

## ANALYSIS OF THE HEALTH RISKS OF SELECTED PROFESSIONS OF AIRPORT WORKERS

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**Summary:** Total control of all processes to ensure the safety of traffic at the airport requires a chronological observance of policies and measures with which is closely related to safety at work. Insufficient management attention that the airport needed to defend the achievement of sufficient competence of staff, management, flexibility and responding to developments in civil aviation. The term, "safety at work", the slope notably to apply the security principles of work of employees of the aerodrome and in compliance with applicable regulations and standards related to the servicing of airport equipment and machines.

**Keywords:** Occupational health and safety, health hazards, safety at work, civil airport, noise.

### 1. INTRODUCTION

Security is becoming more frequent and the date in question operation at airports with the implementation of social responsibility of the airport. The main tasks include airport management and comprehensive planning and management of all activities associated with the provision and management of health and safety at work of all his employees, property and the environment. Inadequate implementation and paying attention to these challenges necessarily leads to serious accidents or poor performance of employees in hazardous locations in his working performance in the individual sections of the airport. The overall attitude of senior management and the relationship with unconditional respect for the principles of safety at work reflects the level capability and competitiveness of the airport.

Weight of responsibility falls just below the top management of the airport but also individual sections, executives and ordinary employees, who must also in its own interest to distinguish the level of risk and is responsible to him. And raising the level of awareness on security and risk within the organization effectively brings a positive effect on improving the quality of work, work motivation, decreased losses and successful position in the cultural and social stage. This knowledge has a positive effect on the creation of a favorable working environment and as a stimulus brings a positive economic effect. It also provides optimization of the working process along with increased productivity. The consequence of poor management and inadequate work organization are the consequences in terms of accidents at work and incapacity for work, occupational diseases, damage to or destruction of property, or loss of life.

### 2. HISTORY OF OCCUPATIONAL SAFETY AND HEALTH

Mankind from its very beginning always tried to prevent injuries which adversely affected the process work. The first surviving mention of the protection of man at work dates back to the 18th century BC the Babylonian Code issuing the king of Babylon and ruler Hammurabi. Of course, at that

time the company still did not know the form of safety at work as we know it today, but then began to form the first rules and institutions. Another mention occurs in the 15th century BC, when the doctor Ramses III. care of the workers who built temples. In Europe, he began occupational safety and health first mention King Wenceslas II .. Published Code, which contains rules on work safety and of working hours in the mines. Major changes and general view of safety at work has changed after the 2nd World War. After the war there was a huge technological and industrial developments and also has exerted enormous pressure on efficiency, which was associated with the law and safety at work. These aspects have led to a major accident of employees.

The coup took place in the 60s of the 20th century. Constantly increasing pressure on staff productivity reflected the lack of preparedness and little experience level. The pace and demands for changes in working employees led to the introduction of high standards of quality of products and goods. This could be achieved only by ensuring high security and reliability of production, which is also linked to the security and protection of human health and life. Here, finally, there is real change in the understanding of OHS. The last major change in the provision of safety equipment was 1 January 2001. Since that date it has been transposed into Slovak law system of the European Union for ensuring occupational safety and health. **Chyba! Nenašiel sa žiaden zdroj odkazov.**

### **3. LEGISLATION OF OCCUPATIONAL SAFETY AND HEALTH IN EU AND SLOVAK REPUBLIC**

The primary human rights, which is remitted in the constitutions of developed countries is implicitly the right to health. This right is found in Article 36 of the Constitution of the Slovak Republic. By joining the European Union, our country has pledged to respect and implementation of legal regulations and directives issued by the EU. The Slovak Republic had to align its legislation with the Treaty of the International Labour Organisation (ILO) as well as with European Union legislation. Through bodies and institutions following the European Union can influence the development of European policy on OSH. In connection with this issue it was issued several directives and main tasks of these authorities in assisting, improving and maintaining high levels of occupational health and safety throughout the European Union.

The principal activities of the International Labour Organisation is to regulate conditions of employment, formulation, supervision and ratification of international labor standards. These treaties become part of the State's legislation after the adoption manner is for the legal system of the country. From a legal perspective, the working process and further its area consists of a set of safety regulations that are binding provisions to move towards a safety of work requirements.

