VII. INTERNATIONAL CONFERENCE ON OCCUPATIONAL SAFETY & HEALTH
İstanbul - Turkey

HALİÇ CONGRESS CENTER
5 - 7 MAY 2014

ABSTRACT BOOKLET
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2. Risk Assessment and Its Impact on OSH
3. Subcontracting and Workers’ Safety
4. Problems and Suggestions of Solutions in Occupational Health Surveillance
5. Experiences in Providing of External OSH Services
6. OSH in SME’s
7. Transforming National OSH Policy into Practice
8. Should the Occupational Diseases Could Be Prevented and Detected? How?
9. What Can Be Done for The Prevention Of Occupational Accidents?
10. Blasting Operations in Mining Industries and OSH
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12. Global Network on OSH
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17. Standardization of OSH Training
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- Yetkin Uysal
- İsmail Şakalak
VII. International Conference on Occupational Safety & Health

SPEAKERS
Most countries and industries barely recognize occupational health and safety practices as an essential determinant of national development. Even with several safety mechanisms and standards of work environment are advised, at many times it is found that by breach of safety standards there is growth in consequences such as accident, dangerous occurrence, occupational disease apart from emergency and disaster in various industries. Such consequences is observed to effect for about 70 percent of adult men and up to 60 percent of adult women in the world, estimated 40 million adults are finally effected or lost their life in the industrial sector. Poor occupational health and reduced working capacity of workers may cause economic loss up to 10-20% of the Gross National Product of a country. Consequently, adjusting occupational health and safety into not only national but also international agenda becomes a vital concern for not only developed countries but also for the developing countries, where international organizations and institutions turn out to be fundamental means for international cooperation. Through involvement of relevant international bodies national governments aims to develop, strengthen and maintain global partnerships and undertake joint actions to ensure solidarity, optimal synergy and impact through exchange of knowledge and expertise in areas crucial to contribute to national strategies for improving work environment, including expertise in supporting capacity building, strategy development, project and program planning/designing, resource mobilization, and mentoring capability. In this respect, the Occupational Safety and Health Network of the Organisation of Islamic Cooperation (OIC-OSHNET) was established as a transnational network in order to establish closer collaboration for systematic sharing of knowledge, experience and new technologies, as well as conduct joint research and training, and organize new initiatives, projects and programmes among similar local, national and regional institutions, OSH researchers, practitioners and policy makers to raise public awareness of occupational safety and health in OIC Member Countries and improve the quality of the service in this area. Since its inception, OIC-OSHNET has been effective in setting up the OIC agenda on OSH and active in intermediating among national institutions particularly in the area of capacity building and networking.
The cooperation with European Institutes for Occupational Safety and Health can lead to synergistic effects. For the Institute for Occupational Safety and Health of the German Social Accident Insurance the paper gives some examples for a fruitful cooperation: The Finnish Zero Accident Forum was created in 2003 and today has 300 members. All members have the following principles: all accidents can be prevented, accidents do not happen by accident and learning is a key to success. In Germany we started in 2008 with the vision zero in road safety. In 2013 we adopted the Zero Accident Forum for a network of 40 German companies. They learn from each other to improve their safety culture. Another example is the cooperation of our institute with PEROSH, the Partnership for European Research in Occupational Safety and Health. From its 7 research challenges our house is very active in work-related musculoskeletal disorders, new technologies, engineered nanomaterials and safety culture. Additionally the Institute of Work and Health in Dresden is active in sustainable employability to prolong working life and psychosocial well-being in a sustainable working organization. The risk observatory of the German Social Accident Insurance. The upcoming topics are identified by a questionnaire for 400 of our inspectors. First results lead our house to the research foci of the future. At the 20th. World Congress on Safety and Health at Work 2014 in Frankfurt will give more information about this innovative system for proactive prevention. Visitors of the 7th International Occupational Health and Safety Conference are invited to Frankfurt from 24th to 27th of August 2014.

Keywords: Zero Accident Vision, Safety Culture, Research priorities, Risk observatory.
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Risk assessment has become an increasingly popular subject around the world in the last few decades. Its purpose is to support decision making in the face of uncertainty. Risk assessment has two main components, risk analysis and risk evaluation. Risk analysis is the technical activity of identifying hazards, and analyzing their risk impacts on valued receptors. Risk evaluation is making value judgments about acceptability of risk, considering the risk impacts, risk benefits, and cost of risk reduction.

Risk assessment, in turn, is part of a broader risk management process, which requires a management system for successful management of risk in an organization. Occupational safety management is part of this risk management system, focusing on occupational aspects only.

This paper outlines the types of risk assessments conducted in high-hazard industries in Canada and the US. The problems encountered in their practical applications are described, focusing on technical as well as safety culture aspects. These are then related to the elements of the process safety management system used in the chemical industries. The problems include inconsistent use of terminology, incorrect and inconsistent application of the commonly used risk matrix, lack of technical competency, lack of management commitment, and complacency.

Comments are also provided on the vast differences between the regulatory regimes in Canada and the US, and among Canadian provinces.

The paper then provides the author’s observations in the risk assessments in which he has participated in Turkey in the last ten years, some as part of the EU-supported ISGLABTEK project for the Turkish Ministry of Labour and Social Security in 2010-2011. Comparisons are provided between North America and Turkey, regarding technical problems and cultural issues encountered in conducting risk assessments and implementing their recommendations. Suggestions are provided to improve the situation and future direction.

Keywords: Risk assessment, risk management, safety culture, risk matrix
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This presentation will critically look at the role played by risk assessment in OHS management systems, and in particular where risk assessment should lie in the wider field of risk management, leading to best practice governance in organisations employing labour.

The presentation will look at why “suitable and sufficient” risk assessments need to be undertaken in order to drive successful OHS management systems. The various drivers for risk assessment will be discussed (such as legislation, insurance company needs, the customer/clients demands, and simply - good management), each will be placed in the context of how relatively important they are to one another and how useful they are as paperwork exercises. Elements and requirements of two OHS systems (HSE’s HS(G)65 and ISO 18001) and one risk management standard (BS 31100) will be described as models for adoption, whereby risk assessments should be integrated into wider management systems.

The presentation will draw upon the personal experiences of the author who has worked during the past 32 years as inspector and policy maker (regulator), OHS manager and consultant in risk management and compliance.

The presentation will show that completing risk assessments on their own (doing the paperwork) does not save lives or prevent ill-health in the workplace. There is no doubt that risk assessments are vital tools in the pursuit of successful OHS risk management. However, the establishment of an OHS system also is not the end destination, just another milestone to pass on the way. The presentation will conclude that the end of the journey is to have risk assessment and OHS risk management integrated into workable business risk management practices that will secure safe workplaces without risks to health, so far as is reasonably practicable.

Keywords: Risk Assessment; Risk Management; OHS Systems
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Risk assessment contains the processes of identifying hazards exist in workplaces or come from outside, leveling factors why the hazards cause risks and risks arise from the hazards by way of analyzing and taking into account the control measures. Numerous methods are available in the literature for risk assessments. In Matrix (L-Matrix) method approach, a measure of risk value is obtained by evaluating two risk factors as the likelihood of a hazard and the severity of the hazard when it arises. In this study, for construction industry that is one of the most hazardous sectors, major hazards are determined, the risks that those hazards cause are evaluated with Matrix method and the control measures related to those risks are discussed.

Keywords: Risk assessment, Matrix method, Construction industry
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Factors like technological developments, increasing competition environment and the work requiring a degree of expertise enable the subcontracting in workplaces. Actually, the fact that primary employer has sub-employer to do some work for him, can emerge as a result of a need. In addition, it is a very delicate balance to prevent this practice from misuses. An opportunity provided legally should not be used in a manner to undermine the sense of fairness. Yet, such a bad practice in our country unfortunately exists.

Nowadays, work in workplaces is divided as much as possible and every piece is given to subcontractors; thereby labour costs are aimed to decrease through the subcontractors which employ uninsured employees even working sometimes below the minimum wage without any union. Hence, there emerge employees who do the same work but works under different conditions.

Another tragic circumstance is the fact that this practice is adopted even by public institutions. The fact that the same work is done both by the employees of the primary employers and by employees of subcontractors requires these groups which have the different wages, social rights and opportunities to be present in the same environment. This creates very problematic situation in terms of work peace.

Can the occupational health and safety be degraded only into the fact that the working environment of employees is made appropriate for work with regard to health and safety? Wonder if it has another dimension that includes employees doing the same work in the same way but having different statutes regarding working conditions in the same working environment?

To us, occupational health and safety has such a dimension as well. Occupational health and safety means not only the protection of employees against any kind of risks that arise from work in the workplace, from working environment at work due to working, but also (it means) measures that should be taken to ensure this protection. Hence, the ones employed in the lower positions should be protected with regard to health and safety due to their positions among employees who do the same work in the same working environment and who have different rights.

The Law on Occupational Health and Safety numbered 6331 provides some certain provisions regarding the working conditions of employees of subcontractors. However, this does not find a solution for different employers’ employees who do the same work. Hence this problem should be solved through general provisions of Labour Law.

In this communiqué, it will be aimed to present these issues and tried to offer a solution.
As a new form of working relationship in terms of subcontracting workers has an extremely negative figure and mainly industrial society with the industrial relations system back from the achievements / are consequences in terms of deterioration. This is necessary to recall briefly the results of teşekkürler:

- Employment of secure jobs, precarious jobs;
- Organised, unorganised collective bargaining of labor relations, labor relations individual contract,
- Registered employment in informal employment,
- Continuous, low and uncertain than certain guarantee fees and charges,
- Protective regulated by social norms of regular working hours, flexible and ambiguous term jobs,
- Protective working order framed in law from the unprotected working order,
right connotes a negative change. So naturally above the negativity in terms of health and safety of employees at work and the working conditions unsafe workplace environment should add.

Hence the above negative consequences for social policy subcontracting and fighting is a new problem area. Sub-contracting issues to tackle first and fundamental way possible to outsourcing is to eliminate completely. If this is not possible, the economic and social conditions that give rise to sub-contracting, subcontracting, taking into account the consequences of the struggle to eliminate the need to carry out for a second.

Subcontracting of competition concerns in the private sector, public sector management principles of the private sector in public services, the plan to apply (a new understanding of public administration or public management) stemmed. In this regard, subcontracting to the public, struggling with a problem caused by their management preferred means is struggling with the consequences.

ILO globalization struggle with the adopted "socially sustainable globalization" concept, subcontracting terms "socially sustainable subcontracting" form to convert the subcontractor jobs "human dignity befitting jobs" to convert on measures need to concentrate.

Other issues of social policy and social law or the like brought to the methods used to combat the negative consequences of subcontracting. But consistent with the reasons for subcontracting employees work to ensure health and safety of the new regulations could be improved.

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Subcontracting in Turkey continues to be a major problem in working life. Disrupting work life balance and corrupt the rules against the employees. Working as a subcontractor are becoming victims in terms of fees, association and trade union rights, job security, social benefits, social security rights and occupational health and safety.

Subcontracting presents itself as a challenge against the trade union movement. This challenge is seen both in Turkey and in the world. Despite the challenge of subcontracting in the trade union movement, trade union movement is still the antidote against the problems of subcontracting. Trade union movement will be the main factor that affecting the subcontractors working conditions. Despite the subcontracting may seem to establish an absolute dominance in Neo-Liberal economic model, the trade union movement starts their own solutions is no longer possible to specify. HAK-İŞ Trade Union Confederation successfully realized a strategy and a model to attempt to organize contract workers. HAK-İŞ starts an organizing campaign for subcontractors against the “wait and cry” policy and invites all subcontractors to organize under the HAK-İŞ Confederation. With these strategy and campaign, HAK-İŞ aims to provide collective bargaining for contract workers. In this way HAK-İŞ achieves a solid foundation and tool in the direction of solving problems for contract workers such as, the working conditions of contract workers, occupational safety, occupational health and social security.

In this presentation, we will focus the subjects: dimensions of outsourcing, outsourced employee issues, safety issues, subcontractor organization and campaign strategy by HAK-İŞ, original union strategies by HAK-İŞ.

Keywords: Subcontracting, Subcontractor workers, Organizing campaign, HAK-İŞ Union Approach, Neo-liberalism and subcontracting
Subcontracting and Worker Safety

Today, enterprises either to utilise their resources more efficiently or to increase their competitiveness must implement flexible working methods. Just as in the whole world, enterprises in Turkey as well via transferring some parts of the production process over to subcontractors; undertake their operations which are beyond their expertise with workers of the subcontractors. While making these arrangements it is very important to protect the subcontracted workers. Protection of workers as one of the most important obligations of employers towards their workers must be upheld by each employer and protection of workers against risks and dangers arising from the workplace must be essential. While the subcontractor fulfils its obligation to protect its workers, main employer must oversee that the subcontractor fulfils its duty regarding occupational safety and health towards its workers. However, this overseeing as per the aforementioned reasons does not imply the notion which sets the basis for the main employer to undertake the protection of workers of the subcontractor. The Health and Safety At Work Act numbered 6331 while considering all employers without any division of main employer or subcontractor within the same framework identifies the responsibilities of employers. In this aspect only under the article 22 of the Act in the establishment of the “Occupational Safety and Health Board” cooperation and coordination responsibility was placed over the main employer together with subcontractor on the condition that there is a subcontractor in the workplace. After the enactment of the Act numbered 6331, with regard to occupational safety and health there is no joint responsibility of the main employer and the subcontractor but there is only the responsibility and obligation of the employer.

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The health surveillance is consisted of the surveillance of workplaces and the health of the employees. The main components are protective, curative, developing and registered implementations for workers and their workplaces.

According to ILO (161), every employer; have to evaluate the risks in workplace, observe the health of employees and workplace, plan the work and improve the implementations, educate the employees, register all the developments.

There are some basic regulations about this subject in the general health protection and occupational laws. These are legislated in different years. According to article 50 in the constitution, “no one should be demanded to work without considering their age, gender and strength”. Also in article 56: “everybody has right to work in a healthy work environment”. 

There are some items in General Health Protection Law (1930), which are about continuity of health surveillance.

There is a “Worker Health and Occupational Safety Bylaw (1974)” in our country which is the most inclusive occupational health arrangement. It is also a great guide for occupational physicians. The half of this bylaw (5-108) is consisted of the surveillance of the workers’ health.

An extended place is given to employees’ health surveillance in the article 4857 of the bylaw 2003.

“The duties, authorities, responsibility and educations of occupational physician and the other health medical personnel” and the last law (2012) about occupational health and safety (6331) contain lots of items about health surveillance.

The health surveillance system should be planned according to the risk assessment. First of all, the dangers in workplace should be detected, determined and analyzed. Additionally, precautions should be decided and updated in necessary situations.

Keywords: Health Surveillance, Law, Risk Analyze
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Health; “not only deficiency of sickness or disability but also physically, mentally and socially wellbeing of people.”

One of the controversial topics is who would do health monitoring. The occupational physician should be certificated and educated in this field.

The problems are; physical examination rooms are not proper, candidate employee has to purchase physical examination fee. According to regulations, periodic physical examinations should be purchased by the employer; however, employees purchased these amounts. Some employees need to change their workplace or jobs because of health problems. Some of the employers put doctors under pressure on dismissal of the employee.

According to regulations; occupational physician’s working period is determined by hazard class; 4-6-8 minutes per month for one employee. Periods are not enough for giving employee’s education, field supervision, risk assessment and physical examination. In fact, occupational physician need more time.

During health surveillance, employee should be informed about physical examination and tests and informed consent should be taken. Not only ethical, but also legally obligated by laws. Yet, the procedure is not applied.

The privacy of physical examination forms is not protected.

Occupational hygiene, sufficiency, reliability and credibility of laboratories, which are important about employees health surveillance is in physician’s concern. Yet, employer makes decision by only considering the amount. Sometimes these services are provided by mobile health units. It is observed that, these units have no standards and lack of conducting inspections. For example; an audiologist do many duties which are not related to his/her specialty.

The effects of training in health surveillance observed. Necessity of 4 hours block education is a difficulty.

Our main duty is to protect the health and wellbeing of employees in terms of physically, mentally and socially. Moreover, we should develop their health promotion. However, we stuck focusing on physical wellbeing of employees.

Keywords: Health Surveillance, Employee, Health,
The employer is responsible for occupational health and safety! He must take the necessary measures. Following the requirements of occupational health and safety, he also has to provide safety technology and personal protection equipment as well as management and organisation.

According to European and German law, the employer must have legal advice from occupational medicine and safety specialists. He can entrust his own employees with this task or contact external services. In Germany, external services for occupational health and safety are primarily applied in small and medium-sized enterprises (50 to 1,000 employees). Depending on the sector, the rate is 60%. The smaller an enterprise, the more external services are used because for economic reasons own employees aren’t worthwhile. In Germany, there’s the possibility of performing management training in the case of enterprises with up to 50 employees. It exempts the company from the obligation to order internal or external safety experts. About 30% of these enterprises make use of it. The construction industry has a special situation. Here, all enterprises are obligated to belong to the occupational medical and safety service of the employers’ accident liability insurance association for the construction industry (BG Bau).

In Germany, more than 90% of large industrial companies have their own safety experts and occupational doctors.

The advantage of employed safety experts and occupational doctors is that they know the medical concerns of their company better than anyone else, that they are involved in its organisation and always on site.
The advantage of external services is that they have a high level of expert knowledge, that they work independently and more neutrally and that they’re economically more favourable for small and medium-sized enterprises.

In order to achieve the objectives concerning occupational health and safety, external as well as internal safety experts and occupational doctors have proven to be successful.
In Turkey, Joint Health and Safety Units have taken a part in OHS services since 15/8/2009 and they have an accelerating graphic both in number and in contribution to the OHS services by now.

In five years, there have been some legislative changes which cause revisions on the structure of services but after OHS law entered into force, the services have shown a remarkable development.

In this study, it is aimed to give information about the standards of Joint Health and Safety Units, the change in the numbers from 2009 to today and the reasons behind this growth. Apart from this, it is also discussed that the employers’ benefits when buying OSH services from Joint Health and Safety Units and the tendency about this.

Finally, expectations about the Joint Health and Safety Units' future are mentioned by referring the statistics and results of inspections.

Keywords: Development of External OHS Services, Statistics of external services
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Dear guests and precious participants, I salute you as deputy chairman of the board of İkitelli organized industrial zone. Primarily, on behalf of İkitelli OSB, which is on an area of 7 million square meters, with 30 thousand companies and nearly 300 thousand employees that is providing the highest value to our country, I am pleased to be at this international meeting and I thank the organizing committee. All loses of human life is important. Lost Money, goods, property and other fixed assets are recoverable values but, the lose of human and especially the lose of generating human is much more important and meaningful.

99 % percent of the establishments in Turkey consists of SMEs which employs below 250 workers. 84 % percent of workers are employed in these establishments. What is striking case is 80 % percent of work-related accidents are still occurring in SME.

The work safety inspectors who operates under the Ministry of Labor and Social Security, discovered the biggest flaws and defects in workplaces, as 80% percent of large proportion of the employers as well as of workers uneducation. According to the International labour Organization, 78% percent work-related accidents are caused by employees unsafe behavior and according to research; as a result, 98% percent of the causes of work accidents are caused by human error.

OCCUPATIONAL HEALTH AND SAFETY IN SMES
it has been priority objectives to benefit from the advantages and opportunities for the countries which want to stay in the globalized world, to receive a share of world trade or from constantly growing and evolving market. SMEs provide more production, kinds of services and products with less investment. This structure of SMEs, makes the concept of occupational health and safety important.

Therefore, we as district presidency, care a lot about the trainings that will enable our SMEs to look hot with the law and to implement them. Among 281 organized industrial zones in Turkey, absence of vital and very dangerous accidents records in İkitelli organized industrial zone so far is an indicator of the our sensitivity.

Nowadays that we need skilled manpower with the effects of industrialization, being ready against various risks that may arise must be the duty of every manager. It should not be forgotten that respect for human and human labor is incomparable to any earnings gregor.
I declare that I am honored to be in this meeting and among these precious participants, I offer my most sincere respects to all our guests.

Keywords: SME and İkitelli, Nihat TUNALI Department of Industrial Zones İkitelli, İkitelli OSB
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Basic occupational health services approach defines the context of the occupational health services and at the same time emphasizes the necessity of attainment to these services by all employees. Several service models can be stipulated convenient for different workplaces and sectors in accordance with the social, economic and administrative structure of the country. The services can be presented differently, but a model which is not inside the workplace or nearby, or peculiar to the workplace or occupational safety and health services approaches will be unsuccessful.

There are difficulties for occupational safety and health services in the privileged small and medium scale enterprises due to properties of employees and workplace. These difficulties particularly exist in the very small scale enterprises.

The occupational health services which are in operation for enterprises with 50 or more employees since 1930 in Turkey, are now covering all employees, without some exceptions, by the Occupational Safety and Health Law in 2012. There are three different service models currently. “In-company Occupational Safety and Health Unit” is convenient for big scale enterprises.

One of the external implementations is common, group or inter-enterprise model. An important disadvantage of such a practice is the occupational safety and health providers being unacquainted with the employees and workplace. There are 1310 this kind of unit providing service for 83585 enterprises by March 2014.

The other external implementation of Health and Safety Units is provided by “Public Health Centers”. It is not widespread for now. The 56 of 971 Public Health Centers are providing service in this area. This model can be accepted as a governmental support for occupational health and safety services. This support and services provided by government should cover primarily the small and medium scale enterprises and agriculture workers that needs service and have deficits in this area. On the other hand it is anticipated that dangerous and extremely dangerous class workplaces with 1 to 9 employees are supported by government for occupational health and safety services. In this content there are 1.5 million employees and the need for service is a huge extent.

Keywords: Small and medium scale enterprises, Occupational health and safety, Service model
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The Netherlands has implemented some considerable measures and specific programs during the last decade to relieve the burden of compliance to OSH legislation for small and medium sized enterprises. Earlier research of TNO showed that the burden of compliance for SME’s was unrealistically high because of the lack of professional OSH staff within SME’s. Therefore, a program of digitizing the obligation on risk assessment was introduced and so called arbo covenants were established in sectors of industry and lastly arbo catalogues were launched. These three approaches took place in a tri partite environment and requires a well-established social dialogue. Each of these three interventions are described and the pros and cons are given. However, it is fair to say that these specific programs led to a higher compliance of SME’s and a relief regarding the administrative burdens they felt on their shoulders because of the complicated OSH regulations.

Keywords: SME, OSH, compliance, risk assessment, administrative burden, tri partite, social dialogue
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The German Social Accident insurance implements the National OSH Policy in diverse ways. Legal foundations are first and foremost the German Social Security Code, Volume VII and the German Occupational Safety and Health Act. Here on the one hand the “extended prevention mandate” and on the other hand the risk assessment is embedded.

The speech outlines the legal fundamentals for those OSH activities and presents measures which support and promote the implementation. This is for instance also the Joint German Occupational Safety and Health Strategy. It concerns a strategy as a permanent part of the work done by the federal and state governments together with the accident insurance institutions to improve safety and health in the workplace.

The focus of the remarks is on the area of psychological stressors and strains. The topic of psychological stressors and strain is currently of great importance in Germany and is intensively discussed by all partners involved.

Keywords: National OSH policy, Psychological stressor, Psychological strain, Risk assessment, Joint German Occupational Safety and Health Strategy, German Occupational Safety and Health Act
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National OSH Policy specified the need of all parties to promote Occupational Safety and Health. It is a pledge by all stakeholders and OSH partners that affirm their respective role in promoting the policy and thus will reduce injuries, diseases and fatalities. The government remains as policy maker but will also play as role model and facilitator. The employer will need to do more to fulfill their fare share of the OSH duty, taking on the leadership or co-leadership role with the government. The employees must involve, in cooperation with the employer to ensure the safety and health of a workplace. Trade union for example should also taking on the role of employer and the government to create awareness.

In Malaysia, continues improvement on OSH lies on the policy which consensually agreed by consultation and cooperation of employer, employee and also the government. For the year 2011 to 2015, focusing is made on 3 main areas which are:

- **Government leadership and Practices.**
  The government should research on the adequacy and relevancy of law, regulation, guideline and other instrument that will regulate behavior and increase the compliance to OSH requirement.
- **Industry leadership and community engagement.**
  Taking on the role of government, the industry should produce their own guideline, technical specification and awareness program.
- **Strong partnership locally and internationally.**
  Internally, there should be stronger correlation between OSH partners and internationally more bilateral engagement with other OSH

Technical Groups (which comprise of representative from OSH partners) were formed to look into each policy. New law on OSH is proposed and Regulatory Impact Assessment (RIA) is on going to study the impact to the country. New initiative such as introducing OSH in school is another commitment of government in promoting OSH at earlier age.

As more association of employer or employee involve in leading the OSH issue, more guidelines are produced and more awareness programs are organized by the association. OSH authority will facilitate the effort by offering award and also Continue Education Program or CEP point.

On collaboration program, the government is supporting the idea for enhancing the international level on sharing OSH information through collaboration. Special ‘International Division’ within the department was set up. Locally, more joint researches related to OSH were conducted by DOSH and university.

**Keywords:** National OSH Policy, stake holders, OSH partners, roles, government leadership, industry leadership, partnership

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As we, Cement Industry Employer’s Association, are celebrating our 50th anniversary; the time we have left behind, we feel the rightful proud of executing all our major activities in the field of occupational health and safety.

In recent years, with the changes made in our legislation, carrying the occupational health and safety issue to the higher position in Industry Relation’s Agenda, is seem to be extremely important. Occupational Health and Safety Act No.633, following, the secondary legislation and all the arrangements including all of the employees and steps taken towards to change entrenched OHS understanding are appreciated.

In the cement industry, long before from the legal regulations, a lot of studies have been performed to change industry practices and to reform settled perception in the area of OHS. Prepared before it become legal obligation “Cement Sector Reference Risk Inventory” was a model for many other sectors. Our activities in 2005 were awarded under the IV. International Occupational Health and Safety Regional Conference by the Ministry of Labour and Social Security.

When we compare the situation of our sector, with the targets at “2009 – 2013 National Occupational Health and Safety Policy” published by the Labour and Social Security Ministry, in the cement sector settled practices related OHS are seen in front of the mentioned targets.

Here are some of the current activities we have realized:
- Printing OHS posters,
- As a different training activity forum theater events,
- “OHS Legislation Adaptation Project” receives funding from authorized committee which is qualified to use the money cut from worker’s fee as a penalty.

In order to inform our members about renewed OHS legislation, meetings were organized with the participation of representatives of the Ministry. In addition, exemplary to the other sectors “Working at High”, “Confined Space Work”, “Working Safely in Hot Works” and “LOTO System” guidelines of OHS are replaced important of publishing activities for our sector.
Job Health and Safety (JHS) enjoys in Turkey a growing importance over the last years. In the countries of the European Union (EU) between 4 to 12 cases of occupational disease (OD) are being registered per 1,000 employees. If we take into consideration that in our country 14,000,000 workers/employees are active then we should normally expect more than 50,000 occupational diseases whereas the officially registered number are just a few hundred. There are many reasons for not being able to detect all these occupational diseases. It has been measured that compensations for accidents at work as well as for occupational diseases stand for 1% to 3% of the total GNP.

It is a common understanding that occupational diseases are totally avoidable illnesses. If the safety and health affecting risks at the working areas can be detected correctly and if also the measures can be taken accordingly then occupational diseases and industrial accidents can be avoided more efficiently. In order to define these risk factors the Job Health & Safety Council (JHSC) has to operate effectively and in a totally independent kind of way. If necessary the JHSC has to be supported by external professionals. Recommendations in order to avoid occupational diseases which are being described as “hidden epidemic” by the International Labor Organization (ILO):

Definitions in laws, regulations and circulars need to be renewed/refreshed.
Informing the Social Security Institution (SGK) should be compulsory also for occupational diseases which don’t lead to physical handicaps or compensation payments.
The institution which is determining the occupational disease should be different from the institution which is making the payments in case of an occupational disability.
In order to effectively avoid occupational diseases the risk factors which were detected by the JHSC should also lead to binding conclusions by the JHSC which then have to be put into practice by the employers. For this purpose the Job Health and Safety (JHS) payments should be one-time deducted from the due taxes.
The Common Health & Safety Units (CHSU) which are offering their services within the JHS area should be inspected according to their quality instead of their quantitative contribution.
Job Health and Occupational Disease expertise should be no longer classified as a subsidiary subject, but as a special/main subject.
Hospitals for occupational diseases that are offering their services within the JHS context, The General Directorate for Labour Health and Safety (GDLHS), the Social Security Institution (SGK) and all NGO’s which are organized as well within this interest area should have frequent meetings and the decisions being taken during these “round tables” should later become legally effective through laws, directorates and circulars. Continuous training of the employers and employees should be rendered in order to contribute to improvements. The central register for occupational diseases (those requiring compensation and those which are not causing any costs) should be held by the Ministry of Health, and only the compensation requiring cases should be reported to the Ministry for Social Security.
Especially the working areas where much more occupational diseases are being observed and which are more often requiring a compensation or additional costs the commitment of the JHSC should be monitored in a more detailed kind of way and if necessary they should get the necessary external and professional support which is then again supported by further measures and legislation.
Hospitals for occupational diseases should be accepted as the independent parties fixing the disability rating and their judgments should be considered as being final. Hospitals for occupational diseases should be supported and sponsored in making mutual researches or projects with TÜBİTAK or the EU in the Job Health & Safety area. Their performance should be measured as well within these researches and projects.
Keywords: Occupational Disease, Job Health & Safety, Job Health & Safety Council, Decision on Occupational Disease, Occupational Disease Diagnosis, Occupational Disability
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WHO Global Burden of Disease Report proved that poor working environment is among the top ten health risk factors. In the WHO European Region alone with over 400 million workers, 5% of GDP are lost every year due to work-related diseases and accidents. Unhealthy working conditions contribute to 1.6% of the burden of disease. The major occupational risks associated with this are injuries (40%), noise (22%), carcinogens (18%), particulates (17%) and ergonomic hazards (3%). 70% of workers are not insured to compensate them occupational diseases and injuries.

Considering the fact that all occupational diseases are preventable, the improvement of working conditions and work organization can significantly reduce the burden above-mentioned conditions.

Universal health coverage, addressing health determinants (health promotion and prevention of risk factors for non-communicable diseases) with the financial protection that prevents ill health leading to poverty is one approach. There are also effective interventions to prevent occupational diseases. For example, encapsulation of pollution sources, ventilation, noise control, substitution of dangerous chemicals, improvement of furniture and the organization of work. Specialized occupational health services are to assess risks and develop recommendations for prevention of occupational and work-related diseases. Workers at risk need regular medical check-ups to detect any health problem at an early stage, when treatment and modification of the workplace can help avoid permanent damage.

Acknowledging the magnitude of the problem, Workers’ health Global Plan of Action was adopted, aiming at national policy improvement via specific health programmes, improved surveillance and occupational services coverage, inspection and enforcement activities.

While global policy formulated, there is a need to deliver the message to media, general public and gain social mobilization, educate and engage working communities in the protection of their health enabling policy development and implementation in countries with the involvement of key stakeholders.
For prevention it must be detected firstly; in many countries, occupational diseases (OD) and Work Related Diseases (WRD) are either not diagnosed or not reported correctly; therefore, significantly underestimated. ILO declared occupational diseases as “hidden epidemic” in 2013; and declared that the estimated number of non-fatal occupational diseases around the world should be around 160 million per year. However, in reality, only few of these cases are diagnosed and reported correctly. Why ODs are underdiagnosed, underreported, and underestimated in the world? Although there are many reasons behind this picture. I think that the first step is to correctly define the OD related terminology. Firstly, the medical OD term is an ethiologic definition. Because all the ODs are not legal ODs; however, all of the ODs are medical ODs. All the legal ODs require compensation and disability benefits. But all the medical ODs don’t require disability evaluation, benefits and compensation. In medicine, OD is defined in very general terms. Medical ODs include WRDs, work agravated diseases, ODs, legal ODs. Legal ODs are a definition used by insurance companies, not a medical term. If diagnosed at early stages, the effect from OD/WRDs can be reversible. In OSH practise we know that there are 3 types prevention: primary-secondary-tertiary. But I assumed that legal ODs falls into a different category; therefore, it is more appropriate to define this as “quarterner prevention”. At this stage the person diagnosed with legal ODs require disability benefits and/or compensation, based on degree of disability, to continue their life. In conclusion, ODs/WRDs are underestimated in the entire world. This problem needs to be addressed correctly, first we need to define the terminology correctly to change the paradigm. For this purpose, we first must discuss and redefine the following terms: medical ODs, legal ODs, ethiologic definition, tertiary-quarterner prevention, disability-compansion.

Keywords: occupational disease, new terminology
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Exposure to sudden loud noise like a blast or exposure to loud noise over period of time may result in either temporary or permanent hearing impairment. Workers in mining, construction and manufacturing are the most vulnerable groups for noise induced hearing loss. Working in a noisy place not only results in noise induced hearing loss but also voice problems because of vocal abuse. Besides, for the groups who are the subject to heavy vocal demands in the course of their works (e.g. teaching), a voice disorders are inevitable.

As all occupational health problems are preventable, noise induced hearing loss and voice problems including voice loss can also be avoidable if necessary precautions are taken.

This presentation will start with defining normal hearing and voice and will continue discussing hazardous effect of noise and the type of occupational hearing impairments as well as voice problems. Intervention, protection and prevention techniques will also be covered.

Keywords: Noise, Noise induced hearing loss, occupational voice problems
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Textile industry, which is the export leader of our country, has a great importance for economy, industry and employment of our region. High level of competition and hard working conditions in textile industry cause an increase in the risk of work-related incidents and occupational disease.

The Law on Occupational Health and Safety No. 6331 governing the health and safety standards to be adopted by employers in Turkey, has been published in the Official Gazette No. 28339 dated 30 June 2012. This article provides information on the major novelties brought by Law No. 6331 and their implications on textile employers. Occupational Health and Safety in Textile industry subject, as an expanding and developing sector, was investigated under headlines of “Fire, Noise, Dust, Chemical Risks, and Risks of Equipment”.

Keywords: textile, work-related incidents, occupational safety
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This study was carried out in order to evaluate the businesses located in Develi Small Industrial Area in terms of Occupational Health and Safety, to draw the attention of the employer and employees to the issue and to contribute to the solution through identifying the problems concerning Occupational Health and Safety. 249 businesses located in Develi Small Industrial Area were visited between November 15th - December 15th 2013, questionnaires were made with one individual per business in person; the business environment was observed and the aim was to identify behaviors. In accordance with the first findings of the study, the average age of the participants was 39.51±0.77 and the age to start working was found out to be 13.95 ± 0.18. 21.0% of the businesses have no employees except for the employer and there are 1-3 employees (excluding the apprentice and intern) in 65.3% of them. 55.6% of the businesses did not have either apprentices or interns while 33.5% of them have apprentices or interns. 15% of the participants stated that they were retired and 45.6% of them stated that their insurance premiums are deposited regularly. 71.7% of the participants stated that the OHS trainings of the employees were not conducted; 68.1% of them stated that their health examinations were not conducted; 61.8% of them stated that they had no information about Occupational Health and Safety and 82.0% of them stated that they were not aware of the government support to the businesses with 1-9 employees in dangerous and very dangerous classes. 81.9% of the respondents stated that they considered the working environment safe; however, it was determined in the observations on visit that only 1.6% of the businesses have sufficient warning signs, that 58.5% of them had dangerous issues and that 56.5% of them had dangerous behaviors.

Keywords: Occupational Health and Safety, Small Industrial Area
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In this study, a flexible and applicable risk assessment interface is developed using the fuzzy logic method involving the human factor. While in the classic methods the number of person is generally added to risk assessment as a multiplier, in the suggested approach, personal characteristics of the human, as well as the number of persons, are also considered. Thus, elements originating from human behaviors that are likely to affect the possibilities of occurrence of dangers to an important degree are evaluated via the fuzzy logic approach. Rules of fuzzy logic risk assessment are designated by availing the PILZ method; however, the boundary conditions are designated by taking advantage of the smooth passing of fuzzy logic unlike conventional PILZ method that reduces the number of rule base. A flexible and user-friendly risk assessment interface is developed using LabVIEW program, which puts at different applications for the course material. In developing the program, human factor, independent of the number of people, is included in the process of risk assessment for this study. Designed interface gives an opportunity to users to assess risks in a wide range of consequences containing many different combinations and options. The interface is tested for a 100-kV high-voltage cell as a case study. As a result, negative case of human factor comes up as a great factor as one of the results for the risk increment. Positive or negative case of human factor can vary the total of risk factor in a wider range in the system.

**Keywords:** Risk Assessment, Human Factors, Fuzzy Logic, Interface, High Voltage

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Safety Management at Petroleum Refinery Planned Maintenance detailed and discussed as followed topics;

- Permit to Work;
- Job Hazard Analysis Specific to the each task
- Last Minute Safety Review
- Take 5
- Tool Box Talks
- Electrical and Mechanical Isolation
- Hot Work Permit
- Confined Space Entry Permit and Rescue Plan
- Scaffolding Permit
- Excavation Permit
- Unsafe Act, Condition and Near Miss Reporting
- Safety Training Modules specific for Planned Maintenance
- Confined Space and Inert Gas Entry
- Hazard of Nitrogen and Safe Working Practices
- High Pressure Water Jetting
- Line Breaking and Positive Isolation
- Line of Fire and simultaneous activities safety management
- Hazard of H2S and safe working practices
- Pyrophoric fires and safe working practices
- Gas (LEL, O2, H2S, CO) Testing
- Sand/Grid Blasting
- Lifting, Crane, Mobile Elevating Work Platform (MEWP)
- Excavation Works
- Catalyst Handling
- Confined Space and Inert Entry
- Working at Height
- Meeting called “Couldn’t we prevent recent incidents?“
- Discipline and Incentive Policies and Implementation
- Contractor Safety Management and HSE Evaluation
- Top Management HSE Commitment and Visible Leadership

Keywords: Safety Management, Permit to Work, Job Hazard Assessments, Safety Training Modules

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This paper presents occupational safety aspects of blasting operations in German coal mines. It gives an overview about the appearance of explosions in coal mines, located in Germany, over the last 150 years. Especially explosions caused by blasting operations are in focus of speech. Special risks of methane- and coal dust explosions and requirements in order to prevent those will be discussed. Furthermore the German strategy for prevention of such explosions caused by blasting operations will be explained.

The fundamental success factors for safe blasting operations: drilling, blasting means, blasting components, ignition products, braid, ignition methods, health and safety measures, selection of personnel, education, training and organization are discussed within the speech. Finally the success of prevention strategies, safe blasting techniques, organization of blasting, OSH-measures and good educated as well as trained blasting personnel in German coal mines will be laid out. Facts show that the last explosion in German hard coal mines caused by blasting operations occurred more than 40 years before. Also the last fatal accidents after blasting caused by blowout or coal gas are dated back to the 1970ties. Since more than 25 years there was not one single blasting accident.

**Keywords:** Germany, Coal mining, Explosions, Blasting Practice, Risks, Safety

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**Title:** Conventional Heading by Blasting in Hard Coal - Room for Improvement demonstrated on a Roadway in Coal and Rock for Turkish Hard Coal Enterprise

Blasting is still an irreplaceable part by driving roadway in coal and rock, although the current technical procedures of deposit exploration by means of full or partial cut roadheading machines have reached a highly level.

When facing small roadway cross sections, rock subjected to high tectonic stress, simple, straightforward and cost effective equipment, limited personnel resources, and of course higher gas load, safe blasting agents are the first method of choice.

Successful blasting and fast advance essentially depend on the drilling work. The possible advance per round undisputedly also depends on the stability of the surrounding rock and especially on the geometric quality of the drilling within the cut. Simple, understandable cutting procedures, which can be followed by the drilling crew and which correspond to simple and variable templates, are needed.

In the presentation the example of a driveage in coal and rock will be used to demonstrate the room for improvement in the application of safe blasting agents in combination with high quality drilling. A wedge cut will be used to exemplify geometric correlations and the basics of blasting and ignition. Another central point is blasting sequence and timing to win the advance in one single stage of blasting.

**Keywords:** Heading by Blasting in Hard Coal, Improvement, Turkish Hard Coal Enterprise

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Safe blasting has been a matter of course in German hard coal mining for decades. Only certified blasting agents are applied. In depths of 1.600 m the methane content amounts to as much as 100 m³ CH₄ for each m³ of coal. Each day thousands of kilos of safety explosive are employed and pay testament to the high safety standard and economical efficiency.

The presentation begins with the fundamental physical causes of a methane and coal dust explosion as it may happen in hard coal or lignite mining.

On the example of the latest stage of development of today’s safety explosives their composition is exemplified. Another focal point are the principles of effectiveness and safety during the detonative reaction in the blasting hole.

Certified class I to III safety explosives of the MAXAM Deutschland GmbH will be presented with their most important data and properties. The limitations of use for the respective classes can be gathered from the blasting table which is based on the maximum CH₄ content of the atmosphere at the blasting location. The certified non-safety explosives, the detonators and the blasting cord will discussed with their characteristics.

The sustainable safety level of the safety explosives is exemplified on the example of the explosive test drift. The quality and safety of each batch is tested with the 10 m³ testing chamber before shipping. Equally, the dangers of a CH₄ ignition can be presented in a spectacular, yet safe manner.

The European rules for the labelling and traceability of explosives including the resulting electronic stock accounting will also be mentioned. This regulation is in full effect from April 5th, 2015 in the entire EU. The presentation will be completed by short movie clips of blasts on the MAXAM testing gallery in Sythen.

Keywords: Permitted Explosives, German Coal Mines
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In the Federal Republic of German (16 federal states / Laender) the commercial blasting practice is governed by the “Sprengstoffgesetz” (Explosives Act) and the “Verordnungen zum Sprengstoffgesetz” (bylaws to the Explosives Act).

While the Explosives Act, among other things, defines the licensing of explosives and the responsibilities of the operators, the bylaw describes, among other things, the training and the basics for gaining qualifications in the respective field of blasting, e.g. blasting in quarries, tunnelling or demolitions. Distinguished basic courses, special courses and refreshing courses exist.

Qualified training under the Mining Control Authority, e.g. in hard coal or potash mining, is governed by Prescriptions from the Laender, provided e.g. the Land Northrhine-Westfalia. On this basis, blasting training is carried out in German hard coal mining by an expert body, recognised by the authorities.

Responsibility for organising and executing blasting work at the mine, takes place directly according to the Blasting Act. Accordingly, the holder of the permission (the entrepreneur) transfers the professional authority immediately to an authorised person (blasting overman), who autonomously and with paramount authority carries out and supervises the blasting work for the holder of the permission.

Consecutively for carrying out the actual blasting work the authorised person is supported by numerous blasters, which in turn are supported by assistant blasters at the blasting site.

Persons responsible with blasting training (supervisors) at the blasting site, are also trained according to the training plan by the expert body for blasting mentioned above.

Keywords: Organization and Training of Blasting, German coal mines
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In the process of preparing for EU membership, Poland undertook national OSH programmes to create the basis for modern labour protection as part of the social and economic transformation. The government, at the request of the Ministry of Labour and Social Policy, determined the objectives and tasks to be carried out in 3-year programmes. The Minister of Health, the Minister of Economy, relevant supervision and control bodies, above all, the National Labour Inspectorate took part in these programmes within their competences. The programme coordination was entrusted to the Central Institute for Labour Protection – National Research Institute (CIOP-PIB).

The present programme “Improvement of safety and working conditions” (Phase III – 2014-2016) serves the advancement of law and practice in the area of OSH in line with the rapidly changing technologies (nano- and, biotechnologies, human-robot interaction, active “intelligent” multifunctional PPE) and the labour market.

Some of the major achievements of the programmes include:
- documentations of factors hazardous to health, focused on prevention, together with original methods for measuring them,
- procedures for testing and certification of machinery as well as personal and collective protective equipment implemented into the national systems of conformity assessment.
- technical and organizational solutions to improve working conditions
- computer programmes for comprehensive risk assessment and checklists for SMEs for implementing OSH MS,
- handbooks and relevant multimedia for OSH education at all levels (universities, secondary schools, preschools),
- OSH network of experts and certified centres as well as a forum for enterprises to exchange good OSH practices.

Thanks to the realization of the programmes, the following have been ensured in Poland:
1) proper, competent research potential in occupational hazard prevention,
2) integration of relevant OSH actors (science, administration, social partners),
3) significant reduction in the number of people exposed to harmful factors and in the number of occupational diseases.

Keywords: occupational health and safety strategy, research programmes
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The aim of this Directive is to introduce measures to encourage improvements in the safety and health of workers at work.


The employer shall:
- Evaluate.
- Implement.
- Take into consideration.
- Take the necessary measure.
- Ensure.
- Inform and consult.

The worker shall:
- Use.
- Inform.
- Cooperate.

ILO says: Each day, an average of 6,000 people die as a result of work-related accidents or diseases, totaling more than 2.2 million work-related deaths a year.

Conclusion: It is not enough to have good regulations. It is not enough to have commitment from all stakeholders in OSH (Government, Employers and Employees). We need to consolidate all efforts available in the society in order to prevent accidents at work and save workers life.

The Macedonian Occupational Safety and Health Association (MOSHA) is established 50 years ago as initiative from enthusiast people who dedicate their time in raising public awareness about the benefits of organized and structured OSH systems.

The members of MOSHA were always active in creating the OSH regulations in Macedonia, as well as raising initiatives for important issues such as Faculty and Master Degrees for Occupational Safety and Health.

MOSHA has organized in average 40 seminars per year for different groups: Labor Inspectorate, Organizations of Employers, Trade Unions, Safety Specialists and Members of MOSHA. The topics are always according to the newest legislative, or according to the internationally campaigns.

MOSHA has organized several International conferences among which; “OSH Management Systems” and “National OSH strategies” with presence and presentations from over 20 European Countries.

MOSHA is active in National OSH council and in all relevant national bodies.

The activities of MOSHA are recognized by awarding the ILO/CIS Collaborative centre for Macedonia as well as being EUOSHA Focal Point for Macedonia.

Keywords: MOSHA, System, Strategy
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Meetings regarding joint cooperation have been made on various dates between Ministry of Labour and Social Security Occupational Safety and Health Institute Directorate (İSGÜM) and The Statistical, Economic and Social Research and Training Centre for Islamic Countries. In the light of the meetings made both institutions identified prospective cooperation opportunities in more than one area, exchanged opinions and proposals about joint projects that can be conducted in these fields and agreed on some tangible matters in the consequence of mutual negotiation. Expert exchange project is one of these matters. In the scope of this project, one expert from each Organisation of Islamic Cooperation Countries was invited and the 8-person group formed paid a visit to Ministry of Labour and Social Security Occupational Safety and Health Directorate General on 24-28 May 2010. The basis of constitution of occupational safety and health network is laid by means of this visit. Network is established in OIC-OSHNET Kick-off Meeting which is held in Ankara on 16-17 May 2011 with the participation of 16 attendees from 15 different countries. This network turned into a project in time giving results like Organisation of Islamic Cooperation Labour Ministers Meeting, whose first is held at 19th World Occupational Health Safety Congress in Istanbul on 10 September 2011 and agreed on to be organised biannually, where lots of activities done and information flow enabled in occupational safety and health field between OIC member countries. Turkey, which is geographically bridging Asia and Europe continents, will continue to be bridging for information flow in occupational safety and health field between Asia and Europe continents with this project.

Keywords: OIC, OSH, Data Network,
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It was adopted at the Sixth ASEAN Summit in 1998, stating the need to establish and strengthen networks in education and training, particularly those promoting occupational safety and health. Realizing the need, ASEAN OShnet was formed in 2000 to promote cooperation to improve the working conditions and environment in ASEAN countries. Its objectives, amongst others, are to facilitate and promote the exchange of the relevant OSH information and the sharing of training expertise and to facilitate and promote the development and harmonization of the ASEAN OSH standards and guidelines.

The organization of the ASEAN OSHnet comprises a Coordinating Board and Secretariat. Coordinating Board decides policy direction, plan action and designates Secretariat on three-years rotating basis. Secretariat represents the ASEAN OSHnet in administrative and operational matters, manage the program implementation. Coordinating Board has the responsibility to render a report on accomplishment of the programs, projects and activities under the ASEAN-OSHNET to the ASEAN-SLOM, the ASEAN Labour Ministers and other relevant ASEAN bodies. Members shall encourage cost-sharing in the funding of projects. They shall also undertake projects which shall generate funds from other sources.

For the last 13 years, Programmes of ASEAN OSHnet has increased awareness, knowledge and skill in OSH. The multiplier effect will encourage and motivate all parties to implement OSH at their workplace and thus will help to improve working condition. Member countries agreed that activities such as training, workshops and seminar organized and attended have contributed to the reduction in the number of accidents in their respective countries. AEAN OSHnet also provided each country with extensive opportunity in sharing of experience and knowledge. International and regional collaborative efforts were also intensified such as collaboration with Japan and Korea. Most importantly, ASEAN OSHnet has enabled member countries to formulate National OSH Master Plan.

Keywords: ASEAN OSHnet, Coordinating Board, Secretariat, sharing information and knowledge, collaboration
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Mining Industry and Mining Operations, due to carrying out in unchangeable natural conditions, have particularly hazardous phases.

Mining Project in terms of the intended situation: to provide a consistence between project estimations and results of application, and to achieve business objectives by making the correct risk assessment.

