of the level of conformity of occupational safety and health management systems to the requirements of the PN – N –18001 standard.

It is also proper to add Polish employers are aware of implementing requirements of the EU's directives into the Polish law and they expect that fulfilling them will contribute to improve safety and health in their companies thus they will impact positively on productivity and competitiveness of enterprises.

#### **5. References**

- [1] Polish Standards Committee PN-EN ISO 14001:1998 Environmental Management Systems – Specification with Guidance for Use
- [2] Polish Standards Committee, PN – N – 18001:1999 Occupational health and safety management systems. Requirements.
- [3] Polish Standards Committee, PN – N – 18002:2000 Occupational health and safety management systems. Guidelines for occupational risk assessment.
- [4] Polish Standards Committee, PN – N – 18004:2001 Occupational health and safety management systems. Guidelines.