These rules direct form, for example. The essential safety requirements, safety requirements of technical equipment and technology, working environment, safe handling of flammable materials, explosives, poisons and substances harmful to health or the requirements of safe behavior in the workplace. Reliable operation and safe use is subject to regulation in integrated stages of the operation. The basic legal code determining the general obligations of the OSH Act NR SR. 124/2006 Coll. Law on health and safety at work, and thus complements other laws such. Act no. 125/2006 Coll. the Labour Inspection Act. 355/2007 Coll. on protection, support and development of public health and law no. 314/2001 Coll. on fire protection. **Chyba! Nenašiel sa žiaden zdroj odkazov.**

### **4. HEALTH RISK AT AIRPORT**

Risk factors that occur in the working environment of civil airports have a significant impact on health and fitness workers. The most serious health risks at work at the airport as noise, stress and overall, local or physical exercise. Other factors that affect a smaller scale performance and health status of worker handling chemicals, dust and vibration. These factors rank among the physical factors. The exception is stress, which already is a matter between psychosocial factors affecting the civilian airport staff.

#### 4.1 Noise at the airport

„ Humanity in the nearby future will have to fight against noise like as once fought against the plague " (R. Koch). Noise is any unwanted, annoying, disturbing or harmful sound. The two key characteristics are frequency, measured in Hertz (Hz), and intensity, measured in decibels (dB). Noise has a direct effect on the central nervous system, which may have mental as well as physical consequences. Hearing damage is the continuing state, and most importantly, incurable. The working environment are sources of high noise levels mainly stationary equipment and mobile devices located at the airport. They load not only their operation, but also the surroundings. **Chyba! Nenašiel sa žiaden zdroj odkazov.**

#### 4.2 Physical strain of airport worker

Assessment of physical onerous employment for workers airport (s air cargo operator, mechanic, ground handling and aviation fuel filler) are criteria of energy expenditure expressed in megajoules (MJ) and heart rate values. Undesirable load is considered to exceed the limits set out in Government Regulation. 542/2007 Coll., Laying down the conditions of health protection at work. The negative impact of physical activity on the action of man rests in diseases of musculo-skeletal disorders, diseases of muscles, tendons, joints, and increase the number of work accidents.

#### 4.3 Work stress as a risk factor

Work-related stress can be defined as an excessive workload as a result of non-equilibrium state. It responds, respectively, the airport worker's reaction to stressors (stress situations). When classifying stresses on the body airport employees distinguish above the limit load (overload) requirements - exceeding power capacity, and the load below the limit (pulled out) - in fulfilling the role he does not take their working potential. Work-related stress factors also increase private life, notably illness or death of a family member, marital problems, or downloading, reducing their own performance in respect of old age or disease. **Chyba! Nenašiel sa žiaden zdroj odkazov.**

### 5. ANALYSIS OF HEALTH RISKS AIRPORT WORKER

Most people only perceives the airport as a place used to travel through the services offered by the airport grounds. Just because of the staff who is employed at the airport, these airports and air services fully available almost nonstop. What did not realize is that the working environment significantly affects the psychological well-being of employees, which affects the productivity and quality of work.

#### 5.1 Protective equipment and means selected airport workers

The basic protective equipment selected professions such airport workers primarily include Ear muffs to noise, which must meet the standard STN ISO 4869-2 (protectors). Another essential work while protective equipment is protective work clothing, which shall include a highly visible reflective elements, either in the form of strips or fringes. In summer at high temperatures airport staff at work on a movement area wearing vests sleeveless or braces with high visibility. In addition to these reflective elements, the clothing must also meet the electrostatic protection function and protection against possible mechanical damage or resistance used liquids or chemicals. In winter, the clothing must guarantee perfect thermal insulation which allows implementation work even at low temperature conditions. They must provide comfort during the working day and shall not restrict the movement of arms or at standstill. Use protective gloves in such cases is also important and necessary part of any protective equipment at work and handling operations. To protect the legs is used high leather work boots with reinforced toe for protection from tripping or dropping the load on feet. To work in winter

is inevitable quality winter footwear, which is adapted for cold environments. Winter working shoes should be adequately insulated, even in the soles, where there is often a significant escape the heat. In bright sunlight they are also used protective equipment in the form of polarized eyeglass lens to increase the field of view of workers at work and what at least eyestrain due to the sun. Some workers also used elastic hinges with a cord to them improving the handling of glasses, so no problem with re-deployment. **Chyba! Nenašiel sa žiaden zdroj odkazov.**