In mining projects, both design and development stages, there are various phases. After emerging of a mining investment as an idea, at all stages of that mining project there would be a wide variety of tasks of many managers and executives from different engineering disciplines. Identification of these tasks, all of the implementation stages of the project based on this distribution planning is one of the priority tasks of mining operations management.

Mining projects, in various stages of formation and development of the project are available. Mining investment ideas emerge as a project at all stages after his many administrators and practitioners from different engineering disciplines reveal a wide variety of tasks. Identification of these tasks, all of the implementation stages of the project based on this distribution planning is one of the priority tasks of mining operations management.

In a mining operation, all occupational health and safety works, are executed as a part of Risk Management.

Risk Management, in short, comprises identification of the inherent dangers of mining main activities, risk estimation and rating, and measures and monitoring phases.

The following activities are generally in a mine:

1) Excavation works
2) Drilling and blasting works
3) Supporting works
4) Transportation works
5) Energy and mechanization
6) Water drainage
7) Ventilation

In mining projects, the first phase of Risk Management is the identification of hazards.

There are two main approaches for identification of hazards, including: Retrospective, indirect analysis, Looking Forward, is directly analyzed.

Indirect retrospective analysis in order to perform properly, similar projects developed in the reports of accidents and near misses investigated seriously and OHS policies and risk management of new projects should be modeled in the planning.

In Turkey, occurred mining accidents during underground mining activities arise from:

- 44% of the collapsed,
- 34% of the methane gas explosion,
- 14% of the fire,
- 4% of the explosion,
- 3% of the gas discharge,
- 1% other (rock falls, etc. ..)

The statistics of past mining works, should be used in new risk management planning, forward-looking analysis of hazard identifications for new mining projects.

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Blasting work is generally classified as activities with a high dangerous potential. The reason lies in the enormous energy containing in the explosive substances that can be realized by touch on the bottom into less than one second.

At blasting work the dangerous isn’t the explosive itself, but the worker who handles that. A human misconduct just leads that blasting works to serious accidents and property damages. To prevent this, a professional and extensive education is necessary. A blasting authorized person must obtain high qualification first. Only the qualified employee is able to take the right decisions in critical situations. Therefore an extensive basic and special training is required.

Repetition and deepening course are as well important. The arising danger by handling with explosives must always be reminded of to the employees. And they must know how to estimate the consequences if they work against safety rules.

Lasting behaviour changes can be expected with the employees by this way. The occupational accident insurance – particularly the line stones and aggregates - concerns oneself with education and training of blasting persons for years. The insurance would like to prevent accidents by specific prevention work and to avoid human sorrow and reduce costs.

In the following instruction contents of various types of teaching will be presented, which is cut to size for the line “stones and aggregates”.

Keyword: Training of blasting authorized

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Asbestos is a very low cost material with a lot of useful properties for many applications, including inflammability, heat resistance, low thermal and electrical conductivity, high tensile strength and ruggedness against rot and rust.

Due to these qualities, asbestos had been widely used especially in the construction industry and is still encountered in many buildings even decades after imposing a ban on usage.

What was an ideal material for a long time now proves to be a great health risk. The inhalation of asbestos fibers of a certain size, so-called respirable asbestos fibres, can lead to sudden cancer of lung, pleural or peritoneal in human even decades later. Also throat cancer is possible. The first asbestos-related occupational diseases were acknowledged in Germany as early as the 1930s. Accumulating scientifically valid knowledge on asbestos-related occupational diseases lead to entrance of these into the occupational disease regulation (so called “BKV”).

More than 40 countries have legally interdicted production and use of asbestos, allowing handling of asbestos only for demolition, renovation and maintenance work. The first interdict on use of asbestos in Germany took place in 1979. Nevertheless world production of asbestos is still increasing steadily.

By handling building materials contaminated with asbestos, e.g. during demolition or maintenance, very high concentrations of asbestos fibers can be liberated into the air. An important aspect is to properly recognize and classify the kind of materials contaminated with asbestos. Only then safety measures can be defined and implemented effectively.

Without appropriate safety measures future affections were inevitable.

In Germany, several procedures have been implemented to identify asbestos-contaminated areas and derive the optimal protection measures correctly. One of the most important instruments for this is the newly revised Technical Rule for Hazardous Substances 519 Asbestos: Demolition, reconstruction or maintenance work (TRGS 519).

Keywords: Asbestos, occupational disease, protection measures, TRGS 519
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There exists a wide range of studies on integrating disabled citizens, which constitute a significant amount of the total population, to the community. These studies are important not only for social balance but also for the value creation of every citizen for the country to help Turkey reach its major goals. The government has the responsibility for providing an efficient working environment to disabled citizens. The accessibility of public transportation service, which is generally the first option for the disabled people to reach their works, is the prominent responsibility of the government. With the recent legislative regulation, all the buses that will serve as public transportation vehicles have to be accessible until 2018.

İETT, the bus and metrobus transportation authority in Istanbul, aims to reach all public transportation commuters conveniently. After withdrawing old Ikarus and Man buses and buying 1705 new low-floor vehicles, İETT’s fleet is now 100% accessible. Also, voice announcement systems and LCD displays within the vehicles make public transportation more user-friendly and travel information more accessible. Besides, in association with İSTKA (Istanbul Development Agency), İETT is planning to establish external sound systems to inform disabled people waiting at bus stops. In addition to the buses, significant part of accessibility improvements of bus stops and transfer terminals are almost completed.

While serving the Istanbul’s citizens, İETT also cooperates with some other institutions to increase efficiency of its disabled personnel. In coordination with Beyazay Association, İETT has started a project to increase the motivation of its disabled personnel and accordingly assign them to right jobs. The aim of the project is to analyze the 193 disabled personnel and prepare the most convenient working environment for them.
OSH TRAINING FOR PUPILS, STUDENTS AND YOUNG WORKERS

Young people are much more injured than their older co-workers. Therefore it is important that good safety and health attitudes are developed in the educational system, and that OSH education is incorporated into teaching at all levels – kindergarten, primary school, initial vocational training and higher education.

The youngsters themselves, their parents, their employers need knowledge of rules and conditions on how to make a safe and healthy working environment for young people.

The teachers need qualifications to teach OSH and knowledge on relevant teaching materials and concrete teaching ideas and examples.

The Danish Branch Working Environment Councils (BAR’s, part of the the labour market system, funded by the social partners in Denmark) have throughout several years taken responsibility for projects on developing materials, ideas and inspiration for teachers to integrate OSH into teaching in general as it is required in the national curricula. Pupils/young workers, their parents and employers can at the same time benefit from the results.

Ideas and reflexions will be discussed during the session. Examples will be presented on how to motivate and encourage teachers.

The overall aim is to encourage children and young people to take a constructive part in the work for improving health and safety – in the school system and on their future workplaces.

Basic attitudes and knowledge in relation to health and safety should be provided by schools, ensuring that pupils are able to make a positive contribution to their own health and safety and to that of their colleagues.

Keywords: Mainstreaming OSH into education, OSH and risk education in national curricula, Developing positive OSH attitudes, Lack of knowledge on working conditions for young workers, Teacher qualifications and how to motivate teachers, How to make OSH relevant for young people

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The construction industry has been recognized as one of the most hazardous industries. It has a poor safety record when compared with other industries. Besides causing human tragedy and economic losses, construction accidents also affect the productivity and reputation of the construction industry. Lack of proper training and knowledge about health and safety issues are some of the main causes of construction accidents. Lack of training can be attributed to poor safety and health management by the companies. Thus, an effective training program implemented by the companies has a great potential to minimize these accidents. This paper gives an overview of an ongoing study that aims to prepare dramas presenting construction accidents. These dramas can be used as learning materials in health and safety trainings in construction industries to minimize accidents. The majority of health and safety trainings given to construction workers consist of theoretical trainings. Since the majority of the construction workers have a low education level, learning the health and safety concepts with theoretical trainings are quite difficult for these workers. Therefore, dramas that have the potential to make trainings more attractive and enjoyable, can overcome this problem. In this study, the potential effects of using dramas on health and safety trainings in construction will be examined.

Keywords: Construction Accidents, Drama, Health and Safety Training
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The construction industry has more accidents of greater severity than any other industrial sector. The construction industry poses challenges for the management of Occupational Health and Safety risk. The industry is typified by one-off projects; a constantly changing environment; a highly competitive tendering system and a high turnover of labour. Construction has a number of characteristics making it inherently hazardous: large workforces involved in many operations; the site is continually changing as construction proceeds; workers do not have fixed worksites and must move around a structure under construction. The common aim and the intention of Health and Safety (H & S) regulations in every country are to improve the safety and welfare of construction activity. The legislative framework provides rules which not only guide, but restrict behaviour and action on construction sites in order to improve the safety performance of individual sites, and of the industry as a whole.

In construction many discrete elements are essential to Health and Safety (H&S). Those many elements can be encapsulated into three fundamental and interacting blocks, namely: plant; procedures; and people. To succeed requires all three to be of the highest quality and working in a harmony. It is the Management System that provides the necessary cementation to hold the blocks together.

The main purpose of occupational safety is to minimise the events that damages the well-being of human beings to create a healthy and safe working environment. Main headings to obtain such a purpose are:

- Protection of employees
- Protection of production safety
- Production of the business environment

Why health and safety management? Main reasons are to prevent loss of work and occupational accidents, to prevent the loss of working human resources, to complete the work on time, and to protect and avoid business in paying unnecessary fines and indemnities.

Keywords: Construction, H & S, Accident, Law
The lecture will focus on the developments in the area of falls. During all the seminars, symposia and conferences in the last years we got a lot of information about new solutions and technologies which could help to improve the accident situation in the falls area especially in the Small and Medium sized Companies. To get a feeling about the accident situation in this field statistical data from several countries will be introduced, interpretations will be given and accident examples will emphasize the importance of this topic.

Based on the German campaign “Safe scaffold work” the lecture will highlight the cooperation between Germany and Turkey in this field.
In order to reduce regional health inequality, risk groups must be identified and need-appropriate services must be developed. The objective of this study was to aim to explain health indicators by calculating comparative health indicators in light of the Millennium Development Goals (MDGs) of seasonal migratory population, and reveal the evidence-based occupational health programs based on the operational research method. The first step of this operational research was to conduct a cross-sectional research (qualitative, and quantitative data) named ‘Need Assessment of Seasonal Migratory Population in Agriculture’ collaboration with Harran University and UNFPA. In this research, socio-demographic and health indicators were calculated and compared with the national indicators. In this group, exposed to negative environmental factors were very high, and maternal-infant health indicators, and general mortality and morbidity rates were at least 3.5 times higher. Based on the research findings, different training modules including health professionals, governors, agricultural envoys, media and farm workers were developed, and training programs were conducted. On the other hand, seasonal farmworkers were trained as health mediators.

Keywords: Seasonal agricultural migratory population, health indicators, occupational health programs
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Before the release of Occupational Health and Safety (OHS) Act. No: 6331, employees in the agricultural sector benefited sufficiently from OHS services due to various factors such as most of agricultural enterprises have less than 50 employees and therefore not covered by the Labor Act No:4857, work in the form of small family businesses and use of seasonal and temporary labor intensive. However, with release of No: 6331 Act. and inclusion of all workers, OHS issues to be addressed in this sector has become mandatory.

As Ministry of Labor and Social Security (MoLSS) Directorate General of Occupational Health and Safety (DGOHS), OHS in agriculture has become one of the top agenda topics and to work in this area has been accelerated. Both collaboration and field studies are carried out.

In order to concerned issues be addressed and improve solution with the parties, “Occupational Health and Safety Collaboration in Agriculture Protocol” was signed. “Advisory Board of OHS in Agriculture” constitute with representatives of the parties are collected twice a year.

The field studies conducted in this area by the Institute of Occupational Health and Safety is ongoing.

In this study, the studies were conducted by DGOHS in order to development of OHS conditions and to increase awareness of related parties in agriculture.

**Keywords:** Agriculture, Occupational Health and Safety, Republic of Turkey Ministry of Labor and Social Security

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In our country, families who have no or insufficient agricultural land to work or can't cultivate these lands for various reasons; by migrating to 38 city which has high level agricultural labor demand, works as itinerant and temporary migrant farm workers.

“Enhancing Working and Social Life of Seasonal Itinerant Agricultural Workers Project (METİP)” had been prepared by the Ministry of Labour and Social Security including years between 2010 – 2013 to enhance the current situation of our citizens, who leaves their province in order to work as seasonal itinerant agricultural workers, regarding their transportation, housing, education, health, security, social relations, working life and social security. In addition, a strategy action plan had also been implemented in this respect.

Regulation in Agriculture Business Crier and dated 24.03.2010 and numbered 2010/6 the Prime Ministry Circular subtracting the legal basis has been given.

Within the framework of strategy and action plan prepared by the Ministry, transferring 96 million Turkish Liras to 65 projects prepared by 38 province governorship between the years 2010-2013, for the improvement of working and social life of hard-working seasonal migratory agricultural workers. Through these Projects, health, housing, education, safety and environmental conditions of seasonal migratory agricultural workers are improved.

It has been aimed to enhance the conditions of working and social life of 300 thousand seasonal itinerant agricultural workers who has difficult working conditions across the country. It has been provided in total of 326 thousand persons had been benefited from allocations by projects carried out for four years. 72 million TL of the allocations spent for housing, infrastructure and ease facility, 5 million TL of the allocations spent for health service and 16 million TL spent for other expense item. In conclusion, with this project that carried out by our ministry, it is planned to enhance working and social life conditions of itinerant and temporary migrant farm workers by determining a holistic and multi-dimensional perspective.
Ergonomics can briefly be defined as human-centered design of work and human technology systems with the aims of optimizing human well-being and overall system performance. A human-work or human-technology system is composed of major interacting components of human, job and/or technology and environment. The ergonomics discipline promotes a holistic, human-centred approach to systems design that considers physical, cognitive, social, organizational, environmental and other relevant factors. In this approach, the system design is simultaneously expected to optimize system efficiency and reliability, as well as safety and health by considering all related interactions.

In optimizing these interactions, first of all, the environmental conditions (physical and social) of work such as the dimensions and layout of work space, visual, auditory-vibratory and thermal conditions, air quality, radiation, perceived stress, perceived risk, social support, job satisfaction, management style, policies and procedures, so on must be considered. Secondly, the physical and cognitive demands of task such as strength, energy expenditure, precision or acuity of manipulation, speed and repetition, memory, mental processing, decision-making, multitasking, problem solving, and the perception of each of these demands must also be considered. These environmental conditions and task demands must fit the varying physical and mental capabilities, limitations, behaviors, culture and needs of workers. Misfits among elements of the system lead to safety, productivity, efficiency, and quality problems.

Safety must start from the design phase and designers must understand and apply abovementioned human characteristics and the interactions in creating safe, healthy, efficient and easy to work/use systems and products. The designs must reflect safe and normal operation, potential misuses, hazard risks, and easy repair and maintenance. Ergonomics principles and data contribute to all of these. If a system is designed with respect to ergonomics principles, it would inherently be safe and reliable and beyond that comfortable and even pleasing. It can simply be stated that ergonomics is the foundation of work safety and health and thus total work safety and health without ergonomics is a hard-to-achieve phenomenon.

Keywords: Ergonomics, Work Safety and Health
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Every year, 1.24 million road traffic deaths occur worldwide according to 2013 statistics. 92% of road traffic deaths occur in low- and middle-income countries including Turkey. These countries have only 53% of the world’s registered vehicles. Controlling speed reduces road traffic injuries. Only 59 countries, covering 39% of the world’s population (2.67 billion people), have implemented an urban speed limit of 50 km/h or less and allow local authorities to reduce these limits. Drinking alcohol and driving increases the risk of a crash. Above a blood-alcohol concentration (BAC) of 0.05 g/dl, the risk of road traffic crash increases dramatically. 89 countries including Turkey, covering 66% of the world’s population (4.55 billion people), have a comprehensive drink-driving law enforcing the WHO-recommended blood alcohol concentration limit of 0.05 g/dl or less. Wearing a good-quality helmet can reduce the risk of death and severe injury from a road crash by 40% and over 70%, respectively. 90 countries including Turkey, representing 77% of the world’s population, have a comprehensive helmet law covering all riders, all roads and all engine types, and apply a helmet standard. Wearing a seat-belt reduces the risk of death among front-seat and rear-seat passengers by 40–65% and 25–75%, respectively. 111 countries including Turkey, representing 69% of the world’s population, have comprehensive seat-belt laws covering all occupants in a car. Since 2007, 88 countries have reduced the number of road traffic deaths. This suggests that progress can be made if there is sufficient political commitment. However, in 87 countries the number of road traffic deaths has increased, while at the global level the number of deaths has remained stable. The pace of legislative change and enforcement need to be hastened and more attention paid to vulnerable road users to reduce the number of road traffic deaths.

Keywords: Traffic safety, Public health, World Health Organization (WHO),
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Social Responsibility is the orientation of common life of public, private sector and civil society who are around an object.
The social responsibility subjects which are the solution for the production of society, ameliorating, development and social justice as a priority in the provision are as follows:
1. Education 2. Health 3. Environment
This are the main task of the government.
Taxes and Health premiums are paid per on this reason.

SECTOR AND SCOPE
The transportation sector by air, sea, rail and road sectors is quite comprehensive sector.
The January statics of Ministry of Labour and Social Security is; there is 2 419 672 employee at Transportation Sector and 3.5% - 84.898 are a member to a trade union.

SHORTAGE
Main problem is a Worker Death
Subcontrator method is trigger of the worker death.
The money understanding which is lower Labor costs from the worker health and safety budget, it is a mentality that money is more valuable than human life.
Having an unrecorded worker understanding.
The mentality of insufficient inspection for detailed legal and regulated workplaces.
The anti-democratic mentality which is lack of Workers' rights in the workplace, warning to be found in unlawful matters and solving the problems that prevent the organization of labor unions.
The time server mentality that is an unionization and collective bargaining rights of workers right.

THE REASON OF MORE WORK ACCIDENT WHICH ENDS WITH DEATH
Subcontractor System
It's a unlawful system where constitution, union, collective labor agreement, occupational health and safety are ignored.
Employers and employees do not have enough knowledge of occupational health and safety.
There is not any traning prior to performance about occupational health and safety; occupational health and safety laws are not followed; the rules of professional competence certificate are not followed; the necessary and right equipments are not given during the work hours.
The uncertainty in the process of diagnosis of occupational diseases.
Employee and employers do not give attention to accident preventive measures beside Environmental factors.
The employees are not informed about inconveniences at their works:

Insufficient controls
Having no union at workplaces.
If there is an Union at workplaces; the employee and employers will endeavour for traning; to obey the rules of laws and regulations; establish the workplace rules, zero work accident and zero death accident.
In Turkey, road transport is the most commonly used mode of transport for both passenger and freight transport. Road transport sector includes activities that containing all class of hazards, very hazardous, hazardous and less hazardous. In the scope of this research, it is focused on passenger transport which is a subset of road transport. In road passenger transport sector, conflict between expectations and demands of customers, frequent changes in work organization lead to increase the violence and work related diseases, especially stress and musculoskeletal disorders. Day by day, stress is also being increased because of external factors such as increasing number of vehicles, traffic jam and lack of roads. Therefore, it should be made an evaluation from occupational health and safety point of view by considering the nature of the work performed, substances used at every stage of work, service methods, work environment and working conditions and should be taken necessary protective and preventive measures.

In this study, it is evaluated the sector of interurban road passenger transport from occupational health and safety perspective. A literature research is conducted on the regarding issues and it is presented with relevant examples of European Union countries. Workplace practice of this research includes two sections: observation of workplaces and working conditions; conducting a survey. Firstly, working environment and conditions of road passenger transport sector is evaluated in terms of occupational health and safety. Then, a face to face survey is conducted on 138 bus drivers in Ankara bus terminal to analyze the current situation. Finally, physical, psychosocial, ergonomic and organizational risk factors; and their health effects of road passenger transport are evaluated and suggestions are addressed to overcome these risk factors.

Keywords: Bus drivers, occupational health and safety, road transport
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Rehabilitation is the process of helping a person to reach the maximal physical, psychological, social, vocational, recreational and educational potential consistent with his or her disabling and handicapping conditions caused by disease or injury.

Rehabilitation specialist uses specific diagnostic assessment tools and carries out many types of treatment, including pharmacological, physical, psychological, educational and vocational interventions. Rehabilitation is a continuous and coordinated process that starts with the onset of an illness or injury and goes on right through to the individual achieving a role in society.

As the patients have complex problems associated with various disabilities, rehabilitation frequently provides through multiprofessional teamwork, including physiotherapists, occupational therapists, nurses, social workers and other appropriate health professionals. Rehabilitation medicine is effective in five ways:
- treating the underlying pathology,
- reducing the impairment and/or disability,
- preventing and treating complications,
- improving functioning and activity,
- enabling participation.

In the world survival rates from serious disease or trauma are increasing, leading to an increasing number of persons with complex problems and functional disabilities.

An occupational injury/accident is bodily damage resulting from working. The most usual organs involved are the spine, hands, the head, lungs, eyes, skeleton, and skin.

Low employment rates after rehabilitation are cause for concern since return to gainful employment may be the most recognized primary marker of successful rehabilitation outcome after disability.
According to WHO disability is not just a health problem, but a complex phenomenon, reflecting the interaction between features of a person’s body and features of the society in which he or she lives. According to WHO/WB World Report on Disability from 2011 it is estimated that about one billion of people lives with some disability and 200 000 is experiencing severe difficulties in their functioning.

Full participation of disabled persons in social life and society development as well as in the working life is one of the basic human rights. According to the UN Convention on the Rights of Persons With Disabilities “disability is an evolving concept” and “results from the interaction between persons with impairments and attitudinal and environmental barriers”. The main principles for developing national legislation to promote and protect working life of the disabled persons is ILO Convention (No159) concerning Vocational Rehabilitation and Employment (Disabled Persons) entered into force in 1985. Main activities related to the promotion of vocational rehabilitation training and employment of the persons with disabilities include provision of vocational rehabilitation services which are performing activities such as: case management, education of supervisors, workplace accommodation, early return to work with appropriate supports, employment coaching with employment assessment, specialized job training, individually tailored supervision, transportation, and assistive technologies implementation. For planning and performing all these activities, it is important to keep in mind the fact that disability affects more vulnerable populations (poor, unemployed, women, children, elderly etc.) and that disability itself can cause vulnerabilities for general health outcomes as well (NCDs for example).

Taking into account wide range of needed activities for the inclusion of the persons with disabilities into the working life, involvement of different sectors and all of society approach is essential.

Keywords: disability, disabled persons, vocational rehabilitation, all of society approach
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The European Community has the aim of forming the unity of Europe. Be aimed to reach a uniform legislation for all member states is required. The member states of the EU have the task of convert European law (so called directive) into a national legislation. In the German explosive law the specifications are implemented most largely from the European jurisdiction. The German explosive law is subdivided into 10 sections. Here is regulated, for example, how explosive substances have to be handled: Transportation, storing and trade play an exceptionally important role. Furthermore it is fixed, which assumption (physical, technical) responsible persons must fulfil, when they handle with explosive substances. The explosive law is subordinated by so-called by-laws. These by-laws can be novelised simpler and faster in opposite to a law and that must not be adopted by the parliament. The explosive law authorizes the occupational insurances to create a set of rules off its own. This was realized by rule 241 “blasting” It’s a modern set of rules, which presents the stand of technology and shows safety philosophy.
DEFINITION OF EXPLOSIVES AND BLASTING AGENTS
An explosive or blasting agent is a chemical compound or a mixture of compounds, which, when initiated by heat, impact, friction or shock, is capable of undergoing a rapid decomposition, releasing tremendous amounts of heat and gas. The decomposition is a self-propagating, exothermic reaction called detonation or explosion.

The stable end products are gases that are compressed, under elevated temperature as high as 4000 °C, to very high pressures up to 100,000 atm. The gas amounts produced by one kilogram of explosive or blasting agent can be illustrated for domestically produced products such as; 970 Lt/Kg for ANFO, 990-1045 Lt/Kg for Emulsion, 895 Lt/Kg for Gelatin Dynamite and 710 Lt/Kg for Permissible Dynamite.

BASIC INGREDIENTS OF EXPLOSIVES
All commercial explosives are compounds consisting of basic chemical elements such as; carbon, hydrogen, oxygen and nitrogen. Carbon and hydrogen acts as fuel, whereas oxygen serves as an oxidizer which is necessary for rapid combustion.
Typical reactions for ANFO:

\[
\begin{align*}
3\text{NH}_4\text{NO}_3 + \text{CH}_2 & \longrightarrow 7\text{H}_2\text{O} + \text{CO}_2 + 3\text{N}_2 + 930 \text{ Kcal/Kg} \\
2\text{NH}_4\text{NO}_3 + \text{CH}_2 & \longrightarrow 5\text{H}_2\text{O} + \text{CO} + 2\text{N}_2 + 810 \text{ Kcal/Kg} \\
5\text{NH}_4\text{NO}_3 + \text{CH}_2 & \longrightarrow 11\text{H}_2\text{O} + \text{CO}_2 + 4\text{N}_2 + 2\text{NO} + 600 \text{ Kcal/Kg}
\end{align*}
\]

WHY ARE THE EXPLOSIVES DANGEROUS GOODS
The reaction is not always ideal under field loading conditions and may produce small amounts of noxious (toxic) gases, such as NO (nitric oxide), CO (carbon monoxide), NH4 (ammonia), CH4 (methylene) and sometimes solid carbon. These products are important especially for underground mining and tunneling works.

The compound already contains fuels and oxygen. Therefore there is high risk for unintentional initiation by heat, impact, shock or friction.

The reaction is very rapid, and in case of an accidental detonation, the miner can’t find a chance to evacuate the blast site. Let us assume that in a quarry, the blast-hole diameter is 89 mm, the bench height is 10 m, the blast-hole depth is 11 m, the charge column height is 8 m, stemming length is 3 m and the detonation velocity of ANFO is 3200 m/s. The detonation time is \((8 \text{ m}/3200 \text{ m/s}) = 1/400 \text{ seconds or 2.5 milliseconds}\).

BAD PRACTICES OR MISFORTUNE HELP TO LEARN A LESSON
Several case studies will be mentioned during presentation to explain the danger and the high risk from occupational safety and health point of view.

Key words: explosive, blasting agent, detonation, rapid decomposition, noxious gases, liable to unintentional detonation.
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One of the main reasons of agricultural accidents is to use agricultural machinery in this sector. Agricultural accidents and end of the accidents exposure injuries are not only because of working with these machinery but also maintenance, adjustment, cleaning and open blockages operations. For the elimination or limitation of accidents in agriculture in developed countries, it has been taken precautions intensively. For this purpose, it has been conducted many studies from to put on the market safety products to raising employees awareness and education. In developing countries due to inadequate training and safety precautions, agricultural workers are at greater risk. Education/training activities in agriculture forming permanent vocational safety culture is getting gradual importance in our country under the influence of increase in human centered policies executed in the world, harmonization of regulations of EU to our country, raise several projects to creating awareness in this area and pressure to human consciousness generated by accidents. In this paper, works related to SAFER project- Safer Agriculture For Employees in Rural- that is conducted by Ondokuz Mayis University and nine different partners and supported by EU Life Long Learning Leonardo da Vinci Programme Transfer of Innovation has been given.

Keywords: agriculture, safety, agricultural machinery
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Many studies on accidents occurred in agriculture revealed the fact the reason ranked the first for the accidents was due to agricultural machinery. Agricultural machines are becoming very complicated and have different structure as compared to the ones used in industry and accidents that involve the use of agricultural machines may result in serious disabilities and cause to death.

The studies conducted in agriculture are mostly about tractors and limited studies concerning agricultural machinery are available in the literature. In addition to this, it is very difficult to deduce the necessary information about the cause and the consequences of the accidents from the official records.

Hence, a study was conducted and the objective of this study was to analyze the accidents solely resulted from the use of agricultural machinery with the exemption of tractors. In order to meet this objective, a countrywide search was conducted on the digital archives of 301 national and regional newspapers and 192 news agencies.

The results revealed 217 incidents at the country level. 52 people died while 152 people were paralyzed in these incidents. 17% of the people who involved in accidents were female and the 10% of the people who either died or paralyzed were children whose ages ranged between 1 and 10. The accidents were mostly took place in the middle and western Anatolia in April, July and September. Among agricultural machinery, threshing units were ranked first while it was followed by forage harvester and rotary hoes. The percentage of the accidents that resulted in amputation was 43%. The amputation by accidents in hand and legs along with heads occurred. The main reason for the accidents was reported to be carelessness and abstractedness. On the other hand, working at a closer distance and also come contact with the machine by hand or leg also caused to the serious injurious or deaths.

The results indicated the significance level of the accidents related to agricultural machinery. It is very engrossing that half of the accidents resulted in amputations. Based on the findings, it is clear that people using agricultural machinery must be informed by educational type studies along with some modifications on agricultural machines to avoid possible accidents and provide protection for the users.

Keywords: Agriculture, agriculture machineries, accident
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In the past two decades, R.Macedonia has experienced major sociopolitical and economic transitions with strong impact on the working life. The health system and policy in the country including occupational health was based on public health (PH) and primary health care (Stampar) model. It was a challenge to maintain the PH leading principles in new societal environment, within the continuously health care reforms, in line of EU accession process.

New “picture” of working life demands to adapt and further develop Occupational Health Services (OHS) with the renewal of policies, legislation, strategies, financing systems and infrastructures in the health sector. The process of the reforms started with the privatization of primary health care (PHC), including the transformation of relevant number of OH specialists to GP, reducing number of OHS. National professional community was making strong efforts to give positive input to the reform activities and to establish the basis for new model of OHS through intersectoral approach, supported by the relevant Ministries.

OHS within the Health Centers (PHC level), in major municipalities, with a special regulation, were excluded from the privatization in order to keep specific function and infrastructure as a part of the PH system.

Renewed health and OS&H legislation, based on international documents (WHO, ILO, EU), increased the number of OHS, including establishment of national PH network of OHS (private and public) coordinated by the Institute of Occupational Health, keeping the public responsibility for workers’ health. This network should provide strengthening of PH aspects of OHS as a segment of the national health system.

SWOT analysis of the factors of OH development should contribute in identification of the OH problems and definition of next steps for action, strengthening the partnership in the health sector, improvement of intersectoral cooperation and mobilization of public and politicians in one line of action.

Keywords: Health policy, occupational safety and health, reforms, EU accession process, new OHS model
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In the field of Occupational Health and Safety (OHS) services structured multidisciplinary, primarily ILO, WHO, EU-OSHA and ICOH, IOHA, IEA as well conduct significant activities.

The ILO/WHO Joint Committee on Occupational Health, 2013, defined basic occupational health services through the integrative approach.

By harmonious of these activities at the international level, primarily Ministry of Labour and Ministry of Health, social partners, related public institutions, professional organizations play important role at the national level.

The health status of the working population is relating to the general health situation of the country as well as the work system and the standard of the work environment.

In Turkey, finally the OHS Law was amended in 2012 and it covered all economical active sectors and all employees. Thus, OHS services are aimed to be generalized as primarily preventive, accessible, multidisciplinary, appropriate to community’s needs and conditions.

Within the framework of these aims, the collaborative agreement signed by Ministry of Labour and Ministry of Health included that OHS services were planned to be integrated into primary health care by means of Community Health Centers. These centers must be organized and spread as soon as possible so that they primarily serve to informal sector, agriculture and SMEs.

Besides, National OHS Council composed of the two Ministries as the main actors and the other related parties must be organized more effectively so that OHS Policy Document must have more realizable and harmonious with the country health policy.

As conclusion, OHS issue which has already taken place both in the OHS Policy Document of OHS Council and in the Strategic Plan of Ministry of Health must be reviewed and improved within the consensus of all related parties and a National OHS Programme must be created promptly by taking account of the international examples.

Keywords: OHS Policy, Workers’ health and safety, National OHS Programme
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FERROSH (Facilitating Effective and Reliable Resources for Occupational Safety and Health in the Turkish metal sector) is a project TNO designed for MESS, the most representative employers’ organization for the metal industry in Turkey. TNO is conducting this project in Turkey together with the Turkish Metal Workers’ Union (Türk Metal Sendikası) and the Public Health Institution of Turkey.

FERROSH intends to:

- raise awareness of preventive OSH company policies, risk assessment, occupational health risks and the provisions of the new Turkish Act on Occupational Safety and Health among social partners in the metal sector in Turkey and health professionals within the Community Health Centres who have already started servicing metal industries in their town or region;
- develop and implement five 5-day training seminars for Community Health Centres’ service providers, employee representatives and employers in the metal sector to upgrade their skills in and knowledge of occupational health;
- come to an agreement on how sustainable collaboration between metal industries and Community Health Centres can take place in a network structure, preferably through the web, to strengthen future collaboration between OSH service providers and clients;
- disseminate this practice and related materials and findings for use by other sectors in Turkey.

Some 150 professionals have been trained in the metal sector, and 10 trainers are available to replicate this approach in the metal sector if needed in other cities and regions in Turkey.

Keywords: SME, OSH, compliance, risk assessment, occupational health, safety, metal sector
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Each new chemical entering the production process, each new work equipment, machinery, tools, and supplies threaten the human health, environmental health and safety, and workplace safety. Consequences of occupational accidents and diseases pose a threat to human life and health. Enterprises confront heavy financial and moral losses.

Now, we need new methods and models to prevent the risk of occupational accidents, diseases, and major industrial accidents such as fire and explosion. We can define metal industry as metal melting and refining industry, metal processing industry

During metal melting and refining,
- the treatment of metal ores and scrap to obtain pure metals.

During metal processing industry, production

Machine, Machine components, Tools and equipments, which were required by the other sectors

Primary processes in metal sector
Melting and refining, Casting, Forging, forming and pressing, Welding and metal cutting, Sintering, Machining

Till obtaining the product
Grinding, Polishing, Sanding, Surface treatment, Surface dressing,
In each of these processes, there are risks with its own source of danger...

Melting and refining operations hazards:
Physical hazards: Radiation, Thermic effect, Noise, Elektricity,.....
Chemical hazards:
Copper, Lead, Zinc, Aluminum, Gold,....

Ergonomic hazards:
Manual lifting and carrying, Repetitive movements,....


Health and Safety Directive in the Use of Work Equipments must be taken into account for Safe Usage For Safety of Machinery, the following must be completed in order of priority:
1. Physical Protectors
2. Automation Protectors
3. Employee Protection Equipment
4. Instructions, Information; Education, Prohibition, Warning, Records and Documents
5. Monitoring, Inspection, and Enforcement

Work equipments:

MUST BE FULLY SECURE during:
- Setup,
- Use,
- Maintenance,
- Periodic check

Machine safety limits should be set for each stage. To do this, standards for security purposes should be considered.(EN ISO 12100, EN ISO 13849-1, EN ISO 13849-1, EN 574, EN ISO 13850, EN ISO 13857, EN 349,EN ISO 13855, (EN 1037, EN 693, EN 692, EN 12409...)

Keywords: Occupational safety, metal industry, hazard, risk, work equipment, safety, standard, machine, protector, safety limits

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The lecture will focus on the developments in the area of Personal Protective Equipment (PPE). Innovations in the field of PPE are improving the use acceptance and can help avoiding accidents. Very often these PPE innovations are not well known to the end user. Therefore the lecture is focussing on several innovations in the area of industrial helmets, protective clothing and fall protection.

Keywords: PPE
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In this study;

- Workplace OHS practices in the process of historical development from the past to the future will be examined and
- The process is divided into stages, each stage will be considered for the basic features.

System description and system elements, and elements of the OSH management system is given briefly mentioned briefly discussed.

OHS Approach and Organization in the development process by considering the stream of history, each consisting of two stages is divided into three phases.

a. primitive Period
   • 1st Generation
   • 2nd Generation
b. medium Term
   • 3rd Generation
   • 4th Generation
c. Next Term
   • 5th Generation
   • The 6th Generation

Chronologically, the level of understanding the salient features of each generation have taken place have been explained briefly.

Next Generation Period covered 5 and 6 OHS Management systems have given relatively more gear and the development of OHS Legislation end of the study period were also briefly discussed.
Today, struggle against problems on occupational health and safety (OHS) in both national and international level has become a necessity in terms of social and economic aspects. The issue should be addressed, managed and controlled with a systematic approach by top management in order to succeed in this struggle. Therefore, occupational health and safety should be approached as the formation of culture and the joint efforts of all relevant stakeholders in the community and all tools should be used actively in solving problems.

In this context, Occupational Health and Safety Management System (OSH-MS) applications have developed significantly in the last 20-25 years and have been accepted by stakeholders in OSH area. Despite the increasing popularity of the concepts of OSH management and OSH management systems among stakeholders, there is still a lack of reliable scientific evidence on its effects on OSH and other outcomes.

Although OSH-MS perceived as a voluntary system in general, there have been also mandatory applications too. Just as in the Report on Management of Occupational Safety and Health-2012, which was published by European Agency for Safety and Health at Work (EU-OSHA), it is mentioned that Framework Directive 89/391/EEC is a good example of a mandatory OSH-MS. This is not a coincidence, on the contrary this is the result of trends that are emerged in parallel with the global developments in the field of occupational health and safety.

In conclusion, requirements for successful OSH-MS applications should be assessed and promoted by stakeholders on OSH for researches considering cost-effective aspects.

Keywords: Successful OSH-MS, OSH-MS Performance Indicators, Voluntary and Mandatory OSH-MS Applications

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Traditionally in Malaysia, labor matters are monitored by respective labor inspector. For example, minimum wages and child labor issue will be handled by Labor Officer, dispute between employer and employee will be resolved by Industrial Relation Officer and OSH issue will be handled by OSH officer. Realizing the need to minimize the man-hour while achieving the objective of the law, there is a possibility to perform integrated inspection. General Officer or Generalist will look at all general issue and when the specific problem arises, the specialist or expert will come in to resolve the specific issue.

As far as OSH is concerned, there is also a need to shift the responsibility of ensuring the ‘right of worker to work at a safe workplace’ to the employer. New initiatives on this include Joint Inspection such as Malaysian Off-Shore Self Regulation [MOSSR] in which the organization will decide their own enforcement system but in collaboration with the OSH Statutory body. Another one in the list is Risk Base Inspection [RBI] on which the level of safety and risk face by the equipments or workplace is determined by the occupier himself but under the supervision of OSH statutory body.

Empowering other government agency to do the enforcement work on OSH is another option. We may delegate the responsibility on OSH to the agency to look into the OSH issue under their purview. In addition to this, we may also recruit in (Cadre) other officer from other agency to perform the task of labor inspector.

Introduction of Competent Person in the labor administration system also contribute to the improvement in managing labor issue. This is done by increasing the involvement and accountability of competent person as adviser to manage and perform audit on OSH.

Another initiative that proved to be helpful in improving compliance to the law is ‘Compliance Support Program’. The industries were trained on Low cost solution, Simplifying OSH MS, Simplifying Risk Assessment and adopting mentor-mentee Program.

Keywords: Integrated inspection, empowering, joint inspection, competent person, compliance support
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Authorized on monitoring, investigation, and inspection of the labour life, Labour Inspectorate Board has undertaken the mission of contributing to labour peace and development of society, by interfering with labour life and serving as a bridge between the social partners, by means of a new conception of prevention-oriented inspection.

The basics of the inspection policy of the Ministry of Labour and Social Security are a correct perception and a proper implementation of the legislation in the field, and the dissemination of the culture of "prevention".

The main objectives of inspection, informing, and monitoring conducted by the Labour Inspection Board are identification of priority risks, elimination of these risks in a short period of time, improvement of the working environment and adaptation of the workplace to the labour legislation.

With the new approach of inspection employers don't experience any uneasyness about inspection, but they benefit from the guidance about both work execution and occupational health and safety.

The new approach of inspection seeks to improve instead of punishing, provides labour peace, and aims at the guidance for the fulfillment of legal regulations.

With innovations in the labor inspection system, inspectors want the employees and the employers to watch for, and profit by their guidance.
There is an active cooperation between Labour Inspectorates (LIs) in the EU. For the cooperation there is the Senior Labour Inspectors’ Committee (SLIC). SLIC is composed of the Commission and representatives of the LIs of the EU Member States. There are meetings twice a year. The overall aim is to develop labour inspection via European cooperation.

SLIC’s activities are:
- Define common principles of labour inspection in the field of occupational safety and health and assess the national inspection systems
- Promote improved knowledge and mutual understanding of the different national systems and practices of labour inspection, the methods and legal frameworks for action.
- Develop exchanges of information between national LIs about their experiences in monitoring the enforcement of Community law on occupational safety and health
- Promote labour inspector exchanges between national LIs and inspector training programmes
- Develop a reliable and efficient system of rapid information exchange between LIs about health and safety issues
- Establish active cooperation with LIs in third countries to promote better understanding and to assist in resolving cross-border problems

SLIC has prepared a document “European code of good practice in inspection and non-inspection work of labour inspectorates”. The goal was to describe the best and most effective activities undertaken by LIs in EU within the framework of their inspection and non-inspection work.

The document is available in internet. The presentation includes also an introduction of a successful Danish project.

Keywords: Labour Inspectorates, Senior Labour Inspectors’ Committee (SLIC)
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Unlike social security, occupational health and safety, the Constitution is not a concept clearly arranged. Therefore, at first glance be considered to have basis constitutional matters. However, this approach is not accurate. Because the actual content of occupational health and safety when placed there, also owned a constitutional basis, even it is not limited to a single substance will be seen. Occupational health and safety of the pillars of the constitution of the first, is the principle of the social state. According to the Constitution of the Republic of Turkey is a social state of law. Social State of Law weak, strong profits in reaction preserving that true equality, social justice and social balance state is obliged to provide the right. Of the main objectives and tasks of the state constitution when acting, occupational health and safety in another basis, who were also mentioned, people's material and spiritual assets to create the necessary conditions for the development of the study. The development of man's material and spiritual existence, everyone's survival, protection and development of material and spiritual entity having the right means. Occupational health and safety, then one of the constitutional basis of the right to life and the right to live in a healthy environment is depending on him. Occupational health and safety of another of the constitutional basis of one's age, sex and power that you cannot perform work unsuited to the arrangement. However, occupational health and safety can be shown as the fundamental basis of the constitutional basis of the right to social security. Social security consists of two basic parts. The first of these is occupational health and safety and is intended to eliminate the risk of formation damage. So the basic function is to relief. The concepts referred to in the second leg creates social security. It also aims at the elimination of losses incurred. This approach when acting as compensatory social security, social insurance, risks, preventive health and safety side of the business is possible to say that you create.
Limited capacity constitutes one of the most crucial problems of enterprises with regard to occupational health and safety. The problems on human resources and financial resources considered to be the main reasons for these capacity shortages. Hence capacity development activities are implemented by multinational and national enterprises in a global scale.

In scope of ILO Convention No. 102, employment injury benefits are approved as a means of social security which constitute a social protection in case of accidents and diseases. In order to prevent the occurrence of accidents at work and occupational diseases which lead to heavy burden to social security systems the capacity of the enterprises must be improved.

The utilization of social security incentives are essential for capacity development and encouragement of enterprises. In scope of the study, social security incentives on occupational health and safety and their implementation in Turkey will be analyzed.

Keywords: Social security, incentives, occupational health and safety
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Occupational lung disease is the most common cause of occupational illness and death. The most important causes are dust and fumes. Inorganic (silica, coal dust, asbestos) and metal dusts and smoke accumulation in the lungs, can cause pneumoconiosis. Together with COPD, tuberculosis, cancer is common. Most of pneumoconiosis progresses even work disconnected , there is no return and cure. Sandblasting accelerated silicosis cases are common in our country. Asbestos exposure causes pleural thickening, plaques, calcification, asbestosis, mesothelioma and lung cancer. Asthma, COPD, pneumoconiosis and lung cancer can be seen in welders. Aluminum causes asthma, chronic bronchitis, pneumoconiosis, pneumonia, pneumothorax and emphysema. Beryllium causes a progressive disease resembling sarcoidosis in the lungs. Hard metals causes giant cell pneumonitis, allergic alveolitis, asthma and an increase in the risk of lung cancer.

Allergic alveolitis limited to the lung diseases, resulting from repeated exposure to the organic dusts or particles of low molecular weight chemical components, reported in 5-15% in different groups. Makes permanent lung damage if not removed from the agents. A typical example is the farmer’s lung. Animal and vegetable dusts, western red cedar, red wood, black pine resin, platinum, nickel, cobalt, chromium, zinc, aluminum, plastic dust and fumes cause asthma. 15% of adult cases of asthma are occupational. Contribution of occupation to COPD is 15 to 20%, and up to 40% in non-smokers. 40,000 COPD deaths per year in Europe is associated with the occupation. Inhalation fever which indicates inadequate dust control measures, due to metal and polymer fumes, and organic dusts. Inhalation of large quantities of metal smokes and steams often as accidents, may result in permanent lung damage.

Occupational carcinogens are most affected lung and pleura. Around the world, 5% to 20% of women and 20% to 30% of men are exposed to occupational lung carcinogens. 32,400 lung cancer cases per year is associated with occupation in Europe. Silica, asbestos, arsenic, beryllium, cadmium, chromium, coal tar, bitumendiesel exhaust fumes, nickel, welding fume and hard wood dusts cause lung cancer.

Ardyl syndrome related with aerosol textile dyes, nylon flocked lung disease related with nylon microfibrils, pulmonary disease due to the synthetic polymers are the newer diseases. Nanotechnology is a rapidly into our lives, especially carbon nanotubes, which raises new respiratory and systemic effects.
Dust is an aerosol airborne contaminant composed of solid particles with diameter < 75 micron occurring during various workplace activity. Those solid particles stay suspended in the air for a certain period of time and settle slowly under the force of gravity. The respiratory system is especially vulnerable to suspended particles with aerodynamic diameter less than 10 micron reaching to trachea and main bronchi. Larger particles are filtered by nose. Particles smaller than 5 micron are accumulated on smaller airways whereas particle with diameter 0.5-5 μ reach the alveoli and are the principal cause of pneumoconiosis.

Dusts are accumulated in the respiratory tract by several mechanisms:
- Impaction: This operates especially in the nose, trachea and bifurcating larger airways.
- Sedimentation operates in smaller airways where the airflow is slow.
- Interception: Leads to the accumulation of fibrous dust such as asbestos.

According to their content dusts can be classified as inorganic and inorganic:

**ORGANIC DUSTS**
- Mineral dusts: eg. Crystalline silica, coal dust
- Cement dusts.
- Metallic dusts: eg. Iron, cadmium, copper, nickel and berilium

**ORGANIC OR VEGETABLE DUSTS**
- eg. Agricultural dusts, wood dusts, cotton dust

**BIOLOGICAL HAZARDS**
- eg. Microorganisms, spors dusts.
Respiratory system diseases occur rather frequently among workers who are exposed to dusts at working environments. Especially the diseases (pneumoconiosis) occur by the reactions of lung parenchyme due to the deposition of dusts in the lung.

In order to prevent the risks that can occur due to dusts at working environments, struggle against dusts and the protection of workers from the adverse affects of dust who are employed at risky works should be ensured. Especially researches and studies on surveillance of health and working environments in dusty workplaces will contribute to reach the aim.

The activities to be applied in dusty workplaces in terms of surveillance of health and working environment cover; risk assessment, workplace measurements and analysis, health examinations, trainings and publications for the employers, employees and OSH professionals.

Keywords: Dust, health of employee, occupational health, pneumoconiosis

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The role of occupational safety and health (OSH) laboratories is to measure chemical and physical agents in workplace. As the results of measurements are important to health of the employees, the control of the performance and competence of the laboratories is very important. A formal recognition of the competence of testing laboratories is accreditation by the national or international accreditation bodies checking fulfillment of provisions listed in ISO 17025. It is a long, difficult and strenuous process and therefore number of accredited OSH laboratories is rather small. Central institutions responsible for OSH in the country (like ISGÜM) are interested in less formal audits checking competence of laboratory staff also from the point of view of legal OSH regulations and requirements. The general regulations regarding external audits covered in ISO 17020 will be presented as well as practical guidelines how to carry out external audits in not accredited labs. The guidelines will include assessment of analytical methods and their compliance with EN 482, knowledge and application of criteria used for hygienic interpretation of measurement results, evaluation of uncertainty of the results and assessment of the training needs of the laboratory personnel. Examples of typical questions to be asked during the audit will be also provided. The proposed guidelines would facilitate control over private OSH laboratories which should result in improvement in quality and reliability of the measurement results and evaluation of occupational exposure to harmful agents.

Keywords: OSH laboratories, external audit, occupational hygiene
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With the enforcement of the law no. 6311 about occupational health and safety in 2011 performing risk assessment and thereby the related measurements at workplaces have been rendered mandatory. Considering the variety and number of workplaces in Turkey, and the number of working people the necessity of conduction of occupational hygiene measurements tests and analysis by the private laboratories all around Turkey is revealed. On the other hand, the correctness and compatibility of the measurements tests and analysis are continuing to stand as question marks. Due to all those reasons, the Ministry of Labor and Social Security has enforced a regulation organizing the operations of authorization of laboratories acting in the field of occupational hygiene and also started to record the measurement, test and analysis results of the authorized laboratories. By this way both the correct and relevant conduction of the occupational hygiene measurements, tests and analysis and also the use of the resulting data base for making national Occupational Health and Safety Policies are targeted. In this presentation, the outputs of the mentioned regulation in relation to the occupational hygiene laboratories and also in relation to the public benefit are analyzed. It become apparent that the Institute of Occupational Health and Safety can play an important role in the solution of the problems regarding the operation of those laboratories. The official recognition of the results of measurement, test and analysis of those laboratories by the Ministry will cause an increase in the responsibility and awareness regarding occupational hygiene. It is understood, though, that making the laboratories of concern have a notion of occupational hygiene and by the way rendering them able to help employees and employers in practicing the Occupational Health and Safety legislation requires a set of long term activities.
Turkish Accreditation Agency (TÜRKAK) was established through Law 4457, which entered into force upon its publication in the Official Journal no. 23866 dated November 4, 1999, for the purpose of accrediting “conformity assessment activities” and TÜRKAK is the sole accreditation body in Turkey. Between 2006-2008, TÜRKAK signed Recognition Agreements with ILAC, EA and IAF in all fields of conformity assessment activities. TÜRKAK, including laboratories and inspection bodies, provides accreditation services in all conformity assessment bodies in voluntary area.