## 5.2 Measuring noise factor in the work environment airport

Measurement of the personal noise exposure for employees of selected professions at the airport is done to their normal activities. Measuring devices that personal exposure meters pinned to the collar work clothes of about 10 cm from the ear workers who for employment use hearing protection. Selected professions were ground handling of aircraft mechanic, aviation fuel filler and operator of air cargo. The source of noise in the workplace is driving operating machinery, from land-based sources or from auxiliary engines, which provide key features of aircraft (air conditioning, brake cooling, power supply) The duration of the noise and the length of exposure airport employees is reported as 8-hour work shift. Based on the measurements and calculations from the point of view of protection against audible sound it can be stated that at the time of measurement is not exceeded occupational exposure limit noise latex, 8h, L on the measurement point, respectively. with none of the monitored professions and have not exceeded the limit value or peak sound pressure levels of C LCPk, L at the measurement point, respectively. with none of the monitored professions. In assessing the health risks caused by noise can be concluded that while complying with safety instructions and complete use of hearing protectors can not at present operation of the airport has been known to airport staff permanent or partial hearing loss noise. Of course it is possible that an airport worker constantly wore ear protectors and so on their own negligence or wear over time, these protectors can cause partial damage to the hearing system or an occupational disease. The period of time is varied and depends on age, physical and mental condition of the airport worker, of course, degree of damage is apparent from the profession at the airport. **Chyba! Nenašiel sa žiaden zdroj odkazov.**

## 6. PROPOSAL TO ELIMINATE HEALTH RISKS AT AIRPORTS

When removing constraints and health risks for workers airport should airport management to focus primarily on the most serious health risks. The degree of severity of the consequences for these risks are so high that the selected airport staff in exercising their professional activity in contact with them constantly. At major airport workers load must be addressed urgently, this constant level of risk, and reduce it available means. At a bearable burden should be given sufficient attention and apply the security and organizational measures. My design part of the mechanics of ground handling and aviation fuel filler is strongly highlight the impact of noise just to those employees. These professions are filling in their work most confronted with noise. Theme for better hearing protection is purchasing protective headphones to a higher category as hearing protection is required due to the frequency of use of annual growth of air traffic and thus increase the number of aircraft to be equipped with the airfields. An important aspect when choosing a suitable handsets also mean estimated value of protection earmuffs and thus the greater the insulation from the noise of the auditory apparatus higher. Top management of the airport by the purchase of longer-term saving and overtake need to purchase protective equipment before it is necessary to allocate the necessary funds that will be followed in other situations.

The next idea to increase the security and comfort of the hands of these workers airport is using insulated gloves, with emphasis on insulation against cold fingertip. The advantage of these working gloves in winter is that even in very cold weather fingertips remain warm and keep the feeling in his hands when handling means defrosting performance aircraft or aircraft fuel. Another proposal in this working process is the introduction to readers faster and better way of sorting cargo and baggage at the packing center. A common problem is the scrambling of air cargo and baggage which are loaded into

the aircraft. This preventive measure can prevent re-search and excessive, but mainly unwanted handling costs and thereby exposing to air cargo handlers undue work stress, physical stress but also noise exposure.

Technical measures, I would observe that within a secure grip loads, lifting and handling of air cargo and baggage recommends the introduction of new work equipment either in the form of anti-slip gloves with reinforced joints. The following proposal is to draw a lot of attention for voluntary vaccination of air cargo handlers and against jaundice (hepatitis), and B is a mistake to think that Hepatitis A and B are diseases that only occur in countries with reduced hygiene standards. It touches each person, so that even workers who handle baggage and air cargo from different parts of the world. When handling can cause cuts and skin lesions with sharp objects contained in the luggage or luggage by breaking the wheels of a sharp edge. As a consequence of infection is unfit for work for over a year the airport or contaminating other employees. From a moral point of view, I take this opportunity vaccinations offered to all employees of the airport.

## 7. CONCLUSION

Airport employees themselves every day moving in the monitored environment, perform work activities using the means and equipment so they are in many cases to determine what health risk factors or activities threaten them. This activity in the airport employees creating a feeling of importance of loyalty to the employer and leads to overall psychological well-being in the workplace civilian airports. Proper provision of safety and health at work is a precondition leading to the creation of a safe working environment and working conditions of airport staff. Management of security measures for the prevention of health risks leads to the minimization of accidents, injuries or occupational diseases.

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