With Bylaw of Laboratories Performing Measurement, Test and Analysis in the Field of Labor Hygiene, for the laboratories who want to perform measurement and analysis in the field of labor hygiene, accreditation became a prerequisite. Laboratories performing measurement, test and analysis in the field of labor hygiene are accredited according to TS EN ISO/IEC 17025 and relevant test methods. Besides, in order to get proficiency certificate from the Ministry of Labour and Social Security laboratories have to comply with the other requirements of bylaw.

As a result of this process, having both legislative and accreditation aspects, there may be some misunderstandings and misapplications. Accreditation is a recent development in labor hygiene but previous experiences of TÜRKAK shows that there may be similar general problems in this field. Lack of adequate information about proficiency and accreditation assessments’ functions and reference documents, lack of enough awareness about time schedule and declaration in assessment processes and personnel competency can be matters of problem and come into question.
The role of personal protective equipment (PPE) at workplace safety and in risk management is nowadays commonly understood: it is preferable to eliminate hazards, reduce risks at source and use various engineering controls before resorting to PPE. However, it is frequently necessary to use PPE to manage work-related risks to a tolerable level.

The correct selection and proper use of PPE demands preparations and expertise e.g.

- Determining the types of PPE available for the identified hazards
- Evaluating the effectiveness of the PPE
- Selecting appropriate PPE
- Providing a variety of sizes to properly fit all users
- Motivation of workers to use PPE

Employers at workplaces are responsible for

- Carrying out risk assessment
- Identifying and providing appropriate PPE for employees
- Training employees in the use and care of the PPE
- Maintaining PPE, including replacing worn or damaged PPE.
- Periodically reviewing, updating and evaluating the effectiveness of the PPE used at the workplace.

Employees are responsible for

- Properly wear PPE
- Attend training sessions on PPE
- Care for, clean and maintain PPE and
- Inform the supervisor of the need to repair or replace PPE

Employers should demand a good service from the PPE seller such as:

- Further analyse of the situation at workplace, define proper PPE, give advice for selection, maintenance and correct use
- Support in motivation of workers
- Monitoring the results achieved by the provided PPE
The lecture will focus on the developments in the area of Personal Protective Equipment (PPE). Innovations in the field of PPE are improving the use acceptance and can help avoiding accidents. Very often these PPE innovations are not well known to the end user. Therefore the lecture is focussing on several innovations in the area of industrial helmets, protective clothing and fall protection.

Keywords: PPE  
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In the last three or four decades, as the most frequent cause of death started to be chronic diseases, the major focus of public health concern is the etiological factors of these diseases. Because of increasing scientific data about the association between industrial or environmental exposures and chronic diseases like hypertension, diabetes, neurodegenerative diseases, preventive approach in environmental and occupational toxicology started to become more important. In occupational health and safety area, chronic health effects are usually the result of long term and low concentration repeated exposure to industrial chemicals in the workplace. Besides classical relations like benzene-leukemia, 2-bromopropan-reproductive disorders, carbon tetrachloride-hepatotoxicity and n-hexane-polyneuropathy, new exposure-disease relations are emerging into the field of medicine.

Evidence suggests that a broad range of toxic chemicals, including lead, arsenic, bisphenol-A, phthalates, organophosphate pesticides, polychlorinated biphenyls and dioxins may play a role in increasing risk of obesity and diabetes. Some of these are also endocrine disrupting chemicals that may involve in breast cancers with their estrogen mimicking activities. Phthalates and bisphenol-A also have demonstrated to have accelerate lung inflammation and play role in the etiology of asthma. Lead, cadmium and mercury have been found to deteriorate renal functions and be closely related to chronic kidney diseases with any stage in many studies. Similarly, manganese and aluminum have been shown to have neurodegenerative diseases, like Parkinson’s and Alzheimer’s disease. In some clinical studies, investigators presented the osteoporotic effects of exposure in lead, cadmium and arsenic exposed workers.

Cumulating data about toxicity of occupational or environmental exposure enforces governmental bodies to take strong preventive measures against toxicological threats of any origin. The core activity and policy of public and occupational health should be designed to aim “prevention” and “protection”. As “knowledge” is the strongest promoter, awareness and lifetime education of related professionals carries vital importance.

Keywords: Occupational toxicology, chronic disease
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Everything in the environment is made of chemicals. Metals play a crucial role in various vital functions associated with living biological systems. However, heavy metals refer to any metallic chemical element that has a relatively high density and is toxic or poisonous at low concentrations. Besides their great applicability and immeasurable benefits, certain heavy metals prove to be potentially toxic, influencing all life forms. Intentional or unintentional releases of heavy metals can pose a serious health risks to workers and innocent people since they can cause asthma, cancer, developmental disabilities and health problems.

Human activity affects the natural geological and biological redistribution of heavy metals through pollution of the air, water, and soil. Toxic metals enter the food chain through water, air and soil pollution and eventually such alterations often affect a heavy metal’s toxicity by allowing it to bioaccumulate in plants and animals, biomagnify in the food chain, or attack specific organs of the body. Humans are often exposed to heavy metals in various ways—mainly through the inhalation of metals in the workplace or polluted air, or through the ingestion of food (particularly seafood) that contains high levels of heavy metals.

The primary anthropogenic sources of heavy metals are point sources such as mines, foundries, smelters, and coal-burning power plants, as well as diffuse sources such as combustion by-products and vehicle emissions. Electronic waste is also a significant source of heavy metal contaminants. Because they cannot be degraded or destroyed, heavy metals are persistent in all parts of the environment. They are often stored as fat-soluble compounds in the body. Heavy metals are associated with myriad adverse health effects, including allergic reactions (e.g., beryllium, chromium), neurotoxicity – affects nervous system (e.g., lead), nephrotoxicity – affects kidneys(e.g., mercuric chloride, cadmium chloride), and cancer (e.g., arsenic, hexavalent chromium).

Keywords: Heavy metal, toxicity, occupational health, mercury, lead
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According to the Behaviorist Theory, human behavior can be analyzed in terms of its antecedents and consequences. The application of this theory to job safety behavior is called “Behavior-Based Safety Management” (BBS). BBS is the process that involves operational definition of critical behaviors that affect job safety, their observation, recording their frequencies, analyzing them in terms of antecedents and consequences (ABC analysis) and behavior modification by planning the actions. In this study, the major theoretical and applied principles that determine the effectiveness of BBS will be reviewed and a BBS project in the steel industry of Turkey will be presented as a case. Borçelik recorded 35 industrial accidents, 18 accidents with lost day and 309 lost work days in 2011 and initiated the BBS project which will be named later as “Number 10 Safety Project”. In the preparation phase, current state analysis, organization (top management involvement), master planning, training of task leaders and the observers, designing the observation forms were followed. Following the kick off meeting in 20.6.2012, observations in the site and ABC analysis of the critical behaviors started. In this process, 4722 observations were realized; 411 actions were recorded as part of the plan; 350 actions were implemented. The job safety records show 8 accidents, 4 lost day accidents, and 207 lost days at the end of 2013 which support the progressive role of BBS. In this study Borçelik case will be compared with theoretical and applied cases in the BBS literature. Moreover the qualitative data on the employees’ and managers’ perception of the strengths and weaknesses of BBS process will be presented which will be obtained from the planned site visits and interviews in February and March 2014.

Keywords: Behavior-Based Safety, ABC Analysis, Action Planning
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Mobbing concept’s during the first 1960, has known by an Austrian ethologist Konrad Lorenz used to describe the behavior of animal groups. Prime ministry’s Circular was published in the prevention of mobbing in Turkey. In this circular, in order to protect workers from mobbing were eligible to take some measures. Mobbing victims people to the Ministry of Labour and Social Security Alo 170 reach out and where can I get help from psychologists.

For combat against mobbing, committee combat against mobbing has been created in the Ministry of Labour and Social Security. When victims of mobbing people applied to this committee for necessary investigation investigators to go to the place of mobbing and investigators investigate whether mobbing. If you mobbing legal process is starting.

According to statistics Alo 170 in the Ministry of Labour and Social Security, mobbing complaint is in the public sector 32%, while 68% in the private sector.

Basis to cope with mobbing constitutes that not surrender. Mobbing against as institutional measures to be taken among is located human-centric and institution culture which built on ethical values.

Keywords: Mobbing, Prime ministry’s Circular, Alo 170, to cope with mobbing

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Recently, interest in occupational health and safety issues is constantly increasing. It is considered as a part of reflex to maintain economic, social, psychological health of countries, organizations and communities. In this respect many legal, economic, political, social actions are activated. But however, sometimes difficult to obtain the desired results and developments. The underlying reasons are extensively studied. For this reason, one of the elements of the set is also psycho-social factors.

Life is intertwined with some hazards is required. Many times the biggest cause of accidents is specified as the human. Although the risk is always and everywhere are evaluated differently by people. There may be many different reasons for this difference. Individual's perception of the risk faced is an important factor. High perceived risk of the emergence of safe behavior will facilitate the effect. In contrast, low risk perception will be an obstacle to the emergence of safe behavior. Individual's perception of risk in the case of objective reality will determine what happens. In the perception of risk, the individuals of the culture in which he lived and grew up and the organization’s safety culture are thought to be the causative agent. It is not possible

it is not possible handle the person, unfettered by the impact of the structure of the social world. Also cognitive activities, as people’s behavior are influenced by social context. Therefore, the perception of risk is not possible to tell from the social context handling. At this point, according to the Douglas (1978), the risk perception is constructed by socially and culturally, is not trait, personality, needs, preferences or risk. Risk perception concept is related to the request for risk mitigation. Which aspects of risk sources or subjectively considered important property information that will identify the demand for risk mitigation. The purpose of this study, detection of individuals at risk and safety, is to investigate whether the effect of culture. Risk perception through the filter of cultural behavior, to what extent and how the return will be emphasized. In the study of culture, individualism - collectivism are viewed as coming from the origin, fatalistic culture tendency will be also included in the study.
According to the Occupational Health and Safety Act No.6331 “The employer shall conduct an assessment of risks to health and safety of workers or get one carried out, taking account the following points: “The situation of female workers and other workers such as young workers, older workers, disabled workers, pregnant or breastfeeding workers who need specific policies” and “the situation of workers who might be affected by certain risks” (Article 10).

Under these provisions some groups such as female workers, young workers, older workers, disabled workers, pregnant or breastfeeding workers are particularly at risk and they need special attention.

Occupational Health and Safety Act defines young worker as “any worker who is of at least fifteen years of age but less than eighteen years of age” (Article 3). Regulation on Pregnant Workers and Workers who have Recently Given Birth or are Breastfeeding defines pregnant workers and workers who are breastfeeding. The workers with disabilities are also defined by the Turkish legislation. Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.

In this paper the Occupational Health and Safety Act’s legal framework for workers who need specific policies is analyzed from a critical point of view. The provisions of the Occupational Health and Safety are compared with European Union and International standards and possible changes are proposed.

Keywords: Health and safety; priority groups; female workers; young workers; older workers; disabled workers; pregnant or breastfeeding workers
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The groups requiring a particular policy are defined such as groups already taking place in a current pattern in the work life, but they are suffering from discrimination to get equal chances or achieving employment, also they are not equal in term of rights or rights' utilization and facing different obstacles when making application.

In our country, the groups requiring particular policies are not provided sufficient level of participation to employment even though there are no legal obstacles or even there are regulations containing positive discrimination in the laws. The majority of the employed ones of them are working in informal and low wages works. This situation is seen in a similar way in most countries, every country is trying to face this situation through developing different policies according to the social reflexes including its employment structure and cultural values. In our country also, there are developed policies and prepared action plans to be implemented in order to create equal chances either in work participation or while employed in work life for all groups, especially: women, youth, handicapped and long-term unemployed people.

Also some incentives have been brought in order to increase the participation of these groups named also disadvantaged groups to employment life, through making legal regulations containing positive discrimination considering their access to the labor market.

However, it is known that there are serious difficulties in the practice and the numbers of employment are very low even that many universal declarations, our constitution and laws are accepting the equality of opportunity as an universal principle and basic human right.

In this regard, in order to solve the structural problems in the labor market and provide a sustainable solution against the unemployment issue through increasing the growth contribution to employment, our ministry has carried out a Strategy of National Employment based on 4 policy axes. One of these axes is about increasing the employment of groups requiring particular policy.

Moreover, there are initiatives of awareness and informing towards groups who do not have enough knowledge to protect their own rights and have lack of understanding regarding the application of equality principle.

In order that the carried out works reach the desired purpose and be accepted socially, it must be understandable by all groups of working life especially its interlocutors.

Keywords: Disadvantaged groups, equal opportunity, equal opportunity in the work life, the sensible groups in the work life, vulnerable groups, child labour, inequality based on gender, working woman, working child, employment of handicapped.

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Innovation is the application of better solutions that meet new requirements or existing market needs. An invention is defined as a unique or novel device, method, composition or process. Innovation ability is greater in low and middle-income persons as well as rich persons, since first group are in need of welfare and second group is having suitable environment with mental concentration.

Nanotechnology comprises the processing and applications of nano bits, namely nano-this, nano-that and nano-the-other. A nanometer is the name given by the scientific-measurement system to a billionth of a meter, and the idea that making things so small you measure their dimensions in nanometers.

By nanotechnology, we face unpredictable vast area from healthcare to microelectronics, from nanofluid cooling to nanocapsules in coating against corrosion. Nanorobots, antistick applications, antibacterial goods, strengthening works are other potential areas.

The biggest problem about nanotechnology is the question of scale. Nanopowders are too small and really difficult to avoid harmful effect. Moving from laboratory to industry, from industry to usage and final disposal - as the quantities increase, the way things mix and manipulate - reaction, interaction and alteration in powders develop. That makes it hard to predict from small-scale experiments what will happen in a commercial setting. By different ways such as inhalation and skin touch, the harmful effect occurs. Inorganic nanopowders such as PM2.5 in burning fuel and synthetized man-made powders such as silver and titanium dioxide and others have potential problem. If problems can be overcome, though, a bright future arises, and some of the nanohype that has been swirling around might actually get translated into a useful product.

Keywords: Innovation, Nanotechnology, Nanopowder, PM 2.5, Nanohealth, Nanosecurity
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Invisible Nanotechnologies are everywhere in our daily lives in a wide spectrum from textiles to cosmetics to health applications. The effects of invisible engineered nanoparticles on human and environmental health are the subject of intense debate in the last years. The suspicions mainly result from the extreme small size of these particles and the lack of information on the interactions of these small particles with humans, living creatures at cell level. There are intense research ongoing without definitive results and data. There are factual information about the adverse effects of especially oblong, feather-like nanoparticles when inhaled in the respiratory system by creating inflammation in the lungs. On the other side, liquid and gases enriched by nanoparticles provide better cooling efficiencies. Filters produced by nanotechnological approaches can clean-up the worst contaminated waters, or body fluids. Nanotechnological filters can protect us from the dangerous particles in the environment. There are even recent reports about filters that can eliminate viruses. The potential risks of nanotechnologies during production at the factory floor need to be considered.

The advantages and disadvantages of nanotechnologies during the production and use will be discussed by examples and approaches for the risk perception and risk management will be debated. The suitability or the shortcomings of the current measurement systems and the applicability of the current regulatory approaches will be discussed. The recent research examples on the effects of nanotechnologies on humans and on the environment will be highlighted.
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VII. International Conference on Occupational Safety & Health

ORAL PRESENTATIONS
Occupational Health and Safety Culture can be sustained by learning available rules and improving the implementation of them within the cooperation towards to the aim of providing healthy working life. Making necessary regulation for coordination of OSHA is important for improving the culture of it through the regeneration of the rules with the help of sharing the problems on national and international level. The aim of this study is to examine the sufficiency of regulations in Turkish law about coordination for improving occupational health and safety in the light of ILO Convention No.155. It is evaluated that the necessity regulated as “communication and co-operation at the levels of the working group and the undertaking and at all other appropriate levels up to and including the national level” by Article 5/(d) of ILO Convention No.155 is not adequately considered with the provisions of Occupational Health and safety Law No. 6331. There is not any regulation for providing coordination between “Council of Occupational Health and Safety” on national level and “occupational health and safety commissions” on workplace level, and Labour Inspection Directorate of Ministry, apart from article 23 of the Law No.6331 titled as “the coordination of occupational health and safety” states coordination for the workplaces in which more than one employers’ employees work together. Only sending representative is regulated with article 22 for cooperation of commissions in the workplaces where sub-contractor employers’ employees work. It is concluded that the regulation about “coordination” in Law No.6331 is not sufficient for improving Occupational Health and Safety Culture, and proposed necessary and appropriate tools must be regulated for sharing information and experience between organizations and institutions regularly.

Keywords: Law No.6331, ILO Convention No.155, Coordination, Organization, Occupational Health and Safety Culture
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According to ILO, there are around 3 billion workforces in the world. 1 million occupational accidents take place every day and each year 2,3 million people dead because of occupational accidents and occupational diseases.

The statistics of Social Security Institution points out there are 18.352.859 active employees in 2012 and 2.662.608 people of the active employees are civil servants. 395 occupational disease cases have been staged and 744 labors have died in 74.871 occupational accidents occurred in 2012.

Having a significant advance in recent years, studies in the field of occupational health and safety have reached a milestone with the enactment of OHS Law No. 6331 on 30 June 2012. Before the current regulations, all these studies are only limited to the employees in the worker status and the civil servants working in the public institutions were out of the scope of the studies. Therefore, the implementation of studies for the OHS measures for the civil servants has been delayed.

Covering all employees and workplaces except a few particular public agencies, OHS Law has been coming into force gradually; and the studies for improving awareness and infrastructure simultaneously. However, some obligations coming from the law enacting in different dates and the distribution of the duties, authorizations and responsibilities cause some question marks. Especially, the hierarchical structure and different type of employment facilities brings out certain parameters.

Examining the overall perspective of public institutions and organizations, the requirement for the improvement of awareness and guidance is observed. The main goal of this study is provide a road map for the duties and responsibilities of public institutions and organizations in OHS practice, measures to be taken, standardization and improving awareness.

This study aims to clarify the obligations, responsibilities and how the law and related regulations should be carried out in public.

Keywords: Occupational health, occupational safety, occupational health and safety, OHS Law No. 6331, public institutions and organizations.
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As per SGK (Social Security Institution) statistics, in 2012 there are 1,425,249 workplaces active in Turkey. When unrecorded sector workplaces are added, number of workplaces increases a lot. In 7th November, 2012, “Employer-Surveillance institutions dialogue meetings” is held and specified the significance of Ministry of Labour and social security Department of Labour Surveillance and SGK Department of Counselling and Surveillance’s working in coordination; it’s informed that the number of inspectors of both institutions has reached 1600 and by expressing that inspectors of both have the authority to perform labour surveillance and social security inspections, it’s stated that the inspections with this mean shall prevent labour loss and repeating inspections.

Furthermore, it’s emphasised that shift from “Work surveillance” implementations and “non-program surveillances” to “programmed surveillances” is the target. In increasing the ratio of workplaces’ being audited, not substitute for the workplace surveillances, the surveillances over CHSU audits serving major part of the workplaces, currently about 1250, shall provide auditors to reach risk analysis reports, immediate action plans, OHS committee minutes, approved book records and health observation records of the workplaces that CHSU render services from the same place and without causing time loss. This can increase “indirect surveillance/pre-surveillance” ratios of workplaces and meanwhile onsite surveillance of about 1250 workplaces (CHSUs) shall be performed. Thus, the CHSUs having service inadequacy shall be ensured and thus reflection of these deficiencies on workplaces and employees shall be prevented quickly; and further surveillances shall be simplified and deficiencies shall be reduced. Adequate issues aren’t defined in the regulation for CHSU surveillances other than “the necessity of keeping copy of approved books in CHSU”. Therefore, firstly it’s required to define the document list that will be included in “CHSU records and files” stated in regulations on establishment of auto-control mechanisms that will help pursuits of OHS services performed by CHSU.
Techniques for sampling alive microorganisms of biological agent type at workplaces for the purposes of biological risk assessment take place in the National Occupational Health and Safety norms in the world and in the EU countries as related with biological agents and biological risk assessment. These factors are defined as harmful and toxic. Risk assessment regarding the biological agents is not yet a developed field in our country. The tasks of identifying and preventing biological risks at workplaces are not sufficiently performed. Therefore the biological risk factors at workplaces require a multidisciplinary approach. When biological risk factors at workplaces are mentioned, it means microorganisms, cell cat Alyzers and human parasites which can cause any infection, allergy or poisoning. The aim of this study is to explain the techniques for sampling alive microorganisms of biological agent type at workplaces.

Keywords: Biological agent, biological risk factor at workplace atmosphere, techniques for sampling alive microorganisms (bacteria, viruses, fungi).
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Representing the lignite mining company Mitteldeutsche Braunkohlenegesellschaft mbH (MIBRAG) in Germany, we would be glad to present the practical experience of our occupational health and safety management system at the Conference on Occupational Health & Safety. Since 2005 MIBRAG has regularly awarded the quality seal „Safety with system“ based on audits of its occupational health and safety management system. The current certificate is valid until 2015. Thereby it has been proven that MIBRAG meets the requirements of ISO 14001 and OHSAS 18001. Furthermore, MIBRAG was awarded the Silver Medal for Occupational Health and Safety by the Royal Society for the Prevention of Accidents (ROSPA) in 2013. The requirements according to international standards and policies are defined in the Corporate Handbook of MIBRAG and specified in detail in internal regulations and instructions on occupational safety and environmental protection. In order to ensure occupational health and safety MIBRAG carries out regular monitoring, instructions as well as internal trainings in the company. All employees are responsible for the compliance of the corresponding regulations at their own work places. Our presentation will include case studies and best practices of the company.

Keywords: Mining, Occupational Health and Safety Management System, Best practices, OHS Training
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Title: Referral Information Return Form And Establishment Of Occupational Health And Archives In Hospitals To Overcome The Difficulties That Employees Of Health Institutions May Encounter

PURPOSE: determination of Referral information return form, form offer, questioning the benefits of establishing “Occupational health unit and archive” in hospitals.

METHODS: significance of referral information return form, whether being used or not; benefits of establishing “Occupational health unit and archive” in hospitals are asked to 127 people in questionnaire study.

FINDINGS: In the questionnaire, which 127 answer; 81 Occupational physicians, 9 other health stuff, 22 Occupational safety specialists, 15 employer representatives delivered opinion. Ones that don’t use form: 44%; method of information return: verbal statement of employee 54%, via filling in form 17%; reason for scarce information return: physicians’ not knowing the importance of required information on OHS 42%, physicians’ hesitations on giving written document 20%; reason for employees not to want to be sent to health institutions: not getting attention due to severe density 32%, the times spent for referral and observation/examination are not considered as paid vocation 29%, not getting requested answer from the health institutions as their lack of information on OHS 18%; main difficulties that employers encounter in hospitals: (all) 52%; will it be beneficial to establish occupational health units and archives in hospitals: yes 85%; the best benefit: information return ratio to occupational physicians shall increase 40%, when employees go to hospital because of occupational accident/occupational illness/with Occupational physician referral, shall be directed from here 28%, lack of information of health institutions on OHS shall be eliminated via these units 23%.

RESULT: “Occupational health unit and archive” shall be established in hospitals. This way, reduce in the difficulties that employees can encounter when sent with occupational accident/occupational illness and increase in information returns for referrals to occupational physicians shall be provided. Furthermore, archives to be established for occupational health personal documents shall simplify document supply to jurisdiction and shall prevent both hospital administrations and workplaces from being under suspicion, and right losses also shall be prevented by preventing document losses. It will be provided that occupational health culture shall shift to hospitals in this way and specialists shall understand the significance of requested information on OHS.

Keywords: Referral form, Referral information return form, Hospital Occupational Health Unit and Archive, Occupational health culture
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Moral and material losses as a result of occupational accidents and occupational diseases reach critical size in terms of country's economy. Therefore, occupational health and safety measures to be taken in the workplaces is vital.

Although it changes between the countries, 4-12 new occupational disease is expected for every thousand workers. According to 2012 SSI statistics, the number of occupational disease is 395 in Turkey. There are number of reasons why this number inadequate. Many reasons can be listed related to medical, legal and social partners.

Within this scope, “detection, diagnosis and increasing of awareness on occupational diseases of OHS professionals project in Turkey” carried out for the purpose of increase awareness of occupational diseases, inform authorized health care providers on diagnosis of occupational diseases and introduction of protective occupational disease serves.

In this Project occupational physicians trained about increasing of detection, diagnosis of occupational diseases in 18 city, 21 university. In addition to this trainings, trainings supported with case study were made in Hospital of Ankara Occupational Disease in the end of 2013.

Keywords: occupational disease, training, OHS professionals
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Work accidents which often occur in the suitable environments for exploding during industrial process cause serious injury and fiscal loss. In this research, explosive environment notion and health risks of the employees in these environments are studied by evaluating No. 1999/92/EC regulation, which is about the employees’ protection from the dangers of explosive environments and enacted parallelly to European Parliament and of the Council. The term “explosive environment” in the regulations mentioned above was discussed critically and the term “explosive atmosphere” in the Europe Directive number 1999/92/EC was compared with the “explosive environment” term mentioned in the regulations.

The possible influences of the types of various substances used in suitable explosive environments and the influences of exploding over human health take part in this study. The pressure effect of blast wave, wind-exploded effect, wrecking parts flying around, collapsing structures and hot radiation cause exploding injuries on employees from a degree of one to five. In addition, it is observed that powders (minerals, organic powders), metals (leads, lead composites, alkyl lead composites, mercury and mercury composites) and chemicals (benzene, cs-gas and methanol) cause diverse diseases.

The training of employees to protect them from exploding risks, regular consultancy service and briefing, decreasing of risks and reasons of accidents, the connection between employer and employee and security culture in workplaces are significant.

Keywords: explosive environment, the effects of explosive environments on the occupational health, industrial health.
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Moderator: Bülent Gedikli

Date/Time: 5 Mayıs 2014/16:30-17:30

Place: Fener Hall

Title: Proposal On Confidentiality Of Personal Information And Transfer Management Of Health Information Inter Units/Workplaces

PURPOSE: Drawing attention of labor health professionals and institutions on signficance of personal health information’s confidentiality, Providing discussions on methods ensuring privacy during information transfer inter units/workplaces.

METHODS: questionnaire study is carried out on 130 people within scope of necessary personal health information required to be provided according to laws; answers on whether reliability is ensured and hospitals give importance to information transfer and this subject are assessed.

FINDINGS: In the questionnaire, which 46 people answer; 72 occupational physicians, 11 other health stuff, 31 occupational safety specialists, 16 employer representatives delivered opinion.

The method of filling in commence of employment/periodical inspection form: printed/paper form 88%, software 4%; useful method for taking approval signatures of employees and approving intermediary notes through signatures printed/paper form 82%; useful method for document archiving: software 68%; method for confidentiality of personal information: software 53%, printed/paper form 45%; ratio of keeping forms in locked cabinets: 63%; Who will access the information in locked cabinet in case of bad faith: inaccessible 8%, administration 27%, Human resources 23%; Are software information safe in terms of inaccessibility?: Yes 20%, Not sure 58%, No 21%; are there anybody who can access software information: No 28%, data processing responsibles 37%; Who will access information in softaware in case of bad faith: inaccessible 14%, data processing responsibles 39%, administration 25%, Human resources 20%; is “to be transferred to workplace doctor and by complying personal information confidentiality” informed when requesting/sending health information: No 27%, don’t know 28%, not necessary yet 26%; is it suitable to send information in closed envelopes with CONFIDENTIAL personal information! Shall be opened by health unit!” notification: Yes 94%; is keeping information confidential in sending reports to your workplace by hospitals noted: No 77%; request of diagnosis coding system or closed envelope system in sending reports to your workplace by hospitals: Yes 94%.

RESULT: Health stuff in workplaces, workplaces and health institutions shall pay attention to safeguarding personal health information, implement the most suitable method for themselves and develop it. These implementations shall contribute to the development and learning of workplace health culture.

Keywords: Personal health information, Confidentiality of personal information, Commence of Employment Periodical Inspection Form

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BACKGROUND: Workplace violence has become a global phenomenon. Additionally, healthcare workers are at particular risk. This study aimed to represent findings about workplace violence among healthcare staff, which obtained from a representative sample of Turkey/countrywide.

METHODS: A cross-sectional study was conducted and the questionnaire developed compatible by ILO/ICN/WHO/PSI. The research population consisted of all of the healthcare workers in Turkey (612,639), 14,451 person selected by using a multistage stratified cluster sampling.

RESULTS: A total of 12,944 healthcare workers were responded questionnaire and response rate of calculated as 89.6%. Mean age of subjects was 36.3 (18-80 years) and 40.4% of subjects were male and 59.6% were female.

31.7% of the participants stated that they weren’t worried about workplace violence at all, 67.2% stated that they were worried in various degrees about violence (28.4% were a little, 28.3% were somewhat and 11.6%).

37.9% of male and 27.4% of female weren’t worried about, 62.1% of male and 72.6% of female were worried about violence in various degrees (p< 0.001).

Our results showed that 18.5% of physicians-dentists weren’t, 30.3% a little, 36.3% somewhat, 14.9% were very worried; 25.5% of nurses weren’t, 30.8% a little, 34.3% somewhat, 14.4% very worried; 42.2% of pharmacists, psychologists, therapists, dietitians, audiologists, speech therapists, and social workers weren’t, 57.8% were worried in various degrees; 29.6% of ambulance/emergency service technicians weren’t, 70.4% were worried in various degrees; 39.3% of laboratory/radiology/sterilization technicians weren’t, 60.7% were worried in various degrees; 51.4% of security staff weren’t, 9.3% a little, 15.3% somewhat, 24.0% very worried; 52.0% of administrative staff weren’t, 48.0% were worried in various degrees; 34.5% of supportive workers weren’t, 65.5% were worried about workplace violence in various degrees.

Keywords: Worry about workplace violence, Workplace violence, Healthcare worker
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Cargo transfer centers are regional process centers where the loads are respectively unloaded, stored in short time intervals, classified and downloaded on vehicles according to the destinations. These centers serve almost every other sector and made great progress in recent years so occupational health and safety conditions should be targeted to develop at the same speed.

Workplace Hazard Class Notification that published in accordance with Article 9 of Occupational Health and Safety Law No. 6331 defines postal and courier services “collection, classification, transport and distribution activities of cargoes such as packages” in dangerous class of works. Thus, a field study has been carried out to investigate working environment and occupational health and safety conditions in cargo transfer centers selecting a sample company. The aim of the study is to determine main risk factors and then find solutions with necessary measures, thus it guides the other companies in the sector. During the observations it has been seen that transfer centers are the places where mechanical equipments and employees need to work together quickly and under time pressure. But the biggest workload is done by employees. In the study, a checklist form with various observation criteria is applied under headlines “General Hazards, Physical Factors, Chemical Factors, Equipments Used, Internal Transport, Carry and Storage, Ergonomics, Safe Behavior, First aid and Fire Safety” to determine risks. The result of application, risk factors of Cargo transfer centers has determined and from 103 observation criteria only 31 of them are correctly done, so performance of Occupational Health and Safety in the facility is found 30.09 percent. During the study, ergonomic risk factors has been observed more that could affect muscular and skeletal system negatively when not only handling, carrying and stowing the loads but also doing repetitive movements. Besides, some elements threatening employees like improper conditions caused by physical condition and security awareness has been encountered. As a result, according to datas and results obtained, some technical measures have been proposed to risk factors which aiming employees to work in a healthier and safer work environment under occupational health and safety legislation. So, the study has been contributed to increase occupational health and safety awareness in employees and managers.

Keywords: Transfer centers, Occupational Health and Safety, Ergonomics, Risk, Checklist
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In our daily life, with the development of modern life, technology has been developed at the same time. Therefore, for the purpose of supplying the needs, it has happened heavy work load and negative environmental circumstances for the workers. In the ILO and International Scientific Publication which published before, they have indicated that approximately 50% of the world pollution are under the affects of physical chemical biological and psychological dangers. In order the workers think that the main goal is to maintain their families, they don't care of their healths and they accept to work under bad conditions. Beside existing bad conditions, since of increasing the consumption, using the low quality raw stuff and to be the production efficiency in a high a level, the unsuitable working organizations have been affected the health of the workers. All of these factors are triggering the stress on the workers and have been happened a negative environmental conditions. In this study, we are targeting to collect knowledgements about the environmental factors of the automobile mechanics and workers who work in the little Industry Region in Elazığ and to deermine the level of the knowledge of the workers who work in these workshops. However, deficiency of the using personal protection and the protections isn’t used in the machines and it has been understood that the ergonomic conditions aren’t used in the install of the machines. In addition, it has been understood that the workers don’t have any knowledge about the work safety and they make no attemps for getting better the working conditions.
Occupational health and safety; workplace, job execution due to the hazards and conditions that may harm the health, freed yapıaln to provide a better working environment can be defined as systematic studies. In terms of occupational health and safety to be successful, be strong safety culture and common values of this culture as business needs assessments.

In all countries, as well as (Germany, Japan and France (99%)) in Turkey all businesses 99.5%, constituting all employment 61.1%, covering all investment 56.5% providing all production 50% and are SMEs make up 38% of all value added. (source: kosgeb)

ILO / WHO Joint Committee on Occupational Health summarizes the goals of the work in occupational health insane, people have been declared as be adapted to work.

At that time we; occupational health and culture attaché to man and man's work as a business process harmonization of Turkey's economy 99.5% of the facilities have to start forming this street.

Let's not forget Turkey's total employment 61.1% than judges and lacked training in this sector if we succeed in occupational health and safety culture to reduce to acceptable levels the risk is will succeed.

Keywords: sme, OHS culture
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In contemporary democratic societies the right to work is protected and secured by the constitutions likewise any other universal human rights. Because individuals do have to work in decent jobs in order to realize themselves, to sustain a living standard that is compatible with human dignity, to be able to cover their basic human needs and to advance their occupational skills to become socially beneficial to their communities. In that direction during their active years in their work lives they face risks such as occupational injuries and diseases. In different sectors and occupations hazards and the probability of facing these hazards or more precisely the risk rates might change. Although these risk maps differ the economic, social and physical burdens of occupational diseases and injuries have a lot in common. Hence, occupational safety and health measures and practices which aim to minimize these costs of occupational diseases and injuries are getting more and more important every day. These measures and practices might incur some likely monetary costs. Nevertheless, when huge losses such as lost wages, disabilities and medical costs are taken into account one might then understand the importance of these measures and practices. Therefore, revealing, evaluating and discussing the economic costs of occupational diseases and injuries in a conceptual framework are aimed in this study. The analysis of these costs are also important in understanding the losses that are evident in these instances.

Keywords: Occupational Diseases, Occupational Injuries, Economic Costs
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Job Health and Security issue has increased and is going to increase its importance with law number 6331 in effect. There have been master and doctorate degree research done about this. As a rather new topic, the main point people pay attention is the cost of services given by job health and security professional but the cost of direct and indirect effects of job accidents is overlooked. In our study:

1- A company with 375 workers, involved in the construction business which is the biggest source of job accidents with death in Turkey. (This example is also in the 250-499 worker range company group, which is the biggest source of accidents amongst other companies with different number of workers range)

2- Another company with 9 workers classified as “dangerous” which is included in “Supporting of Job health and security regulations” will be used. Job Health and Security activities both will be inspected according to these companies and government. Direct and indirect expense effects of job accidents on the companies and the government will also be inspected. Examples from daily life will be given and ongoing and forthcoming problems will be examined. Especially our concern is to raise awareness of companies that require support, and increase the level of readiness of job health and security in general.

Keywords: Job accident, Construction sector, Supporting of job health and security services, deangerous workplace, very dangerous workplace.

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Authors: Özlem Emgen, Marsh Risk Consulting
Moderator: Burhanettin Kurt
Date/Time: 5 Mayıs 2014/16:30-17:30
Place: Tophane Hall
Title: Health And Safety And Employer’s Liability Insurance

The aim of all occupational health and safety related studies is to be proactive to prevent occurrence of occupational accidents and illnesses. However, occupational accidents continue to happen with various reasons despite all of the effort put in to prevent occurrence. When we look to Occupational Health and Safety Law (Law No. 6331), occupational accident definition is given as follows ‘the incident that happens at the workplace or during the execution of the work, and leads to death or damages body integrity through mental or physical disability’. When an accident happens, in addition to the people involved in the accident, his/her family, friends, other employees, employer and depending on the size of the incident whole society can be impacted. As a result of the incident, employer face moral, financial, reputational, and market share losses, and sanctions due to incompliance with legal necessities. Employer’s liability insurance scheme supply financial cover for the statutory liability rising from occupational accident. This insurance covers the claim request of the employee registered to social security system or their rightful owner, recourse request of Social Security Institution, and the labour court and attorney fee up to the limit mentioned on the policy. The voluntary insurance scheme can cover employees’ as well as the third parties’ treatment cost and claims. The list of uninsured items including reputation, market share and moral losses, loss of production due to loss of qualified worker, new staff employment cost, sanctions due to incompliance with law, and time and effort loss is however much longer and costly. All of these confirm the importance of effective risk management and indicate the necessity of financially securing the firm with having right insurance scheme.

Keywords: Insurance, Risk Management and Occupational Accident
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Behavior, is a collection of actions that we do willingly and with a purpose. Attitude is a state of repeating the behavior in a similar manner. Reaction to the impact is important in our behavior. For example, if someone treats you in an angry manner as a reaction our behavior against him will be in an angry manner as well. In the same way people behave positive response in case of a positive act. People’s choices determine their behavior. Level of awareness and consciousness direct people's choices as a result of their behavior.

Employee perceptions and differences should be well understood in order to change employee behavior and attitudes in the workplace. The difference is the attitude of people in the workplace. This attitude has been framed with many years of education and culture. When people's behavior in industrially and technologically developed countries is examined, the majority determine ethical and moral values as basic principle in business life. Other principles like acting responsibly, abide with laws and workplace rules, respect other employees on health and safety, love their job fondly and being punctual are examined within these communities.

Despite the presence of laws, codes and standards in Republic of Turkey that are regulating and improving work life, we see, read or experience painful events, witness situations and events that pave the way for many of the unexpected results.

Two basic hazards will be addressed in this study that are fire incidents and forklift truck accidents. These incidents occur as a reflection of the behavior of employees and employers. Positive effects from provisions of Occupational Health and Safety Act Number 6331 will be presented with media obtained from printed sources.

Keywords: Behavior analysis, moral values of worklife
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Office work areas, is one of the important sectors that need to be addressed in terms of occupational accidents and occupational diseases. Occupational accidents or occupational diseases occurred in the office sector are less than in the other sectors that gives the impression is not a problem to be concerned about office work areas. However, in recent years occupational diseases and accidents occurred in this sector was observed to increase rapidly. The problems that lack of ergonomic factors of the office environment will be mentioned in this study. At the same time the contributions that should contribute to the productivity of employees will be determined ergonomic factors to be performed by regulation and improving. As a result of these studies, performed ergonomic improvements was found to be effective in enhancing the employees' work efficiency, performance and quality of life.

Keywords: ergonomics, productivity, office
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Pursuad to Workplace Hazard Class Communiqué which is published according to the 9 article of the law on occupational health and safety No.6331, collection, classification, transportation and distribution activities of the package and cargo is take place in hazard category. Generally in cargo transfer centers lifting, carrying, separating, vehicle loading and stacking of load activities are performed by employees. Most common ergonomic risk factors are lifting and carrying heavy loads, repetitive movements, twisting, fast pace of work and unsuitable working postures in these studies which the manual handling activities are basis. In developing countries musculoskeletal disorders are increasing dramatically in recent years and still gaining importance. By means of studies in the field of occupational health and safety and ergonomic regulations, to create safe and healthy working environment, increase working motivation and prevention of occupational accidents and occupational diseases are possible. In this study result of musculoskeletal disorders survey will be presented for 100 cargo transfer center workers. In these study Standardized Nordic questionnaires was applied. As a result of the implementation of questionnaire, it will be determine whether the workers are effected by the work related musculoskeletal disorders and in which area of their body are effected. Work loss days resulted from the diseases which are specified in survey results are expected to arouse. Findings from the study will give an idea of the effects of health and safety issues faced at transfer centers in freight transport sector by evaluating the cost caused by resultant work day losses. In this study, survey questions and results will be shared with visuals.

Keywords: Cargo transfer center, musculoskeletal disorders, occupationaal diseases, ergonomic, NMQ
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Ergonomics, in short, is defined as working life, human and environmental compliance. In other words ergonomics is “to apply and to explore the information that people’s behavior, capabilities, limits, and about other characteristics, on tools, machines, systems, tasks, jobs and the environment for efficient, safe, comfortable and effective human use”. In work environment, if as individual or by group, work organization, work methods, instruments and materials are included. The purpose of ergonomics is to prevent frazzle because of the stress and to increase business productivity by adapting people and the environment. In this context business environment in terms of production of scientific knowledge, covers a number of factors at the university that of the faculty building to the academic staff rooms, room design to the design of the tables and chairs, conference room up to classes. On the other hand, in terms of success in the scientific knowledge production it is also important that, economic and social viability of the information produced by used theoretical approaches. It is known that, Turkish universities are not at the forefront of scientific achievement by the international scale. In this study, this reality would be approached in terms of ergonomic factors and work environment- employee adaptation will be questioned at the universities. For this purpose, it is researched that the compatibility of the environment used in knowledge production, material and scientific approaches, of academic staff at the Kahramanmaras Sutcu Imam University (KSU). In this context, semi-structured in-depth interviews will be conducted with the faculty members and research assistants working in various faculties at KSU by the monographic sampling method. In addition, observation and (annual reports, strategic plans, etc..) document review process will be carried out by the use of a descriptive qualitative research.

*simit: savory roll covered with sesame seed

Keywords: Production of scientific knowledge, Ergonomics, Academic staff-working environment adaptation
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Working posture is a factor of importance in work method and work place design, as it affects the performance of all workers and determines the extent to which uneasiness, fatigue and musculoskeletal system disorders are experienced. In literature there exist a number of methods intended to figure out risk levels by evaluating working postures. These methods can be categorized into three groups as; direct measurement methods, observation based methods and subjective evaluation methods. In this study, the methods in question are examined from point of view of engineering discipline, their disadvantages are determined and factors to be taken into account in newly developed methods are deliberated.

Keywords: Working Posture, Musculoskeletal System, Fatigue, Performance
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People can provide maximum benefit to by resolve their needs in using tools and hardware by using the advantage of anthropometry studies. If we consider that college students spend most of their time in classes, designing of their desks using anthropometry dimensions have great importance. In this study, a total of 111 students, including 57 women 54 men's anthropometric dimensions were determined. The check of these dimensions for the university desks and what dimensions they have to be are calculated by using a statistical software program.

Keywords: Ergonomics, Anthropometry In Education, Anthropometric Measurements
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Although attempts have been made to convey the concept of innovation, by definition, into Turkish as a novelty and an innovation, these words do not fully express innovation. The primary resource where was used the most widely accepted definition in the International platform, is the Oslo Guide which was jointly published by OECD and Eurostat. The definition of innovation in the Guide’s publication in 2005 was: “The innovation is the implementation of a new organizational method to the product (goods or services) or the process, which has been newly or significantly changed; to a new marketing method, or in business practices, workplace organization or external relations.” (Oslo Kılavuzu/OECD, AB – 2005) As is in many branches, the innovation is of great importance in occupational health and safety matters as well. The technological tools implemented with expectations of a commercial return, provide a significant contribution to the occupational health and safety. The growing manpower, brings along the increase of human errors. For this reason, high protection solutions are being planned for ensuring the necessary protection and supervision at the business places and for providing a safe working environment for the employees. It was intended to uphold the workers’ health and safety in all business lines and workforce environment with the designed products. We can give as an example the personal safety equipment. As the improvements to be made in this area will protect in a better way the health of workers, it means that they will prevent loss of labor force and its reflection to the production as well. So, the studies of innovation and occupational health and safety should be carried out together in line with common goals, and the work to be done should be maintained by looking through the windows of two separate branches.

Keywords: Innovation, occupational health and safety, labor force, technology
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Psychosocial risks are important threats for the safety and health of employees in contemporary business life. Researches show that these kind of risks in business environment that are defined as psychological harassment, violence, intimidation and so on lead to chronic stress, depression, exhaustion and they may cause significant costs to society.

Regulations, such as Labor Law, occupational health and safety law and mobbing circular provide that the employer is directly responsible to take every precaution in providing occupational health and safety in the workplace.

Hence, there is a need for a system for institutions in order to identify, assess and minimize psychosocial risks as well as the other risks that threaten health and safety. Since these risks are not always observable and demonstrable, people who are exposed to avoid to report. For this reason, only formal methods and procedures are not enough to solve the problems, so in order to minimize these kind of risks development of organizational ombudsman model as preventive approach is going to provide a protective system.

Organizational ombudsman is a person in order to solve the situations in the organization such as psychological abuse, incivility and conflict etc. It can be applied to all sectors. Organizational ombudsman works independently, impartially, confidently and informally in accordance with practice standards that are determined by international ombudsman organization (IOA)

Organizational ombudsman concept is a new concept in Turkish Literature. This concept may be an effective method to minimize counterproductive behaviors in organizations. For this reason being treated organizational ombudsman as a new method to solve these kind of problems is going to be an important step in development of occupational health and safety. In this study, it is going to be explained the applicability of the organizational ombudsman model which is new for Turkey.

Keywords: Occupational health and safety, psychosocial factors, psychological harassment and violence, organizational ombudsman
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Organizations are combination of capital, technology, resources, labor, venture elements that emerged corporate groups meet the specific necessity. In terms of functional, it can be the sum of the activities to meet the needs and in the name of making profit. There are external factors in the success of organizations as well as internal drastically. Human capital investment, which determining the quality and efficiency human factor in production process, is constitute the main elements of the new management approach such as education, health, housing, safety etc.

Safety is realized by the intervention to changes in individual behavior. Safety culture is consists attitudes, behaviors and values and personal responsibility. A company's value system is a key point for the success or management strategy. It determines what is good and what is bad, what is right and what is wrong, what should be done and what should not be done for the members of the organization. Organization culture is total of behaviors when doing job, and values master subcomponent of behavior. So, safety culture as a subculture of organization culture, can be expressed sum of policies and applications for minimize the job accidents.

Organizational values scale was used in this study. In this context, it were studied determine the blue-collars value map and occupational safety of these companies in manufacturing enterprises which has 50 and over workers in Düzce. According to the years of the 2010 records of Social Security Institutions (SGK) have been identified 102 firms which has 50 and over workers. These 102 firms are formed the population of the research. The survey sent whole 102 companies, but 31 companies returned. Thus, organizational value survey was implementation to 700 blue-collar employees in these companies. And data is taken on occupational safety applications from managers and safety specialists of these companies.
Forestry operations generally comprise nursery works, plantation and erosion control works, wood production activity, road building, forest conservation, and forest maintenance in Turkey. Present situation of forestry operations should determine for job efficiency improve with scientific data and method.

This study, the safety and health conditions of forest operation workers were surveyed, as there are currently no statistics on these topics despite the occurrence of accidents and health problems caused by forest operation workers. I used a questionnaire that inquired about safety and health conditions, and job satisfaction of forest workers. Total 135 forest workers were conducted a survey in Kastamonu, Giresun, and Samsun Enterprise in Turkey. Besides, some data were done statistical analysis.

As a result of research, sexes of all of workers were male and most of workers had experiment and health problems that these were confirmed. Furthermore, most of workers did not have vocational education and use personal protective equipment. With respect to job satisfaction, 59% of the respondents were dissatisfied with their job mainly because of the low salary and heavy and dangerous work.

Keywords: Forest operations worker, Questionnaire, Turkey
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In the world and in our country, employees have a safe and healthy working environment, working as one of the important human resource issues emerge. Especially in our country with the latest regulations, occupational health and safety carried out in a planned and systematic studies, is to protect the future of workers and firms. Therefore, employees need both in terms of work-life businesses more effectively and efficiently in order to obtain business "before the health and safety" of understanding and adoption of this approach is the need to ensure continuity.

Depending on the nature of the work done every workplace health and safety hazards contains a number of terms. Technical training is given and the application is made mainly of courses at vocational colleges hazards associated with the particular application classes and accordingly, there are risks. Occupational health and safety (OHS) aim of the work done in the field of health and safety hazards and their work environment free from the risk posed is to provide. Vocational schools in terms of both staff and students to create a safe and healthy environment primarily within the institution the highest level of employee perceptions of safety climate should be removed.

Research as a result of a workplace, an effective Occupational Health and Safety Management System implementation and Safety Climate creation, in the workplace employee morale, to increase work efficiency increases, work accidents and occupational diseases appeared to decrease. Results should be known as investment in occupational health and safety, and quality of investment in human is.

The purpose of this study, which is an essential step in occupational health and safety, particularly the safety climate perceptions of OSH courses taught as a compulsory technical education institution is discussed in terms of employees.

The prepared questionnaires, academic and administrative staff working in vocational schools have been applied to all. The results obtained were evaluated by SPSS.

Keywords: Safety Climate, Culture, Occupational Health and Safety
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It is known that the employee behavior has an important role in ensuring the health and safety in the workplaces and dangerous behaviors are the fundamental causes of occupational accidents. Preventing dangerous behaviors, controlling risks, and ensuring the health and safety depends on improving the safety climate at the workplaces. Safety climate is defined as the perceptions giving priority to the safety, attitudes, rules, roles, responsibilities and applications. In other words, it can be expressed as the complete perceptions happened at the workplaces as a result of the reflection of the importance given to the safety for attitudes and applications. Purpose of this research is comparing safety climate indicators and analyzing these indicators of individual and organizational factors in some corporations which operates in Turkey. A large-scale machinery corporation, a large-scale chemistry corporation, and a large-scale mining corporation in Ankara have been taken as the scope of this research. Each of these corporations show similar features in terms of factors which hazard class, period of activity in the sectors, number of employees, payment levels, and the level of institutionalization. This situation gives an opportunity to analyze the sector effect over safety climate. In order to measure the safety climate, safety climate developed by Lin et. Al. (2008) has been translated to Turkish, and its reliability and validity has been completed. The test contains 21 subjects. Also, it has seven sub-dimensions as; safety awareness and qualification, communication for occupational safety, organizational environment, management support, risk level, safety precautions and education. The adopted test, has been applied to the 750 employees from the different departments of the corporations. Each sub-dimension level of the safety climate has been analyzed in line with individual (age, background, accident history, etc.), organizational (hierarchical system, suggestion system, shift system, team work, etc.) and environment (work equipments, noise, vibration, etc.) effects. In analysis; Analysis of Variance (ANOVA), t-test and Duncan tests have been applied and all tests have been performed over SPSS 20.0 software. Willingness, Privacy and ethical principles have been accepted as the priority in accomplished works, records kept and reports prepared.

Keywords: Safety Climate, Risk Perception, Scale
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Confined space is defined as an area large enough to bodily enter and perform work, has limited means of entry or exit and is not designed for continuous human occupancy. A confined space is a place which is substantially enclosed (though not always entirely) and where serious injury can occur from hazardous substances or conditions.

In the aircraft industry, maintenance and inspection plays a vital role in ensuring the aircraft airworthiness. These inspection and maintenance tasks often require a high level competency of the personnel performing the tasks. These levels of competency can often be compromised by extraneous factors associated with various types of job functions, one of which is confined space work. Some of the most important functions associated with aircraft inspection and maintenance are conducted in confined spaces. Because of this fact, special consideration needs to be placed on the tasks performed in confined spaces. This paper outlines not only a need for pursuing confined space research and provides a roadmap for pursuing confined space research but also performs risk assessment and provides concrete proposals for precautions to be taken.

Keywords: Confined Space, fuel tanks, ergonomy, aircraft
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Is the municipal solid waste in other words garbage, a fact that we have just concerned with the field of the environment? The answer will be no. Garbage that should not be thought just as an environmental fact is a global problem which has a much wider scope. It has a process consisting of phases such as collection, transportation, sorting, recycling and storage. At the same time, employees involved at these phases encounter with serious risks in the field of occupational health and safety. These risks should be investigated in depth, the measures to be taken should be determined and the steps should be taken. There is no specific regulation or act in our country about the occupational health and safety of employees working in municipal solid waste collection and transportation. The Occupational Health and Safety Act No. 6331 and published specific regulations to this act are also valid for workers due to not classifying of employees by occupational groups and basing on inclusive principles that all employees. Unfortunately, “waste awareness” has not improved much in Turkey. Separating waste at source is the basis of improving the waste and environmental awareness. Waste sorting reduces costs for transportation and disposal of waste. In addition to this, it gets rid of some risk factors faced by people working in waste collection. It is also very important for the workers. People store their waste with substances which are not classified as municipal solid waste as well as they do not separate waste at source. Field research shows that employees working in this field face with serious health and safety problems as well as fatality rate on occupational accident would be so serious. An analysis over the period 1992–97 yielded an occupational fatality rate of 46 per 100 000 refuse collectors. This rate is about 10 times higher than the overall fatality rate in the USA.

In this study, in order to improve occupational health and safety conditions of employees working in municipal solid waste collection and transportation, the risks faced by employees are determined, field research made at both home and abroad are surveyed. In addition to this, I made in this study legislative reviews, legislative suggestions, good practices and offer recommendations for employees in order to eliminate or take the minimum level the risks face by employees. Furthermore, at the end of the this study you can find a practical guide about occupational health and safety for employees working in municipal solid waste collection and transportation.
Occupational psychosocial hazards are related to the features of organization and work environment such as job content, work load, work pace, working hours, employment autonomy and control, organizational culture and climate and interpersonal relationships. Role conflict, role ambiguity, dissatisfaction about career developments and job insecurity are the psychosocial hazards that may lead to stress, mobbing, work life imbalance and so on (Leka and Cox, 2008).

Psychosocial hazards and risks are defined as the new and emerging group of risks in the occupational health and safety field (AISG in 2007). They affect employee health as much as the physical and chemical risks. In addition to psychological problems (e.g. burnout, depression) they also affect physically like musculoskeletal and cardiovascular system diseases. By definition, health is holistic well-being of an individual (Binbay, 2006).

Occupational medicine aims to improve the physical, mental and social health of employees mainly by preventing occupational diseases and monitoring physical and psychological person-job fit (Tiryaki et al., 2011). Our research is designed to define the psychosocial risks by referring occupational physicians who are the most direct observers of employee health in Türkiye.

In this study, both quantitative and qualitative methods are used. 68 occupational health physicians participated the study by evaluating the organizations which they are working, in terms of psychosocial hazards and risks.

According to the preliminary findings of the study, monotonous work and the inflexibility of employees are the main psychosocial hazards. Our study will contribute to the creation of new strategies to follow psychosocial elements of work environment in addition to definition of current situation.

Keywords: Psychosocial Health, Occupational Medicine, Psychosocial Hazards and Risks
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As our society evolves under the influence of new technology and shifting economic and social conditions, so our working methods and conditions are constantly changing. These new situations bring with them new risks and challenges for workers and employers to ensure high levels of safety and health at work. Job satisfaction is the main factor to manage the risks. One of the most important factors which effect on job satisfaction is physical risk factors of working conditions. Improving working conditions to keep people in work is also a basic condition to create quality jobs and increase workforce participation. In this paper the relationship between physical risk factors (vibrations, noise, high temperatures, low temperatures, breathing in smoke, fumes, powder or dust etc., breathing in vapours such as solvents and thinners, handling chemical substances, radiation, tobacco smoke from other people, infectious materials, tiring or painful positions, lifting or moving people, carrying or moving heavy loads, standing or walking, repetitive hand or arm movements, wearing personal protective clothing or equipment) and job satisfaction (satisfied or very satisfied with working conditions, lose the job in the next 6 months, well paid for the work doing, the job offers good prospects for career advancement) sets is analyzed by using data from the fourth European Working Conditions Survey. Canonical correlation analysis is used to explain the correlation between two data sets by using XLSTAT and NCSS package programs. The findings revealed that there is a significant and very strong relationship between physical risk factors in a workplace and job satisfaction. To take control physical risk factors not only prevents accidents, but also plays an important role in improving occupational health and safety system via effecting job satisfaction and quality.

Keywords: Physical risk factors, job satisfaction, working conditions, work quality
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In this study, calculation of Wet Bulb Globe Temperature (WBGT) per person was aimed. The experiment was realized at the 2nd floor of central building of ISGUM (Occupational Health and Safety Institute). Herein are 13 rooms and 51 employees. The number of employees in the room varies between 1 and 7. The measurements were taken twice daily; once in the morning and once in the afternoon. It was important to measure WBGT in the routine work of the employees; such as windows and radiator leaving the personal preferences whether open or not. The meter was set to receive an admeasurement per minute. The measurements in the first fifteen minutes were not taken and the next thirty-minute measurements were recorded. By this way, the measured temperatures were expected to have more reliable results. First, the measured WBGT taking the average multiplied by the number of employees in the room then, the results were divided into the total number of employees at the floor, so that WBGT per person was calculated. The highest WBGT was measured as 21.18°C and the lowest WBGT was measured as 18.61°C. The average WBGT per person was calculated as 19.80. In the literature, WBGT in an office environment for employees wearing light clothes should be below 30°C. Therefore, according to the measured maximum temperature and the average WBGT per person, working environment was well suited for the winter season. To obtain more accurate results, this study should be repeated in the summertime.

Keywords: Office, Thermal comfort, WBGT
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In this research, the dust concentration in Turkey in last three years is analyzed. The main purpose is to decide the most risky occupational sectors from the point of dust concentration. The observed data set is separated in work types. The amount of observation has to be much enough to perform trustful analysis and to find reliable results. Hence, the sectors that have limited amount of measurements are eliminated. ACGIH (3 mg/m³), OSHA (4 mg/m³) and NIOSH (5 mg/m³) threshold values of dust concentration are used in this methodology. If the concentration is bigger than 3 mg/m³ and smaller than 4 mg/m³, it is defined as risky (R1); if the concentration is bigger than 4 mg/m³ and smaller than 5 mg/m³, it is defined as more risky (R2); if the concentration is bigger than 5 mg/m³ and, it is defined as most risky (R3). Then total amount of R1, R2 and R3 are found in each sector. As a result, it is found that ceramics, coal mining, chemical works and plasterwork are the most dangerous sectors at the point of dust concentration. Dust concentrations in gold mining and textile sector are lower than other ones. In general, 421 dust concentration measurements have been analyzed at the Central ISGÜM Laboratory (Ankara) in the last three years. 152 of them are bigger than 3 mg/m³; 88 of them are bigger than 4 mg/m³; 61 of them are bigger than 5 mg/m³. In general, one of three measurements is above the ACGIH's Threshold value in Turkey.

Keywords: physical risk factors, dust, measurement concentration, Turkey
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Wet Bulb Globe Temperature, Heat Index, Humidex and Apparent Temperature are commonly used as Thermal Comfort Indices. Regional Climate Model (RCM)s are used to estimate future climatic conditions of observed regions. These mentioned indices are calculated over western Turkey and a general map of Thermal Comfort conditions is drawn. The required RCM outputs (Relative Humidity, maximum air temperature, wind velocity and pressure) that are produced for ENSEMBLES Project, are used to calculate the spatial distribution of selected indices over western Turkey. The analysis have been performed for past (1970-2000) and future (2020-2050) periods. Instead of Heat Index, the general distribution and trend of each index over observed region is close to each other. Moreover, they have very similar values over same regions in each climatic season. Temperature indices change from 18 °C to 36 °C over the observed region. In summer season, it is up to 35 °C over western Turkey. In future (2020-2060), whole indices tend to increase. They will rise approximately 4 °C - 8 °C. The increases over coastal region is higher than continentals and the most increases can be seen over Izmir and its’ neighbors. The observed region includes western Turkey region and if detailed analysis are wanted and comprehensive results are desired, the same operations and calculations can be be performed over cities and even villages.

Keywords: Wet Bulb Globe Temperature, Heat Index, Humidex, Apparent Temperature, Climate Model
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In recent the use of chemicals has increased in workplaces as parallel with industrialization. While the chemicals was produced totally one million tonnes per year before 50 years, it produced 400 tonnes per year now. On the one hand the produce of chemicals important contributes to firms as economically. On the other hand, chemicals be caused to health and safety risks for workers. Because the incidence rate of industrial accident and occupational disease in workplaces where used chemicals is higher than other sectors. When health and safety of employees with chemicals is examined, firstly it should be understood effect of chemicals on they. In this context, our study consists of two parts. In the first part, it is taught chemicals which used in working life effect on human health. In the second part, it is examined regulations related with health and safety measures in working with chemicals, and if there is a lack of this regulation, it is purposed to put forth it. It is also evaluated accordance of regulations in Turkey with legislation in Europe Union.

Keywords: Occupational health and safety, chemicals, health effects of chemicals.

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Workers may get harmed by physical and chemical factors in their occupational environment or by dangerous production devices and elements, as also by exposed raw materials. These form the basis of occupational health and security.

In this paper, the results of risk based and sector specific proactive labour inspections led by the Labour Inspection Board in dental prostheses laboratories in 2012 and 2013 are given. According to SGK statistics, four technicians working in a dental prostheses laboratory died from silicosis in 2010. In order to develop the labour conditions and prevent pneumoconiosis in such laboratories, 162 prostheses laboratories in 12 cities have been investigated and 3254 relevant workers have been contacted. Dental prostheses laboratories are categorized as very dangerous, due to their common locations of entry level or mezzanine flats of residential buildings, in which, working for long times under insufficient ventilation leads to exposure to dusts containing silisium and heavy metals. Despite these conditions, it is found that 78% of the inspected workshops did not possess a general ventilation system and 95% of the total did not have local ventilation. Under programmed inspection, 429 workers are investigated radiologically and by other medical means in Ankara Atatürk Chest Diseases Education and Research Hospital and in Adana Dr. Aşkın Tüfekçi State Hospital. In search of silicosis, the degree of pneumoconiosis is found to be 4.8% in Ankara and 3.2% in Adana. The total percentages of workers having verified pneumoconiosis sickness are 12% in Ankara and 16% in Adana. In addition, the effect of the Public Awarding Law, which is invoked 2011, on the production of dental prostheses and on the related health hazards is surveyed. In this sense, 18 informatory meetings on Labour Inspection Law of number 6331 and on its related legislations are organized.

Keywords: Chemical Factors, Dust, Pneumoconiosis, Dental Protheses Laboratories
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Working life is changing worldwide at an ever-increasing speed. The working changes such as new production processes, introduction of technologies and new materials, new management and organization of the work reduced physical demands and efforts. On the other hand, emotional and psychosocial demands and needs of workers are becoming a major issue. Improving of psychosocial work environments are necessary to create quality jobs and retain workers in good condition. Linked to psychosocial risks, issues such as work-related stress and workplace violence are widely recognized as major challenges to occupational health and safety in EU. Psychosocial risks such as bullying, mobbing, stress, violence and harassment can lead to unproductive behaviors, mental health disorders and absenteeism at the workplace. By managing psychosocial risks potential economic and social costs will be avoided and the organization's sustainability will be ensured. Employees' physical and mental health related to psychosocial risk are likely to affect the tension between various groups in society, and trust in people and in public institutions. The aim of this paper is to analyze the relationship between perceived psychosocial risk factors and Quality of Society by using data from (ESENER) and (3EQLS) through canonical correlation. Psychosocial risk variables are; time pressure, poor communication between management and employees, poor cooperation amongst colleagues, lack of employee control in organizing their work, job insecurity, having to deal with difficult customers, patients, pupils etc., problems in supervisor employee relationships, long or irregular working hours, an unclear human resources policy, discrimination. Quality of society variables are; trust in people, trust in public institutions, perceptions of tension between poor and rich people, management and workers, racial and ethnic groups, religious groups, different sexual orientation, old and young people, men and women. The paper finds that there is a very strong relationship between psychosocial risk factors and quality of society.

Keywords: Psychosocial risk factors, quality of society, working condition, work quality
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### Title: Risk Factors And The Risk Assessment Of Petrochemical Establishments In The Field Of Occupational Health And Safety

In this conference abstract submission-thesis study, in the field of petrochemistry and petrochemistry companies some literature information is given. According to Occupational Health and Safety Law with a number 6331 and Environment Law with a number 2872, operators of the petrochemical companies have to describe hazards of the processes involved during rafineration of cuel petrol and then they also have to assess these hazards by their chosen risk analysis methodology. There are too many kinds of different processes during rafineration of cuel petroleum. Due to mentioned reason above, among the distillated byproducts of cuel oil, LPG, naphta, kerosen, light diesel, heavy diesel, residue etc., reformate yield of distillated naphta over CCR unit had been selected for this conference abstract submission-thesis study. In the reformete recovery, there are three main compounds and these are heavy reformate, light reformate and benzene. In order to increase the quality of benzene that has been used in the daily life, octane quantity of benzene should be increased. And for this aim, benzene should be react with H2 make up under the conditions of catalyst, the reaction called as Hydrogenetion. The elected hazard identification and risk examination methodology over this referred process is HAZOP (Hazard Identification and Operability) methodology, which is especially used in thermohydrolic chemical processes. For this conference abstract submission-thesis study, some assumptions are done and accepted. One of the P@ID is assumed as a reference P@ID. The notes of this process (benzene octane increase) were elected over the presumed P@ID. The main three hazardous phenomenon, which are fire, explosion and dispersion, are taken into account for the HAZOP study.

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Key Words: Petrochemical Rafinery, Occupational Health and Safety, Environmental Health and Safety, Risk Assestment, HAZOP, Safety Barriers

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Security criteria have an important role in planning, project design and application of processes in chemical industry. Process security criteria has come to a maturity by CENELEC and IEC standards and these standards has been started to be used in applications.

The aim of these standards is to identify possible hazards and incidents by the use of the risk analysis and consequently taking necessary measures and therefore minimize the risks to an acceptable level in the application stage.

Accidents in our country and the whole world related to chemicals are self-explanatory that how important is to comply those standards.

Measures taken for explosion protection and functional safety are often coincide and usually complementary. At the same time, both have the same aim which is to protect workers, the public life & health and environment and to operate the process safely.

In this article, internationally accepted standards are mentioned, the relation between IEC 61508, IEC 61511 standards and ATEX directives, and the minimum security level within a process are investigated.

Keywords: ATEX Directives, Functional Safety, EN 61508, EN 61511, SIL, SIF, SIS, ESD
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Chemical substances are located in all areas of life, however, they lead to the creation of the environmental, health and safety risks. After experiencing some major accidents, management issues of risks arising from chemical substances, today is on the agenda of many national and international organizations. WHO (World Health Organization), CRED (Disaster Epidemiology Research Center) and the EM-DAT (Emergency Events Database) are among these organizations. Especially lately the use of chemicals with industrialization increased in many businesses. Of the businesses, the following issues in the prevention of risks arising from chemicals needs to handle with all from a perspective

1. Risk Analysis,
2. Chemical Substances Management Procedure,
3. Safety Data Sheets,
4. Education, Storage,
5. Process Safety Management,
6. Static Electricity Management,
7. Labelling and Marking,
8. Personal Protective Equipment,
9. Fire Safety and Fire Fighting
10. Emergency Management

Therefore, measures to be taken will be secured to not only workers' health and safety, but also by preventing economic damage which may caused by the loss workdays resulting from temporary and permanent incapacity or death will be increase productivity.

In this paper, by taking its entirety technical criteria for the use of chemical substances in terms of the health, safety and in environmental terms is intended to guide users.

Keywords: Dangerous chemicals, Management of chemicals, Chemicals and Occupational Health and Safety
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The great majority of the problems -notably occupational accidents- taking place in the field of labor-worker’s health and job safety-security are believed to be human induced. This belief is one of the most significant bias in the field. However, there are certain studies which focus on improving work environment, technical system and law enforcement against in the field.

On the other hand in human behavior, attitudes, thoughts will create changes are ignored. One of the humanitarian causes of occupational accidents work is individual’s perception form about occupational accidents. Situations of risk to be ignored or not taken seriously are very important about risk perception.

In our opinion, an important factor in the perception of risk is the individual's thinking style. Individual's information processing style to environments and situations that will affect perceptions of risk. Risk factors in the workplace are common to all workers who are perceived differently as an individual.

The goal of our study is testing the whether of the effect of cognitive thinking style in the risk factors perception. In this respect, face to face interviews were done with 30 workers who work in the marble sector in Denizli. However, demographic information form was created specifically to get used to. In addition measuring to the risk assessment of the subjects will be asked to scoring to risk factors of the workplace. All the results reached from applications made in the workplace for this research will be analysed with the risk assessment reports.

Keywords: Risk Perception, Occupational Health and Safety, Cognitive Thinking Style
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The ISGUM (Turkish Occupational Health and Safety Institute), in Ankara, staff has taken 85 thermal comfort measurements since 2011. The smallest temperature are obtained in the evening on February in copper mining while doing washing operation (4.15 °C) and the highest one is reached in the milling occupation in coal minings in the morning on November (35.38 °C). The colder temperatures is generally obtained in washing, engine removal, stock and consignment operation. The corresponding sectors are metal and mining. The hotter ones can be seen in mining sectors and construction sector. In front of the filters, centrifuge operation, milling is the most hottest job type. The main reason behind cold environment in copper mining may stem from the situation and condition of workplace. Hence it may be fault to generalize that copper minings is so cold. The smallest relative humidity values are obtained in copper mining (ten results changing from 3.7 and 5) on different hours on March. The highest ones are obtained in a mining sector on August (6 results changing from 82.1 to 91.9). However, these high amounts mainly stem from the depth and location of the mining. This data set doesn't contain the all sectors and job types. For example, there is no data from the iron casting operations which are very hot environments. Consequently, it isn't reliable to claim that the unique job types and occupations that are so cold or hot; are the mentioned ones. However, these mentioned ones are also crucial from the point of hot and cold environments.

Keywords: temperature, relative humidity, Turkey, measurement
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The main purpose to perform such a study is to classify the rooms according to their temperatures. The experiment was performed in the second floor of the main building of ISGUM. (The Occupational Health and Safety Institute). There are thirteen rooms and fifty-one people in this floor. The number of the employees in these rooms varies between one and seven. The measurements were taken in summer and winter seasons. The following method is used for classification. The averages of absolute value of the difference between temperatures of each room from others’ temperatures were calculated. The chosen room and the ones whose absolute values of the difference of temperatures are smaller than the chosen one were considered as a group. There are two groups with respect to the measurements in summer season. There were six and five rooms in these groups. According to the measurements in the winter season, three groups were formed. There were four, five and two rooms in these three groups. One room couldn’t be classified in any groups. The groups altered with respect to the chosen season. This means that the conditions of season have to be taken in consideration. If the employees complain the cold, the temperature measurements have to be taken in winter. If the measurements are taken in summer season, the effects of season will be added to the results. On the contrary, the measurements have to be taken in summer season, if the employees complain about hot environments.

Keywords: temperature, thermal comfort, classification
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BSVM/SVM is a vector machine, used for classification. In general view, it is a program to control mathematically and statistically whether the classification is meaningful or not. The operational procedure of this program is simply described like following. First of all, all data set is normalized between 0 and 1. Then, the groups; expected by the user; are determined. By using this groups, the program is trained. At last, the groups are formed by using these train an test data set. Program compares the results with the users’ expected values and it gives the percentage of the overlapping results.

The staff in ISGÜM (Occupational Health and Safety Institute) Central Laboratory has taken 363 noise measurements since 2011. In this study, these data set was tried to be classified. The values below than 80 dB were in the first group and the values between 80dB and 85dB were in the second group. Similarly, the values below than 87 dB were in the forth group and the values between 85dB and 87dB were in the third group. When the program is activated, the second group is participated in the first group and the third group is participated in the forth group. There may be two main reasons behind this result. First one is; the spike values of time series of some measurements may be very big although their noise exposures are small. The second reason is the existence of the big measurement results that are very big than 87dB(110.1dB) and also small ones that are very small than 80dB(57.8dB). This may prevent the separation of more groups. The sectoral and work type classification analysis will be made in the future.

Keywords: BSVM, SVM, classification, noise, Turkey
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Safety culture and safety climate are often used interchangeably but these concepts are fundamentally different. In the literature, many definitions about safety culture and safety climate exist but there is no consensus on a definition. Within the framework of the definitions, while safety climate is a more superficial and temporary concept, safety culture is a more deeply rooted and time-consuming concept. With this aim, the study will explain the concepts of safety culture and safety climate and examine the differences and the relationship between these concepts. The study mainly focuses on three points: What is the relationship between the concepts of safety culture and safety climate? What are the stages of development of safety culture and safety climate? How is measured safety culture and safety climate? Occupational accidents are one of the most important problems in the work life. Investigating the causes of occupational accidents based on the literature, with the aim of creating a safer work environment explaining the concept of safety culture and safety climate will be one of the contributions of this study.

Keywords: Safety Climate, Safety Culture
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Safety and health at work provides ideal life standards for a community in terms of health, economy and social issues. Rights of an employee are secured by the laws according to the researches of the safety and health at work. Safety and health at work is a science that studies an individual as a whole. People shouldn’t be judged with the language they speak, the religion they believe in, the race they belong to, their genders, geographical region they live in and their thoughts.

A community can only maintain its life according to the laws, the moral values and ethic rules. At a workplace that doesn’t have work ethic and morals, it is impossible to maintain a peaceful environment. Ethic is a philosophy that studies the behavior, relationships and the moral values of the people by referring to legal norms. The main principles of the work ethic are equality, honesty, objectivity, confidentiality, respect, affection, rights and liberty of a person, obeying to the laws and responsibilities. The aim of the work ethic is to ensure equality at work, protect the rights of the employee, define the responsibilities, obey confidentiality, objectivity and the laws. On the other hand the aim of the safety and health at work is to protect the health and the security of the employee, increase the efficiency of the company and prevent the work accidents and diseases.

The government, employers and employees are responsible for carrying out and obeying the laws. Employees cannot be forced to behave against the ethic rules safety and health at work cannot be thought apart from the ethic rules. Both of them are necessary for the health of the community and equality.
98% of occupational accidents can be prevented by human beings. The unpreventable part of occupational accidents consists of natural hazards such as earthquake, flood, etc. In this research, risk map of flood in Turkey is tried to estimate. The spatial distribution of flood risk can be obtained by analyzing climatic precipitation outputs of regional climate model simulations. The gridded precipitation data set of ENSEMBLES Project, having resolution of 25 kilometer in latitude and 25 km in longitude, is used in the following of this research. The following definitions are used to define flood risks: 1. The daily precipitation is bigger than 50 mm/day (B50) that is very risky; 2. The daily precipitation is bigger than 20 mm/day and smaller than 50 mm/day (B20) that is risky; 3. The daily precipitation is bigger than 10 mm/day and smaller than 20 mm/day (B10) that has lower risk. The total B50, B20, and B10 days are calculated spatially over western Turkey in the period between 1970 and 2000 (for past period) and between 2020 and 2050 (for future period). Generally, the flood risk over coastal regions is very big in the past and future period. A more detailed, a city and also village based analysis by using more higher resolution, can be done. Hence, the flood risk of lands can be considered while the fabrics and firms are established.

Keywords: flood, occupational accident, risk map, Turkey
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There is a diverse range of risk factors such as temperature, dust, pressure, noise, vibration, chemicals in the workplaces. But there is also an unvisible risk factor, which we couldn’t perceive with our five senses, called electromagnetic radiation. Radiation types are used in industrial, medical and communications applications everyday.

Despite the positive effects on daily life, some types of electromagnetic radiation could cause adverse health effects which causes detectable impairment of the health of the exposed individual or of his or her offspring; a biological, chemical or psychological effect, may result in an adverse health effect. Effects of electromagnetic radiation due to occupational and public exposures are determining by epidemiological studies.

The exposure of the electromagnetic radiation must be effectively controlled. There are some standarts of ICNRPs (International Commission On Non-ionizing Radiation Protection) and IEEE(The Institute of Electrical and Electronics Engineers ). ICNP determines the reference levels in terms of thermal effects by leaving a safety margin.

In this study, main features and categories of the electromagnetic fields are briefly explained and the importance of negative effects on human health is expressed. Additionally, national and international standarts of reference values are informed. In this study, electromagnetic field measurements are made in different workplaces. The results of the measurements are evaluated taking into account the reference values. Besides, necessary preventive approaches (personal and public precautions) are described.

Keywords: Electromagnetic Fields, Exposure of Radiation, Occupational Health and Safety, Health Effects
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Agriculture is one of the most dangerous sectors in many countries. ILO estimates, about half of accidents and diseases at work is taking place in agriculture. Accidents related to agricultural equipment are also a significant cause of deaths and injuries in Turkey. Accidents frequently occur during transportation and using agricultural equipment. Although today’s tractors are the safest ever, they still account for the majority of serious injuries. The aim of the study is to identify causes of accidents and to provide suggestions for solutions by analyzing motor vehicles used for agricultural purposes. A total of 8732 tractor related traffic accident report (between the years 2008-2013) was examined in this study. Last five years 1592 people lost their life and more than 15 000 people were injured in tractor related traffic accidents. Tractor related accidents and deaths are increasing in the months of July and August due to the intensity of agricultural activities. Approximately 2,6 of every hundred other types of vehicles related accidents are fatal. This rate is 12,6 for tractor related accidents. The death rate in tractor related accidents is about 5 times more. This result indicates that tractor injuries are more severe than other vehicular injuries. Common causes of more than half of the tractor related accidents are off the road and turnover/skid/rollover. To protect against rollover accidents, it is essential that the tractor be equipped with a rollover protective structure and seat belt. A passenger falling from tractor is also the most common type of tractor accident resulting in death or injuries. Children are often the victims of such accidents. To minimize agricultural vehicles related traffic accidents, farmers should be informed about the safe use of tractors, should be encouraged to use safety-equipped tractors, traffic control should be increased especially during the peak periods agricultural of activities.

Keywords: Accident, agriculture, tractor, agricultural vehicles
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This project, in agriculture, with the respect of risk assessment of occupational health and safety, and in order to enable the preventive and protective approach was carried out by the staff of the Occupational Health and Safety Institute (ISGUM) on 26th April, 2012 – 5th May, 2012 in Adana and Şanlıurfa provinces.

Methodology;
In five workplaces operating in agricultural sector in Adana and Şanlıurfa provinces, that are selected as pilot areas, health screening within the scope of health surveillance pulmonary function tests, postero-anterior chest radiographs, and laboratory tests of employee were performed by means of mobile occupational health screening vehicles of ISGUM, questioning either medical and work history or occupational health and safety knowledge and awareness of employee were performed through occupational health questionnaires and history forms, besides risk assessments and environment measurements were made.

Conclusion;
In the framework of this study, questionnaires were applied to 221 employees of determined three workplaces in Şanlıurfa province, medical histories were taken, and pulmonary function tests were performed. Participants stated that 20.3% of them had pre-employment screening, however, 2.1% of them had regular periodic medical examinations. The pathological findings were identified in 6.7% of 210 employees to whom pulmonary function tests were performed. Evaluation of responses to the questions about the basic occupational health and safety training showed that 18% of employees were taken occupational health and safety training previously, and 82% of them didn’t take any training.

Hemoglobin (Hb) and hematocrit (Hct) values of 216 employees were analyzed. The average of Hb and Hct values were identified as 12.43±1.79 and 35.61±4.17. The group with lowest average values of Hb(10.85±2.39) and Hct(32.44±5.55) were identified in illeterate. Comparison of the workplaces according to Hb and Hct means showed that the group with lowest average values of Hb(11.82±1.74) and Hct(34.37±3.80) were detected in greenhouse workplaces.

Keywords: Agriculture, occupational health, worker health
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Abstract
If we are to consider in the historical process, the first emergence of occupational health and safety dates back to the beginning years of the industrial revolution. The presence of workers in the agricultural sector is well known before the industrial revolution yet it is possible to say that the concept of occupational health and safety was born after the industrial revolution. However, the service sector which has different working methods and conditions from industrial sector is nowadays increasing rapidly. The tourism sector is not only one of the most important service sectors, but it has also become at the top of the important sectors for the economies of the countries by developing all over the world day by day. While the international tourism market is growing, the competition between tourist attracting countries to get the biggest share of the market is gradually increasing in the tourism sector which is also one of the world's fastest growing sectors. In Turkey the number of the employed people has almost reached to 1.7 million in the tourism sector which is widely accepted as an important part of the service sector with its contribution to the national income and promotion of the country. The fact that the jobs carried out in tourism sector do not require high skill and education level makes it easier for the gates of the business life to be opened for many people. When the general features of tourism are viewed, it can be clearly seen that working in holiday periods and summer months when the seasonal workload is at the highest level, working in the unusual hours like weekends or nights when not overall the workforces are at work and finally working without insurance and guaranty reveal various business interests resulting from carrying out quite different jobs. For these reasons, the tourism industry should be taken into consideration in terms of occupational accidents and diseases. In our country, the numbers of occupational accidents and diseases in service sector are much lower than the industrial sector. However, the high psychosocial and ergonomic risks, working conditions, labor force structure and increasing employment has turned the service sector, a rapidly growing industry, into a newly important center in terms of occupational health and safety studies. Along with the increase in tourism enterprises, employment and competition, the employees in this sector will face several risk factors. For these reasons, the tourism industry should be taken into consideration in terms of occupational accidents and diseases.

Keywords: Occupational health and safety, tourism, service sector
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Occupational Health and Safety case is more than resolving of the damages that occurs result of an accident. It is to ensure the elimination of negative situations that could occur.

There are some important duties and responsibilities on Occupational health and security professionals in order to fulfill to these functions by 6331 numbered Occupational Health and Security Law. In order to fulfill these duties, to put the deficiencies and wrong applications into the order, as a first step, the employer must be informed. If the required measures aren't taken by the employer, health and security professionals must be informed and lastly in case of the risks which are deadly for the employees and aren't prevented, the Ministry of Labour and Social Security can be directly applied. In this situation, how can occupational security professionals execute above and beyond the call of dutt with ethical principles and liberty profession who are related to employer contact? Another consideration; it is stated in law and regulation that employers are allowed to be occupational security professionals. When "life-critical" happens, how can written notifications tracking to employer be sustained reporting to Ministry of Labour and Social Security?

In practice, occupational health and safety experts and employers can come cross. At the point of the occupational security, necessity of the legal protection of occupational health and security profressionals will emerge. In this study we tried to find , what kind of guarantee do 4857 numbered Labour Law,6331 numbered Occupational Health and Security Law,6356 numbered Industrial Union and Labor Agreement Law brings to Occupational Health and Security Professionals?

Key Words: Occupational health, Labor law, Social security.
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In this research, diminishes on labor productivity in agricultural sector in Turkey as a result of climate change are estimated. Kjellstrom and his colleagues propose a method to find the percentage of losses as a result of hot environments. To apply this method, Wet Bulb Globe Temperature has to be obtained. Daily maximum temperature and relative humidity outputs of ENSEMBLES Project (ensemblesrt3.dmi.dk) are used to calculate an approximated WBGT index. After this calculation, time series of WBGT is separated to seasons and the intervals. These intervals are determined according to the TLVs of WBGT for each work type (light, medium, heavy and very heavy). The Agriculture is defined as heavy occupational sector. Hence, whole calculations are performed for this sector. 25% (27.5-29.5 °C), 50% (29.5-31.5 °C), 75% (31.5-36 °C) and 100% (above 36 °C) losses are estimated according to different WBGT intervals. The net percentage of losses in each season are obtained. In winter season, no losses are present in past and future. In spring and autumn, limited losses are found. However, in summer season, serious losses are estimated over some parts of the Mediterranean and Aegean coastal of Turkey and Hatay in the past period (between 1970 and 2000). In the future period (between 2020 and 2050), the losses may extend over most of the Mediterranean and Aegean coastal and central Turkey.

Keywords: Labor productivity, NIOSH, Turkey, agriculture
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Hairdressing, barber and beauty salons are considered to be one of the most dangerous businesses for the customers as much as the associates. Working with sharp tools and using chemical products are two of the dangerous factors in this field. The survey was made about finding out the level of how much the associates are knowledgeable of occupational health, business safety and labor act in the hairdressing, barber and beauty salons. According to the information received from the survey, the aim was to influence the business health and labor safety in this field for everyone.

Keywords: Business Sector, Barber, Hairdressing and Beauty Specialist
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The development of private security sector in the world, varies depending on political, legal and cultural structures of every country. In Turkey, there has been a rapid increase in private security services since 2004. According to the report published by (CoESS), Turkey has the biggest private security system. Private security organizations were first seen in some institutions and organizations with the law no:2495 in 1981. In 2004, it was generalized with the law no:5188 about private security services. In accordance with this law, private security sector has improved rapidly. Security sector in Turkey includes a lot of risks in terms of occupational health and safety. It can be said that psychosocial risks that are created by low wages and deficiency of job guarantees have the priority. Because the demand for security services is seen as a low-priced service. It is possible to evaluate the risks in three general categories. These are the risks resulting from the overall situation, specific risks related to security activities and risk factors related to the workplace. Some of the specific risks related to security activities are harassment and violence at work, risk factors related to business organization, risks related to workload, psychosocial workload, risks related to female staff etc. Prevention of occupational risks in private security sector has three sides as the company, security personnel and the institution. Therefore amendments on occupational health and security need an action on three levels. In our research, risks related to occupational health and security that are encountered by security personnel and managers in private security companies are evaluated by surveys and interviews and measures to minimize the risks are emphasized.

Keywords: Occupational health and safety, private security services, risk factors, prevention of risk
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The maritime industry, the importance of combating unemployment and job creation is one of the key sectors that supply. According to data from 2013, the maritime sector, sub-sector, along with about 50,000 people directly, indirectly, at least 3-4 times this number are employed. Positive aspects of the industry itself, but in recent years are remembered with fatal occupational accidents occurring. In December 2013 we have experienced the death of 10 people in Alaybey Military Shipyard and accidents resulting in 17 people with injuries, occupational health and safety in the maritime industry has been brought up again. In the maritime industry, these negative processes, closely followed by Istanbul University Marine Science and Management Institute of Maritime Business lipid profile as a Lecturer 2012-2013 academic year Graduate Training Programme "under the Maritime Administration in the Occupational Health, Safety and Law Practice." lessons were hungry. In this course, conducted by me "in the Process of European Union Maritime Administration of Occupational Health, Safety and Law Enforcement titled" Master's Thesis work has been completed. In this report that we have completed graduate studies sector workers and managers to share with the maritime enterprises of occupational health and safety related to the management system to analyze, TS 18001 Occupational Health and Safety Management System stressing the importance of industry-related work accidents with a focus on assessment will be made.
The objective of this study is the research on determination of risk levels and prevention measures for skin exposure to hazardous chemicals used in tanning industry and emphasizing on the strategies for prevention of this type of exposure. After review of main steps of tanning process, the hazardous chemicals that are used in tanning process are explained in depth. After specification of the hazardous chemicals that has the possibility of skin exposure, these chemicals are studied in detail. Moreover, the method that is generated by German Federal Institute of Occupational Health and Safety (BAuA) is used in order to determine the most hazardous chemicals used in tanning process. In this scope 10 workplace visits were held on in Bolu-Gerede and a poll has been done with the participation 30 workers working with chemicals. The outcome of the study is the analysis of this poll and defining the most hazardous chemicals that are used in tanning processes.

Keywords: Tanning, Hazardous Chemicals, Skin Exposure
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The fundamental objective of the safety management at a workplace must be prevention of fatal accidents and permanent personal incapacities and minimization of the day away from work cases (DAFWC). The strategic approach in this context is a continual proactive improvement of the safety performance with the target that residual risk levels, after corrective and preventive actions, would be ALARP (As Low As Reasonably Possible). For this, job specific special safety measures are required besides the basic mitigation measures as per the related legislation, standards and codes.

The tools for safety management are basically established through a generic assessment of the risks associated with the specific construction processes. Further to that, results derived from analysis of the recorded incidents provide very significant means for safety management.

The identified direct and root causes of the accidents and near misses demonstrate that incidents are triggered off by uncontrolled external effects, human mistakes, equipment and material failures. A number of special applications have been developed based on the practice and experience for control of the safety risks.

The following special applications have been found to be very effective for risk mitigation.

i. Task Specific Safety Plans under expertise for high risk operations,
ii. Permit to work for critical activities,
iii. Management of change (MOC),
iv. Tracking of deviations and non-conformity,
v. Cross check of safety supervision,
vi. Emergency management and drills by experts, vii. Drama for lessons learnt for highest degree of awareness, viii. Tool-box drama,
ix. Specific technical and competency trainings,
x. Incentive for workforce involvement,
xi. Periodical check of equipment and color coding of electrical equipment.

The merits of the special applications have already been experienced with improvement of the safety performance at heavy construction works. However, further studies are still required to elaborate the special applications.

Keywords: Safety Management, Accident Prevention
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Incident Management Procedures deal with the imminent effects of the incident, i.e., emergency response and incident investigation, which includes, collecting evidence, analysing the root causes and planning new mitigations, etc. The result of such studies is a lesson, learnt from the incident. In this study, these three sample incidents that occurred in a large scale infrastructure project, including 13.5 km of tunnels, C&C structures, in Istanbul will be used.

For these three incidents:
- Emergency response to the incident, with the feedback from ERT and witnessing workers,
- Incident investigation including;
  - Feedback from workers, where a reenactment of the incident takes place,
  - the direct and root cause identification,
  - CPAR, including mitigations for future works and change of procedures.

The lessons learnt from these studies for the below incidents are presented in detail in the paper:
1. During track works, a wagon released on a slope and moved uncontrolled approximately 5 km. and hit to another group of wagons and construction machines before stopping.
2. A drilling machine fell during a lifting operation with a portal crane, during lowering of the machine.
3. The diamond coated cutting rope of an electricity powered, concrete cutting machine, snapped during cutting of a waling beam. A part of the rope hit and injured a workers leg.

The incident investigation process, when performed diligently, provides invaluable information to enhance safety planning. The investigations of three sample incidents occurred in a large scale infrastructure project, provided invaluable “lessons learnt”. The investigation process was effective because of the following:
- Involvement of the workers in the process,
- The reenactment of the incidents in a drama study with the workers,
- Collecting feedback related to the incident from every possible people including the conditions/mistakes at the pre incident, during the incident and post incident.

Keywords: Lessons Learnt, Incident Management
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Keywords: Lessons Learnt, Incident Management

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Haddon matrix is a conceptual framework used to analyze injury mechanisms. It is used for improving effective intervention strategies as well. The articles of the law of occupational health and safety enforced on 30 June 2012 were evaluated and distributed within the cells of the Haddon matrix by 4 independent raters (A,B,C,D). The Haddon matrix originally flexible in form is reshaped in accordance with the idea of the study. The aim of the study was to determine the phase (pre-accident, accident or post-accident) that the law focuses on and emphases by objective evaluations. Besides, another objective was to make recommendations to strengthen the weak points of the law if there are any. The articles were rather collected at the pre-accident phase especially in the human factor cell. The employer is emphasized the human factor and government is emphasized in the environment factor. The fact that the articles were concentrated in the pre-accident phase supports the pro-active approach claim of the law. The cells that do not contain more than a few articles are either regulated by sub-legislations or are not taken into consideration (socio-cultural factors, working environment) on purpose in the law. The comparison of the results obtained by the raters for inter-rater reliability by interactive 2 way random effects model (Model ICC 2,1 ANOVA) gave a correlation coefficient of r 0,98 with a confidence interval of 95%. This result shows that the results of 4 raters were consistent.

Keywords: OHS Law, Haddon Matrix, Proactive Measures
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Matrix (L-Matrix) method is a systematic approach widely used in the Occupational Health and Safety (OHS) risk assessment. In a typical matrix method approach, a measure of risk value is obtained by evaluating two risk factors as the likelihood of a hazard and the severity of the hazard when it arises. In this paper, a fuzzy approach enabling experts to use linguistic variables for evaluating two factors which are the parameters of Matrix method is proposed to deal with shortcomings of a crisp risk score calculation and to decrease the inconsistency in decision making. The parameters likelihood and severity related to the hazards in an aluminium plate manufacturing plant are weighted by using Fuzzy Analytic Hierarchy Process (FAHP), then the orders of priority of 23 various hazard groups are determined by using Fuzzy TOPSIS (Technique for Order Preference by Similarity to Ideal Solution) method.

Keywords: Risk assessment, Matrix method, Fuzzy AHP, Fuzzy TOPSIS
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Subcontractor: Defined as taking a portion of a great job, from principal contractors to on their own is the second contractor. In the legislations, subcontractor word is used instead of the sub employer. However, this word that came into our language from the French is more widely used. In the 1980s, this system has entered our country is simply, a portion’s work to be done build another firm.

As subcontractor firms almost didn’t enter business life’s industry, employees’ subcontractors almost didn’t encounter without trouble. Severance pay, annual leave, overtime, work can be easily removed, the principal employer and its employees attitudes and behaviors to subcontractor employees etc. issues can be given a few examples of these troubles. But, we’ll handle to health and safety issue that subcontractor employee’s another trouble.

Safety measures are often seen as a burden by employers and they try to minimize these measures. They think more win when they minimize those measures. Statistical data also says that it is the exact opposite; majority prefers to learn by experience.

Subcontractor employees, with the fear of dismissal didn’t demand safety measures. In the absence of demand, subcontractor’s job is easier, who wants to minimize measures.

Legally, principal contractors and sub-contractors together are responsible and principal contractors seems to be sensitive about this issue. They want from their subcontractors maximum measures. Cause they don’t pay anything about measures. This situation has been a good situation for the employees of subcontractors as it may, these measures aren’t taken often. Because, principal employers are using this situation for strengthen of hands and more comfortable judge to subcontractors. When subcontractors didn’t move in accordance with the wishes, they say “these measures still didn’t get, why?” and penalties are cut. In short path leading to subcontracting companies, safety has become top management’s game.

Keywords: Subcontractor, Subcontracting, Safety
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Employers, on the one hand, have to make their goods and services quality to meet customer satisfaction, on the other hand they have to present their goods and services to the market at a reasonable price that enables customers to buy. Especially due to the pressure of competitive market conditions, most employers try to keep labor costs that they see important cost factor at the minimum level. Majority of employers which get subcontract services act with this in mind. However, technology and specialization has become quite important in today's job market, working with subcontractors specialized in the field is seen as a requirement of professionalism in business must also be specified.

Although subcontractor is an independent employer from the principal employer it still accomplishes the work it has undertaken in the principal employer’s workplace/organization. In this case, the problem of whose responsibility of occupational health and safety measures arises in the principal employer-subcontractor relationship. Occupational health and safety responsibilities of employers in the identification, protection of workers and the implementation of sanctions in case of violation of terms is extremely important.

In this study, in general the principal employer-subcontractor relationship will be discussed, the principal employer and the lower the employer's responsibility to be determined, the continuation of the sub-contractors in the implementation of occupational health and safety issues national and international legislative arrangements, the judiciary moved with current examples will be discussed.

Keywords: subcontractor, subcontractor workers, subcontractor’s liability

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As it is known, in our country the construction industry still has been the leadership in terms of number of occupational accidents that result in death. One of the main factors causing the deaths due to this occupational accident is to fall the employee for various reasons, especially falling from high places. For the protection of workers from the dangers of this type, fall prevention platforms, barriers, covers, scaffolding, safety nets and airbags that can be implemented as collective protection measures are available. Other collective protection measure which the employer can take against falls from a height of the workers is the securely guardrail applications. In our legislation, in particular in the Occupational Health and Safety Regulations in Construction Works published on the basis of the Occupational Health and Safety, Law No. 6331, the implementation of this securely guardrail prevention is clearly stated with features. Even, in the same regulation, this measure will be used in whereabouts (e.g, at the edges of the flooring, the spaces, i.e., elevators, stairs, chimney etc., forming discontinuities in the floor) is also indicated. However, in practice, in these places, in where it is necessary to use the guardrail, it can be seen that the use of warning strip or bands. For this equipment used for warning and noticeability against the hazards, it is impossible to demonstrate the task that is expected from a guardrail alone. In addition the usage of the warning strip alone, in practice, they are used in conjunction with the appropriate guardrail to increase the noticeability as good applications. In this study, guardrail applications in construction workplaces are evaluated in light of the regulations. As a result, the right and wrong application of the guardrail in the practice has been demonstrated in terms of occupational health and safety.
Construction is a very large research field for the simple reason that it covers so many different types of trades and work tasks. In both developed and developing countries, the construction industry is considered to be one of the most significant industries in terms of its impact on health and safety of the working population.

The thesis presents structured and systematic approach that will help the foreign/migrant construction workers in Korea and Turkey to be monitored and measured their safety performance. The research also covers the analysis of the factors which influence the process of safety performance in the construction industry.

Safety management, safety policy, trainings, accident causing factors and general safety situations between foreign workers at construction sites in Seoul, Pyeongtaek and Gyeonggi Province areas were surveyed through questionnaires. The suggestions have been declared to improve the safety performance for migrant workers on the construction sites.

In this study, construction safety between foreign workers in Korea and Turkey has been described with reason of poor construction safety and survey on foreign workers in the construction industry. It is seen that there are significant legal structure similarities which are required both in Turkey and South Korea. In order to have a good level of health and safety in both countries there have been prepared regulations for the responsibility of employees and employers in recent years, among of these regulations, employers face more responsibility with newly added legislations because of the reason that employees have to be supervised. In concern with this, Occupational Health and Safety Act No. 6331 has been issued, institution and organisations have been given responsibilities. These two countries have shown their interest in this area, especially in the construction industry steps have started to be taken with employees’ responsibilities.

Employers are legally obliged to respect and protect the personality of workers and provide a system which is suitable to the integrity principles, employers should also take necessary measures for enabling sexual harassment and psychological discomfort and those who suffered harassments should be protected for not having more harm or damage.

Keywords: construction, foreign/migrant worker, south korea, turkey
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The Law no. 6331 which is the first Occupational Health and Safety Law in our Country have been entry into force after its issuance at Official Gazette on 30.06.2012.

Almost all workplaces have been taken into the framework of this Law apart from the ones working for their own selves. What has Occupational Health and Safety Law no. 6331 which has been prepared in accordance with EU Directives in the harmonization process with EU introduced?

First of all, with the Law which has been prepared with a proactive approach without discrimination between public-private sector and employers-subcontractors, workplaces have been classified as less hazardous, hazardous and very hazardous taking into account their works and different obligations for the workplaces have been introduced as per their hazard classifications.

Moreover, serious arrangements have been made regarding the relations between employers and subcontractors within the new Law and the Regulations published in accordance with the Law and it is especially stated in many part of the legislation that the employer cannot be discharged from the activity areas of the subcontractors.

Subcontractor’s workers are almost being perceived as the employer workers within the concept of the Occupational Health and Safety Law No. 6331. Employers have joint responsibility with the subcontractors especially at the activities of the Occupational Safety Specialists and Occupational Physicians working for the subcontractors, working environment and organizations of the subcontractors’ workers, training of the workers, entrance to and exit from the workplace, hygiene conditions and health reports of the workers.

Responsibility of the employer has increased together with the work aspects of the occupational health and safety committee and the risk assessment. Subcontractors have to submit the risk assessment documents to the employer and moreover, they should not be able to start working at the sectors like mining, construction and chemical industry without having risk assessment.

Employers have responsibilities for overcoming the deficiencies at the risk assessment documents and auditing the works of the subcontractors.

Obligation of the subcontractors, which do not have occupational health and safety committee, to assign an authorized representative to the employer’s occupational health and safety committee is one of the new arrangements. Moreover, workers who cannot certificate their vocational training should not be employed at jobs classified as very hazardous and hazardous. Employers and subcontractors are jointly responsible for the training of the workers of the subcontractors.
Risk assessment process is used to determine and assess potential health & safety, ergonomy and industrial hygiene hazards in manufacturing/non-manufacturing processes before (or during) application. It helps to identify and prioritize proper controls, apply them in order and maintain continuity.

This process consists of (but is not limited to) the above conditions:

- Manufacturing, non-manufacturing and maintenance processes
- Test (e.g. drive test) and PD activities
- In-site transportation, shipping and handling
- Office works
- Site, process, building exterior, road, auxiliary facility related works
- Non-standard jobs

Non-standard job: A job done for the first time.

The work is planned by team members, potential hazards and precautions are identified, non-standard hazard analysis form is filled. Each team member reads the form and signs it. The objective of this process is to raise team members’ awareness about potential hazards prior to work. The filled and signed form is posted to a nearby suitable spot. The team members stop working if any unsafe conditions occur and inform team leader.

For every equipment and project, risk assessment is applied for phases below:

- Project development
- Purchasing
- Design
- Installation/commissioning
- Running
- Revision

Risk assessment is done for following conditions:

- Process/location change
- Commissioning of new equipment/machine
- After occupational incidents/near misses occur
- Change of legal regulations
- Once a year

Risk assessment process also includes the identification and assessment of hazards from off-site sources. The sub industry of site is evaluated within site fire safety, emergency and health & safety management system.

Keywords: Risk assessment, risk, hazard, non-standard, process
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In furniture manufacturing sector, the production activities from a tree brought into a timber to be sold in furniture stores are held respectively in timber workshop, furniture workshop, paint workshop and upholstery workshop. In the upholstery workshops, the seat production is completed with addition of structural elements such as implementing sponge cloth on the seat frame. Occupational Health and Safety Act No. 6331 in accordance with Article 9 of the Communiqué issued by the Workplace Hazard Class, business activities under code to "Furniture manufacturing" get into the class of dangerous and very dangerous. Chairs, seats, etc. works like laying of making (except for the office and home furniture re-covered) works fall into the dangerous classes. The aim of this study was to examine the working environment in upholstery workshops, identification of risk factors and recommendations for controlling these risks is to develop. Two examples upholstery shop have been selected from Ankara Siteler Region for the investigation of occupational health and safety conditions of work on laying on the activities undertaken in the workshop. In the surveys, the usage of upholstery fabric, foam, glue-like materials and basic activities like cutting, stitching and stapling using a compressor with air gun were determined across the seat upholstery workshops. Risk factors like exposure to noise, electrical leakage, fire, chemical exposure and injuries that may lead to a total of 19 were observed in the risk assessment. Solutions have been proposed for employees work in a safe and healthy environment, the risk of accidents at work and occupational diseases for the elimination of the risk factors.

Keywords: Upholstery workshop, Occupational health and safety, Risk assessment, Risk factors, Work environment
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Nowadays with the increase in industrialization, resulting in development of new technologies the importance of occupational health and safety concept gradually grew in. In 2010, world furniture production is about 376 billion dollar. %58 of world furniture production is made by USA, Italy and Germany. Turkey has a share about %1 in total global production. Number of workers in furniture construction sector is estimated about 150.000 where total employment in Turkey is roughly 26 million. 16.000 from 250.000 construction industry workplaces are furniture construction industry workplaces. Woodworking and Furniture sector includes wide range of field of activity. There are lots of products and types of service including doors & windows, furniture, fitted kitchen and so on. Process in furniture construction workshops is comprised of cutting, drilling, forming, assembly, bonding and sanding. Pursuant to The Communique of Hazard Classes Regarding Occupational Safety and Health which is published in accordance with 9th article of Occupational Safety and Health Law numbered 6331, furniture construction is ranked hazardous and very hazardous. The purpose of this study is to research the occupational safety and health conditions, to examine the workplace environment, to identify the risk factors and developing suggestions for controlling these factors in two furniture construction workshops selected in Ankara Siteler Region. During the study conducted, it is observed that materials such as timber, massive, glue, nail are used throughout the furniture workshops, the main activities are cutting, shearing and assembly and in respective processes work is carried out with intensive use of machines like milling machine, band saw, planer and sander which has cutting, drilling and moving parts and is generating noise and dust. In the risk assessment, 22 risk factors are identified which can cause dust, noise and chemical exposure, electric leakage and fire. Measures that can be taken for employees working in safe and healthy environment and the elimination of risk of work accidents and occupational diseases which result from risk factors identified.

Keywords: Furniture Workshop, Occupational Health and Safety, Risk Assessment, Workplace, Workplace accident, Machine guards
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Statistics show that preventable occupational accidents are continuing even though the TRNC occupational health and safety law was improved in 2008 and is in force since 2009. According to the 8th article of this law, employers have the obligation to carry out risk assessment and file all related reports in their workplace. The main aim of this study is to determine the employer awareness about the occupational health and safety law that has been in force for about 5 years now, and to find out to what extent the employers fulfilled their obligations related with risk assessment. A pilot study was carried out in the G.Mağusa region, data was collected by distributing surveys and oral interviews with employers. This study shows that in most of the workplaces employers do not pay attention to occupational safety, they do not know much about the related law, they did not fulfill the risk assessment requirement and did not take preventive action. The lack of preventive inspections by TRNC labor office inspectors is the main reason why employers are not meeting the extremely important risk assessment obligation. The current situation was determined and suggestions were generated for improvement.

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Social Security Institution publishes each year statistics concerning working area. The workplace accidents data are included in these statistics. For the time being the statistics are belonging to the year 2007-2012. This paper aims to find out accidents risk analysis, risk assessment and level of acceptability of risk in the construction industry. A risk assessment made for Greek’s construction industry is taken as an reference for writing this paper.

The Fine-Kinney method is used for risk assessment.

200-400 Risk values show that the risk is certain and required actions must be in place earlier than 1 year. In this paper the risks assessment results are required to take action earlier than 1 year for the years 2010 and 2011.

Keywords: Statistics, Fine-Kinney Method, Construction Industry
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Risk analysis process is one of the most important milestones in occupational health and safety management system. This process introduces implementation of suitable corrective and preemptive measures for hazards and risks resulting therefrom. In context of risk analysis, actual and probable sources of hazard in working environment, are identified, risk levels of these sources are reckoned and risk response plans are formulated. Thus, working environment is transformed to become more convenient for mental, physical and physiological health of workers. In this study; metal accessory production process of a porcelain isolator producing company is considered. The metal accessory production unit of this company has recently been reconstructed and therefore environmental conditions are inappropriate in terms of occupational health and safety. Hence, risk analysis is performed in the production process using 3T RD (3T Risk Assessment) method. On completion of the analysis, risks resulting from hazard sources present throughout the process, are clearly identified. Necessary measures to be taken for the identified risks, are proposed.

Keywords: Risk, 3T RD Management, Risk Groups.
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The market share of the air conditioning sector in Turkey is growing rapidly; by the end of 2013 about 400,000 people are employed in this sector. The work carried out in our country in recent years of health and safety regulations along with many business units as well as air-conditioning industry, some regulations are needed. Air conditioning sector, and this sector employees, occupational health and safety studies evaluated the current situation can not be said to be very encouraging. Especially inexperienced people working in the density of the study area could not be kept under control and the continuous monitoring of technological developments, the adoption of an old-fashioned work, reveals the size of the risk in the sector. Made in this study, especially in summer, seasonal and inexperienced workers are concentrated where the refrigeration and air conditioning industry, hazardous situations and behaviors of what is happening specified for the purpose in the industry a company by employees animation made and these cases photographed in the industry for inappropriate behavior, and this behavior may occur after the risk to be shown is provided. Favorable conditions of work, then it should be, how it should be animated postures and risks of measures to be taken in order to eliminate what it should have been explained. The main purpose of this study, especially the air conditioning sector could shed light on the risk analysis is to reveal the directory.

Keywords: Air conditioning, Risk, Safe working, air conditioner, Risk assessment
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The Machinery Directive 2006/42/EC describes standardized health and safety requirements for interaction between man and machine.

The manufacturers are obliged to produce their machines in compliance with the essential safety and health requirements of the Machinery Directive. The manufacturers shall take account of the safety integration during the early design process. In practice, this means that the designer shall perform risk assessment as early as during the development phase of the machine. The Machinery Directive 2006/42/EC has applied since 29.12.2009.

The obligations for employers are set out in the Work Equipment Directive 2009/104/EC, which also applies to the use of machinery and equipment in the workplace.

Irrespective of the place and date of manufacture, starting from the date 01.01.1995, all machinery used in the European Economic Area for the first time is subject to the EU Machinery Directive and as such must be CE certified.

Safe design is the first and most important step in the risk reduction process. During this process, possible dangers are excluded by design. For this reason safe design is the most effective approach. When designing a machine, the possible risks must be analyzed and where necessary, additional protective measures must be taken to protect the operator from any hazards that may exist. To aid the machine manufacturer with this task, the standards (EN 12100, EN 13849 etc.) define and describe the process of machine risk assessment.
After the serious industrial accident happened in Seveso, Italy in 1976, a Directive (82/501/EEC) has been agreed regarding the accident prevention in industrial installations. Afterwards, two accidents which happened in Bhopal, India in 1984 and Basel, Switzerland in 1986 have resulted in the amendment of this directive. Seveso II Directive has brought about various control obligations regarding the prevention of major industrial accidents involving hazardous substances. The installations of concern are to prepare safety reports and emergency action plans.

Studies regarding the harmonization with Seveso II Directives completed on 2013. The Regulation on the Control of Major Industrial Accidents was published in the Official Gazette dated December 30, 2013 and Numbered 28867.

In this article, the ARAMIS methodology being a European Union project and also a joint effort is investigated which exists in European Commission Fifth framework programme in order to meet special requirements.

Keywords: Seveso II, Quantitative Risk Assessment, Accidental Risk Assessment Methodology for Industries (ARAMIS), Control of Major Accident Hazards Regulations (COMAH)

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Accident at work in the world and turkey emerges as a very serious problem. The rate of accidents at work also varies depending on the importance given to the issue of work-related accidents besides the development of countries and the level of education. In order to reduce work-related accident which also causes economic loses besides labor loss, the applicable laws, rules and regulation should be strictly adhere, attention should be given to work safety training and for studies for causes and precautions of work related accidents should be done. The basic premise of Occupational Health and Safety Law No. 6331 is the risk analysis which is determining the hazards existing or coming from outside of the work place, the factors that caused the risk turn into hazard, analyzing and grading the risks arising from the hazards and the studies which are essential in order to decide the control measures.

Today, the competitiveness of the countries is associated with human resources. Vocational and technical education is the driving force of the countries to educate qualified human resources for development and modernization. In this context, Vocational Schools (MYO) which trains qualified personnel for business life to be successful, it's possible with too much practical studies in addition to the oretical training. But the hazards and risks should be determined for the students in terms of occupational work and safety in practice courses, precautions should be taken to drop the risks of laboratories to acceptable levels. As per the law no:6331 it is imperative to make these arrangements until 2006.

In this study, the aim is to evaluate the hazard and risk concepts which have a critical role in the prevention of accidents and determine precautions to be taken in terms of occupational health and safety in the laboratory which is one of the imperatives for vocational and technical training. In this context, Uludag University, Vocational School of Thecnical Sciences, Machine Program laboratory is evaluated Kinney Method risk assessment, measures to be taken are determined.

Keywords: Occupational Heath and Safety, Vocational and Technical Education, Hazards, Risk Analysis
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The objective of this study is to determine the risk of early disease and mortality among agricultural workers in Southeastern Anatolia. We conducted a cross-sectional study in 2013 among 1077 households via “Questionnaire for Occupational Risks in Agriculture”. Nearly 90% reported size of working area is 19 ha and under; 15.1% were doing only mechanized agriculture, and 41.3% farming based on manual labor. In terms of general environmental risks, 60% of the participants reported no access to safe drinking water, soap and hand washing unit; 85% had no access to proper toilet; one out of three participants reported exposure to direct sunlight while working in the middle of the day. Furthermore, nearly 79% did not use earplugs while working in noisy environments; 75% did not use protective material for dust; 89% reported that there were no safety band or fence around water-canal, and 91% did not have first aid knowledge. As for animal related risks, 83% of the participants did not use gloves during animal bearing; 82% did not vaccinated their dogs for rabies; 63% did not vaccinated their animals for brucellosis while almost 50% had no veterinary control of their animals. In terms of transportation and machinery related risks, 80% of the participants did not use seat belts while driving and one out of four participants did not have regular maintenance of the machinery and the vehicles. Additionally, 72% reported not wearing overalls, 50% not wearing masks, and 28% smoking when applying pesticides. 66% of participants defined agricultural work as stressful. In terms of child labor, 27% of the participants reported existence of child labor in agriculture and 14% reported children under 14 driving tractors. These findings from GAP Region suggest high levels of risk in agriculture. In order to eliminate these risks multisectoral public health interventions are needed.

Keywords: agriculture, risk evaluation
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Mining is known as the beginning of all industrial processes. When mining is examined from occupational health and safety point of view it also show up that this sector is also should be counted as pioneer of occupational health and safety.

Objectives

- Examination of mining sector from occupational health and safety point of view and count down the main problems that are faced by the miners during the operations.
- Describing the legislative approach to mining sector before the enactment of the occupational health and safety law and specify the missing points.
- State the new legislation framework and the innovations come with the new law and implementing regulations.

Methods:
Although the knowledge about mining and health and safety precautions are quite high in Turkey, to statistical date on occupational accidents and diseases show that there is a long way to be taken for better and safe working conditions. New Law and the EU directive based implementing regulation can be shown as a huge steep in this path.

The effect of Law and the implementing regulation also discussed and the acquirements are classified from the origin of related legislation.

Results
Mining sector is very important for all of the industrial processes and occupational health and safety starts with it. In Turkey this sector is still preserves its importance. With the new legislation, health and safety level of the sector is started to increase with new provisions and labor peace is more valid between the employees and employers.

Conclusion
Although there is huge way that should be travelled, new occupational health and safety legislation approach on mining sector take a long step for better conditions and demonstrate it’s come up in a sort time in a safe manner.
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One of the major human resources problems encountered in business, especially in factories manufacturing vehicles, is that the employees do not have a chance to work in a safe and healthy environment. In order to achieve a better competitive conditions in business, employers should perform planned and systematic studies on occupational health and safety. With industrialization, the importance of occupational health and safety has increased in the world and in our country and in this context, a separate standard has been created to provide and maintain occupational health and safety at work by constantly improving the work conditions. This standard, also known as OHSAS 18001 TS 18001, is OSHMS.

The most important step of this management system is determination and identification of occupational health and safety risks. Doing risk assessment in workplaces is a legal requirement but it is also quite important in terms of business and national economy. Risk assessment has been referred in relevant clauses of Labor Law No. 4857 which is the fundamental law in occupational health and safety. The necessity of risk assessment was supported by prepared regulations and without leaving no doubt it has been made compulsory with the relevant clauses of OHS Law No. 6331.

The scope of this thesis is to make risk assessments and evaluate the results in terms of occupational health and safety by measuring physical and chemical environments of commercial vehicle production factories and its related parts in automotive sector. The results obtained from risk assessments will include; determination, identification and evaluation of risk sources, prevention from risks and completely elimination of these risks and also the things need to be done in order to minimize losses. In this study; proactive risk assessments methods will be preferred instead of the methods that are based on detected reactive risk assessments.

Keywords: OHS, Risk Assessment, HAZOP, FMEA
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A safety incident is either a work related accident or a near miss. An incident management process is required to comprehend the mechanism of the incidents such that corrective and preventive actions can be cautiously planned and implemented for avoidance of such accidents.

An appropriate incident management practice enables formation of a detailed comprehensive standard statistical safety data base, in which correlations can be established among the related safety parameters once sufficient data is available from the safety applications.

A detailed comprehensive description of a typical incident management procedure applicable to construction works is introduced in the present paper as follows:

i. Definition and classification of incidents,

ii. Liabilities and requirements for incident management,

iii. Emergency response,

iv. Notification, reporting and recording of incidents,

v. Investigation of incidents,

vi. Analysis and assessment of incidents; direct and root causes and lessons learnt,

vii. Deviations and non-conformances,

viii. Corrective and preventive action,

ix. Feedback to Safety Management System,

x. Preparation of incident database.

The leading and lagging key performance indicators of construction works database for a large infrastructure project, at Istanbul, Turkey is used for measurement and assessment of the prevailing safety performance. Further to that, the relationships between the corrective and preventive actions and risk reduction are used for planning of continual improvement on the safety performance. The decrease of incidents and the consequences correlates with below corrective and preventive actions:

- Permit to work system,
- Technical trainings, toolbox talks, vocational trainings,
- Site supervision and site conditions,
- Incentive programme.

The increase of incidents on the other hand correlates with:

- Hazard rating of the works,
- Site conditions,
- Complexity of work (start up, demobilization periods, interactions with other works),
- Time pressure.

The results of the analysis of incident data of this large infrastructure project are in line with the literature. However, with these results, an advantage would be provided for safety planning during early stages of a project, allowing prioritization of efforts on incident decreasing mitigations and avoidance of incident increasing conditions.

Keywords: Safety Management, Incident Management

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The occurrence of accidents at work have many important causes of accidents grouped under 3 main headings; caused by workplace, caused by workers and caused by both the workplace and the workers. All the reasons for these accidents to examine in more depth, in order to take advantage of the statistical methods of the past in the light of numerical information is intended to give direction to the future and provides a scientific approach based on the applications. Especially in the annals of SGK Statistics and TTB official data belonging to statistical data, using methods and modeling the data would light the subject. It can be said that the MDS (Multi-Dimensional Scaling) is used are easy to understand and simple method requiring less computational time in application.

**Keywords:** Employment, Occupational Accident Annual Statistics, Multidimensional Scaling (MDS)

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We do not want to think about even question, let alone write, many things about our lives. Instead of questioning those things, we rather cover them with metaphysical, theological and anti-positivistic beliefs that we have and that is how we make decisions...

We purport that we make use of scientific norms in our works. We also share or value unfounded information that we manufacture. We first take that insufficient and baseless knowledge to the top layers of our brain and then pretend as if they exist and protect them! Believe them! We do things to show off...We do them so that we feel valuable...Though it is difficult to say we make a decision which can hurt someone or the society and act as an accomplice. We also expect people around us to believe in things that we so easily put forth or present as facts...We line up with the claims that our limited brain is limitless...and we think all the information is with us sufficiently (adequately).

We want to find out why it happened! What was the reason? Why did losses happen? Why did they get trapped under debris? And so many others like them? It is argued that 85% of accidents happens due to unsafe conducts. In other words, due to people’s decisions. And the part that we do not question is who led to those 15% of unsafe conditions. All the accidents, one hundred percent, takes place because of insecure conducts. And it is humans who do these actions. The evolution of the knowledge that people have, unfortunately, is possible with Occupational Health and Safety, Life Safety Method which is brave enough to do filtering of human knowledge.

We should teach the world! Each individual inherits the knowledge of his or her predecessors. We are born into this world with tabula rasa. We try to change this knowledge that is embedded in that empty memory over the time! Change is power...The safety mindset in the world is only based on engineering therefore as long as it continues the way it is now we have no chance to be successful in that regard. Rather, what we need is to establish methods that change the people’s decision-making centers.

Metaphysical thought, theological structure and anti-positivistic decisions, when they are unlimited and uncontrolled, they cause accidents. A right approach to Occupational Health and Safety is Life Safety Method!

Keywords: Life Safety Method, Humans are valuable, iSGDER
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Considering the working life of the human factor, which is considered a behavioral editor of culture needs to be examined. Safety culture has a great importance in business life which is a reflection of shared values regarding safety of workers, perceptions, beliefs and attitudes, which dimensions of culture. Implementation of legislation related to job security, business management and employee perspectives on health and safety issues are important. For the placement of the job security culture in enterprises and in institutions, business / corporate management and employee perceptions of safety culture is also important. The purpose of this study, to identify the perception of business management and employees on safety culture and in the light of the findings, in terms of safety culture can be placed to draw attention to important issues. For this purpose, in order to identify the attitudes and behaviors of workers and business management on safety culture in the Kahramanmaraş manufacturing industry, a survey implemented to the 30 administrative staff and 300 workers working in the Kitchenware Sector and other quantitative and qualitative data concerning the sector also discussed. In the light of quantitative data, medium and large enterprise business security applications for workers can be said to create above 50% of a "positive safety culture". Though analyzing qualitative data, but this situation appears to be a reflection of a "communitarian perspective" and some units of occupational safety practices and culture is seen not sufficiently improved.

Keywords: Occupational safety and health, Safety culture, Kitchenware sector
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Corporate culture comes alive, is seen, shared, learned in the workplace through organizational communication and transferred by means of tales, heroes, symbols. Practice of all management concepts and methods including safety should be assessed together with organizational culture. (Koçel, 2001)

Corporate history and past stories are part of the corporate culture that impact health and safety issues in corporations.

Since 1990’s, organization theorists have begun increasingly to take into consideration the past stories that have an important role in the organizational communication strategies. This approach is used by corporations that use their past as information storages and also in the recent organizational discourse work. (Gatti, 2011)

This study is from a metal production plant within such a theoretical framework. It has been implemented as part of a study that aimed to improve the health and safety culture of the company and convert any negative sides of this culture to positive. It was conducted in an experimental way to understand how the corporate culture was seen by workers from the point of health and safety function.

The method used is to visualize the health and safety history of the corporation with the 65 attendees making use of internal interaction and interrogate the material received with content analysis method.

The material has been analysed in terms of the meaning of the course of events and corporate values in the official history of the corporation, in the perception of the staff members in terms of health and safety.

It was found out that the result material carried cultural meanings that belonged to the shared corporate system of symbols however did not totally overlap with the official corporate values.

It is believed that the information from this work will be beneficial to design the transform the safety culture of the corporation.

Keywords: Organizational culture, corporate history, health and safety culture, visualise health and safety culture

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**Moderator:** Ebru Korkmaz

**Date/Time:** 6 Mayıs 2014/16:30-17:30

**Place:** Tophane Hall

**Title:** Priority Training Topics For Giving Information To Employer/ Employer’s Representatives On Occupational Health And Security (OHS)

**PURPOSE:** Development of OHS culture by eliminating lack of knowledge meeting the expectations with determination the prior topics for giving information to employer/ employer’s representatives on OHS.

**METHODS:** In the questionnaire, which 223 answers, “prior topics for giving information to employer/ employer’s representatives on OHS” are questioned. Subjects are classified as A and B group and it is requested to determine the prior subject and to classify the topics in each group as per priorities.

**FINDINGS:** In OHS professionals questionnaire, which 134 people answer, 66 occupational physicians, 48 occupational safety specialists, 11 other health personnel, 9 employer’s representatives delivered opinion. In employer/ employer’s representative questionnaire, which 89 people answer, telephone questionnaire data are gathered by trained call centre staff, questionnaire feedbacks are obtained from transferred links.

B group topics are specified as prior preference: OHS professionals 72%, employer %64; A group grading of OHS professionals: Code (first), Applications, OHS professionals and Common Health and Safety Unit (CHSU) selection, Directives, safety culture; employer/ employer’s representatives A group topics grading; OHS professionals and CHSU selection (first), Applications, Directives, Code, safety culture; OHS professionals’ grading in B group: Employer/employer’s representatives’ criminal-legal responsibilities (primary), economic and social contributions of OHS services to employer, compensation amounts for occupational accident-occupational illnesses, importance of human resources units on OHS, who is employer/ employer’s representative; grading of employer/employer’s representatives in B group: if replacement in second and third row is neglected, determined as the same with OHS professionals.

**RESULT:** It’s understandable that in A group topics, employer/employer’s representatives place “OHS professionals and CHSU selection” in the first row. That employer/employer’s representatives place 6331 numbered OHS Code in fourth row show that they are adequately informed. It should cause anxiety that safety culture is placed in last row because, OHS applications can only reach its aim provided that it is associated with this concept; however, other expectations shall be met when OHS cultures of businesses are formed, matured, adopted and implemented in positive way.

**Keywords:** Employer/ employer’s representative, Occupational Health and Safety culture, Occupational Physician selection

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The determination of Electromagnetic radiation (EMR) levels in the working environment and assessment of the results in terms of the work health and safety has been identified as a quality requirement of European standards.

Indeed, in the countries of the European Union came into force in 2012 under the direction of EU 2004/40/EC, the electromagnetic field exposure has been necessary to measure in the work environment of all institutions firstly automotive, metal industry, hospital.

Therefore, the determination of electromagnetic radiation levels in the working environment especially for different frequencies, in terms of work health and safety, constitute an important research topic for our country.

This research study within the scope of Directive 2004/40/EC in an automobile factory were made by Sakarya University Electromagnetic Research Laboratory (SEMAM) experts who work in the past 25 years. At the end 1 month-long study of electromagnetic field measurement obtained results will be presented with tables and graphs and the results will be compared with the limits recommended by ICNIRP (International Commission on Non-Ionizing Radiation Protection Committee) which is recognized by World Health Organization (WHO).

REFERENCES:

Keywords: Electromagnetic pollution, Safety Standards of Electromagnetic Fields, Non-Ionizing Radiation, EU2004/40
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In Turkey, The Occupational Health and Safety Act No. 6331 is an essential step to avoid the work accidents and occupational diseases which are shaded problems in the pace business life for years. In accordance with this Act, the published many new regulations define the work safety and health (WSH) rules that should be provided in the workplaces as well as how to satisfy the WSH expertise. On the other hand, many engineers, architects and technical staff who want to be a WSH specialist have been training in courses and attending to the exams conducted by the Ministry of Labour and Social Security.

In this study, the distribution of grades of WSH certification exam (held on August 18, 2013 in Ankara) with respect to participants’ professions are analyzed. The data used with the number of N=152 are taken from the WSH training courses. The study also evaluates the correlation between participants’ exam grade-age-gender.

According to the first level statistics, the participants’ ages vary between 22 and 63, and the age groups of 25-35 and 45-over occupy 63% and 4% of participants, respectively. The success ratio is 39% for engineers, and 36% for technical staff. 43% and 35% are the values of success ratio for female and male participants, respectively.

The statistical method, analysis of variance, is used to analyze the differences between two large group means (engineers and technical staff), and no difference between the means of the groups are found. There has been a significant positive correlation between age and exam grade of participants. This correlation is much stronger for the female participants.

At the end of the study, the possible efforts that are required for improving the quality of WSH trainings are discussed. In addition, the opinion and recommendations are given about the necessity of this type of studies to increase the exam performance.

Key Words: Workplace safety specialist, Analysis of variance, Engineer, Architect, Technical staff
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The statement ASBIAD (Antalya free zone Business Association) performed by a study will be made available first to our country and an overview of the project. 17 firms participating in the project talk the same language and their employees a culture to develop by the instructor made on behalf of the trainings. Turkey is the first to be regarded as the set of occupational health and safety training.

Turkey Ministry of Economy 2010/8 Development Support "International Competitiveness" of Declaration has come within the scope of the project "development of production and Industry" project in Antalya Turkey Luxury Yacht economy Ministry dated June 12, 2012 writings without the approval and has started work.

This statement; ASBIAD by as part of the project, Antalya free zone Yacht Workers given a short summary of the occupational health and Safety Training is aimed.

I wrote the project for promotional purposes the announcement I have been ASBIAD in the light of the TRAINING PROJECT will present the RESULT BOOKLET. As the Coordinator and trainer located in the my training participation rates, occupational groups of workers participating in the company's 17 as notifications, and particularly on education, education with the test and the final test in front of photos of our graphs will be presented in the statement.

Actively trained in Antalya free zone project with 350 workers, about 1,000 people indirectly. During the training the employees belong to the sector risks being the YACHT SECTOR employees reported. This includes training, while the risks; the legal obligation to comply with the rules for themselves and their families the importance of highlighting so much, by grounding on. Topics were: 6331, we have to protect ourselves, the yacht Features, why being a Worker in the sector according to the potential risks of the materials used, the Sections of the materials possible risks, personal protective, and we Complied to the rules the employer's Rights.

The statement said that, within the framework of the training given to adult education, vocational education characteristics of the audience rules considering the created model can also introduce.

Keywords: Education, work and health, security, adult education
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**Date/Time:** 7 May 2014/12:30-13:30

**Place:** Eyüp Hall

**Title:** Discussion on Significance of Occupational Nurses in Health-Safety Services

**PURPOSE:** questioning working conditions, working times, duty priority perceptions and difficulties of Occupational nurses.

**METHODS:** adequacy of working times necessary for the implementations of duties of occupational nurses as per regulation, working conditions, duties most given importance, supporting ones during performance of work, and the ones raise difficulties are asked 146 people with a questionnaire study.

**FINDINGS:** In the questionnaire, which 146 answer; 34 Occupational nurses, 61 Occupational physicians, 29 Occupational safety specialists, 22 employer representatives delivered opinion. The ones who does not have Occupational nurse are asked to answer the questions as per working conditions of workplace nurses.

Working type: Permanent 53%, in CHSU (Common Health and Safety Unit) 18%; Manner: full time 63%; serving how many workplaces: 1: 45%, >10: 10%; working time: 6/9/12 minute/employee/month 32%, more 41%; be supported most by whom: occupational physician 55%, employees 6%; the ones raise difficulties most: administrative staff 23%, employees 20%; to which duty most of the time is spared: organization, communication 34%; duty on which workplace nurses would like the spare most time: workplace health supervision and hygiene inspections 41%; duties that occupational physicians pay attention most: organization, communication 29%; as per employer/employer’s representative: organization, communication 23%, workplace health supervision and hygiene inspections 20%, consultancy 11%; as per employees: consultancy 28%; damage of not employment of occupational nurses in doctor’s workplaces 62%.

**RESULT:** Although the ratio of full time working is 63%, rendering one workplace is 45%, working times more than specified in regulation is 41%, whereas the ratio of employees in CHSU 18%, the ratio of professionals that claims duration isn’t adequate is over %26. It will be inadequate when Occupational nurses are certified and working in more than one workplaces in CHSU. Consultancy duty that employers pay attention with 11%, and employees with 28% ratio shows that workplace psychologists are needed.

The answer who raise difficulty during work as administrative staff 23%, employees 20% express the significance needs to be given to OSH culture.

**Keywords:** Workplace nurse, Primary duty, Occupational nurses’ duties, Significance of occupational nurses

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The work life is increasingly flexible due to globalization and intense competition conditions. Dynamic working life and mechanization in production have significantly affected working conditions. Economic and technological requirements have led to prolong the working hours to 24 hours a day. The industry and service sector require a full day’s work. So, shift work system is applied in these sectors. Thus, it becomes a working period for some people, who work part time or full time at night shift. Such works conducted in a non-standard hours have proved to affect employees negatively on medical, psychological and sociological perspective. The basic legislation which regulates night work is article 69 and 73 of the 4857 labor law. Female workers within legislation is one of the specially protected groups. Besides labor law, legislation has a variety of regulations about female workers over the age of 18. Female workers become more and more dominant working life. Female’s roles and responsibilities within the family reveal the need to protected by some special regulations besides general judgement which provided for all workers. In this paper, the effect of social and health of night work on female and present national and international legal regulations are investigated with a critical perspective and are presented suggestion.

Keywords: Night work, Occupational health and safety, Female workers

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Domestic labour in the labour market is one of the oldest forms of employment. Along with the acceleration of globalization, immigration facilities have increased and as a result, domestic work has become a more common form of employment. In this context, the number of foreign domestic workers among immigrants in Turkey has significantly increased in recent years. In this group, a great majority of employees are employed in the home care services sector. Appropriate to the nature of the work performed, it is observed that a large majority of domestic workers consist of the female workforce. The ILO Convention concerning Decent Work for Domestic Workers (No. 189) is a convention setting the labour standards for domestic workers. Turkey has not yet ratified this agreement. In this study, domestic workers’, especially female domestic workers’ working conditions and job security issues will be examined. Turkey's current occupational safety arrangements will be discussed to see whether they are adequate or not. Turkey's occupational safety arrangements will be compared with ILO Convention No. 189.

Keywords: Domestic workers, women labour, No 189 ILO Convention
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According to Occupational Health and Safety law, in order to provide occupational health and safety services including activities related to the protection and prevention of occupational risks, the employer shall designate workers as occupational safety specialist, occupational physician and other health staff. Moreover, there is a common question that worries us about this rule & situation. The question is “Occupational Safety Specialist Education which is given by private Education Center authorized by Ministry of Labour and Social Security is enough?”.

As it is well known, some vocational school have Occupational Health and Safety programmes. After the graduation of students from these programmes, they will become an “Occupational Safety Technician” and they can continue to their career by taking another education from Education Centers which promotes the student as “Occupational Safety Specialist” after a final exam which is made by ministry. Additionally, some of our universities have occupational health and safety graduate programmes without any requirement of thesis. This new model of undergraduate programmes in the Faculty of Engineering proposes a unique way of structuring for new programme type for occupational safety specialist education. Students who registered to Engineering Faculty, when they are continuing their own programmes, they can be able to take this new program as double major area at the same time. In the end, they can get an “Occupational Safety Engineer” diploma. Double major program covers all courses in Occupational Safety Programme. Students enrolled in the Occupational Safety Program will be assigned an advisor from. Major Students who graduate from the program, which is registered and has fulfilled all obligations required for graduation Occupational Safety double major program are eligible to receive a diploma.

Keywords: Occupational Safety Specialist Education, Double major Programme, Occupational Safety Engineering
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Occupational safety covers all the measures for the safe working conditions related not to expose to occupational accidents and diseases. Training is the first of the topic of these measures. It is beginning with the training of occupational safety specialist, and then these specialists train the employees in the workplace. Regard to minimizing work-related accidents, rather than limited solution results such as periodic training of employees and taking help from OSH specialists and other specialist from the outside of working places, more effective remedy is required. Because the problem is not limited to small, medium and large sized enterprises; it covers all the areas from houses and apartments, butchers, greengrocers and supermarkets up to 76 million of the population of the country. Therefore, it is difficult to inform the entire community and to raise awareness, and to transform it into a culture with just a short-term training. For radical solutions, such as traffic, this issue should be included in the National Education curriculum. When we examined the causes of work accidents, the personal related faults such as ignorance, negligence, indiscipline, will be seen principally. Therefore, greater emphasis on the human behavior on OHS is required.

The occurrence of occupational accidents, besides defects and various technical deficiencies, especially, lack of awareness of OHS is the main factor of triggering accidents. The most effective way to overcome these deficiencies is school education. This is sustained from primary school to university education. Human nature and habits are already ready for education. These habits can be gained best in the school period; information about occupational safety and health, consciousness, culture and work ethic required for the creation of training must be given in these schools. If this issue is included in the 12-year compulsory education system like as 4 +4 +4 large extent the problem will be solved.

At the university level, as the OHS is an interdisciplinary branch of science the “Occupational Safety Engineering” department should be introduced and this branch should be supported by vocational schools and vocational high schools by strengthening their infrastructure to sustain real owner of the OHS professional.

Keywords: OHS, National Education, Occupational Safety Engineering Department
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In Turkey; occupational safety specialists (OSS) should be authorized and certificated by the General Directorate of Occupational Health and Safety (GDOHS) of the Ministry of Labour and Social Security (MOLSS) in order to work in the field of OHS. The certificates of Occupational Safety Expertise (OSE) are given to technicians, graduates of natural applied sciences, engineering and architecture faculties, provided that they complete a training program of an authorized training institution (TI) and be successful in the exams of OSE.

Objective:
The training of OSSs in Turkey are provided by TIs in order to reach a standard OHS education. Authorization and certification processes of TI are regulated by the General Directorate of OHS of the Ministry according to Occupational Health and Safety Law No.6331 and The Regulation about Occupational Safety Specialists Task, Authority, Responsibility and Trainings No.28512.

Methods:
Application requirements to serve as a TI were standardized within the framework of related laws and regulations. For that purpose; OSS trainees, courses, educational staff, contracts and the manager in charge are registered by authorized TIs and controlled and approved via internet through the software system ISG-KATIP; which is used by the GDOHS for recording, tracking and monitoring of OHS services through the country.

Results:
As of the date 20.04.2014;
220 authorized TI,
3.821 Trainers,
10.472 contracts btw. trainers and TI,
8.692 approved Training Programs,
170.056 OSS Trainees
were realized by the recent data taken from the ISG-KATIP

Conclusion:
Through this regulation; qualifications and qualities of training institutions were based on standards; including physical and thermal conditions of TI, qualifications of educational staff, duration and contents of all courses. In addition; training institutions and educations were controlled and supervised by the Ministry and new regulations have been made with the feedback of participants.

Keywords: OHS Education, OHS services, ISG-Katip
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The state power in an obligatory form in the case of illegal acts is called sanctions. In the area of Job Health and Security (JHS), there are two types of sanctions; administrative and penal. Sanctions imposed through a direct decision by an administration in the cases that are not clearly explained by the laws are administrative sanctions. Different from administrative sanctions, penal sanctions are those imposed as a result of judging and in the form of adjudication by the state based on the laws.

Today, in accordance with the JHS act (no. 6331), employers have important responsibilities and serious penal sanctions are imposed if these responsibilities are not fulfilled. Risk assessment as one of the most important steps in terms of JHS has been compulsory for all workplaces as of 2013. There is no doubt that sanctions to be imposed have great significance for both risk assessment and following other JHS rules, and consequently for JHS to achieve its purposes appropriately. In many studies examining job accidents and occupational diseases based on years, it was revealed that as the sanctions increased, job accidents and occupational diseases decreased. In this study, the administrative and penal sanctions based on the JHS Act (no. 6331) and whether these sanctions are in accordance with the JHS Act will be examined. In addition, the rate of imposing these sanctions and what other sanctions should be imposed in order for the JHS to achieve its purposes will be discussed.

Keywords: JHS Act, Penal Sanction, Administrative Sanction.
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In terms of Job Health and Security (JHS), social dialogue is an effort to solve the problems between employer and government through various structures and a two-way interaction towards an agreement. Examples of social dialogue include Collective Labour Agreement and Economical and Social Council.

The first attempt of Social Dialogue in Turkish history was an advisory assembly named as Economy Assembly formed by the supporters of the Union and Progress Party. Izmir Economy Congress was then organized in 1923, after the Independence War. This congress is the first quest for societal agreement and Social Dialogue before the declaration of the Republic. In 1927, the national assembly of the date approved founding Ali Economy Assembly as part of Prime Ministry as a dialogue organization. This assembly is the first economic council type organization founded in the Republican period. There were a few other attempts of Social Dialogue after this congress, however, “Societal Agreement”, the first realistic step for Social Dialogue, was signed between the government of the time and the Turkish Labour union in 1978. In 1990’s, with the candidacy for European Union (EU) and increasing strikes, Social Dialogue began to come into Turkish working life. After these developments, Social Dialogue commenced among the social stakeholders on a reciprocal basis in 1990’s.

JHS Act in 2012 enabled new regulations and improvements for employees' lives. It is important that employers, employees and the government are working together for the shared interests. Accordingly, Social Dialogue is quite important for the success and purpose of JHS Act. This study aims to identify the Social Dialogue practices that should be conducted in order for the JHS Act to be implemented appropriate to its purposes and success. Consequently, awareness for developing the JHS culture would be raised.

Keywords: JHS Act, Social Dialogue, Collective Labour Agreement.
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Occupational health and workplace safety is an important issue for working life. Occupational health and safety (OHS) issues have been addressed since First Development Plan (1963-1967). However, for a long time, due to evaluation of more critical issues such as cyclical developments and competitiveness; prioritization in the plans has been to the detriment of the OHS. In this period, it is noted that findings and recommendations related to OHS in the Development Plans are mostly focused on employment, labor, health and social security-related parts, mainly in the industrial sector, and the emphasis on lack of integrated legislation and inspection mechanisms.

It is obvious that in the recent plans, especially Tenth Development Plan, which are prepared to achieve 2023 targets, OHS issue has been evaluated with a prior and more detailed approach. Medium Term Programs (OVP) and Annual Programs, which are prepared by Ministry of Development with an integrated and participatory approach, are economic, social and cultural policy mechanisms that are coherent with Development Plans. Therefore, OHS policies, proposals and objectives are addressed in these documents. On the other hand, consistent with all plans and programs process, projects in the OHS field are supported in Annual Investment Programs in order to achieve the objectives set.

The analysis of aforementioned documents which includes government policies and activities of institutions in an integrated and systematic manner, will lead to analysis of the progress made so far and will not only help the comprehension of the historical progress of the field, but also will enlighten the future works and studies.

Keywords: Occupational Health and Safety, Labour Life, Development Plan, Medium Term Program, Annual Program, Investment Program
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Training of the employees is very important in order to decrease the volume of work accidents and occupational diseases. By means of training (education), employees’ consciousness level will increase; by learning how to work more carefully and organized (planned), they will contribute to occupational health and safety; and also progress in preservation of their own health & happiness.

Training issue takes part in the “6331 Numbered Occupational Health and Safety Legislation”, however which training methods will be used and other related details are left to the implementors. In this act and related regulations, training issue is very essential as the minimum risk assessment in the occupational health and safety. After making the risk assessment, the first duty is to take measures (hedge) and inform the employees. Informing the employees can be performed by training them. One or more method and techniques that are included in our study, will be used in the training programmes. These training programmes will continue by periodically repeating, long-term learning and implementing the acquired data personally. Experienced labor safety officers and workplace doctors will work coordinately with the employer and by using various training methods, they will train the employees and contribute to preventing occupational accidents and vocational diseases.

This study aims to clarify who will provide occupational health and safety training programmes, how often they will take place, which act-rules and regulations will they be based on, and which methods will be implemented.

Anahtar Kelimeler: Keywords: Occupational Health and Safety, training, Law No. 6331, work accident, occupational disease.
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In the 3rd University Conference about Safe and Healthy University, participants discussed various physical, chemical and biological agents, social, physiological and economic factors that trigger accidents and/or give harm to human health in universities and research centers. Some of them are hereinbelow. In the point of chemical agents, explosion is more powerful and risky when nano material is used in laboratories. In the point of physical agents, to choose the most convenient color, noise interval and other physical agents for workplaces is important and some experiments have been done for this purpose in European Research Center. Limited Fundings, unstable university positions, international working environments, e-learning and their advantages and disadvantages were discussed very much during the conference. The hierarchy in universities is one of the biggest problems, since professors, deans and rector mayn’t take notice of the OHS expert's warning and obey the prevention rules. Recognized as an employer of universities administrators are responsible of employees of universities to work on healthy and safety conditions. This situation was obliged with the Law on Occupational Health and Safety. Thanks to the Law; making risk assessments, preparing emergency and fire fighting plans, informing and training workers, employing occupational safety experts and doctors are liabilities of all state and private sectors and actually all universities. It is now so easily that to prevent, protect and keep alive workers from dangers and risks with these provisions.

Keywords: health and safety, university, research, Turkey
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The concept of labour safety and health has emerged especially in civilized societies and come up as a very important issue in today's countries. When examined from this point of view, it is clear that our country is far beyond western countries.

One of the most important problems related to work in Turkey is labour accidents and health problems through which thousands of people die and thousands of people have become disabled every year. The main cause of this state is lack of importance given to labour health and safety. According to the verdicts of International Labour Organisation (ILO) every year 2,200,000 people lose their lives either because of labour accidents or health problems related to their business. For this reason, as a developing country, the study aims at emphasizing the necessity of developing labour safety and health.

If unions as professional labour syndicates and as civil organizations have functioned properly, most of the work problems can be solved. Whereas, such unions in our country have turned their focus to the economic problems of the workers rather than dealing with their safety and health. This policy does not improve the labor rights and health issues of the workers. Research carried out in some certain European countries indicate that these unions have contributed to the improvement of labour rights of workers and their development of the culture of Working life and Health and this culture has spread among workers. In this study, the safety and health workers in Turkey is examined and the deficiencies and weaknesses are discussed.

Keywords: The Union’s perception of work safety and health
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OCCUPATIONAL HEALTH AND SAFETY SYSTEM

Occupational Health And Safety System (OHS); Identifying hazards which can occur during the activities performed by Viko, according to hazard identifications determine risks based on people, machines, materials, work environment dimensions and emergency case management and take necessary actions, with identifying the OHS organization and control systems and executing by systematically, work environment is improving. OHS System is managed according to OHSAS 18001 OHS Management System Standard and 6331 OHS Law.

RISK MANAGEMENT

Risk assessment activities are executed according to process-based by OHS specialist, workplace doctor and related employees. As a result of the risk analysis; The measures taken, legislative compliance, work accidents, issues such as training needs analysis and determine the degree of risks. Precautions to be taken is determined by the degree of risk, actions are planned and executed. The adequacies of the precautions are taken after the completion of activities is control.

HSE (HEALTH, SAFETY AND ENVIRONMENT) COMMITTEE

HSE Committee consisting of the employees of the production department works for implementation and effectiveness of the spread of health, safety and environmental issues. Committee performs audit by three months period.

NEAR MISS SYSTEM

Administrative staffs notify nearmiss occurrence using with user computer, production staff notify nearmiss occurrence using with kiosk computer located in production area by using Viko Intranet System. Near miss notifications are investigated by the OHS Specialist, and necessary actions are taken.

TRAINING

For all employees, according to the scope of their work in accordance with the relevant regulations and requirements for planned training is carried out. OHS orientation training is organized for all staff who start to work.

7S METHOD

7S system was made with adding of safety and save steps to the 5s system by Viko. 7S steps are; 1.Sort, 2.Straighten, 3.Shine, 4.Safety, 5.Save, 6.Standardization, 7.Sustain. The aim of the Safety step is determine hazards clearly in the workplace and to reduce occupational accidents by doing necessary arrangements. In this scope, visualization of the risks are done on the work place and employees are informed. The principal risks and visualizing the work zone employees are informed.

OHS PERFORMANCE INDICATORS

OHS performance indicators, which is the basic tool of strategic management process is monitored through the Balanced Scorecard system.

Keywords: VIKO OHS Management System
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Representing the lignite mining company Mitteldeutsche Braunkohlengesellschaft mbH (MIBRAG) in Germany, we would be glad to present the practical experience of our occupational health and safety management system at the Conference on Occupational Health & Safety. Since 2005 MIBRAG has regularly awarded the quality seal „Safety with system“ based on audits of its occupational health and safety management system. The current certificate is valid until 2015. Thereby it has been proven that MIBRAG meets the requirements of ISO 14001 and OHSAS 18001. Furthermore, MIBRAG was awarded the Silver Medal for Occupational Health and Safety by the Royal Society for the Prevention of Accidents (ROSPA) in 2013. The requirements according to international standards and policies are defined in the Corporate Handbook of MIBRAG and specified in detail in internal regulations and instructions on occupational safety and environmental protection. In order to ensure occupational health and safety MIBRAG carries out regular monitoring, instructions as well as internal trainings in the company. All employees are responsible for the compliance of the corresponding regulations at their own work places. Our presentation will include case studies and best practices of the company.

Keywords: Mining, Occupational Health and Safety Management System, Best practices, OHS Training
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ABSTRACT
The impacts of minerals on human health have been known since the beginning of geology and medicine sciences. Due to their physical and chemical properties, minerals and rocks are widely used in pharmacy and therapy and they are the main reason of several occupational diseases as well. These minerals (e.g. asbestos, silica, borate, zeolite) which adversely affect the human health via respiration, digestion and dermal exposure are the main issue of Medical Mineralogy. Today these minerals are focus of various investigations and, in order to maintain their adverse effects on the employees under the exposure levels, controlling the medical mineralogical contents are be of vital importance.

In risk assessments of workplaces involving in minerals and rocks, mineralogical, petrological and chemical analysis values of lithological units in the activity area are one of the most important data to be used in application of control measures and minimizing exposure of occupational diseases. These analyses define the physiochemical properties of minerals such as chemical composition, grain size, crystal system and ore grade. By the virtue of these “analysis reports” that must be included to health/safety data sheets and plans of workplaces in this sector, OHS experts will make more reliable risk assessments and able to train the staff with knowledge and information gathered from field and site supervisions.

On the other hand, there are also some misdetections arising from imperfect knowledge such that crystalline nature of silica mineral increases the exposure and marble dust is less dangerous than other dusts (e.g. quartz and coal) with regards to respiration. In case of pumice stone, silicosis decease mostly occurs as a result of non-crystallized (amorphous) silica. Since the term of marble is used for all polishable and cuttable stones, in nomenclature or risk assessments the mineral content should be considered. Likewise in “granite marble” case, high amount of silica minerals are present in mineralogical composition of firm stones.

It is believed that an important expansion is made if the term of “Medical Mineralogy” is included to the sector terminology and its contents are taken into account. This issue which might greatly contribute to duties and responsibilities of OHS professionals may be taught in OHS educational organizations.

Keywords: Medical Mineralogy
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There are many risk assessment methods used for different purposes. Some methods used to analyze the technical systems and processes, and some are being used to analyze people’s work and the working environment hazards in the work related activities. Moreover, certain methods are developed for specific workplaces. 3T Risk Assessment method intended to be applied in various sectors and also can be used in small and medium sized enterprises or corporate companies. In this study, 3T Risk Assessment methods adapted to the marble industry and its application examples have been given.

Keywords: Risk Assessment, Marble 3T Risk Assessment
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Main reasons of serious accidents in Metal Industry are lack of safety guards/ functions on machines and usage of guards incorrectly. Additionally, mistakes of the machine design encourage user for manipulation because of production requirements.

New approach;
- “New Machines” shall be purchased according to CE Directives and EN Standards.
- Risk Assessment must be carried out for new and old all machines according to Regulations before usage
- Retrofit shall be applied for “Old Machines” according to latest version of Regulations and EN Standards
The Aim of this presentation is to give hints to reach safe machines with Risk Assessment. Safety Solutions may be explained on presses as an example.
Metal industry, that involves processes like foundry, welding, metal cutting, scrap melting, surface forming, has an important place in our country. According to the Social Security Institution Statistics in 2012, the number of workplaces in metal industry is 187,127 while the number of insured employees is seen as 1,547,712. In the Workplace Hazards Classification Communique regarding occupational health and safety issued by Ministry of Labour and Social Security of Turkey; the works in this sector are mostly within dangerous and very dangerous classes. The metal sector includes hazards such as working at heights, heavy lifting, dust, noise and chemical exposures. These hazards may lead to fatal accidents as well as serious health problems such as hearing loss, respiratory failure, loss of limb. Identification and grading the risks and improvement of the working environment will save employees and employers from these serious consequences. The purpose of this study is to share the results of field studies and determine basic measures on behalf of creating a healthy and safe working environment in establishments which operate in metal sector. For this purpose, site visits were made and hazards in the metal industry were examined. In accordance with the titles of 3T Risk Assessment Method, the general main hazards as working at height, ergonomic, physical, chemical, biological hazards and hazards related to floor-ways, array-layout, internal transport, machinery- hand tools, fire-explosion safety were discussed. In conclusion, in this study, hazards and risks in metal industry as well as the industry-specific examples of good and bad practices were evaluated.

Anahtar Kelimeler: Occupational Health and Safety, Metal Industry, Hazards, Examples of good and bad practices
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The Occupational Health and Safety Law, No. 6331 enacted in June 20, 2012, has launched a new era in Turkey’s working life. This law, which is revolutionary in comparison to the situation before this date, has some difficulties in practice. In particular, it is observed that the employers and workers in small businesses refuse the occupational health and safety practice to be implemented, and try to maintain their old habits. On the other hand, however, the law enforcement dissuades the violations. Among these sanctions, there are large amounts of fines for the employers, and termination of employment contracts for the employees. The metal industry is one of the industries that the occupational health and safety has an utmost importance. Metal sector is a line of business classified as “Dangerous” and “Very Dangerous” in Turkey, according to the Workplace Hazard Class Commumqué. This Industry, which is based on manpower rather than automation, forces their employees physically in terms of production methods and processes. The need of physical power confirms the difficulty and danger of the industry. In general, the working conditions of the industry are accepted by people with low levels of education in Turkey. At this point, the field studies become quite difficult. In addition, the measures taken by the employers to protect the employees through occupational health and safety practices evoke negative thoughts, particularly in new staff, about the company and have led to the resignation of the person. Especially in certain positions, the constantly changing personnel cause problems in occupational health and safety matters, as well as the other problems related to production. This study aims to investigate and evaluate the challenges experienced on occupational health and safety issues in the metal industry in Karyer Group companies, serving the metal industry. After setting forth the current status to a certain extent, it is planned to offer solutions and act accordingly in this regard.
Exposure to small-sized particles poses a high risk of employee health. Consistent with the particle size of the material shrinking physical, chemical and toxicological properties have been observed in the major changes. With the development of nanotechnology materials and has been used to produce nano-sized. Have application in different business lines produced with this technology, "nano" size is rapidly increasing number of materials. In parallel with it, which interacts with these materials increases the number of employees. By using this technology during research and production activities nanomaterials exposure of workers is concerned. Prevention of employee exposure to these materials and the development of this technology is aimed to provide safe. Asbestos bitter experiences in the past, for example, does not happen on behalf of nanotechnology, unconscious and could be released as a result of excessive use prevention are the main targets of the risks.

The route of exposure, quantity and exposure effects are important parameters for exposure to nanomaterials. Exposure to nanomaterials occurs in three ways; respiratory, skin and ingestion. These three are the most likely exposure route of exposure is by inhalation. Nanostructures are very small in size, it is quite light in parallel masses therefore can become airborne with the slightest air current. The absence of adequate local ventilation in work areas and engineering measures are insufficient exposure to nano-sized materials is inevitable. To control exposure to nanomaterials, and to reduce workplace environment for the realization of the measurement method has not been developed yet a standard and a specific exposure limits for nanomaterials Standards also could not be determined with certainty. The reason for this state of the technology in question is not a new technology and toxicological studies conducted in this field is not completed yet.

Decreasing particle size of the material surface area tremendously increases, then the nanoparticle exposure when examining "number" with "particle surface area", "particle size" and "particle count" effective outcome. Therefore, when determining the exposure nanomaterials using a combination of different methods of measurement and analysis is required. In this study, in the working environment nanomaterials used methods for determining the exposure, and their effectiveness is discussed devices.

Keywords: Nanomaterial, Measurement, analysis, Safety nano technology
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Dust that appear during production can cause explosion, which result with several death and injuries, in metal, wood, nourishment sector depending on dust’s kind and environmental conditions. When the secondary dust explosions follows primary dust explosion, damage and impacts of the major accident get worse.

In 2003, a dust explosion happened in a medicine company in USA and resulted with 6 deaths and 38 injuries. Also in 2008, a dust explosion happened in a company which produce sugar in USA and resulted with 15 deaths and 36 injuries. In these two facilites became unavailable after the explosion.

In January 2013, a dust explosion occurred in a company which produce pasta in Turkey. The first explosion was because of methane gas which produced with degradation of the product in silo and meet with the fire source. After the first explosion, the dust which is hanged on the air cause second explosion and result with 1 death and 4 serious injuries.

With the presentation, under the proactive approach, condition of forming the dust explosion and precautions for preventive and control will be evaluated. Besides, the analysis of the accident will be considered for the importance of dust explosion.

Keywords: work accident, combustible dust, explosion, dust explosion, safety
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Electric, gasoline, LPG and diesel energy types that can operate forklift, various industry organizations, people could not afford the heavy loads, fuel and chemical tanks, with various methods packaged product removal and / or desired to where it used to work machine. During transport, user error, proper bracket after transporting the load, above load carrying capacity for the transport, a lack of timely maintenance of construction machines, etc. occur due to accidents at work. According to a study conducted by TUIK that, within a year of people employed in various sectors of %2,9 is exposed to the work-related injury or discomfort have been identified. This study can occur with Forklift injury and / or fatal work accidents and measures aimed to investigate.

Keywords: Forklift, Work Accident, Human Health
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The purpose of this study is to classify occupational accidents that occurred in Turkey and to examine the distribution of these accidents according to 2008-2013 years. Also in our study, there is information about evaluating occupational accidents and as for the solution of problems that occurring how to evaluate these accidents, how that should be shared responsibilities required. Taking into account the results of occupational accidents will be classified different ways like as on the results of accident event, on the nature of the damage as a result of events and depend on the shape the occurrence of the event.

Keywords: occupational accidents, danger, preventive activities
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Several establishments accidents occurring mostly in indoor environments is presented as methane poisoning. However, this is often misleading. Actually the event of lack of oxygen due to CO2 and CO2 narcosis is caused by the thesis will be defended. The following specific examples of accidents occurring with the causes of accidents and thereby explaining the necessary measures to be taken will be made to create awareness.

1986-Cameroon Nyos Volkanic Krater Lake Disaster (1,700 dead!)
1999-Mersin/Tarsus City Center Sewer Construction accident (4 dead),
2003-Adana Waste Paper Factory accident (3 dead)
Oct-2007-Adana, Waste Water Treatment plant accident (3 dead, 2 wounded),
Agust-2008-Hatay/İskenderun Chrom Mine shaft accident (2 dead),
2009-Adana/Pozanti Turnip Juice Fermentation Factory accident (1 dead)
2013-Muğla-Milas, Waste Water Treatment plant accident (7 dead),

Carbon dioxide and chokedamp accidents will be released. Measures will be discussed.

Keywords: Carbon dioxide, methane, chockdamp, mine, accident, dead, disaster, indoor environment, Niyos Lake, organic matter, fermentation, reaction, dissension

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Coal-mining enterprises except in the workplaces
1-Agust-1992, Tekirdağ/Çorlu Textile Factory methane explosion (32 dead, 84 injured),
2-1993-Istanbul/Ümraniye Waste storage methane explosion (27 dead, 12 casualty)
3-1985-Kayseri/Yahyalı Pb-Zn mine methane explosion (1 dead 2 injured),
4-2012-June G.Antep/Nizip Hancağız Irrigation Dams metane explosion (2 dead),
5-2013-G.Antep Auto paint Shop methane explosion (4 dead, 3 wounded)
methane explosion as so to measures to be taken will be announced.

Keywords: metane, mine, accident, dead, disaster, indoor environment, organic matter, fermentation, reaction, dissension
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Human’s safety being is the most valuable element of the industrial production systems. Therefore, human being should be protected against the hazardous that he could encounter in the production. Occupational accidents are the most important problem of the workers in Iron-Steel Industry which providing materials to the Consturicton Sector in our country. High rate of work power loses underline the importance of the researches needed in this area. In this study, a statistical research was conducted on the necessary precautions to be taken against the occupational accidents to protect the workers working in Iron Steel Industry. In this study, occupational accidents, occurred in the Iron-Steel Industry between 2005 and 2011, were statistical analyzed.

Keywords: Hazard Assesment, Iron Steel Industry, Risk Analysis, Consturicton Sector
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According to the data of Social Security Institution from the year 2010, approximately 10 million people have been employed in 1,325,749 workplaces active in Turkey. Providing a healthy and secure working environment within these workplaces is one of the most significant element of working life. There are various hazards for employees in the workplace with regards to human health and safety. These hazards pose a risk that can lead to injuries and even deaths for employees. The predetermination of the hazards in premises such as working places, buildings and facilities that employees could stop by as a part of business activities as well as in recreation areas, child nursing places, dining room, sleeping and bathing places, inspection and care, physical and vocational training places as well pre-existing as health and safety precautions could decrease the risk of injury and death. On the purpose of determining minimum essential health and safety precautions for the workplaces and premises, the Council Directive of Directive 89/654/EEC of European Union (EU) concerning the minimum safety and health requirements for the workplace has been included. Within the EU adjustment process, Turkey has issued a regulation on the aforementioned directive related to Workplace Health and Safety Measures in Workplaces and Premises in 2004.

After the Occupational Health and Safety Act No. 6331 was issued in 2012, the relevant regulation has been updated in 2013.

This study evaluated the risks of workplaces and premises in terms of human health and security and aimed to find whether the relevant regulation is sufficient in practical terms or not and thus to reveal any deficiencies. The evaluation of this study has been conducted on a critical perspective of the adjustment of EU on the relevant Council Directive.

Keywords: occupational health and safety, health and security precautions in workplaces and premises, protection and prevention.
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In recent years, studies related to job security have been given great importance to the studies conducted in our country, which is far behind that of developed countries. Besides the legal regulations in many areas, work accidents that occurred with an extensive research related to these subjects is needed raising awareness of workers and employers. Work Accident and Occupational Diseases in 2012 according to statistics in the field of machinery and equipment manufacturing, 2235 pcs is seen that of work accidents. Manufacturing industry has an important place in the turning lathe considering this workbench is examined in terms of job security is of great importance. The major portion of the causes of work accidents are known to be of human origin. In manufacturing employees ensuring comply with the rules to raise awareness accidents can be prevented. In this study human source or machine source of accident that may occur and what measures can be taken to the accident emphasized.

Keywords: Turning lathe, Work accident, Job security

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Dangerous condition that caused the selection of risks in a systematic way according to the characteristics of measures essential for the creation of a general methodology is a big step. Presentation to be delivered, and determine the impact of the measures on the choice of method will be explained. Scoring of the risks and precautions, then to what extent the measures taken to reduce the risk of trying to be expressed in numerical and mathematical.

Keywords: Risk analysis, measure, risk, danger, hazard, accident, scenario, hazard situations, hazard movement, dangerous act

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ISG-KATIP is a software project which enables OHS services to be provided via internet and reported as statistically.

This software is integrated with databases of relevant institutions and it operates with real person data by connecting to Identity Sharing System simultaneously.

Objectives
Authorization, commissioning and contracts of companies and institutions (Joint Health and Safety Unit, Training Institutions, Community Health Center) and people;(Occupational Safety Experts, Occupational Physicians, Other Occupational Health Staff, Trainer)
Submission of training programs, certification, commissioning and contract monitoring of Occupational Safety Expert, Occupational Physicians, OOHS and Trainer etc. and also control, approval and cancellation processes are being done through the system.
The system is designed in a user-friendly structure, providing users to make their processes as soon as possible with the most appropriate interface.

Methods:
IT: OS (Windows Server 2008), Database (Oracle 11g), Software Language (Microsoft .net Framework), Reporting and Interfaces (Silverlight, Crystal Reports)
Other Sources: OHS Experts from the MoLLS, Software Firm, Social Partners
Principles followed in the design phase:
• Sample application is prepared so the user tests can be performed easily
• Reliability, maintainability and flexibility principles are taken into account
• Questioning and graphic capabilities are enriched during design

Conclusion
With ISG-KATIP software project; procedures and operations related to OHS services can be maintained by DGOHS of the MoLLS independently from the people, places and documents. Nearly 1.500.000 private and public companies and 100.000 OHS professionals were brought together within a single system. Efficient usage of human resources and time has been reached and quite large amount of savings has been made from the usage of public resources. OHS service contracts made between companies and OSEs, OPs and JHSUs have provided with the total of 3.400.464 worker’s OHS services to be covered and so a significant progress has been made from preventing occupational accidents and diseases.

Keywords: OHS, Risk Assessment, HAZOP, FMEA
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As all over the world in our country, when numerical quantities, the volume of employment, the share of exports and social situation are discussed, SME’s constitutes the basic elements of working life.

Evaluation responsibilities of Occupational Health and Safety Legislation from the perspective of the employer and employee, is very important for integrating law with the requirements of Turkey successfully.

This study aims to expose employees and employers’ perspectives on occupational health and safety legislation, their needs and their proposals by survey results which were accumulated from 300 SMEs in Turkey. In this way, the Occupational Health and Safety services that will be given to SME in short or long term can be planned; so the law can be more efficient by providing the participation of employees.

As a result of the assessment made, it was occurred that lack of qualified staff, lack of technology and lack of education are the biggest problems for SME’s to practice Occupational Health and Safety rules. Broadening the scope of KOSGEB supports, increasing the service training, employer’s training and safety culture studies can be recommended to be applied OHS law in real sense. In addition to this; reconsidering the hazard classes notification or reorganization of working hours can be achieved.

Keywords: SME, occupational and safety, employers
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The problems about the safety of the employees have begun to come to order with the industrialization. Because of the increasing of occupational diseases and accidents caused by these problems and decreasing of efficiency, it was needed to take health and safety precautions. After a while, the requirement for coordinated act was more felt, and the need of establishing international organisations ascended. With the Treaty of Versailles in 1919, the International Labour Organization (ILO) was established and began searching solutions to the problems of safety and health. The ILO and the World Health Organization (WHO) are making international studies to improve working conditions. In our country, occupational safety and health process has gained importance especially with the European Union. For this purpose, with new regulations, also the education of occupational safety and health is being studied. The most important problem to be overcome is to improve the security culture perception of the employers.

In this study, it was investigated that the security culture perceptions of the marble industry owners and managers in TRB1 region are only consist of the legal responsibility.

Keywords: Marble Industry, Security Culture, Occupational Safety, Occupational Diseases
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Reforming regulations which are connected with occupational health and safety are made in Turkey. Occupational Health and Safety Act No. 6331 published and entered into force on 30 June 2012, which is a first regulation and special law in this field. This law’s effects can be analyzed after long years but also after occupational health and safety law’s period, prior statistical data will be indicative on the change.

In this study, the overall number and general data of occupational accidents, the number of deaths due to occupational accidents, temporary and permanent incapacity statistics of occupational accidents, which are occurring in Turkey in the last 5 years were examined. The data in the classification of activity groups known as “Statistical Classification of Economic Activities in the European Community (NACE)” in the classification of economic activity in terms of number belongs within the year’s top 10 activity groups have been categorized and in this context 13 activity groups in the last 5 years have been identified. 13 activity groups of the overall crude death rates, occupational accident rates, fatality occupational accident rates, standardized rates of occupational accidents, weight rates of occupational accident, incidence rates of occupational accidents calculated the value for the last 5 years and interpreted statistically based on the general terms of data.

In the last 5-year average; 677 of every 100,000 insured people have a work accident and 12 of them died as a result of the work accident and also 1,721 of every 100,000 work accidents were determined result in death. In the same context 13 activity groups analyzed in Turkey and these groups contains; 36.57 percent of all insured people, 55.50 percent of all work accidents and in 48.81 percent of all deaths due to work accidents in Turkey. When we examined the 13 activity groups that was determined 1,028 of every 100,000 insured people have a work accident and 16 of them died as a result of the work accident. In these sectors 1,513 of every 100,000 work accidents resulted in death. Coal and Lignite Extraction branches of activity is the first place in respect occupational accident rates (0.19038) and crude death rate (0.00092). But in terms of the fatality occupational accident rate the Non Building Construction branches of activity (0.05685) ranks at the first.
Explosion is “an exothermal chemical process that, when occurring at constant volume, gives rise to a sudden and significant pressure rise”. Dust explosions, which occur in industry, are one of the most serious and hazardous explosion types. According to accident investigations in literature, dust explosions pose serious severity in terms of human and property losses. According to TS EN 60079-10-2, combustible dust is “finely divided solid particles, 500 μm or less in nominal size, which may be suspended in air, may settle out of the atmosphere under their own weight, can burn or glow in air, and may form explosive mixtures with air at atmospheric pressure and normal temperatures”. Combustible dusts can come from metal, wood, plastic, and organic materials such as grain, flour, sugar. The combustible dust explosion is occurred when five factors—(i) presence of combustible dust; (ii) oxygen; (iii) ignition source; (iv) dispersion of dust particles in the right concentration; (v) confinement of dust cloud—come together. A research by CSB reveals that major industries, in which combustible dust incidents have occurred, are food (24%), wood (15%) and chemical manufacturing (12%). According to research by Zalosh et al. equipment involved in dust explosions are dust collectors, silos, grinders, conveyor systems, dryers/ovens and mixers/blenders. Since, no similar statistical analyses are available in Turkey, food products industry is chosen for this study considering these reports. The objective of this study is to investigate the awareness of employers, employees and occupational health and safety professionals about the hazards, technical knowledge and catastrophic effects of dust explosions and current/required situations of preventive and protective measures. To that end, a checklist has been prepared based on standards of NFPA. This checklist was applied to four selected food firms and required preventive and protective measures were reported. In the following period, the dissemination of this application in the food industry has been aimed.
According to Food and Agriculture Organization of the United Nations’ 2012 data, Turkey is ranked as 9th worldwide in the production of cow milk. However, only 27% of milk is processed in modern facilities. Although this percent is too low, dairy products industry constitutes 11% of whole food industry in which there are 40,077 firms according to TÜİK 2009 data. In workplace accidents and occupational illnesses statistics published by Social Security Institution, it is shown that in 2012, 3035 workplace accidents and 3 occupational illnesses occurred and 16 employees died in accidents. There are not any statistical data focusing directly on dairy products industry. However, considering percent of dairy products facilities in food industry, it can be interpreted that lots of accidents occurs. By considering these data, the purpose of this study is to reduce workplace accident rate of dairy products industry by evaluating the current occupational health and safety (OHS) conditions of dairy products industry, suggesting solutions according to evaluation and sharing solutions with employers and OHS professionals. To achieve the aim, literature research was done and a checklist to apply in field visits was prepared. By applying checklists in selected facilities in Ankara, Bursa, and İzmir, common hazards in dairy products industry were found. Visit reports were written and they were shared with the firms visited. By summing up literature research, information on checklists and feedback from the firms, “Dairy Products Industry, Occupational Safety and Health Guide” were prepared. For the guide to be a good instructive material for the dairy products industry, it is aimed that the guide will be up to date. Therefore, additional visits to previous facilities and new visits to different facilities will be done. The guide will be updated according to new findings.
VII. International Conference on Occupational Safety & Health

POSTERS
In our country, tourism sector is one of the main branches of a growing service sector. The tourism sector, is one of the booming sectors in our country. An important component of the tourism sector is to provide accommodation services. Facilities operating in the tourism sector the best-known types of hotels, motels, hostels, resorts, campsites are. In this study, in the hotel business to be done to improve health and safety, working environment and considering the characteristics of the employee will be given information about sources of danger.
Although remarkably fast-advancing technological innovations and solutions are in almost every sector of work worldwide, many accidents still occur every year, especially in the construction and contracting sectors.

Documents published by the Turkish Ministry of Labour and Social Security show there are 3 billion active workers in the world, 1 million work accidents happen every day and 2.3 million workers die annually due to work accidents and illnesses.

The economic costs resulting from unexpected safety accidents are about 600 billion to 2.4 trillion American dollars worldwide each year. This loss is bigger than 170 countries’ gross national product, and it clearly shows the seriousness of the problem.

Even though there are a variety of products for cost estimating, scheduling and document control systems, a system that analyses risks and important information for each operational activity based on site, project and natural conditions is still missing. There are many different risks and important points planned for each of the thousands of activities conducted in workplaces however the human brain cannot evaluate multiple things simultaneously due to its organic structure, and for this reason fatalities and serious accidents are still not consistently decreasing.

In this project, the technology being developed consists of:
1. Real-time data – primarily visuals – from the active work environment will be directly collected,
2. Then it will be evaluated by the work schedule details as well as our activity risk and conditions database.
3. Finally, the system will warn relevant workers immediately and create managerial level reports, if needed, when it predicts a potential danger.

Our aim is to significantly reduce safety accidents and to increase productivity in the sector’s construction sites via innovative technologies and information-communication efficiency in workplaces.

We will also test the features of our system on a pilot workplace in order to measure this efficiency and contributions of this system.

Keywords: Workplace Safety, Accidents, Image Processing, Sensor Networks, Data Mining, Smart Algorithm
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Emergency is an event which requires immediate response, first aid or evacuation in cases of fire, explosion or natural disasters that may occur in some or all parts of a workplace. Workplaces in the scope of Occupational Health and Safety Law No.6331 must evaluate and identify the emergencies affecting employees and surrounding of the workplace, taking into account of work environment, substances used, work equipment and environmental conditions. These workplaces should further prepare an Emergency Plan that includes actions to take and procedures to follow in these cases. An important part of Occupational Health and Safety and an outcome of emergency preparedness, Emergency Plans feature identification of emergencies and their preventive and restrictive measures, response and evacuation procedures, employees to be assigned, documentation, drills, revision of the plan, informing and training of the employees. Although offices are not considered to require special measures compared to the manufacturing industry, they have emergencies. Outputs of risk assessment, nature of the work, workplace location, neighbors, alarm systems, efficiency and location of emergency equipment should be considered during the preparation of Emergency Plans for offices. In this study, an Emergency Plan was prepared for a workplace involving office works. Deficiencies related with emergencies were detected during field study and they were reported before preparing the Emergency Plan. The problems detected were missing and misplaced fire extinguishers, obstacles in the escape route, improper emergency signs, detector and alarm systems that have not checked periodically. Possible emergencies during the documentation were: fire, explosion, first aid cases, earthquake, food poisoning, sabotage and plane crash. Preventive and restrictive measures for these emergencies were identified. Flow charts including response and evacuation procedures and plans for each emergency were designed to be hanged at various locations in the workplace. In conclusion, the need for awareness raising activities on emergencies at offices and announced and unannounced drills and significance of management-employee cooperation on emergencies were identified. This Emergency Plan, prepared in accordance with the legislation, was formed in a format that is applicable for offices.

Keywords: Emergency, Emergency Plan, Occupational Health and Safety, Offices
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Objective: In this study it is aimed to determine the incidence of the skeleton and low back pain in Usak State Hospital (USH) and Malatya University Hospital (MUH) nurses, secretaries and housekeeping services staff and to compare demographic data and ratios. Finally, it is aimed to make the comparisons between hospitals.

Methods: The study consisted of 400 nurses, technicians, secretaries and housekeeping services staff working in relevant hospitals. Data was collected by using questionnaires and "Oswestry Disability Index" (ODI) without sampling from January 10 to February 10, 2014. The questionnaires is consisted 8 Demographic and Likert-type of 10 questions ODI. The data was analyzed in SPSS 15.0 package program by using descriptive statistics, Kruskal Wallis and Mann Whitney U tests.

Results: It was determined in the study %49.7 nurses, %23.8 housekeeping services staff, %19 secretaries in USH; also %35.3 nurses, %41.1 housekeeping services staff, %36.6 secretaries in MUH had moderate and high functional disability. The score of ODI was %32.5 respondents in USH and %35.5 respondents in MUH had moderate and high functional disability. It was determined that there was a statistical correlations between low back pain and working period, income level and occupation variations in USH. But there was a statistical correlations any variations in MUH. The highest score of the occupational groups were found to be nurses in USH; but in MUH were housekeeping service staff.

Conclusion: In view of the results of this study; we recommend that nurses, secretaries and housekeeping services staff be trained to prevent Low Back Pain. Also, long bouts hours should be shortened. It is proposed that it should develop new application techniques on the lifting and transporting patients.

Keywords: Occupational health and safety in the health sector, low back pain in hospital staff
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Effectively provide of occupational health and safety, primarily is possible with instill a sense of responsibility to employees and employers. Management of specific policies, constitutes an important point of this situation. It is seen that work accidents and occupational diseases can not be prevented or greatly reduced even if are absolutely obeyed the laws. The phenomenon that is the weakness of the responsibility. At first, each employee through self-awareness should be created both yourself and other colleagues thinking to create a common sense of responsibility, makes a positive contribution to occupational health and safety. This assimilation of responsibility of the management is thanks to be organizational norms, ensuring that knowledge, ensuring effective communication and motivation of employees. Employees who feel valued himself will be more cautious and feel more self-responsibility due to enjoy their jobs. Norms, employees and partners with etched into the minds of responsibility by settling comply with the occupational health and safety measures when they see colleagues who forget stimulating the necessary measures will be taken. With comfort of fulfill the duty and be known that their efforts would be appreciated by management, liability for conduct involving, will be more valuable in the eyes of employees. In this study, social responsibility awareness of what is happening and how adoption that social responsibility in instilling management important role of employee motivation and communication of health and safety to the positive impact and work accidents and will be touched on recommendations for reduction of occupational disease.

Keywords: Sense of Responsibility, Motivation, Occupational Health and Safety
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The requirement of setting up a safe and healthy working environment in work life has become more of an issue now because of the working accidents and occupational diseases. Besides, the studies on the reduction of working accidents and occupational diseases were globally miscarried. Although they have been mentioned in the related regulations and precautions for emergency medical interventions have been developed, working accidents and occupational diseases still form one of the most basic problems of work life in both developing and developed countries. Within the recent years, “safety culture” has started to be stressed as the term that is preventing the occurring of working accidents and occupational diseases. The ultimate target of Turkish Ministry of Labor and Social Security is to form a ‘safety culture’ that is common in the working life and the society. In this study, small and medium size enterprises, aka SMEs, will be focused; that is to say that SMEs are seen to be effective in working life of both Turkey and other global countries, with their support to development as numerical amount, employment volume, and production value. However, the cultural domains in which the employees of these kinds of companies are in common action are more limited when compared to large sized enterprises. Right at this point, there is the obligation for these companies to form an organizational culture in order the safety culture to be understood and settled better. The main target of this study is to determine the limits of main admissions and the projects to be started in order to form organizational culture, which includes the values of safety culture as well, for small and medium sized organizations.

Keywords: Security Culture, Organizational Culture, Small and Medium Scale Businesses
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Title: Opinions Of Students Of Occupational Health And Safety Department About Gender Roles

Object: This study is performed with the purpose of specifying the opinions of the students of occupational health and safety department who continue their first grade undergraduate study in Bingöl University, about gender roles in working life, social life, marriage and family life. Method: It is a cross sectional research. Sampling selection was not performed in the research. Survey form was given to the students who accepted to fill out the survey during the days it was performed. Survey form which consists of two chapters are applied to 141 students who study in the first grade. First chapter of the survey includes socio-demographic features, and the second chapter includes expressions about gender. Necessary permissions for the performance of the survey were obtained from college directorate. Findings: The average age of the students is 19.6±2.0. 44% of them are women and 77.3% of them are nuclear family. At the rate of agreement with the statement of 'the professions to be performed by women and men have to be the same' between the gender statements, an equalitarian approach was adopted in terms of gender'. Male students have shown a more conventional approach to the expression of 'Domestic responsibilities in the family should be equally shared'. 93.7% of the female students and 80.8% of the male students stated that women and men should get paid equally in working life.

Conclusion and recommendations: The fact that there are students who have conventional opinions about the gender in university education and especially in working life shows that there is a high risk for women to be exposed to gender discrimination in occupational health and that there is a need for students to gain awareness about the gender equality in addition to the professional knowledge.

Keywords: OCCUPATIONAL HEALTH AND SAFETY
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Recycling Sector is the basis of a sustainable world which has limited natural resources and growing population. By taking attention to the contribution to the national economy, the importance of recycling increased in our country. Such that, the employers which will operate in this sector are being watched for suitability of licensing process with these regulations. Employers are the key point undoubtedly about Occupational Health and Safety. Key point of the OS is informing employees by taking the necessary precautions by employers to develop in OHS topic. Doubtlessly, the most important point here is employers’ awareness. When taking cognizance of other sectors; employers’ education level varies but in Recycling Sector, a large part is concentrated at certain points. Most of Recycling Facilities in our country operate about packaging wastes which can be built minimum cost and which is safe. Most of these employers of facilities are who has become licensed facilities from garbage collection. There’re two reasons about being nonactive of Employers which is in desired level and taking step by sanction power. Firstly; Economic Reasons. If it’s started to the OHS by cost calculation, it can be only calculated of visible part of Iceberg. Thereby it can’t be predicted of accidents which results workforce loss and death that causes wounds in Employer and State Economy. Second reason isn’t becoming conscious in desired level. With ‘By Trade’ consciousness, it can only be protected from work accidents by ‘Trial and Error’ method but that is not enough for employees in today’s work life. We need Recycling Sector for both a Sustainable World and strengthening the Development of Our Economy; and for the continuity and development of this sector, we need healthy employees. In this study; view of Employers to Employees in recycling of nonhazardous waste and packaging waste will be evaluate with 4M4E method (4 Reasons of Fault 4M: Man, Machine, Media and Management and Precaution 4E: Education, Engineering, Environment, Enforcement) which is used in accident anlysis and precaution will be discussed in OHS Economy Title with considering of lost by resulted by work accidents. Undoubtedly that, OS Economy’s only be considered with reducing of lost by resulted by work accidents.

Keywords: Recycling, Education of OHS, Method of 4M4E, 4E, Economy of OHS
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Safety culture can be defined that continuity of health and safety issues at community level is ensured for lifetime by people protecting and developing their health, and paying attention of their safety. In working life, human factor is inevitable to take into account. Recent research shows that almost 90% of work-related accidents are caused by unsafe acts of employees. According to Occupational Health and Safety Law which came into force in 2012, a proactive approach has been adopted by making all employees obligatory to receive basic occupational health and safety (OHS) training. Including public employees in the scope of Law is one of the most significant changes introduced by Law. Thus, educational institutions aiming to train qualified manpower the prerequisite for social progress and development are taken under the roof of OHS. Higher education institutions providing vocational training have the biggest role in preparing individuals to work life within education system. It is essential that these institutions have a strong awareness of OHS in order to transfer acquired knowledge and experience in safety culture effectively from educators to students. Purpose of this paper is to investigate the level of knowledge of higher education institutions about creation of healthy and safe working environment and prevention of accidents and occupational diseases, and also to increase level of awareness in these institutions establishing safety culture. In this study, a questionnaire is conducted among academic members lecturing in Faculty of Architecture, Engineering, Arts and Science, and Vocational High School of state universities in Ankara. According to the questionnaire results, although approximately 90% of respondents have owned conscious of safety culture, awareness of law and related regulations level (30%), and also level of transferring their knowledge to students (50%) are found to be low. Accordingly, to raise awareness, necessity of various studies has emerged.

Keywords: safety culture, public institutions, higher education, 6331
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The nature of mining processes creates a potential negative impact on workers both during the mining operations and for years after the mine is closed. Mining ventilation is a significant safety concern for many miners. Poor ventilation of the mines causes exposure to harmful gases, heat and dust inside sub-surface mines, which can cause injury, illness and death. The concentration of methane and other airborne contaminants underground can generally be controlled by dilution (ventilation), capture before entering the host air stream (methane drainage), or isolation (seals and stoppings). Rock dusts, including coal dust and silicon dust can cause long-term lung problems, including silicosis, asbestosis and pneumoconiosis (also known as miners lung or black lung disease). A ventilation system is set up to force a stream of air through the working areas of the mine. The air circulation necessary for the effective ventilation of a mine is generated by one or more large mine fans, usually located above ground. Air flows in one direction only, making circuits through the mine such that each main work area constantly receives a supply of fresh air. Watering down in coal mines also helps to keep dust levels down: by spraying the machine with water and filtering the dust-laden water with a scrubber fan, miners can successfully trap the dust.

Keywords: mining, dust, ventilation
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“Work Related Musculoskeletal Disorders” (WMSDs) are very important health problems in industrialized countries. WMSDs can often be eliminated with cheap and simple measures. Risk assessment is a new concept in occupational health and safety area in our country and it is an approach stipulating participation and information of the workers and grounding on the determination of unsafe working conditions, analysing and grading the risks arising from the hazards and carrying out studies for the purpose of determining the control measures, rather than the approach concerning the secondary protection and indemnification of the adverse event occurred.

Here, ergonomic risks of the packaging operations carried out by women and men working at a risky workplace in three shift system, as obtained with Quick Exposure Checklist (QEC) are presented.

With sectional research, data was collected at product packaging departments of EvyapSabun, Yağ, GliserinSanayive Ticaret A.Ş. Tuzla/Istanbul during February 2013-September 2013 by using a questionnaire (5 sections, 41 questions) and QEC scale (2 section, 12 questions). A scoring table is obtained from QEC scale and the exposure level is assessed as low, medium and high.

Five different duties, which are carried out frequently by all employees alternately and six observations are made on each of them on gender basis.

Sampling was not selected, it was planned to reach all employee and response rate of 98% (160/164) was reached.

More than half of the employees participating in the research are women; while most of them are in 25-29 age group, most of the men are in 30-34 age group. More than half of the employees had been working in the same workplace for more than 5 years and men had been working longer than women.

1 out of every 3 person was perceiving the mental load of the work as “heavy”. 16,2 % of the equipment used by women and 26,2% of the equipment used by men were height-adjustable (p=0,179).

86,9% of women and 90,2% of men had worked at night during the one month.

In our research, it was detected that the body part, where the musculoskeletal disorders were seen the most, were neck, waist and shoulder. One out of every two women and one out of every four men declared neck pain during the previous week. “Waist pain” was the musculoskeletal disorder that men employees experienced most. In our research, the pain frequency of the wrist is lower than the others.

Keywords: Ergonomic Risk Assessment, Quick Exposure Checklist (QEC), Work-related Musculoskeletal Disorders (WMSD), Health Supervision in the Workplace

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The aim of this descriptive study is to evaluate the characteristics of work and current health condition of the teachers’ who work at the schools in the city center which are affiliated to Zonguldak Provincial Directorate for National Education. The sample size to represent the total number of 2212 teachers was calculated to be 783. Simple random sampling was used. The data of this survey, of which accessibility was 84.0 % (n:658), was collected via the self-administered questionnaire prepared by the researcher. While 54% of the teachers included in the study was female, 83% had been graduated from university. Among 658 teachers, 93.9% worked as permanent staff, while 6.1% were contracted. 23.4% was found to be frequently working overtime and 4.7% had extra jobs. The mean working hours of the teachers were 34.0±10.9. 39.4% of teachers had at least one disease diagnosed by a doctor. While otolaryngologic diseases were most frequent (15.8%), gastrointestinal diseases had a frequency of 13.7%. The three most frequent health complaints were backache (%15.0), headache (% 14.9) and sore throat (%13.7). 17% of the teachers were using medicine on regular basis. Being a role model and having the ability to reach to whole community, the teachers have a key status for health promotion and prevention. Considering their potential of reflecting their knowledge and perceptions to the community, it is essential to integrate the health of teachers into school health services or cover them in occupational health services. With the new legislation, Community health center (CHC) based occupational health services can be carried out with the support of occupational health nurses.

Keywords: Teacher, Health Status, Occupational Health, Working Conditions

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Despite of the scarcity of data on the real magnitude of occupational cancer, estimated percentage of cancer cases related to occupational exposures to carcinogens changes from 4 to 20%. Research on occupational cancers is important for cancer prevention and health of the population. Only a negligible fraction of occupational cancers are identified, not only due to long disease latency and multiplicity of causes, but also because occupational histories are almost never taken from cancer patients. Even for cancers potentially of occupational origin (e.g. bladder or lung cancer), treating physicians generally are not-tuned in to occupational causes of cancer even in developed countries. Cancer registration is the process of continual, systematic collection of data on the occurrence and characteristics of cancers with the purpose of helping to assess and control the impact of cancer on the community. Population based cancer registries covered only 21% of the world population. The percentages of the population covered by cancer registries that produce high quality data vary greatly across regions, with developing countries having less favorable situation. Even in developed countries, collection of Industry and Occupation (I/O) Data by the registries is exceptional. Because of difficulties in proving causation, multicausality and the long lag time between occupational exposure and cancer, estimating the magnitude of the problem of occupational cancer is challenging. Integration of I/O data with health information systems (HIS) would bring out an opportunity to estimate cancer burden by industry and occupation, and focus on high risk areas to carry out further research to delineate possible causative relationships. Such an integration would also help seeing time-trends and relations between I/O and cancer in long term follow-up of individuals after retirement.

Keywords: Industry and occupation codes, cancer registry, occupational cancers
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The aim of this descriptive study is to evaluate the reflections of social gender role attitudes of resident doctors in a university hospital on gender perception in work life. The target population of the study consists of 159 resident doctors working in a university hospital. All of the residents were included, but 128 people (80.5%) accepted to participate. Variables of the study were socio-demographic characteristics, "Social Gender Roles Attitude Scale" (SGRAS) developed by Zeyneloğlu and answers to statements related to perception of social gender roles in work life. 45.3% of the participants were female and 54.7% were male. While 52% of the residents worked in departments of medical sciences, 38.4% worked in departments of surgical sciences and 9.6% worked in departments of basic sciences. When Agreement to the statement of "Gender does not affect choices in work life" was higher in female and the difference between female and male subjects was significant. When sub-dimensions of perception of social gender roles in work life and sub-dimensions of SGRAS were evaluated, there was a moderate positive correlation between the perception of "Utilization of job opportunities is free of gender" and "Equitable gender role" (r=0.491 p=0.000). While there was a moderate negative correlation between the perception of "males are more favored in the working unit" and "Equitable gender role" (r=-0.419 p=0.000), there was a moderate positive correlation between the perception of "Males are more favored in the working unit" and "Gender role in marriage" (r=0.526 p=0.000). The reflections of social gender role perceptions to gender perceptions in work life has been investigated in this study. Awareness in this regard and improving social gender role behaviours with educations would be expected to support improvements in unfavorable conditions related to gender in work life.

Keywords: Social Gender, Work Life, Status of Woman, Social Gender and Attitudes, Social Gender Equality

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Working life quality is a psychosocial factor affecting the health of the employee and a basic determinant for the efficiency of working life. It is known to be a significant factor for nurses, having direct and indirect effects for giving highly qualified patient care during health services. Identifying the factors affecting working life quality of nurses and eliminating the unfavorable components will improve both work organization and the efficiency at workplace. The aim of this cross-sectional study was to determine the level of working life quality of nurses working in a university hospital. The population of the research consists of 161 nurses working in ZKU Uygulama ve Araştırma Hastanesi. Questionnaire form prepared in accordance to working life characteristics and socio-demographic variables was applied; additionally, working life quality scale for the health workers was also implemented. 142 (88.20) nurses were reached in total, including 96 working in daytime period and in services and 46 working by shifts in intensive care unit. The mean age of nurses was 29.22 ± 3.32. The mean score of their working life quality was 79.54 ± 15.65. When working life properties were examined, working life quality between groups was found to be different. The mean score of the working life quality of nurses working in daytime period was 80.44 ± 15.00 and the mean score of the working life quality of nurses working by shifts in intensive care unit was 77.61 ± 16.98. Mean score of the working life quality of nurses working overtime (76.59±14.41), was also lower than those not working overtime (81.86±16.38), (p=0.042).

Keywords: occupational health, health of health worker, working life quality, nursing, shift work

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International comparability of statistics requires classification and coding systems that have unified criteria. International Classification of Diseases Tenth version (ICD-10) and International Standard Classification of Occupations-2008 (ISCO-08) are two of the widely used classification schemes in the area of occupational health. Turkish Statistical Institute (TurkStat) has gathered data by using these two systems. ICD-10 has been used by Ministry of Health (MoH) of Turkey. ISCO has been mainly used by Ministry of Labour as well as NACE codes for sector hazard groups classification. In this abstract we propose integrated usage of the occupational and sector codes in health information systems (HIS). HIS records have critical importance owing to their contributions to priority settings via the transformation of collected data to functional knowledge. A functional information system provides appropriate hazard classification and occupational health service planning that are based on objective data. Integration of occupational health services with primary health care creates an important opportunity to overcome the deficiency in determination and diagnosis of occupational diseases in Turkey. MoH of Turkey declared a resolution in 13th June 2011, in which it has obliged all family physicians, State and Education and Research Hospitals to use an integrated “Patient-Record–System” that enable to warn the physician for a possible occupational disease diagnosis via a correspondence between ICD and ISCO codes. Although this leads to a great development in occupational health recording, we claim that it could be more effective to relate this data with the ISIC (International Standards of Industrial Classification)/NACE sector codes. By doing this it would be possible to plan and develop sector specific protective/preventive measures and to detect case clusters and disease burden and to capture new occupation-health relations. Integration of ISIC/NACE sector codes with the ICD and ISCO codes will provide the opportunity of estimating the risks in occupational environment via job-exposure matrix analyses.

Keywords: Industry and occupation coding system, health information system, occupational disease
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The development of private security sector in the world, varies depending on political, legal and cultural structures of every country. In Turkey, there has been a rapid increase in private security services since 2004. According to the report published by (CoESS), Turkey has the biggest private security system. Private security organizations were first seen in some institutions and organizations with the law no:2495 in 1981. In 2004, it was generalized with the law no:5188 about private security services. In accordance with this law, private security sector has improved rapidly.

Security sector in Turkey includes a lot of risks in terms of occupational health and safety. It can be said that psychosocial risks that are created by low wages and deficiency of job guarantees have the priority. Because the demand for security services is seen as a low-priced service. It is possible to evaluate the risks in three general categories. These are the risks resulting from the overall situation, specific risks related to security activities and risk factors related to the workplace. Some of the specific risks related to security activities are harassment and violence at work, risk factors related to business organization, risks related to workload, psychosocial workload, risks related to female staff etc. Prevention of occupational risks in private security sector has three sides as the company, security personnel and the institution. Therefore amendments on occupational health and security need an action on three levels. In our research, risks related to occupational health and security that are encountered by security personnel and managers in private security companies are evaluated by surveys and interviews and measures to minimize the risks are emphasized.

Keywords: Occupational health and safety, private security services, risk factors, prevention of risk
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Antalya FreeZone Yacht Workers' demographic characteristics. 8-year breakdown of these records will be submitted in the form of graphs. Age, gender, medical history, family history, smoking and alcohol use on the characteristics of workers in the region. Posters in the primary records for presentation as a resource for companies and individuals without names have been used.

Keywords: Worker, age, demographic characteristics

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Sickness absence (SA) defined as ‘an individual’s lack of physical presence at work place due to health related problems. SA is influenced by demographics characteristics, job-related factors. Objective of this cross-sectional study was to examine the relationships between demographics characteristics and job-related factors and SA.

Of four companies, 566 persons completed questionnaires. Selected demographic variables included age, gender, marital status, education level, income, number of children, body mass index, smoking, alcohol consumption, presence of diseases, family demands. Work-related factors measured included job, the length of employment, working hours, social support at work, exposure to hazards, working environment, job satisfaction, night and shift working. The absenteeism measured a question, “In the past month, did you miss an entire work day due to health problems?” Multiple logistic regression analyses were conducted to examine associations between individual work-related factors and SA.

The age of participant ranged from 18 to 60 years (35.74±8.33). Of them, 79.6% were men, and 28.3% had high school degree or higher. Among the participants 10.2% of workers (men = 9.6% and women =13.0%) missed at least a working day due to health problems past months. A history of chronic disease (OR 2,464 (95% CI 1,452-4,181)) and family-members care responsibilities (OR 1.99 (95% CI 1.03-3.82)) was associated with SA. There was relationship between SA and the satisfaction with work place (OR 1,438 (95% CI 1,069-1,936)). However other work related factors and demographic characteristics were not associated with SA.

Low job satisfaction, the presence of chronic diseases and family demands were risk factors for SA in this study. Companies should supported workers with chronic disease and high family demands by establishing employee-friendly workplace culture.

Keywords: Sickness absenteeism, Health problems
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ABSTRACT: In recent years, increasing workplace accidents and occupational diseases that arise leads us to look closer to their work environment to prevent the concept of health and safety at work. Past production, product and productivity-oriented working life now replaced by employee-oriented work. Work safety, peace in mind, happiness and full health state are being studied to guarantee by the State with the laws enacted such as mobbing, safety and health at work. Unwanted and annoying sound can be described as noise may cause in short and long term psychological problems, temporary or permanent hearing loss as well as many other diseases. Employees must work close to the machines in furniture workshops where cutting, piercing and use of high-speed machines are intensive. For this reason, employees' exposure to noise from machines is highly likely. In this study, the noise measurements have been made at the department of Furniture and Decoration of Çanakkale Onsekiz Mart University, Vocational School of Technical Sciences. The results obtained were evaluated according to the relevant legislations. At the source of the problem, research has been done for the solution and the findings were summarized.

Keywords: Furniture workshops, wood working machines, noise exposure, ergonomics, occupational health and safety
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Changing and developing environment of working life has brought mankind facing new health risks and the importance of the country's development level in the health sector increased in time. Health which is one of the main components of human capital is one of the main components of the health workforce and therefore affect productivity. Occupational health remains neglected in least developed countries and developing countries because of social, economic, and political reasons. According to data from the World Economic Forum considering lost workday, health emerges as an important factor. The main focus of this article is to deal with the occupational health as one of the primary concerns of development economics. In this article, after studying development, globalization and occupational health the effects of development and globalization on working life and worker health specified. Finally, the article focuses on the importance of health investment to have honorable working environment for everyone.

Keywords: Health, occupational health, development, globalization, economy
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Besides being a social element for people who need to maintain their lives, work affects people’s health and lives in the context of physical, psychological, social and financial factors. According to International Labour Organisation, occupational health is the study of developing, maintaining and protecting physical, psychological and social well-being for all workers. Policy, practice and culture of occupational health and safety is one of the main elements of working life and a field which is becoming increasingly significant for all countries in the world. In recent years, as a consequence of enhancing the effectiveness of Occupational Health and Safety (OHS), there is a considerable decline in occupational accidents at country-wide level. Nevertheless, when compared to developed countries, it is a fact that Turkey lags behind in decline of occupational accidents. In every year, as a result of occupational accidents, approximately 4000 employees become disabled and 1500 people lose their lives. According to the statistics of Social Security Institution (SGK), 74,871 occupational accidents of 2012 were consisting of 5,781 female and 69,090 male workers. 2,036 of those accidents resulted in incapacity to work, 744 of them resulted in death. Mining, textile and construction industries are leading in the context of occupational accidents. Coal and lignite extraction had the highest number of occupational accidents with 8,828. In addition, occupational accidents and diseases annually engender approximately 50 billion loss of GDP. It is vital to make a good analysis and obtain result in order to conduct a proper research. We intend to examine the data of Statistical Institute of Turkey and Social Security Institution in terms of industry, gender and age group as well as recommendations within the scope of current practices.

Keywords: Occupational accidents, social security, Occupational Health
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Although there are many factors in the occurrence of occupational accidents, which has a complex structure, research has shown that 88% of work-related accidents occur from dangerous behavior. This shows that a significant proportion of work accidents dependent on human error. Thus, the human factors of occupational health and safety have been begun to focus more and more on. At this point in 1986, after the Chernobyl disaster occurred, "poor safety culture" had taken place in the accident investigation report. The occurrence of accidents has as well as deficiencies or errors in the various techniques especially, safety awareness among employees has created a trigger major factor. From this date, at the point of the prevention of occupational accidents, began to highlights on safety culture. In general, the culture of a society is characterized as lifestyle and composed of elements knowledge, beliefs, traditions, customs, art, morals, tools, equipment, technical and other tangible and intangible, refers to a complex of whole. For members of the community culture, also consists of guiding the basic acceptance and value. In addition to the general culture, the community has several sub-cultures. Especially in the working life, giving a distinct identity to the members of the organization, helps connect the organization as well as to provide internal variables that are shared by members of the organization; the organizational culture serves a very important function in working life. In recent years, though limited in Turkey "safety culture" has become the topics of studies. This study aims to contribute to the existing literature in Turkey through a literature review. Safety culture is revealed by literature review at the point of the importance of prevention of work accidents in Turkey.
This project, in agriculture, with the respect of risk assessment of occupational health and safety, and in order to enable the preventive and protective approach was carried out by the staff of the Occupational Health and Safety Institute (ISGUM) on 26th April, 2012 – 5th May, 2012 in Adana and Şanlıurfa provinces.

Methodology;
In five workplaces operating in agricultural sector in Adana and Şanlıurfa provinces, that are selected as pilot areas, health screening within the scope of health surveillance pulmonary function tests, postero-anterior chest radiographs, and laboratory tests of employee were performed by means of mobile occupational health screening vehicles of ISGUM, questioning either medical and work history or occupational health and safety knowledge and awareness of employee were performed through occupational health questionnaires and history forms, besides risk assessments and environment measurements were made.

Conclusion;
In the framework of this study, questionnaires were applied to 221 employees of determined three workplaces in Şanlıurfa province, medical histories were taken, and pulmonary function tests were performed. Participants stated that 20.3% of them had pre-employment screening, however, 2.1% of them had regular periodic medical examinations. The pathological findings were identified in 6.7% of 210 employees to whom pulmonary function tests were performed. Evaluation of responses to the questions about the basic occupational health and safety training showed that 18% of employees were taken occupational health and safety training previously, and 82% of them didn’t take any training.

Hemoglobin(Hb) and hematocrit(Hct) values of 216 employees were analyzed. The average of Hb and Hct values were identified as 12.43±1.79 and 35.61±4.17. The group with lowest average values of Hb(10,85±2.39) and Hct(32,44±5,55) were identified in illiterate. Comparison of the workplaces according to Hb and Hct means showed that the group with lowest average values of Hb(11,82±1,74) and Hct(34,37±3,80) were detected in greenhouse workplaces.

Keywords: Agriculture, occupational health, worker health
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Mining is known as the beginning of all industrial processes. When mining is examined from occupational health and safety point of view it also show up that this sector is also should be counted as pioneer of occupational health and safety.

Objectives

- Examination of mining sector from occupational health and safety point of view and count down the main problems that are faced by the miners during the operations.
- Describing the legislative approach to mining sector before the enactment of the occupational health and safety law and specify the missing points.
- State the new legislation frame work and the innovations come with the new law and implementing regulations.

Methods:
Although the knowledge about mining and health and safety precautions are quite high in Turkey, to statistical date on occupational accidents and diseases show that there is a long way to be taken for better and safe working conditions. New Law and the EU directive based implementing regulation can be shown as a huge steep in this path. The effect of Law and the implementing regulation also discussed and the acquirements are classified from the origin of related legislation.

Results:
Mining sector is very important for all of the industrial processes and occupational health and safety starts with it. In Turkey this sector is still preserves it importance. With the new legislation, health and safety level of the sector is started to increase with new provisions and labor peace is more valid between the employees and employers.

Conclusion
Although there is huge way that should be travelled, new occupational health and safety legislation approach on mining sector take a long step for better conditions and demonstrate it’s come up in a sort time in a safe manner.
Istanbul’s primary school canteens prepared and presented for consumption of food microbial load. What is determined that these canteens fed children and workers microbial food poisoning risks of occupational health and safety evaluated were aimed. Check-in: the nutritional needs of employees and students in the school canteen, cafeteria, buffet, tea bushes and so on. meets from such places. Therefore, these businesses within the school prepared and presented in how much of the food is healthy should be investigated. Of the persons involved in food preparation and awareness of students and in time be subject to various training programs are needed.

Materials and Methods: In this study five different districts in Istanbul took place in the elementary school. It belongs to the school canteen, buffet, etc. taken from a total of 100 different foods taken place, all the individual components of each food was studied and pathogenic microorganisms which cause food poisoning were investigated for. Our study Microbiology Laboratory of the Institute of Forensic Medicine at Istanbul University and published in the Official Gazette No. 27133 dated 06.02.2009 Microbiological Criteria Turkish Food Codex Communiqué was carried out in accordance with regulations.

Results: In the present study, No. 1 elementary school 50% of the number 2 elementary schools, 25% , 3 number of elementary schools , 50% , 4 The primary school of 75% and 5 th primary school canteen food produced 50% of CPC based on the results of the microbiological analysis was found to comply with the Turkish Food Codex.

Discussion: Analysis of the 100 food samples, analyzed in terms of the microorganisms that cause food poisoning, and has been interpreted in the context of forensic science. In primary school canteens in Istanbul who had consumed food where there is a variety of pathogenic bacteria and their existing regulations were found to be above the desired value. This case, we need to take care of the canteen operators to show that personal and environmental hygiene, especially in terms of occupational health and safety has been suggested, canteen controls showed once again how important that is. Failure to take the necessary measures and controls poses both risks and crime.

Conclusion: Our goal is healthy food, healthy food served in the canteen of particular occupational health and safety is so important in terms of what to do, think that such biological studies show.

Keywords: Occupational Health and Safety, School Canteens, Biological risk factors
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Forensic science jobs in the health and safety of employees is important and how it is necessary to investigate the effect size. Evaluation of evidence found at the scene and sent to the laboratory in the process of biological, physical and chemical risk factors is very important. Research forensic microbiology; biological terrorism, biological crimes, postmortem investigations, food poisoning and employees are used to the risk of infection. Microorganisms or toxins, chemicals, radioactive substances Even small amounts can lead to the death of many people. Diagnosis and treatment of these factors are difficult, time, and causes significant economic loss. Heat, weather conditions and topographical structure, properties, are able to change the degree of influence and control of the effects is also difficult to predict. In addition, forensic sciences with a corpse on postmortem studies different stages of carrying out the crime scene investigation team, forensic experts and autopsy technicians and toxicology, genetics, microbiology laboratory staff body fluids, soft tissue and bone in direct contact with meat because of infection are at risk. Microorganisms that pose a risk on the body how long they stay alive, while the impact on the viability of environmental conditions, the impact of toxic and radioactive substances in body fluids also know it is important for the prevention of infection by autopsy room. Some microorganisms physical or chemical decontamination methods and high heat resistance, the formalin-flick was waxy samples at risk of infection due to the factors and prevention methods knowledgeable and to be sensitive, in each case the potential high risk of infection with the idea of measures of occupational health and safety terms, vital importance. Acceptable level of risk, exposure action and limit values should be considered in this context. However, animals, plants, food, forensic units well known to pathogens and toxins, and are essential for the public health. Environment (secure environment), in short living activities of individuals in a sanitary manner to meet the environment as well as expressed in physical, chemical, microbial, irradiation, genetic manipulation, psychological and so on. should be well away from danger. Given all of these features, and at the same time having enough information gathering evidence of such practices should be trained experts who have come to the fore.

Keywords: Forensic science, occupational health and safety, risk factors
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Working life quality is a psychosocial factor affecting the health of the employee and a basic determinant for the efficiency of working life. It is known to be a significant factor for nurses, having direct and indirect effects for giving highly qualified patient care during health services. Identifying the factors affecting working life quality of nurses and eliminating the unfavorable components will improve both work organization and the efficiency at workplace.

The aim of this cross-sectional study was to determine the level of working life quality of nurses working in a university hospital. The population of the research consists of 161 nurses working in Zonguldak Karaelmas University (ZKU) Application and Research Hospital. Questionnaire form prepared in accordance to working life characteristics and socio-demographic variables was applied; additionally, working life quality scale for the health workers was also implemented. 142 (%88.20) nurses were reached in total, including 96 working in daytime period and in services and 46 working by shifts in intensive care unit. The mean age of nurses was 29.22 ± 3.32. The mean score of their working life quality was 79.54 ± 15.65. When working life properties were examined, working life quality between groups was found to be different. The mean score of the working life quality of nurses working in daytime period was 80.44 ± 15.00 and the mean score of the working life quality of nurses working by shifts in intensive care unit was 77.61 ± 16.98. Mean score of the working life quality of nurses working overtime (76.59±14.41), was also lower than those not working overtime (81.86±16.38), (p= 0.042).

Keywords: occupational health, health of health worker, working life quality, nursing, shift work
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There are six organized industrial zones in Bilecik. 60% of the working class works in these organized industrial zones. In our district, there are public and private laboratories, agencies and institutes which can make measurement, do testing and analyzing about the physical, chemical and biological factors in working conditions or personal exposure in working conditions within the scope of occupational health and safety. In this study, a feasibility study about founding a test (testing) laboratory and about the necessities and cost analysis of operating a test laboratory is done. After these evaluations, it is found appropriate to found a test laboratory in this district.

Keywords: Labour Hygiene Laboratories, the feasibility study of labour hygiene in Bilecik.
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Asbestos or amiat, resist heat, abrasion and chemicals, is a carcicogenic mineral that has fibrous structure. It is known as terra alba, hard soil etc. Asbestos, natural silicate mineral, has used in ancient times due to being a good isolating material. Archaeological studies demonstrate that asbestos usage started 2500 years before. Asbestos has more than 3000 usage area including especially ship building, aircraft and automotive industry as lubricant and seal, building trade as thermal and sound insulation. Breathing asbestos fibres cause malignant disease like lung cancer. But this illness does not occur immediately, it occurs after 10-20 years.

Old buildings' covering of ceiling, insulating materials, roof paneling and base slab, drain pipes, brick and tile, roofing materials include asbestos and it is risk for urban renewal. Because of urban renewal, many asbestos materials will come out. Not to damage human health, building demolition must be done by asbestos disassembly worker with asbestos disassembly expert.

Keywords: Asbestos, human and environment health
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Parallel to the industrialization, taking occupational health and safety measures has emerged as an important problem that needs to be solved. Safeguarding the employees’ health and safety is one of the main obligations of the employers under the duty of care protecting employees. Employer must safeguard the employee’s life, health and bodily integrity against workplace hazards. According to the statistics of the Social Security Institution, it has been observed that there is a decrease in workplace accident amounts. In this study, the concept of work accident will be defined and the way of determining a situation as a work accident will be analysed within the context of the Social Security Institution applications. Then the consequences of work accident shall be referred in Labour and Social Security Law. During considering of this subject, all of the Social Security Institution circulars and applications will be examined mainly and in the context of the Turkish Obligations Code hazardous occupation and pecuniary damages and damages for mental anguish arising by work accident will be discussed within the framework of Supreme Court decisions.

Keywords: Work Accident in Labour Law and Social Security Applications
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Used in metal processing, water-miscible (water-oil concentration of on average %5) cooling fluids lubrication, cooling and corrosion protection tasks such as chips are removed from the workspace surface. Cooling liquid is provided present in the metal-working machines with a tank or a plurality of metal working machines in work places with a central cooling and filtration (Hydromation) of system. Central cooling liquid system of in cooling liquid is input-output each workbench. Output from the workbench when cooling liquid, metal chips, dust, etc. carrying particles to the central system and again filtered and the cooled liquid loop, help of a pump is included. Central cooling systems harmful to human health; bacteria, skin irritation, bad smell and vapor density the risk of formation, the workbench are more than the existing tanks. In this study, the center of Hydromation coolant has been investigated the negative effects on human health.

Keywords: Coolant, Central Cooling System, Human Health
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Protective clothes are Personal Protective Equipments that protect workers against heat, splashes of chemicals, mechanical risks and hazardous chemicals. The aim of this study is to give basic information about protective clothes and then determine the selection criteria.

Keywords: Personal Protective Equipment, Protective Clothes
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If we are to consider in the historical process, the first emergence of occupational health and safety dates back to the beginning years of the industrial revolution. The presence of workers in the agricultural sector is well known before the industrial revolution yet it is possible to say that the concept of occupational health and safety was born after the industrial revolution. However, the service sector which has different working methods and conditions from industrial sector is nowadays increasing rapidly. The tourism sector is not only one of the most important service sectors, but it has also become at the top of the important sectors for the economies of the countries by developing all over the world day by day. While the international tourism market is growing, the competition between tourist attracting countries to get the biggest share of the market is gradually increasing in the tourism sector which is also one of the world’s fastest growing sectors. In Turkey the number of the employed people has almost reached to 1.7 million in the tourism sector which is widely accepted as an important part of the service sector with its contribution to the national income and promotion of the country. The fact that the jobs carried out in tourism sector do not require high skill and education level makes it easier for the gates of the business life to be opened for many people. When the general features of tourism are viewed, it can be clearly seen that working in holiday periods and summer months when the seasonal workload is at the highest level, working in the unusual hours like weekends or nights when not overall the workforces are at work and finally working without insurance and guaranty reveal various business interests resulting from carrying out quite different jobs. For these reasons, the tourism industry should be taken into consideration in terms of occupational accidents and diseases. In our country, the numbers of occupational accidents and diseases in service sector are much lower than the industrial sector. However, the high psychosocial and ergonomic risks, working conditions, labor force structure and increasing employment has turned the service sector, a rapidly growing industry, into a newly important center in terms of occupational health and safety studies. Along with the increase in tourism enterprises, employment and competition, the employees in this sector will face several risk factors. For these reasons, the tourism industry should be taken into consideration in terms of occupational accidents and diseases.

Keywords: Occupational health and safety, tourism, service sector
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Being a multi-discipline branch, occupational health and safety services is an obligation which should be maintained in the by a competent team. Within the team, especially the occupational safety experts have great responsibilities in terms of dropping the occupational accidents to acceptable levels. The grounds for the success of the expert, who has a lot of duties such as creating a safe working environment in businesses, taking preventive precautions, decreasing the costs of occupational accidents; accordingly the accidents generally and raising awareness among the employees in terms of occupational safety, will be set with the training s/he has received. The expertise trainings are carried out by the public institutions and organizations authorized by the ministry, the universities or private education institutions. In accordance with the legislation in force, the "expertise" includes engineers, architects, technical instructors, physicists, chemists, individuals with biologist title and the graduates of occupational health and safety departments of vocational schools (VC). Gaining a great momentum with the Occupational Health and Safety law, the need for the occupational experts caused a quick increase in the occupational health and safety programmes in the universities and the training institutions authorized by the ministry operating in this field. According to ÖSYM (Student Selection and Placement Center), there are occupational health and safety programmes in 43 different universities with formal, evening and/or distant education, total quota of which are 3,491. In addition, 4 universities started bachelor's degree teaching in occupational health and safety and the quota is 420. With this work, the course topics and contents of the VC Occupational Health and Safety Programmes were compared with the Basic Training Programme for Occupational Safety Expertise; missing points were identified for both parties and suggestions were made.
All of the auto mechanics workshops operating in Develi industrial Region were visited between December 1st - 14th, 2013; the employees were spoken in person and the dangerous situations and behaviours were identified through observing the working environment. Different businesses carrying out auto painting, glass montage, auto electricity, engine mechanics, auto chassis, body shell mechanics, auto tires and auto upholstery within auto mechanics concept were individually interviewed. It was found out that the education levels of the workers employed in small businesses are low; that the number of employees with vocational education was very low and that they had started working in childhood and learned the work in time. The working periods are not consistent. The health examinations of the employees have not been carried out. In addition, the thermal comfort conditions are quite inadequate and it is necessary to work outside especially during winter. The personal protective equipment of the employees are limited with gloves, most of which are not made for purpose and the protective equipment like glass and mask are past their expiration dates. Along with the fact that the employees do not have work outfit, there are no dressing cabinets for the employees. The only precaution against the fire in the businesses is merely the fire-extinguishers. The risk for occupational diseases for those working in businesses especially doing car painting is very high due to the fact that the air-conditioning is inadequate; that no personal protective equipment is used and that the dangers concerning the chemicals such as lining, paint, solvent are not identified. The aim of this study was to reveal the problems, to develop solutions and to draw the attention of both the employees and the experts to provide services in the field

Keywords: Small businesses, Occupational Safety
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Haddon matrix is a conceptual framework used to analyze injury mechanisms. It is used for improving effective intervention strategies as well. The articles of the law of occupational health and safety enforced on 30 June 2012 were evaluated and distributed within the cells of the Haddon matrix by 4 independent raters (A,B,C,D). The Haddon matrix originally flexible in form is reshaped in accordance with the idea of the study. The aim of the study was to determine the phase (pre-accident, accident or post-accident) that the law focuses on and emphases by objective evaluations. Besides, another objective was to make recommendations to strengthen the weak points of the law if there are any. The articles were rather collected at the pre accident phase especially in the human factor cell. The employer is emphasized the human factor and government is emphasized in the environment factor. The fact that the articles were concentrated in the pre-accident phase supports the pro-active approach claim of the law. The cells that do not contain more than a few articles are either regulated by sub-legislations or are not taken into consideration (socio-cultural factors, working environment) on purpose in the law. The comparison of the results obtained by the raters for inter-rater reliability by interactive 2 way random effects model (Model ICC 2,1 ANOVA) gave a correlation coefficient of r 0,98 with a confidence interval of 95%. This result shows that the results of 4 raters were consistent.
Occupational health and safety; workplace, job execution due to the hazards and conditions that may harm the health, freed yapıaln to provide a better working environment can be defined as systematic studies.

In terms of occupational health and safety to be successful, be strong safety culture and common values of this culture as business needs assessments.

In all countries, as well as (Germany, Japan and France (99%)) in Turkey all businesses 99.5%, constituting all employment 61.1%, covering all investment 56.5% providing all production 50% and are SMEs make up 38% of all value added. (source: kosgeb)

ILO / WHO Joint Committee on Occupational Health summarizes the goals of the work in occupational health insane, people have been declared as be adapted to work.

At that time we; occupational health and culture attaché to man and man’s work as a business process harmonization of Turkey's economy 99.5% of the facilities have to start forming this street. Let's not forget Turkey's total employment 61.1% than judges and lacked training in this sector if we succeed in occupational health and safety culture to reduce to acceptable levels the risk is will succeed.

Keywords: sme, OHS culture
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Title: The Importance Of Dust Suppression Systems In Stone Mining And Developing A System Of Dust Reduction Using Negative Ion Technology

One of the biggest problems of the mining sector, threatening human health in many ways via mingling into the air about small particles of mine while gathering a mine, allocating large pieces into smaller pieces or similar processes realized. According to information in the literature, dusts reduce visibility in the work environment, Irritating to eyes, psychologically affected and reduces the efficiency employees working underground. May damage to tools, equipment and machines. Some dusts demonstrate are explosive character when mixed with air, Some of them toxic, carcinogen and even radioactive. Additionally dusts of various sorts causes lung diseases when inhaled in sufficient quantities and at certain times. In our country every day for the increased production and become a major health threat in the stone mines located get stone chips with stone breaking according to the data of breaker and screening machine average of 100 tons per hour each stone breaking machine, releasing into the air is at least 1 kg of dust per hour. 100 micron and smaller and even in places with nanoscale particles of rock dust accumulate in the alveoli of the lungs and after a while the formation of scar tissue in the lungs that may occur fibrosis disease. Affecting the blood with the transport of oxygen from the lungs and forming in the body of various dysfunctions are creates pneumoconiosis diseases. To take precautions against to dust occurring from stone mining can prevent the release of the dust with pulverized water or a suction compressor. Additionally, with negative ion technology are often used in enclosed spaces, dusts can be collected at specific points with certain locations creating magnetic fields although run acrossed in this sector. For scientific research in this issue, OHS issues should be included in the priority research areas by our country.

Keywords: Dust Suppression Systems, Negative Ion Technology, Dust Protection
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**Title:** Evaluation Of Risk Analysis At The Three Textile Managements: An Example Of Gaziantep

**Aim:** Getting somebody to do a risk evaluation at work offices is both necessary legally and it’s very important as far as the future of that work office and that county is concerned. This study was made to compare the risk analysis results at three textile managements having the same danger.

**Material-Method:** The data of the study have been gotten by examining the risk analysis enlistment of health and security at work made by a work security expert in March 2013 at the three textile managements in the centre of Gaziantep belonging to the private sector. A risk evaluation has been made at the three work offices by the help of “L Type Matris Analysis Method”. The data registered at excel program have been evaluated at the same program. Our survey is a registration study of defining type.

**Findings-Discuss:** In the occupational health and safety risk analysis made at the three textile managements in the city centre, high risk has been seen as far as the orders, education and warning tables are concerned; medium risk has been seen as far as first-aid, the electric installation, the periodic measurements, the health check-ups of the workers, fire system, personal protective system and environmental factors are concerned; low risk has been seen as far as the hygiene rules, stress-mobbing the physical insufficiency of the work offices and the danger factor (out of the managements) are concerned. It is emphasized that all of workers have been affected because of the danger situation and the owners of the managements are responsible for it. They have been given three months. It’s also emphasized that the risks can be reduced or can be completely left by doing the necessary changes and such studies will help to set the occupational health and safety plans of these managements for their future years.

**Keywords:** occupational health and safety, risk analysis, textile

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Many studies have been done in different scientifically scopes on the causes and results of rural migration in Turkey. It is known to be come to a conclusion in the form of the vary economics and social factors of the rural migration. At direction of the common conclusion, it is drawn extensively a conclusion that is emanated from repulsive origins in the rural of the rural migration. At the one of the common repulsive is reality to miss enough out from social security of the inhabitants in the rural. In this study was aimed to deliberate of effect on the rural migration of the deficient from the social security of the rural inhabitants that is the efficient causes on the rural migration. In study, it was aimed to benefit from the domestic and the foreign resources about the subject besides the social security statistics.

Keywords: Rural, migration, rural migration, social security
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Title: Training Through Visual Communication On Prevention Of Occupational Risks In The Use Of Agricultural Machinery

The Agricultural Code project: “Training through visual communication on prevention of occupational risks in the use of agricultural machinery” is a Leonardo da Vinci - Transfer of Innovation Project, developed within the framework of the Lifelong Learning Programme of the European Commission and with a total lifetime of 24 months.

It intends to transfer the results of the FOR.MA.AGRI. project that was developed within a previous Leonardo da Vinci Project:

“TRAINING FOR THE CORRECT USE OF FARM MACHINERY”. The main aim of the present project is to improve quality and efficiency of the learning processes by means of design and validation of training materials based on visual communication systems.

Objectives of the project:

To provide proper training for the use of farm machinery for agricultural workers.
To make safer the use of tractors and other farm machinery, especially to low-skilled workers.
To approach training about prevention of occupational risks in agricultural machinery.
To guarantee the product quality by continuing evaluation during the project development and by means of a final validation of technical aspects and the developed educational materials.
To use prevention of occupational risks training as a strategy to increase workers adaptability to the changes and developments emerging in the sector, thereby improving their employability and European agricultural competitiveness.

To promote the spreading and use of personal protective equipment, contributing therefore to protect workers health and safety.

Training materials based on an eminently visual character have been developed in different training methods (class-based training, distance learning and a combination of both) to ensure and to facilitate access to continuous training programmes to workers of the agricultural sector.

Keywords: safety, agriculture, agricultural machinery

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The number of studies within the scope of occupational health and safety, regulations development studies, people’s and institutions’ interest in the topic and their sensitivity to the issue are increasing day by day. It is conceived that occupational health and safety studies started with Hippocrates and have continued with Bernardino Ramazzini and today the value and importance of occupational health and safety studies are understood even more. In this sense, Sarayönü Vocational School, located in Konya, Sarayönü district and an academic unit of Selcuk University, has partly been evaluated within the context of its current employees and operations. Selcuk University, which also embodies Sarayönü Vocational School, was founded in 1975 as the first state university in Konya and today it includes 21 faculties, 6 institutes, 6 colleges, 22 vocational schools, 1 state conservatory. With more than 70,000 students, it is among the biggest educational institutions in Turkey. In Sarayönü Vocational School, there are 6 two-year educational departments with a total of around 670 students. The departments are mostly agriculture-centered programs.

Sarayönü Vocational School embodies Plant Breeding, Seed growing, Organic Agriculture, Environment Protect and Control, Computer programming and Food technology programs. 21 academicians, 4 administrative officers, 6 labourers one being regular staff and the other five being sub-contractor employees, and 3 security guards in the position of sub-contractor employees work in the school, which means 34 people in total serve for the educational, administrative and other purposes. The present study provides information about the physical structure of the school, current educational activities, some application studies regarding the educational programs and the school’s internal and external capacity.

Keywords: Selcuk University, Sarayönü, Vocational School, Occupational health and safety, Social Environment
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For carrying out examinations such as employment, job change, return-to-work, special group in OHS services, “Informed consent and approval form” shall be given to stuff some ago against signature so that they can read it. Provisions of similar regulations express that similar conditions are necessary for consumer clarifications, and taking bank credit contract signatures, can guide in this issue. In 6502 numbered “Code on Consumer Protection” it is stated that it is obligatory that information form will be given in a reasonable time before the contract is concluded.” Accordingly, even there isn’t 24 hours condition, it must be provided that related person (employee) to think, discuss and approve.

Giving approval form to employee to read against signature will not cause problem if the employee isn’t employed and form is not filled in because SGK certificate is given 24 hours before the employment begins.

Form can be kept as independant form, attaching it to OHS internal directive booklet, application form, employment/periodical examination form, the latter one will benefit practically. Employees making job application will read this form and pre-briefing shall be provided.

The informations before witness shall be provided by physician after that and signatures are put. It’s specified by legal experts that witness concept is a habit coming from Islamic law and nowadays doesn’t have a value before original signature. There shall be two witnesses for illiterate ones or don’t understand what is read. It will be suitable that employees shall witness each other. As per 6331 numbered code, the information of quitting employees shall transfered among workplaces; This sould be included in the form. Employees shall know that their information shall be sent with an expression "compliance with the confidentiality of personal information rule, it shall be sent to requesting workplace health unit in closed envelope ".

Keywords: Informed consent and approval form, Witness signature, Confidentiality of personal information

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Technological advances in the service of social welfare, the environment and for human life from the other side also brings some dangers. Entering into the production process, each new material, machinery, tools and supplies, human health, workplace safety, environmental health and the environment is a threat to security. Work accidents, negligence, carelessness, or external events occurring in an unexpected state, and as a result of incidents which are defined as negative factors. As the mining industry in our country all over the world, in terms of work-related accidents are among the most risky sectors. In our country, the Occupational Health and Safety Management Systems The main purpose of any hazards caused by working conditions in workplaces and health, reducing the risk to drop to levels that do not affect human health. Occupational Health and Safety Management System, 'Risk Assessment Analysis' form. Risk Assessment Analysis of danger, risk, risk assessment, risk management and risk control point covers basic issues. In this study is an example of a risk analysis of underground coal mine that may occur coal mine accidents in some measures. In this paper was given about the reduction of work accident.

Keywords: Risk analysis, underground coal mines, occupational health and safety, risk management
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Abstract

Background and Aim: Work stress is one of the most frequent problems encountered at workplaces. Priority should be given to provide solutions to this problem. The aim of this study was to reveal work stress in bank workers in Aydın, Turkey.

Methods: This cross-sectional study was performed between July 2013 and September 2013 and included 221 bank workers in 31 banks in Aydın. Work load is defined as the amount of work including the speed of working and strength and capacity used. Control over work indicates the level of one’s skills, opportunities in which one can use his/her skills and one’s involvement in decision making processes. Interaction of psychosocial work load with control over work, and work stress were determined by using data collected by using Psychosocial Factors Scale based on Karasek’s Job Demand, Control and Support Model. The validity of the scale for Turkish population was tested by Demiral et al. The ratio of the scores for work load to the scores for control over work shows the scores for work stress. High scores indicate heavy work load, high control over work and high social support. Data about demographic features were collected by using another form.

Results: Of all the participants, 56.1% were male and 43.9% were female. The mean age of the participants was 33.9±7.1 years. Out of all the participants, 65.6% were married and 81.1% were university graduates. The mean score for work load was 70.54±20.22, the mean score for control over work was 71.39±18.71 and the mean score for social support was 73.99±19.83. The mean score for work stress was found to be 1.05±0.26. There was not a significant relation between work stress and age, body mass index, marital status, work title and duration of work experience.

Conclusion: The bank workers were found to have low work stress based on a five point Likert scale (0-4).

Keywords: Work stress bank workers, musculoskeletal system

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Health protection and promotion is a concept that encompasses promotion of healthy lifestyles as well as improvement of social, economic, environmental and individual factors. Workplaces are favorable for health promotion because the workers are organized and easy to reach groups within the workplaces. Workers also spent significant amount of their time at the workplace and share peer characteristics, which make it easier to manage group dynamics. The benefits of workplace health promotion have been reported by numerous studies and can be summarized as safer and healthier working conditions, decrease in health expenditure and workdays lost, increase in productivity and job satisfaction and enhanced positive image of the workplace. Today, the programs mainly focus on workers, but they’re also recommended to cover workers’ families, community and the end-users of the products of the workplaces. Workplace health promotion programs can focus on topics such as prevention of work-related health risks, violence and injuries, tobacco, alcohol and substance use, promotion of physical activity, health eating habits, coping with stress and cancer screenings. The programs mainly aim to eliminate biological, physical and social factors with negative health effects; train workers on how to protect and promote their health, and promote healthy behaviors, e.g. healthy eating, regular physical exercise etc. These programs may include health education sessions, screenings, counseling services, establishment of safe and healthy environments by decreasing noise or increasing ventilation, illumination, and safety precautions, as well as taking administrative measures such as smoking bans or creating supportive environments including sports facilities and cafeterias. Main recommendations for successful programs are conducting needs assessments, involving both the employees and employers, planning programs that are appropriate for age, education and culture, delivering comprehensible health information, developing health education-information materials, supporting programs with administrative measures and infrastructural/environmental adaptations, as well as regular program monitoring and evaluation.

Keywords: Health promotion, health education, occupational health, workers’ health
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Introduction: The World Health Organization defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Workers spend significant amount of their time at the workplace. Besides improving working conditions, occupational health also includes provision of social facilities and promoting physical, mental and social health of workers. Workers’ mental and social health are associated with workplace satisfaction, which in turn affects productivity. This study aimed to assess the use of social facilities and its association with workplace satisfaction among university employees.

Method: The descriptive study was conducted in 2003, with 135 employees working as either academic or administrative personnel in a university in Ankara. Data were collected via a questionnaire covering sociodemographics, work, job and workplace satisfaction, and the use of social facilities, e.g. cafeterias, restaurants, sports facilities, culture and arts centers, guesthouses, kindergarten and preschool. Descriptive statistics and chi-square were used in data analysis.

Results: The mean age of employees was 36.5±0.8 years, 60.7% were women, 48.9% were university graduates, 67.4% were married and 60.7% reported his/her economic status as good. Cafeterias (88.1%), culture and arts centers (39.2%) and restaurants (28.8%) were the most commonly used facilities. The associations between the use of social facilities and workplace satisfaction (p>0.05) and job satisfaction (p>0.05) were not significant, however, level of workplace satisfaction was higher among employees who used the social facilities more commonly.

Conclusion: The use of social facilities, with the exception of cafeterias, was low among the participants. The employees, who used the facilities had higher workplace satisfaction, although the association was insignificant. Advertising, decreasing user fees and improving transportation may increase the use of facilities. There is a need for further research on the reflections of provision of social facilities on workers’ health, workplace satisfaction and productivity.

Keywords: Social health, social facility, workers’ health, workplace satisfaction
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The role of education is very important for the development of health and safety culture and prevention of occupational risks. Incorporation with employees for elimination of occupational risk factors emerge as a major strategy of 89/391 EEC The Framework Directive Occupational Health and Safety. At the same time, Regulation of Occupational Health and Safety Procedures and Principles of employees according to article 42 of Act no 6331 Occupational Health and Safety Law. Education emerges as a main policy for occupational disease prevention and protection. Thus, the capacity of the personnel working in the field and increase the level of expertise as well as raise awareness of trained personnel which can play an active role in the prevention of occupational diseases is required. This study deal with the result of Occupational Diseases Workshop which was conducted by ÇASGEM in 2013 with the participation of the public institutions, private sectors, and universities. Within this framework importance of the education which is one of the prevention policies was emphasised especially. In this study, in addition of the literature evaluation, the result of the workshop are also evaluated.

Keywords: Occupational Disease, Occupational Health and Safety, Training, Participation of Employee, policy of prevention
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Asbestos or amiant is a carcinogenic crystallize mineral that has a harmful effect besides of benefits on humanity down the ages. It is known as white soil, barren soil, sky-blue soil, celpek, hollum or ceren soil in colloquially. Asbest is a naturel silicate mineral found a wide area of usage down the ages because of its good isolation properties, being of dielectric material, having resistant to abrasion and some chemicals such as acids and being of easy handle due to its long fibrous structure. The most important variety of asbestos are crocidolite (blue), amosite (brown) and chrysotile (white). All forms cause asbestos related diseases. The inhalation of asbestos fibers, by the way of internal and external environment causes calcification and thickening of lung membranes, water collection, mesothelioma and peritoneum has been shown to be cancer causing. The diseases last for 15-60 years have no cure. The lethal dose was determined and serious legal limits were set for asbestos with the discovering of asbestos damages on human health after second half of twentieth century. Within the frame of regulations in our country, mining all forms of asbestos, processing, sale, importation, manufacturing of asbestos or asbestos-added products and processing of those products is prohibited. Consequently; asbestos-containing materials or probable asbestos-contaminated materials in the work environment should be identified and protective measures should be taken.

Keywords: Asbestos, asbestos-contaminated material identification, exposure to asbestos, asbestos protection
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Since the ancient times asbestos has been well known and used in many regions of the world. Asbestos, which is resistant to heat, corrosion and chemicals, has been used commonly in the industry of construction, automotive, chemistry and also people got in touch with this element in many parts of life in the developed countries.

After the second part of the 19th century asbestos was called “magical mineral” because of being resistant to acid and isolation of electric and heat. After the second part of the 20th century, asbestos has been shown as carcinogens having significant harm to human health and the use of it is restricted or prohibited.

The usage, production and processing of asbestos was prohibited in 2003 in Turkey.

In this study a research was made on the usage of asbestos in various sectors and diseases based on asbestos exposure, by examining the reports Occupational Health and Safety Institute (İSGÜM) which gave permission importing asbestos. While doing this statistical job, the annual statistics of Social Security Institution (SGK), especially the statistics of the period during which asbestos was heavily used and the diseases that were seen after the end of the latent period was examined. It was also discussed the precautions to be taken to minimize to exposure while dismantling, demolition, repair, maintenance and removal of asbestos and asbestos-containing material. The precautionary measures to be taken and some of the regulations in force were indicated. Also, legal process, practices and precautions in the other countries were emphasized and compared with the circumstance in Turkey. It is important for the Ministry of Labour and Social Security and the related government agencies to raise awareness of the public and employees working with asbestos and asbestos-containing materials about the dangers of heavy asbestos exposure and necessary precautions to be taken.

Keywords: Asbestos, Asbestos-containing material, precautions, Removal of asbestos,
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Heat via combining of the two pieces to each other by thermal treatment is called the welding. Parts to be joined to each other is done by inserting heated up to the melting temperature or using the same composite filler (welding wire or electrode). The most widely used welding types are covered electrode arc welding (Manual Arc Welding, Electric Arc Welding), MIG welding (MAG, MIG, TIG), submerged arc welding, plasma welding, laser beam welding, oxy-acetylene welding, Resistance spot welding. During the welding operation the molten metal absorb oxygen and nitrogen from air. These gases dissolved in the molten metal combine with the elements which in solidified weld metal and by creating new compounds invisible gases occurs. Exposure to these fumes and gases causes nausea, headache, dizziness, and metal fume fever disease. Some of air pollutants chronic (long-term) disease as cause, due to the level of influence acute discomfort (sudden-suddenly) may also cause. As welding fumes irritate the eyes, the power smell and respiratory organs adverse effects. It causes cough, shortness of breath with wheezing, bronchitis, pneumonia, and fluid accumulation in the lungs (lung inflammation). Some metals in welding fumes, for example cadmium or cadmium oxide compounds can be fatal in a short time.

Risk factors occurring during welding can be listed briefly as follows:
- Chemical reactions in the arc formed by UV the influence of heat
- Ambient air pollution
- Due to the hot and ultraviolet radiation, the chemicals (nitrogen dioxide, ozone, phosgene) consisting of the reaction between the chemicals in air or chlorinated hydrocarbon chemicals
- The resulting acute and chronic effects of metal powder
- Electrical
- Fire and explosion risk
- Noise

Submerged Arc Welding

Submerged arc welding is an automatic welding method. In particular, it has a wide range of applications in the nuclear power plants and in the chemical industry. Arc heat electrode creates the weld pool by melting metal powder and the main metal which fills the mouth of weld. The dusts in using submerged arc filling welding doing with band electrodes are; SiO2, MnO, CaO, MgO, Al2O3, CaF2.

Keywords: Welding, OHS
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Objective: In hospitals, physical, chemical and biological risk factors are present. In this study, especially in hospitals, physical risk factors such as radiation detection and will examine the impact on employees. Elimination of risks identified should be taken to reduce or remove control measures aimed.

Introduction: Hospital staff particularly nuclear medicine, radiology units (radiation hazards encountered which units ) employees when a majority of the radioactivity counters, gamma cameras and PET- CT (Positron Emission Tomography) medical devices and passes. Increasing awareness of the staff working in these units, health protection, and various training programs should be subjected to security measures must be taken.

Materials and Methods: In this study, critical control points identified in various hospitals, hazards will be identified, and various measurements to be made in the legislation will be evaluated by comparison with the exposure limit values and effective. This assessment will be conducted surveillance for the work environment and an appropriate risk assessment methods will be selected. Corresponding to the identified hazards have been identified, then the risk will be rated each risk. Above the level of acceptable risk, the risk control measures for removing the additional employees will be working with reliable risk. Results: Employees in the various rooms of the radiation dose received will be measured locally, hours and days of μ / h dose rate will be determined. Air radiation doses (μ/hr) and the absorbed doses (mSv/y) will be saved. Recorded radiation dose limits specified in the regulations will be determined by comparing the level of risk.

Discussion and Conclusion: In conclusion, working according to the rules and be faced with the danger of radiation, all units will be treated as a critical control point. In these laboratories, air radiation based upon the values and calculated the absorbed dose levels of medical staff and laboratories in close proximity to other staff working for the exposure dose of radiation at the ICRP (International Radiation Protection Commission) from the recommendations is low and is not to be determined. Therefore, in order to maintain confidence in the hospital absorbed dose total body health personnel and other personnel needed to determine whether the exposure limit values will be over. The values measured for the entire staff of these laboratories in accordance with "occupational health" in terms of acceptable risk level will prove to be.

Keywords: Physical risk factors, occupational health and safety, radiation
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BSVM/SVM is a vector machine, used for classification. In general view, it is a program to control mathematically and statistically whether the classification is meaningful or not. The operational procedure of this program is simply described like following. First of all, all data set is normalized between 0 and 1. Then, the groups; expected by the user; are determined. By using this groups, the program is trained. At last, the groups are formed by using these train an test data set. Program compares the results with the users’ expected values and it gives the percentage of the overlapping results. The staff in ISGUM (Occupational Health and Safety Institute) Central Laboratory has taken 363 noise measurements since 2011. In this study, these data set was tried to be classified. The values below than 80 dB were in the first group and the values between 80dB and 85dB were in the second group. Similarly, the values below than 87 dB were in the forth group and the values between 85dB and 87dB were in the third group. When the program is activated, the second group is participated in the first group and the third group is participated in the forth group. There may be two main reasons behind this result. First one is; the spike values of time series of some measurements may be very big although their noise exposures are small. The second reason is the existence of the big measurement results that are very big than 87dB(110.1dB) and also small ones that are very small than 80dB(57.8dB). This may prevent the separation of more groups. The sectoral and work type classification analysis will be made in the future.
Ergonomics is a multi-discipliner science branch that puts the rules of man-machine-environment cohesion by the way biological, pyschiological properties and capacities are taken into account. Providing coherency between work and employee while health improvement of working conditions, elimination of hazards, rearranging of working hours due to physiological properties and used tools and fixtures are taken into account is the main aim. Ergonomic risk factors affects creation of health problems directly or indirectly. There are so many risk factors in health sector, especially hospitals, where includes serious health and safety risks. Physical, chemical, biological and ergonomic and pyscho-social risk factors causes the negative results like health problems, decreasing in productivity and penetration of serious risks from health staff to patient. Musculoskeletal diseases are observed in health employees frequently due to ergonomic risks. Hospital ergonomics is important due to occupational health and safety especially work flow between the services is one of the most important problems. Necessary man-power and material needs must be evaluated for all units in the hospital and set appropriate lay-out and work-flow relations between them. Making ergonomic analysis in workplaces, working posture, detailed analysis of occupational fatigue and pain are critically important for building a ergonomic work environment and increasing in productivity. The best results in ergonomics are obtained by training, adaptation of ergonomic improvements and active participation of employees. Success is directly dependent with manager support, increase in ergonomics awareness, employee participation and checking the planning actions. A healthy and safer hospital environment by applying an efficient health workers must be obtained in order to decrease health deleterious risk factors that sourced from interaction of working environment, production processes and industrial relations and occupational injuries/illnesses.

Keywords: Ergonomics, Health Workers, Hospital Ergonomics
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Introduction: Cancer and genetic effects are stochastic effects of the radiation and there is no threshold level of dose. Radiation safety standards and policies are set by a consensus among national and international scientific organizations, such as the Turkish Atomic Energy Authority (TAEK), the National Council on Radiation Protection (NCRP), and the International Commission on Radiological Protection (ICRP). In our study, the radiation dose received by the radiation workers were examined with reports of dosimeter readings between January 2008 and March December 2013.

Material and Methods: We evaluated retrospectively the occupational radiation doses received by the workers of Radiation Oncology Department, Cerrahpasa Medical Faculty. To detect occupational radiation doses, the radiation workers of department have been issued TL badges with unique identification number for the particular worker. In this study, the radiation dose received in last five years (2008-2013) by 45 radiation workers was evaluated.

Discussion: The occupational exposure of any worker shall be so controlled that the following limits be not exceeded: (a) an effective dose of 20 mSv per year averaged over five consecutive years (b) an effective dose of 50 mSv in any single year. The results show that annual doses of workers were ranging from 0.1 mSv to 0.54 mSv.

Results: The annual and last five years data of radiation doses to all the workers was in the acceptable range of National and International regulatory bodies. Systematic verification of received dose is of great importance for occupational health and safety.

Keywords: Radyasyon, Health
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In this study, calculation of Wet Bulb Globe Temperature (WBGT) per person was aimed. The experiment was realized at the 2nd floor of central building of ISGUM (Occupational Health and Safety Institute). Herein are 13 rooms and 51 employees. The number of employees in the room varies between 1 and 7. The measurements were taken twice daily; once in the morning and once in the afternoon. It was important to measure WBGT in the routine work of the employees; such as windows and radiator leaving the personal preferences whether open or not. The meter was set to receive an admeasurement per minute. The measurements in the first fifteen minutes were not taken and the next thirty-minute measurements were recorded. By this way, the measured temperatures were expected to have more reliable results. First, the measured WBGT taking the average multiplied by the number of employees in the room then, the results were divided into the total number of employees at the floor, so that WBGT per person was calculated. The highest WBGT was measured as 21.18°C and the lowest WBGT was measured as 18.61°C. The average WBGT per person was calculated as 19.80. In the literature, WBGT in an office environment for employees wearing light clothes should be below 30 °C. Therefore, according to the measured maximum temperature and the average WBGT per person, working environment was well suited for the winter season. To obtain more accurate results, this study should be repeated in the summertime.

Keywords: Office, Thermal comfort, WBGT
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This research has been conducted to determine the knowledge, attitude and behavior on work health and safety of the nurses who work at Cerrahpasa Faculty of Medicine. The universe of the research is the nurses who work at all surgical units in Istanbul University, Cerrahpasa Faculty of Medicine, Surgical Medicine Sciences Department. (n=495) The random sample of the research is 217 nurses. Data has been collected through an information form consisting of 8 questions covering occupational and introductory information; and a questionnaire of 67 questions about work health and security. The statistical analysis of the data has been conducted on SPSS 21.0 computer package program. Chi-square test, along with frequency distribution have been used in analyses. Comparing the working hours of the nurses and their exposure to verbal and physical violence/harassment by the patients’ relatives or other people; we see that 46.2 % of day shift nurses, 47.3 % of them were exposed verbal or physical harassment or violence, while 52.7% of them were not. The difference of the ratio evaluated is meaningful. (p<0.05) Based on the rank/status of the nurses participating in the study and compared to the number of suggestions being made respectfully, 16% of those is observed to be managerial nurses with 71% providing suggestions for the provision of measures against occupational health risks. The rate of provision of suggestions for measures against the occupational risks is determined to be significantly higher with nurses running managerial posts then compared to those with nurse staff. The difference of the ratio analyzed has been found meaningful. (p<0.05)

Keywords: Work Health, Work Security, Nurse.
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The concept of occupational health and safety has been changing for a restructuring with Occupational Health and Safety Act No. 6331 that published on 30.06.2012. All workplaces where have more than 2 employees have to fulfill all legislation on the law.

Building control laboratories which was established under the Building Control Act have to be accredited by Ministry of Environment and Urban Planning. There are instructions and procedures for all kinds of job on these laboratories which was accredited with standard of TS EN ISO/IEC 17025.

In this study, Çanakkale Onsekiz Mart University Building Laboratory was investigated with last Occupational Health and Safety Act and its’ regulations and results were summarized.

Keywords: Building Control Laboratories, TS EN ISO/IEC 17025 standard, occupational health and safety, occupational health and safety on concrete test, occupational health and safety on concrete steel bar test, occupational health and safety on coring

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| Author: Ali Naci Yıldız, Kibor Kipkemoi Keitany |
| Title: Occupational Accident Rates Change in Turkey (1970-2010) |

**Aim**

Occupational accidents are important issues in Turkey as all around the world. There has been a decrease at both occupational accidents and mortality related to these accidents in Turkey at last four decades. Decrease at mortality has been lower than the decrease at accidents related to occupation. Fatal accidents has been increased.

**Results**

There has been 11,000-63,000 occupational accidents yearly in Turkey between 1947-60. Occupational accident rate was 11.2% at 1963 and 11.4% at 1968. Decrease was seen at next five year intervals. It was 10 percent at 1973, 9 percent at 1978, 6 percent at 1983 and 3 percent at 1993. It continues to decrease recently. 69,227 occupational accidents occurred in Turkey at 2011; 1,563 persons died and 2,086 persons became disabled related to these accidents. Turkey is one of the countries in which fatal occupational accidents are frequent. Occupational accident rate decreased to 0.62% at 2010 where it was 10.9% forty years ago. Similar to this, fatal occupational accident rate had decreased from 5.1*10^4 to 1.4 between socially insured workers. However fatal accidents rate is getting higher between all accidents, 4.74% at thousand accidents was mortal at 1970 but 22.9% at 2010. Accident rate and death related to accident is getting lower but fatal accident rate gets higher between all workers.

**Conclusion**

The decrease can be explained by bigger service sector which is more safe. Service sector worker rate get higher in Turkey. Decrease at agricultural sector and branch of industry which is more risky gets bigger. Rate of working at service sector between Social Insurance Insution workers’ was 24.3% at 1970, 40.1% at 2000 and 50.5% at 2010 workers. This transformation doesn't explain the increase at fatality against decrease in mortality and the morbidity.

**Keywords:** Occupational accident, Mortality, Morbidity, Fatality

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Aim: The aim of this study is the evaluation of their own occupational health knowledge and practics of primary health care physicians; present the requirements as the result of these assessments.

Methods: Descriptive study is conducted at Ankara province on 2010 with 707 (80.3%) primary health care physicians. Some sociodemographical features, trainings and some occupational and vocational disease related questions were asked with a three sectionned and 23 questioned data collecting sheet. Form was sent to related units and the questionnaire was collected after a week from answered.

Corrections was made after pretesting as well as SPSS 11.0 was used for data entrance and analyses.

Study had an approval from the local health authorities and from the physicians.

Results: Of the participants 95.3% (674) was practitioner and mean age was 41.0±6.9. Mean precedence time was 15.8±6.7 years. The frequently right answered question was related to the working places/cooperations which needed to employee a workplace doctor (85.7%). Regarding to occupational health, work related health effects and prevention was the major issues that physicians wanted to have trainings (73.4%). The mean training time needed was 17.3±21.6 hours. Workplace health unit’s tasks, workplace doctor’s tasks, authority and responsibilities (15.4%), occupational accidents and prevention methods (13.3%), types, diagnoses and therapeutics and prevention of vocational diseases (11.9%; 10.8%), risk assessment (6.9%) and vocational risks of health personnel (5.8%) were the primary training issues wanted.

Conclusion: Occupational health services which is an important public health problem must be discussed under the primary healthcare services. Early diagnose and necessary interventions would prevent the problem getting bigger. Support and training on occupational health and safety pratic is necessary for practitioners when thought of their roles in our country.

Keywords: Doctor, Occupational health and safety, Knowledge, Vocational history
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Title: Comparison of Duty Priorities of Occupational Physicians and Durations Necessary for the Implementation of These Duties

PURPOSE: Comparison between the duration necessary for occupational physicians’ fulfilling duties as per regulations and minimum reasonable time period in practise; discussion on time adequacy, duty priority expectations.

METHODS: Minimum working times as per “Regulation on Duties, Authorities and Trainings of workplace doctor and other health stuff” the minimum time foresight required for the duties expected with 50 employees “less dangerous group” in practise and 242 people are asked about time adequacy and duty priority expectations of parties in the questionnaire.

FINDINGS: In the questionnaire, which 242 answer; 142 Occupational physician, 58 Occupational safety specialists, 23 other health stuff and 19 employer representatives delivered opinion. The ones who does not have workplace doctor are asked as per working conditions of occupational physician.

Working time: 4/6/8 minutes/employee/month 43%, more 46%; sparing time for employment inspections: No 24%; for periodical: No 33%; for private group inspections: No 43%; compliance with annual working plan: No, duration isn’t adequate 43%; adequacy of working time for suitable performance: No 54%; how much the current durations shall be increased: durations are adequate 25%, need to be increased 63%; duty that employer/employer’s representative pay attention most: prescription, polyclinic service 55%; duty that employees pay attention most: prescription, polyclinic service 76%; duty that occupational physician pays attention most: health supervision 56%; sparing time for epidemiological studies: No 64%; the ratio that epidemiological (health statistics) studies are demanded by employer: No 67%.

RESULT: In a workplace with 50 employees “less dangerous group”; 3,3 hours/months is considered adequate for fulfilment of duties as per regulations; in practise, necessary minimum reasonable time lower limit is determined as 13 hours/months and the necessity of increase in these durations are verified with 63% ratio in questionnaire results. Considering duty priority expectations, it is determined that safety culture consciousness shall be enhanced.

Keywords: Workplace doctor, Working times, Occupational Physician duties, Occupational Physician working times
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Occupational Health and Safety case is more than resolving of the damages that occurs result of an accident. It is to ensure the elimination of negative situations that could occur.

There are some important duties and responsibilities on Occupational health and security professionals in order to fulfill to these functions by 6331 numbered Occupational Health and Security Law. In order to fulfill these duties, to put the deficiencies and wrong applications into the order, as a first step, the employer must be informed. If the required measures aren’t taken by the employer, health and security professionals must be informed and lastly in case of the risks which are deadly for the employees and aren’t prevented, the Ministry of Labour and Social Security can be directly applied. In this situation, how can occupational security professionals execute above and beyond the call of duty with ethical principles and liberty profession who are related to employer contact? Another consideration; it is stated in law and regulation that employers are allowed to be occupational security professionals. When "life-critical" happens, how can written notifications tracking to employer be sustained reporting to Ministry of Labour and Social Security? In practice, occupational health and safety experts and employers can come cross. At the point of the occupational security, necessity of the legal protection of occupational health and security professionals will emerge. In this study we tried to find, what kind of guarantee do 4857 numbered Labour Law, 6331 numbered Occupational Health and Security Law, 6356 numbered Industrial Union and Labor Agreement Law brings to Occupational Health and Security Professionals?

Keywords: Occupational health, Labor law, Social security.
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The ISG-KATIP System is an innovative solution that promises success in occupational health and safety (OHS) efforts, is regarded by OHS professionals and engineers as a smart solution, and provides ease of application in OHS.

Process steps in constructional works are respectively as follows: project designing, control steps, manufacturing works, and inspection of manufacture in every aspect. The Ministry of Environment and Urban Planning inspects construction safety, that is, our national safety in the field of construction via relevant municipalities and building inspection and construction supervisors. Any deficit in such inspection process is crucial and dangerous because it may jeopardize the security of life and property of millions of citizens.

The examination of the work flow diagram employed in this control mechanism shows that security gaps are divided into two. Firstly, it takes a long time to investigate whether any renovation projects have been included in the approved projects or any cancellation has been made in them. Secondly, project printout and copy centers are operated like a regular copy office. Such copied project data as date, quantity, and the center of obtainment are not known by anyone except for the criminal office. That increases the probability of human error by control engineers at the approval stage. As a result, the work safety is put at risk.

At the present time, even fruits, vegetables, eggs, milk products, etc. are provided with barcodes, and the expiry dates of such products are tracked online. However, project documents which are highly important and changeable are not tracked online, which is a big deficiency. The implementation of another version of the ISG-KATIP approach under the name of PROJECT TRACK AND TRACE SYSTEM or a similar name may enable to report projects as updated or non-updated via a barcoding system online during site inspections.

A solution to the other application deficit may be licensing project printout centers and ensuring a serious working order there by laying specific tasks and responsibilities (i.e. adoption of semi-notary approach)

Keywords: Project control, innovation in inspection, project safety
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The aim of this descriptive study is to evaluate the reflections of social gender role attitudes of resident doctors in a university hospital on gender perception in work life. The target population of the study consists of 159 resident doctors working in a university hospital. All of the residents were included, but 128 people (80.5%) accepted to participate. Variables of the study were socio-demographic characteristics, "Social Gender Roles Attitude Scale" (SGRAS) developed by Zeyneloğlu and answers to statements related to perception of social gender roles in work life. 45.3% of the participants were female and 54.7% were male. While 52% of the residents worked in departments of medical sciences, 38.4% worked in departments of surgical sciences and 9.6% worked in departments of basic sciences. When Agreement to the statement of "Gender does not affect choices in work life" was higher in female and the difference between female and male subjects was significant. When sub-dimensions of perception of social gender roles in work life and sub-dimensions of SGRAS were evaluated, there was a moderate positive correlation between the perception of "Utilization of job opportunities is free of gender" and "Equitable gender role" (r=0.491 p=0.000). While there was a moderate negative correlation between the perception of "males are more favored in the working unit" and "Equitable gender role" (r=-0.419 p=0.000), there was a moderate positive correlation between the perception of "Males are more favored in the working unit" and "Gender role in marriage" (r=0.526 p=0.000). The reflections of social gender role perceptions to gender perceptions in work life has been investigated in this study. Awareness in this regard and improving social gender role behaviours with educations would be expected to support improvements in unfavorable conditions related to gender in work life.

Keywords: Social Gender, Work Life, Status of Woman, Social Gender and Attitudes, Social Gender Equality
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Health protection and promotion is a concept that encompasses promotion of healthy lifestyles as well as improvement of social, economic, environmental and individual factors. Workplaces are favorable for health promotion because the workers are organized and easy to reach groups within the workplaces. Workers also spent significant amount of their time at the workplace and share peer characteristics, which make it easier to manage group dynamics. The benefits of workplace health promotion have been reported by numerous studies and can be summarized as safer and healthier working conditions, decrease in health expenditure and workdays lost, increase in productivity and job satisfaction and enhanced positive image of the workplace. Today, the programs mainly focus on workers, but they’re also recommended to cover workers’ families, community and the end-users of the products of the workplaces. Workplace health promotion programs can focus on topics such as prevention of work-related health risks, violence and injuries, tobacco, alcohol and substance use, promotion of physical activity, health eating habits, coping with stress and cancer screenings. The programs mainly aim to eliminate biological, physical and social factors with negative health effects; train workers on how to protect and promote their health, and promote healthy behaviors, e.g. healthy eating, regular physical exercise etc. These programs may include health education sessions, screenings, counseling services, establishment of safe and healthy environments by decreasing noise or increasing ventilation, illumination, and safety precautions, as well as taking administrative measures such as smoking bans or creating supportive environments including sports facilities and cafeterias. Main recommendations for successful programs are conducting needs assessments, involving both the employees and employers, planning programs that are appropriate for age, education and culture, delivering comprehensible health information, developing health education-information materials, supporting programs with administrative measures and infrastructural/environmental adaptations, as well as regular program monitoring and evaluation.

Keywords: Health promotion, health education, occupational health, workers’ health
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**Introduction:** In this research, the objective is to analyze employment injuries occurred in Turkey between 2003-2012 and current situation assessment and make contributions to future researches. 

**Method:** With the data obtained from statistical annuals published between 2003-2012 by Ministry of Labor, analysis of employment injuries and rate of employment injuries have been calculated.

**Findings:** In Turkey, between 2003-2012, 738,330 employment injuries occurred, 11,281 workers died, 564,025 workers stayed in the hospital and in total 17,528,834 work day loss occurred. 60.1% of employment injuries occurred in workplaces with less than fifty workers, 44.16% of injuries in craft and related trade workers without specification, 34.78% of injuries occurred by pressing between one or more equipment and 16% of injuries occurred in the first hour of the day. 52.64% of wounding arising out of employment injuries is in upper extremities, 41.09% of them occurred as superficial injuries and open wounds. Fatal injury rate was 14.4 in one hundred thousand workers in 2003 and raised to 15.5 in one hundred thousand workers and reached to peak in 2005 with 20.4 rate in one hundred thousand workers but since 2007, the rate fell into a decline and finally declined to 13 in one hundred thousand workers in 2009, raised to 15.4 in one hundred thousand workers and reached to peak in 2012. Incidence rate of employment injuries was 1.23 out of one hundred workers in 2003 but declined until 2009 to 0.62 in one hundred workers. Weight rate of employment injuries was 0.68 in every hundred hours in 2003 but declined until 2012 to 0.32 hours. Fatality rate of employment injuries was 10.6 out of thousand in 2003 but started to rise up to 20.1 out of thousand in 2006 and however up until 2008 it declined to 11.9, again in 2009; it started to rise to 18.2 out of thousand, rise up to 22.96 out of thousand in 2010, rise up to 24.56 out of thousand in 2011, declined to 9.9 out of thousand in 2012.

**Result:** Even though there is a decline in incidence and weight rate of employment injuries between 2003-2012 in Turkey, there is a

**Keywords:** workplace health, workplace safety, employment injuries, death, rate

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292 lighting measurements are made in various sectors by İSGÜM (Institute of Occupational Health and Safety). As a result of these measurements, it was measured the least data in drying point as 5 lux and the highest data in surface treatment section as 1730 lux. The least data was observed in machinery sector, and the highest data was observed in mining sector. Especially, it was observed that lightning is not enough for working conditions in boiler room, engine room, people and freight elevator cabin, materials storage room, dressing areas, a cafeteria, a normal installation, the rough work benches, the areas making canning and boxing, the places where it is necessary to select details closely, dark-colored fabric, the places where doing fine work that requires continuous attention like offices. It is very significant to ensure adequate lightning in these mentioned departments because these departments are riskier than other departments.

It was observed that the 112 of 292 data are lower than expected. According to measured data, it can be also said that the every 2 of 5 departments are not appropriate in terms of lighting. Especially, the riskiest sectors are mining, metals and machinery. Besides, print-publishing, textile and construction sectors are in risky group.

The analysis does not contain values from all sectors. Consequently, because of the lack of data, it cannot be actually claimed that mining, metals and machinery sectors are the riskiest sectors in terms of lighting. On the other hand, it is also said that the sectors mentioned before are seriously risky in terms of lighting.

Keywords: Lighting, Turkey, Lux, Threshold value, Measurement

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This study aims that to calculate the success scores of institutions which authorized by General Directorate of OHS to provide training in occupational health and safety under the certain conditions. By this way either the management or the professional of OHS can estimate the future of the training centers more clearly than the past. Also they can realize the criteria which they must pay more attention than the others. Eigenvector is used to weighting criterias and TOPSIS is used as a decision analysis technique.

Keywords: Training center, occupational physician, occupational safety expert, multi criteria decision making

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Introduction: The World Health Organization defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Workers spend significant amount of their time at the workplace. Besides improving working conditions, occupational health also includes provision of social facilities and promoting physical, mental and social health of workers. Workers’ mental and social health are associated with workplace satisfaction, which in turn affects productivity. This study aimed to assess the use of social facilities and its association with workplace satisfaction among university employees.

Method: The descriptive study was conducted in 2003, with 135 employees working as either academic or administrative personnel in a university in Ankara. Data were collected via a questionnaire covering sociodemographics, work, job and workplace satisfaction, and the use of social facilities, e.g. cafeterias, restaurants, sports facilities, culture and arts centers, guesthouses, kindergarten and preschool. Descriptive statistics and chi-square were used in data analysis.

Results: The mean age of employees was 36.5±0.8 years, 60.7% were women, 48.9% were university graduates, 67.4% were married and 60.7% reported his/her economic status as good. Cafeterias (88.1%), culture and arts centers (39.2%) and restaurants (28.8%) were the most commonly used facilities. The associations between the use of social facilities and workplace satisfaction (p>0.05) and job satisfaction (p>0.05) were not significant, however, level of workplace satisfaction was higher among employees who used the social facilities more commonly.

Conclusion: The use of social facilities, with the exception of cafeterias, was low among the participants. The employees, who used the facilities had higher workplace satisfaction, although the association was insignificant. Advertising, decreasing user fees and improving transportation may increase the use of facilities. There is a need for further research on the reflections of provision of social facilities on workers’ health, workplace satisfaction and productivity.

Keywords: Social health, social facility, workers’ health, workplace satisfaction
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Objective:
In our country, the Occupational Health and Safety (OHS) regulations and legal basis of services, especially starting with the Labor Law, Public Health Law and Occupational Health and Safety Regulation was laid with elements such legislation.

In this area, the last 10 years in our country in recent developments is examined only legislation these views in terms is not sufficient, the State Council, or the Administrative Court as the judicial organs of the decisions carefully the need to investigate the conclusions are reached. However, the evaluation of the OSH service of the repealed Act 81 of 4857 with Article No. 6331 of the Occupational Health and Safety Act 6 and 7 substances are of particular importance. In parallel to these articles, "Occupational Health and Safety Services", "Occupational Physician Task, Authority, Responsibility and Training Regulation" and "Occupational Safety Experts Task, Authority, Responsibility and Training Regulation" are the most important sub-regulations in this area.

Occupational Health and Safety Professionals are working under these sub-regulations "Occupational Health and Safety Services" and "Occupational Safety Experts Task, Authority, Responsibility and Trainings" in Turkey.

Methods:
Occupational Health and Safety Professionals working in Turkey is applied a questionnaire about their working conditions. Questionnaire data are evaluated by using SPSS Statistics which is a software package used for statistical analysis.

Results:
As of the date 01.01.2014 in Turkey; 50.000 Occupational Health and Safety Professionals Questionnaire was performed over 1.000 Occupational Health and Safety Professionals

Conclusion:
At the end of the questionnaire conducted in Turkey working conditions of employees in the Occupational Health and Safety Professionals emerging issues and problems have been identified. Fixing these problems will be eliminated with the legislation, Occupational Health and Safety professionals working for a healthier work environment will be formed. In addition, better working conditions and OHS professionals in the field of OHS in the country player will do more good work. As a result of the better working conditions for OHS professionals, work accidents and occupational diseases in our country will be avoided.

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Sick building syndrome is a series of symptoms that are related to poorly ventilated interior environments that have thermal insulation and high concentration of air pollutants. These symptoms can be listed as follows: Eye, nose and throat irritation, headaches and dizziness, nausea, fatigue and weakness, impaired concentration, skin irritation. These symptoms begin after a certain period of entering the building and decrease after leaving the building. To solve problems of indoor air quality, pollutant sources is known and can be controlled. When we investigate the causes of sick building syndrome, the problem is quite complex conditions like physical contaminants, chemical, biological contaminants and personal factors. In order to prevent sick building syndrome symptoms; (a) proper air-conditioning conditions should be provided (b) emissions of pollutants should be reduced. Sick Building Syndrome investigations that are carried out at intelligent buildings have shown that these structures are extremely complex structures because of closed windows and a number of advantageous features. Also these buildings have only one control system make life difficult. These windows should be opened because the fresh air input possibilities not provide. For this reason, sick building symptoms are often seen at these buildings. These constructions are considered easier as is known structures are not living. In this research, sick building symptoms are monitored and determined at intelligent buildings. Our method is as follows: in order to determine indoor air quality working environment measurements were carried out and prevalence of sick building syndrome symptoms of living in these buildings were determined via survey. Analysis and evaluation of these surveys were done with SPSS (15.0).

Keywords: SICK BUILDING SYNDROME
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Lead exposure remains importance as a public health problem. 95% of lead poisoning has occupational origin. Lead battery manufacturing industry is the most important area of use. Other than this area, it used at chemicals and pigments, paints, production of ceramic, insulation of cable, alloys and gasoline industry. Battery industry has substantial proportion at subject of lead exposurement. In order to determine health effects of lead exposurement working environment should be monitor regularly. We should have data on working environment measurement of lead and blood lead levels of workers. Industry and the health effects of lead exposure on a regular basis to monitor the environment, making measurements and blood lead levels is necessary to examine. The purpose of this research is to determine lead exposurement of battery industry in a weekly working time (40 hours). Thus, lead measurement of working area results and blood lead level of workers were compared. These studies was carried out at 19 different departments of battery factory that has occupational health and safety improvements. At the research working environment measurement results and blood lead levels of workers were discussed together.

Keywords: LEAD EXPOSURE,
The human eye is sensitive to radiation between 400 to 700 nm wavelength rays but outside this range it cannot detect. Ultraviolet (UV) radiation has a wavelength of 100-400 nm. If long and high doses of radiation is exposed, this situation can be hazardous health effects. Using of UV in food sector is used not only disinfection but also some food processing as detection of aflatoxin in dried figs. Aspergillus species molds (A. Flavus, A.Parasiticus and A.Nomius) are caused forming aflatoxin especially after its harvesting and it can be imaged as greenish-yellow fluorescence under UV light. Although there are some computerized monitoring systems, workers can be exposed because of using UV in dark place for detection of aflatoxin. In addition, UV lambs can be sterilized air and smooth surfaces in inoculation cabin using in food microbiology laboratories, inoculation rooms. If necessary measurements are not taken, the workers in laboratories may be exposed to UV rays. In this review, the use of UV radiation in the food industry, health effects of it and importance of occupational health and safety are mentioned.
Electrical energy is the most elemental source of power in the industry. Transmission, distribution and consume styles of that energy is one of the most important element of occupational safety. In this study, it has been categorized that basics of occupational accidents occurring in electric power transmission and distribution sector and continued with arguing modern preventive and protective guidelines. These guidelines have been argued in respect of creating and contributing a general prevention directions for nowadays’ electric sourced occupational accidents.

Keywords: Transformer Maintenance Procedure, Transmission and Distribution Line Maintenance Procedures, Protective Equipments
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In this study, chemicals formed due to the characteristics or the nature of work and have the ability to catalyse the genesis of cancer disease are determined moreover the overcoming or minimizing methods are examined. The sources that cause concerning chemicals formation are categorized. In addition precautions that can be taken and some of the legal obligations are also stated. The analyse techniques and other applications applied in Institute of Occupational Health and Safety (İSGÜM) which works under the Ministry of Labour and Social Security are investigated.

Law on Occupational Health and Safety (no:6331) which was enacted in 2012 and bylaws issued within the scope of this law, awareness and liability of employees has been increased and meanwhile some legal sanctions has been brought to enterprises and institutions. Within this study legal development process concerning carcinogens and legal processes in other countries have been examined and compared. In addition, industrial applicability of these regulations has been investigated. In issues of enhancing occupational health and safety culture and methods of prevention from carcinogens in our country, governmental institutions having comprehensive knowledge on workplace measurement plays an highly important role. By this means, required legal regulations are being constructed on a safe basis.

Keywords: Carcinogenic substance, measurements, legal orders
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ISG-KATIP is a software project which enables OHS services to be provided via internet and reported as statistically.

This software is integrated with databases of relevant institutions and it operates with real person data by connecting to Identity Sharing System simultaneously.

Objectives
Authorization, commissioning and contracts of companies and institutions (Joint Health and Safety Unit, Training Institutions, Community Health Center) and people;(Occupational Safety Experts, Occupational Physicians, Other Occupational Health Staff, Trainer)
Submission of training programs, certification, commissioning and contract monitoring of Occupational Safety Expert, Occupational Physicians, OOHS and Trainer etc. and also control, approval and cancellation processes are being done through the system.
The system is designed in a user-friendly structure, providing users to make their processes as soon as possible with the most appropriate interface.

Methods:
IT: OS (Windows Server 2008), Database (Oracle 11g), Software Language (Microsoft .net Framework), Reporting and Interfaces (Silverlight, Crystal Reports)
Other Sources: OHS Experts from the MoLLS, Software Firm, Social Partners
Principles followed in the design phase:
• Sample application is prepared so the user tests can be performed easily
• Reliability, maintainability and flexibility principles are taken into account
• Questioning and graphic capabilities are enriched during design

Conclusion
With ISG-KATIP software project; procedures and operations related to OHS services can be maintained by DGOHS of the MoLLS independently from the people, places and documents. Nearly 1.500.000 private and public companies and 100.000 OHS professionals were brought together within a single system. Efficient usage of human resources and time has been reached and quite large amount of savings has been made from the usage of public resources. OHS service contracts made between companies and OSEs, OOs and JHSUs have provided with the total of 3.400.464 worker’s OHS services to be covered and so a significant progress has been made from preventing occupational accidents and diseases.

Keywords: OHS, Risk Assessment, HAZOP, FMEA
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This proceeding was prepared about Management of Change for Plants, Machineries and Personnel according to Turkey Occupational Health and Safety Regulations and Harmonized Standards needs. Plant, Machinery and Personnel topics based Flow Charts were prepared according to US OSHA 1910.119 Process Safety Management Standard. Flow charts consist of decision and control mechanism and process documentation and traceability were defined in flow charts.

Keywords: Management of Change, MOC, Process Safety, Management of Change for Occupational Health and Safety

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The First Organized Industrial Zone of Bilecik is the first autonomous organized industrial zone in Turkey. The First Organized Industrial Zone of Bilecik has a great role in Bilecik’s development. The Law No 6331 was analyzed in 40 enterprises which operate in this organized industrial zone. For the duration of this analysis, occupational accidents could be successfully decreased in the amount of 27% in the firms which were grouped as hard and hazardous labour (occupation). Great progression was made in all these firms about labour hygiene, general appropriateness and awareness. All the workers in these firms trained about labour safety and risk analysis were done in all these firms. Although business managers of these enterprises were anxious about the firms’ incremental costs at first, there became a great satisfaction in these enterprises about the rates of their yield increase and performance.

Keywords: The Law No 6331 and labour safety applications in the first organized industrial zone of Bilecik
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Sleeping, which constitutes about 1/3 of human life time, is an important requirement for health. During sleeping, brain performs various physiological, electro-physiological and cognitive activities. Sleep disorders are disturbances in the duration, pattern and quality of sleep. It’s known that there are 85 types of sleep disorders.

This cross-sectional study aims to explore the frequency of diagnosed sleep disorders and the daytime sleepiness, known to be related to sleep disorders (using Epworth Sleepiness Scale) in miners. Other investigated variables are socio-demographic characteristics, working life and conditions, habits and the history of other diseases.

In the study, a questionnaire developed by the investigator in accordance to the variables and Epworth Sleepiness Scale to measure daytime sleepiness were used.

Target population of the study was 1520 miners and the calculated "smallest representative sample size" was 307. Thirty percent of replacement has been used and out of a total of 409 target people, selected by using a random numbers table in accordance with their working characteristics, 378 people (92.4%) were reached. Achieved sample represents its own universe. The mean age of the study group was 34.5±5.1. The average working year of the employees was 8.3±5.1. While sleep disorder diagnoses were not reported by the workers, the frequency of daytime sleepiness detected by Epworth Sleepiness Scale was found to be 29.4%
Textile industry is a leading sector in Turkey and occupational accidents and diseases are very common in textile industry because of labour-intensive manufacturing and insufficient safety measures. In big textile factories and small mills, sizing agents are applied to warp yarn in order to reduce breakage of yarn and production stops on the weaving machines thus, high quality fabric is obtained from the weaving machine. Hazard class of sizing process is high. The process includes;

- Preparation of sizing bath and put into sizing boxes.
- Winding of warp beam before impregnation.
- Impregnation of warp yarn with sizing bath
- Drying of sized yarn.
- Winding of sized warp beam.

A lot of polymers are sizing agents like starch and polyvinyl alcohol. Sizing bath includes auxiliary agents like wetting agents, lubricants and preparation temperature of sizing bath are generally high. Risk sources of the process are usage of chemicals and high temperature. Sizing machines are composed of four zones.

- Creel and unwinding zone
- Sizing boxes
- Drying zone
- Weaver’s beam preparation zone.

The risk sources of sizing process are running rollers, heavy beams and high temperature. If precautions are not taken of fast running roller, occupational accident risk will be increased. In the drying zone, explosion risk emerges because of steam pressure. Electrical equipment of the sizing machine is dangerous due to wet work environment. In the poster, training of workers, working environment, chemicals and protective devices are presented. And risks, hazards, their solutions are determined.

Keywords: Textile, Sizing, OHS.
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VII. International Conference on Occupational Safety & Health

FULL PAPERS*

* Full papers that are requested by the authors to be published.
A RESEARCH ON SAFETY OF FOREIGN WORKERS WHO WORK IN CONSTRUCTION INDUSTRY IN SOUTH KOREA AND TURKEY AND EMPLOYER’S LEGAL RESPONSIBILITIES

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The research presents structured and systematic approach that will help the foreign/migrant construction workers in Korea and Turkey to be monitored and measured their safety performance. The research also covers the analysis of the factors which influence the process of safety performance in the construction industry. Safety management, safety policy, trainings, accident causing factors and general safety situations between foreign workers at construction sites in Seoul, Pyeongtaek and Gyeonggi Province areas were surveyed through questionnaires. The suggestions have been declared to improve the safety performance for migrant workers on the construction sites. In this study, construction safety between foreign workers in Korea and Turkey has been described with reason of poor construction safety and survey on foreign workers in the construction industry. It is seen that there are significant legal structure similarities which are required both in Turkey and South Korea. In order to have a good level of health and safety in both countries there have been prepared regulations for the responsibility of employees and employers in recent years, among of these regulations, employers face more responsibility with newly added legislations because of the reason that employees have to be supervised. In concern with this, after Occupational Health and Safety Act No. 6331 has been issued in Turkey, institution and organisations have been given responsibilities. These two countries have shown their interest in this area, especially in the construction industry, steps have started to be taken with employees.
Chapter 1: Introduction

Construction industry has a very wide scope. General building work, which is domestic, commercial or industrial in nature, is the most common activity in construction industry. This work may be a new building work, such as a building extension or, more commonly, the refurbishment, renovation, alteration, maintenance or repair of existing buildings.

Most construction projects cover a range of activities such as site clearance, the demolition or dismantling of building structures or plant and equipment, the felling of trees and the safe disposal of waste materials. The work could involve hazardous operations, such as roof work or excavation, or contact with hazardous materials, such as asbestos or lead. The site activities will include the loading, unloading and storage of materials and site movements of vehicles and pedestrians. Finally, the construction processes themselves are often hazardous.

In recent years, governments in most countries set new management issues with the increasing employment of migrant workers. The authorities of Health and Safety in the countries generally hold various events to make migrants familiar with the health and safety’s most important aspects. Written educational and informational materials for Health and Safety including the leaflets, practical checklists and safety signs are generally prepared with the translation into different languages by the management of construction site for the foreign construction workers. For many migrants there are cultural as well as language differences that need to be taken into account. And sometimes cultural differences could be more important than language differences.

Since 1980, Korea has turned into a labour force importing country caused by the shortages of domestic manpower. Turkey has tried to overcome its unstable economic problems for a long time. Geographic location of Turkey serves as a bridge between Europe and Asia. Politics, ethnic and religious problems caused migration to Turkey since 1970. Turkey let immigrants from Bulgaria, Greece, Macedonia, Romania, Kosovo, Bosnia-Herzegovina, and Albania. Turkey also let immigrants from Iraq and Syria in 1990 and 2012 for the reason of chaos in these countries. Only in 2012 more than 300,000 Syrian citizens crossed the border from their country. Except the last immigration from Syria most of the other refugees got their Turkish citizenship and held the legal working permission.

There is also a higher number of Armenian, Georgian, Russian, Azerbaijani, Chinese, Pakistani, Turkmen, Afghanisti, Central Asian and Balkanian people working in Turkey have no valid visa. Many of them do “visa run” to neighbouring countries, exiting Turkey after their 90-day visa ends and immediately re-entering with a new 90-day visa. The largest foreign illegal workforce is from Georgia. These people are mainly employed in house labour, babysitting and patient care.

Turkey involves too many ethnic groups and regions in its territory. Even though they have Turkish citizenship it is possible to see people from some regions that they have communication problem in Turkish. Those people who employed are especially working in construction industries. There are also too many construction projects on-going with foreign
companies in Turkey. Recent years it is common to see Korean, Japanese, Chinese and European companies on some projects in Turkey. Due to cooperating with foreign companies there are workers in construction industry from low-skilled labour to well-skilled and engineer labours.

But, situation is little bit different in Korea. Korea used to be a migrant source country, sending farmers, miners, nurses, and workers to the U.S., Germany, and the Middle East. The Korean diaspora population around the world numbers 6.82 million as of 2009, including 2.34 million in China and 2.1 million in the United States. Until the end of 1980s, Korea was able to sustain its development without foreign labourers because it had enough cheap labourers. However, from the 1990s, Korea's decreasing birth rate and growing cost of labour caused labour shortages especially in the 3D jobs (Dirty, Dangerous and Difficult). Basically imported migrant workers were caused by higher income, elevated education level and lower birth rate among Korean nationals.

**Chapter 2: Methodology**

The preliminary study to obtain the initial data was carried out which comprised of the recruitment procedures, the inflow foreign labour, the impact of the foreign workers in the social, economics, as well as safety culture. The literature reviews were obtained from books, previous thesis, journal articles, local news, websites and works of previous researches. Both countries Occupational Health and Safety Acts, Occupational Health and Safety Act No.6331 in Turkey and Occupational Health and Safety Act No. 10968 in Korea have been examined to identify what employer’s responsibilities are and what specific details mentioned especially about foreign workers in these countries. According to these acts and related regulations, some explanations have been expressed about fines and imprisonment in case of failing the legislations and regulations.

Several interviews were carried on the respondents at construction sites in Wangsimni and Yeongdeungpo, Seoul and Pyeongtaek, Gyeonggi Province. The respondents consisted of contractors, technicians, foreign workers, safety officers and engineers.

By attitude survey questionnaire foreign worker’s general point of view about safety management, safety trainings, safety cultures and construction accidents have been surveyed.

The data such as the number of foreign workers, migration countries, foreign workers’ tasks have been taken from both Turkish and Korean Ministry of Labour, KOSHA (Korea Occupational Safety and Health Agency), CAK(Construction Association of Korea) and ISGUM(Turkish Health and Safety Institute). From the updated data, construction safety for the migrant workers has been clarified. The study has been finalized with the results and questionnaire survey’s statistical analysis.
Chapter 3: Health and Safety Acts and Employer’s Legal Responsibilities in Korea and Turkey

Since 1963, Turkey has been an associate member of the European Union and Turkish authorities had a big effort to comply with European Union law. As many laws have been changed for adopting EU and to be full-membership of EU, Health and Safety Act also has been changed and improved recently years. International Labour Organisation (ILO) Guidelines is the main actor on Occupational Health and Safety Acts in many countries. The Guidelines provided by the ILO, Guidelines on Occupational Safety and Health Management System (ILO-OSH-2001) clearly identifies the employer’s responsibilities. This guideline influences the Korean and Turkish Safety and Health Act.

From 1980 Korea had a very fast growing period and quickly jumped into the class of developed countries. But Korea’s legal development was not as fast as its technological and scientific development. Especially in the past decade Korea had a great effort to receive desired level of safety in practice, regulations and legislations.

According to Occupational Health and Safety Act No.6331 in Turkey and Occupational Safety and Health Act No. 10968 in Korea; employers shall take into consideration in order to prevent accidents at work place. Safety trainings should be organised and given to workers before starting and during the work processes, a safety work place shall be designed for workers and also protective equipment shall be supplied by employers. Other thing that the Health and Safety Law in Turkey and Korea require is to have a written safety policy. Every construction organization should have a clear policy for the management of health and safety so that everybody associated with the organization, including foreign workers, is aware of its health and safety aims and objectives. In case of having foreign construction workers in a work place, Occupational Health and Safety Act No.6331 in Turkey and Article 2 of the Korean Act on Employment state the obligations that employers should provide for the health and safety of foreign workers. These are providing safety trainings in different languages and attaching safety signs in a language that foreign workers can easily understand. Employer who fails to follow the rules from Occupational Safety and Health Acts in Turkey and Korea may be punished by a fine or even imprisoned. For example, According to Korean Occupational Safety and Health Act, failing to provide safety educations for foreign workers and attach safety signs in different languages can force employers to pay not more than 5 thousands US Dollars.

Ministry of Labour and Social Security and Turkish Consulates are the main official bodies give work permit for foreign workers in Turkey and The Construction Association of Korea is the main official body to supply foreign construction workers for the main contractors if there is a need to hire foreign workers in Korea. In order to work in Korea as a migrant construction worker, the industrial training visa (D3) should be issued. After training, under Non-professional Employment (E-9) Visa and Employment Permit for Foreign Worker rules, Korean companies can employ for foreign workers.
Chapter 4: Accidents at construction sites involving foreign workers

4.1. Introduction of Accidents, work-related ill health and occupational diseases

There is not generally only a single cause for an accident as well as incident, single cause rarely can be a result, mainly multiple causes lies behind of the accidents. Casual factors that are connected and have an effect on each other are involved in most incidents. Accidents can occur whenever deficiencies, oversights, errors, omissions or unexpected changes occur. Any one of these can be the precursor for an accident or an incident. Korean and Turkish Health and Safety Legislations require investigation after an accident or an incident. Planning, organising, controlling, monitoring and reviewing are the 5 requirements in these countries as it is in most of the countries’ regulations and legislations.

4.2. Accidents at construction sites in Turkey

The reported construction accidents that foreign workers involved are indicated in Table-1. Official numbers are only indicates the reported accidents, that is why there is a difficulty to get to know the exact number of accidents in construction sites that foreign workers involved in.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of accidents in Construction sites</th>
<th>Construction Workers in Turkey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of accidents Foreign Workers</td>
<td>Number of accidents Turkish Workers</td>
</tr>
<tr>
<td></td>
<td>Accidents</td>
<td>Accident rate</td>
</tr>
<tr>
<td>2010</td>
<td>11</td>
<td>1.5</td>
</tr>
<tr>
<td>2011</td>
<td>18</td>
<td>1.33</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Table-1 Accident rates for foreign and Turkish workers in Turkey. (Ministry of Labour and Social Security, 2012 – Turkey)

4.3. Accidents at construction sites in Korea

One of the main reasons for accidents in workplaces is communication between migrant workers and Korean workers in Korea. There are two accident cases which occurred in Korea due to communication fail. According to KOSHA’s Newsletter published in October 2012, these two cases follow below

Accident case 1: “A Korean worker talked to his migrant colleague from China aged 29 to arrange massed tools, but he failed to understand and just smiled at his eyes. That smile triggered misunderstanding between the two persons finally leading to assault.”

Accident case 2: A migrant worker from Bangladesh was injured in his hands as he tried to eradicate materials crushed in the processing machine without stopping the running equipment at a work place located in Gwang-ju, Gyung-gi province, January 2012”
Table-2 Accidents to all migrant workers in various employment sectors (2011). (Research on foreign workers in Korea, KOSHA, 13.09.2012)

Table-2 gives an indication of accidents in different employment sectors in 2011. There is noticeable difference between the accident numbers in various sectors. The construction industry is one of the largest industries in Korea and Turkey. Construction industry has always high ratio in accidents and it is one of the most dangerous sectors in other countries as well.

Chapter 5: Intention of Surveying Health and Safety for Foreign Construction Workers

An attitude survey has been prepared to analyse foreign construction workers’ reaction of health and safety in construction industry. The questionnaire has two different parts, the first part is made for foreign construction workers’ personal information and the second part is a health and safety attitude survey questionnaire which introduces the concept of health and safety in a selected construction sites. Survey questionnaire was designed for the health and safety of foreign construction workers in a construction site to analyse how successfully health and safety is being managed. Attitude survey questionnaire has been prepared in five different languages to reach to variety of foreign construction workers. Survey questionnaire in Korean, English, Chinese, Vietnamese and Thai were handed out or emailed to foreign workers’ foremen, safety managers or the persons who is in charge of safety and foreign workers.

Questionnaire survey was distributed in construction sites which mainly located in Seoul area such as Wangsimni and Yeongdeungpo and Gyeonggi Province, Pyeongtaek Foreign workers who participated in the survey were mostly from China, Vietnam, Thailand, the Philippines and some from Central Asian Countries. The questionnaire survey was responded by a total of 148 blue-collars including some white-collars. 8 of questionnaire survey sheets weren’t taken into action for the analysis because of the inadequate answers to the questions. 19 white-collars workers who participated in the questionnaire are mainly from China, the Philippines and Kazakhstan. 5 of the white-collar responders duty is related to safety. Their duty is to work as a safety supervisor in those workplaces area that also blue-collar workers work in. (Table-3)
<table>
<thead>
<tr>
<th>Responders Origin</th>
<th>Number of responders</th>
<th>Effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign workers (Blue-collars)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>China (including Korean ethnics)</td>
<td>97</td>
<td>Responded: 129</td>
</tr>
<tr>
<td>Vietnam</td>
<td>13</td>
<td>Effective: 93.8%</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Bangladesh</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Pakistan</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sub total</td>
<td>121</td>
<td></td>
</tr>
<tr>
<td>Foreign workers (White-collars)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>China (including Korean ethnics)</td>
<td>7</td>
<td>Responded: 19</td>
</tr>
<tr>
<td>the Philippines</td>
<td>4</td>
<td>Effective: 100%</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Bangladesh</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sub total</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>140</td>
<td>Effective: 95.9%</td>
</tr>
</tbody>
</table>

Table-3

Chapter 6: Correlation analysis of questionnaire survey

In the first part of survey questionnaire, foreign workers were asked about nationality, age, staying period in Korea, education level, safety training, occupational accidents that they were involved, major back in home country and Korean language ability. In the second part of questionnaire foreign workers were asked to analyse safety culture of workplace such as management’s policy to unsafe behaviour, safety practice and safety orientation.

104 of the participant are Chinese including Korean Chinese therefore it is not surprising to have a result with 60 workers which equal 42.86% has a good level of Korean language ability. And also 24.29% of the workers think that their Korean language ability is a very good level. Construction workers from South Eastern countries and other countries have not have a good level of Korean as Chinese workers including Korean ethnics. Language becomes a barrier to safety training when it is provided. But it is declared that there is generally a foreman who speaks Korean if there is something that is not understood.

According to correlation analysis age has a high negative correlation with the reasonable risk control (-.330**). This means that workers in older ages are inclined to believe that risk controls do get in the way when they perform their jobs. And experience also was found to have a negative significant correlation with risk control -.198*. (Table-4)

Knowledge on safety instruction is correlated negatively with accident. According to -.171* significant result the more accident is the more not having knowledge on safety instruction. Workers who don’t fully understand the health and safety instructions which are related to their job tend to experience accident. (Table-5)
The correlation between wearing safety equipment when they are supposed to and useful safety briefings is .273** which shows the correlation not very high but still it is positive. This correlation factor means daily given safety briefings remind foreign construction workers how life saver is using personal protective equipment and they are aware of its importance. (Table-6)

One of the most common excuses that workers mention is that the time pressure makes them not to think of safety first and forget using safety protective equipment. The positive, direct correlation factor of .369** shows when the time pressure is reasonable, then using of protective equipment takes priority when it is supposed to. (Table-7)

Korean language ability of foreign construction workers are relatively high then the education level as an instance. The origin of foreign workers is mostly from China but Korean ethnic Chinese. This can be the reason why most of the foreign workers in survey have at least in conversational level Korean language ability. The direct correlation of .217** between language and blaming for worker’s mistake can be interpreted as having a high level of language knowledge will give the worker chance to talk about the mistake that caused blaming. (Table-8)
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- Statistics Korea, (http://kostat.go.kr)
- Social Security Institution, Turkey, (http://www.sgk.gov.tr)
- Ministry of Labour and Social Security, Turkey, (http://www.csorb.gov.tr)
- Health and Safety Institution, Turkey, (http://www.isgum.gov.tr)
- Ministry of Employment and Labour, Korea (http://www.moel.go.kr)
### Appendix 1

**Correlation Analysis**

**Pearson's correlation coefficient values**

<table>
<thead>
<tr>
<th>Correlation factors</th>
<th>Accident</th>
<th>Age</th>
<th>Experience</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest of mgt on H&amp;S</td>
<td>-.086</td>
<td>-.031</td>
<td>-.142</td>
<td>-.035</td>
</tr>
<tr>
<td>Mistake blaming</td>
<td>-.087</td>
<td>.086</td>
<td>.002</td>
<td>.026</td>
</tr>
<tr>
<td>Praise for safe behaviour</td>
<td>-.005</td>
<td>-.100</td>
<td>-.033</td>
<td>-.091</td>
</tr>
<tr>
<td>Action based on risk rating result</td>
<td>.001</td>
<td>-.239</td>
<td>-.040</td>
<td>-.101</td>
</tr>
<tr>
<td>Risk control reasonable</td>
<td>-.004</td>
<td>-.330</td>
<td>-.198</td>
<td>-.026</td>
</tr>
<tr>
<td>Bruise inevitable</td>
<td>.046</td>
<td>.099</td>
<td>.039</td>
<td>-.080</td>
</tr>
</tbody>
</table>

**Table-4**

<table>
<thead>
<tr>
<th>Correlation factors</th>
<th>Accident</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest of mgt on H&amp;S</td>
<td>-.086</td>
<td>-.031</td>
</tr>
<tr>
<td>Protective equipment wearing</td>
<td>-.067</td>
<td>-.098</td>
</tr>
<tr>
<td>Rule braking, no action</td>
<td>-.115</td>
<td>.158</td>
</tr>
<tr>
<td>Knowledge on instruction</td>
<td>-.171</td>
<td>-.017</td>
</tr>
<tr>
<td>Need of time pressure</td>
<td>.020</td>
<td>-.150</td>
</tr>
</tbody>
</table>

**Table-5**

<table>
<thead>
<tr>
<th>Correlation factors</th>
<th>Workmate's blaming</th>
<th>Adequate H&amp;S training</th>
<th>Indifference to prevent accident</th>
<th>Protective equipment wearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest of mgt on H&amp;S</td>
<td>.111</td>
<td>.457***</td>
<td>.178**</td>
<td>.417''</td>
</tr>
<tr>
<td>Mistake blaming</td>
<td>-.202*</td>
<td>.005</td>
<td>.304**</td>
<td>.036</td>
</tr>
<tr>
<td>Praise for safe behaviour</td>
<td>.348***</td>
<td>.418***</td>
<td>.083</td>
<td>.376''</td>
</tr>
<tr>
<td>Risk control reasonable</td>
<td>-.035</td>
<td>-.048</td>
<td>-.087</td>
<td>.189</td>
</tr>
<tr>
<td>Bruise inevitable</td>
<td>-.064</td>
<td>.062</td>
<td>.159</td>
<td>-.072</td>
</tr>
<tr>
<td>Useful briefing</td>
<td>.363***</td>
<td>.272***</td>
<td>.055</td>
<td>.273</td>
</tr>
<tr>
<td>Workmate takes risk</td>
<td>.076</td>
<td>.205</td>
<td>.030</td>
<td>-.162</td>
</tr>
</tbody>
</table>

**Table-6**
<table>
<thead>
<tr>
<th>Correlation factors</th>
<th>Need of time pressure</th>
<th>Risk rating involve</th>
<th>Praise for safe behaviour</th>
<th>Action based on risk rating result</th>
<th>Risk control reasonable</th>
<th>Bruise inevitable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest of mgt on H&amp;S</td>
<td>.123</td>
<td>.039</td>
<td>.304 **</td>
<td>.348 **</td>
<td>.065</td>
<td>-.026</td>
</tr>
<tr>
<td>Workmate’s blaming</td>
<td>.078</td>
<td>.564 **</td>
<td>.348</td>
<td>.065</td>
<td>-.035</td>
<td>-.064</td>
</tr>
<tr>
<td>Adequate H&amp;S training</td>
<td>.221 **</td>
<td>.149</td>
<td>.418 **</td>
<td>.324 **</td>
<td>-.048</td>
<td>.062</td>
</tr>
<tr>
<td>Indifference to prevent accident</td>
<td>.118</td>
<td>-.147</td>
<td>.083</td>
<td>.118</td>
<td>-.087</td>
<td>.159</td>
</tr>
<tr>
<td>Protective equipment wearing</td>
<td>.369 **</td>
<td>.137</td>
<td>.376 **</td>
<td>.493 **</td>
<td>.189 *</td>
<td>-.072</td>
</tr>
</tbody>
</table>

Table-7

<table>
<thead>
<tr>
<th>Correlation factors</th>
<th>Accident</th>
<th>Age</th>
<th>Experience</th>
<th>Education</th>
<th>Safety Training</th>
<th>Language ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest of mgt on H&amp;S</td>
<td>-.086</td>
<td>-.031</td>
<td>-.142</td>
<td>-.035</td>
<td>.093</td>
<td>.018</td>
</tr>
<tr>
<td>Mistake blaming</td>
<td>-.087</td>
<td>.086</td>
<td>.002</td>
<td>.026</td>
<td>.085</td>
<td>.217 **</td>
</tr>
<tr>
<td>Interest in individual opinion on H&amp;S</td>
<td>.049</td>
<td>.026</td>
<td>-.003</td>
<td>-.125</td>
<td>.054</td>
<td>.046</td>
</tr>
<tr>
<td>Useful briefing</td>
<td>-.050</td>
<td>-.006</td>
<td>-.080</td>
<td>-.052</td>
<td>.082</td>
<td>-.033</td>
</tr>
<tr>
<td>Need of safety procedure</td>
<td>.058</td>
<td>-.272 **</td>
<td>-.095</td>
<td>.086</td>
<td>.073</td>
<td>-.138</td>
</tr>
</tbody>
</table>

Table-8
AUTHORIZATION AND FUNCTIONS OF TRAINING INSTITUTIONS FOR OCCUPATIONAL SAFETY SPECIALISTS IN TURKEY

Ayşegül ALTINOK
(OHS Assistance Expert)
Authorization and Functions of Training Institutions for Occupational Safety Specialists in Turkey

Ayşegül ALTINOK, OHS Assistance Expert

In Turkey; occupational safety specialists (OSS) should be authorized and certificated by the General Directorate of Occupational Health and Safety of the Ministry of Labour and Social Security (LSC) in order to work in the field of OHS. The certificates of Occupational Safety Expertise are classified as A, B or C according to hazard class of workplaces and given to technicians and graduates of natural applied sciences, engineering and architecture faculties; provided that completing a training program of an authorized training institution and being successful in exams of Occupational Safety Expertise.

Objective:

The training of occupational safety specialists in Turkey are provided by training institutions (TI) in order to provide a standard OHS education. Public institutions, universities and enterprises can open a TI and give OSS training programs; provided that they are authorized by the Ministry for training of OSS.

Authorization and certification processes of TI are regulated by the General Directorate of OHS of the Ministry according to Occupational Health and Safety Law No.6331 and The Regulation about Occupational Safety Specialists Task, Authority, Responsibility and Trainings No.28512

Methods:

Application requirements to serve as a TI were standardized within the framework of related laws and regulations and determined on issues such as;

Rector approval for universities/company's authorized signatory for application,

Application documents; including land registry or lease, fire prevention reports

Location and layout plan of the institution,

Conditions for classrooms and other parts

Educational staff,

Task, authority and responsibility of training institutions,

Also;

The curriculum of training programs,

Eligibility of the trainees,

Arrangement and hours of courses,
Contracts of educational staff & manager in charge are registered by authorized TI and controlled and approved via internet through the software system ISG-KATIP; which is used by the General Directorate of OHS for recording, tracking and monitoring of OHS services through the country.

Results:
As of the date 20.04.2014;
220 authorized TI,
3,821 Trainers,
10,472 contracts btw. trainers and TI,
8,692 approved Training Programs,
170,056 OSS Trainees

Were realized by the recent data taken from the ISG-KATIP

Conclusion:
Through this studies; qualifications and qualities of training institutions were based on standards; including physical and thermal condition of TI, qualifications of educational staff, duration and contents of all courses. In addition; training institutions and educations were controlled and supervised by the Ministry and new regulations have been made with the feedback of participants. In this way; the quality of education for OSS were based on strong and technical concepts and recognition of the value of OHS by the profession, government, industry and the community were increased.