



Israel Institute for Occupational Safety and Hygiene

IIOSH

2007

THE INFORMATION CENTRE

General.

The IIOSH Information Centre is the Israel's primary source of OSH information. It delivers to the public, particularly to the safety community and other interested people at industrial plants and to stakeholders, reliable up-to-date information according to their requests. Every answer is being tailored to the inquirer's needs and educational level. The centre's information scientists use an extensive network of OSH information resources that includes numerous international and local databases, a library, personal expertise of the IIOSH staff and, when necessary, authoritative sources elsewhere. For this purpose the Information Centre maintains working contacts with many relevant organizations in Israel and abroad.

The IIOSH is the official representative of the International Labour Organization Information Centre in Israel (CIS ILO).

The centre's main activities include:

- Provision of up-to-date information, normally free of charge, in response to written or verbal requests from workers, managers, OSH professionals, or members of the public, submitted by means of mail, fax, telephone, e-mail or via the Internet;
- Maintenance of ongoing ties with recognized suppliers of OSH information worldwide;
- Acquisition, processing, translation, cataloging and systematization of information pertaining to various aspects within the field of safety and health at work, using databases, professional literature, other printed and electronic sources;
- Development and maintenance of specialized local databases;
- Maintenance and ongoing updating of the service library containing thousands of books and periodicals;
- Preparation and production of professional publications on selected topics, intended for a statewide circulation, including information sheets and FAQs;
- Maintenance and constant updating of the Israeli OSH-related legislation and standards register;
- Participation in surveys and growing participation in applied research in the field of OSH.

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Every year the Centre answers around 5500 written and verbal information requests.

The centre's establishment and current operation have been facilitated by financial support provided by the *Workplace Health and Accident Prevention and Research* fund of the Ministry of Industry, Trade and Labour and the *Manof* Foundation of the National Insurance Institution.

THE INFORMATION CENTRE IN FIGURES

YEAR 2007

5,370	Written and verbal answers
50	Selected answers presented at the Institute's Internet site
59,000	Full text microfiche and digital items
55,000	Entries in the local database
6,100	Books and magazines
37	Extensive databases containing millions of items
2,350	Enterprises, factories, organizations receive safety information handouts
5,000	IIOSH bimonthly magazine subscribers read the information centre's selected answers.
160	International Hazard Datasheets on Occupations
35	International Chemical Safety Cards

DISTRIBUTION OF THE WRITTEN ANSWERS BY THE SUBJECT

JANUARY – DECEMBER 2006

	Subject	Amount of inquiries	%
	Total	2948	100
1.	Occupational Hygiene	9	0.31
2.	Machinery – equipment – tools	397	13.47
3.	Energy (electricity, gas, water)	313	10.61
4.	Industrial processes	73	2.48
5.	Chemistry	577	19.57
6.	Physics - radiation	78	2.65
7.	Human factor	24	0.81
8.	Medicine and biology	119	4.04
9.	Personal protection equipment	122	4.14
10.	Legislation	551	18.69
11.	Fire protection	67	2.27
12.	Construction works	193	6.55

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13.	Ergonomics	52	1.76
14.	Environment	159	5.39
15.	Other (statistics, safety management etc.)	214	7.26

The human factor and the occupational safety - work related stress

In recent years the Institute's information centre set up the foundations of the work related stress subjects. The major portion of the activity concentrated mainly on the provision of the basic information intended to promote the awareness to the subject, development of the training frameworks for various target populations and the creation of an extensive and continuously updated information database backed by international sources relating to the work related stress and the human factor in the occupational safety.

In 2006 - 2007 these three aspects of the work related stress activity were assigned even higher promotion priority by the Institute's management, stipulated by the requirement that it would be based on the methodology of the ILO Guidelines on Occupational Safety and Health Management Systems (ILO-OSH2001) and the Israeli Standard 18001 "Occupational health and safety specifications" which closely follows the ILO guidelines.

The major portion of our activity is still focused on the continuing efforts to promote the tools that assist in coping with work related stress and to back up their integration in various organizations. Updating our resources with the world's most advanced trends and adapting them to the circumstances, in 2007 we continued to channel extensive information to the workplaces relating to the ways of handling work related stress by organizations, increased the number of the workshops on the subject, the training events length and improved the contents. We are encouraged by the fact that the number of requests for information and training events at workplaces is steadily growing. A section on the work related stress was added to the guidance on the implementation of the systems of the occupational safety management. The guidance will be forwarded to thousands of workplaces, carrying the most advanced information on hazards assessment. This process follows the ILO Guidelines on Occupational Safety and Health Management Systems adopted in Israel.

Disseminating the information and promoting awareness is a part of the Institute's incessant effort to bring the subject of work related stress to the attention of employers, managers and employees at workplaces and place it on the list of subjects to be dealt with as part of routine.

We have expanded the publication venues - a new section was added at the Institute's Internet site to include all our publications on the subject. We have also included the subject of the work related stress as a parameter for evaluating excellence in safety, etc.



For the benefit of the managements at workplaces articles have been written and published elaborating on the arguments that emphasize the advantages of facing and coping with the work stress related situations at the workplace.

A major effort is dedicated to the adaptation of the available information to the local circumstances.

Concurrently, we continue to intensify our involvement into developing specific subjects on work related stress and to disseminate resulting information on:

- work related stress causal factors, such as bullying, driving stress, etc.;
- the connection between the work related stress and the absence from work, its effects on the productivity of the organization and on the economy - on the organizational level, and the work related stress effects on the health - on the individual level: physiological, mental, eating habits and behavioral patterns.

Multimodal transport and workplace handling of dangerous goods

The IOSH information centre is a major source of information on all aspects of the transport of dangerous goods in all modes. Since the preparation of the dangerous goods shipments, being an intrinsic part of the workplace processes, is normally carried out at the premises of the plants, the transport of dangerous goods is treated by the Institute as a very important occupational safety subject in industry.

Following are some of the major subjects pertaining to the multimodal transport of dangerous goods dealt with in 2007:

- Consultation and provision of required information, including regulatory updates around the world, to various governmental offices, such as Environmental, Interior, Transport and to the emergency services. Some of the advisory activity is provided as a background for the current or future legislation processes.
- Obtaining new professional literature in the field and updating the existing sources (printed and electronic).
- Provision of support to the workplace staff involved in the transport of dangerous goods through assistance on the classification, selection of suitable packagings, the rules of packing, shipment documentation, and the like.
- Providing active professional support to the Institute's training department and participating in actual basic and refresher training of the industrial and transport sectors relevant staff. Thus, in 2007 the IOSH launched a new training program for the shippers of dangerous goods using international maritime transport, following a new requirement by the Israel competent authority to provide such a training, thus ushering Israel into an

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exclusive list of the countries that require compulsive training for those using international maritime transport for the transport of dangerous goods, albeit this requirement by the International Maritime Organization in the IMDG Code as yet remains of voluntary nature.

- A training program was developed and launched dedicated to writing and understanding Safety Data Sheets required by relevant Israeli legislation.
- Continuation of the pilot project on the preparation and publishing of the instructions in writing to the drivers carrying dangerous goods compliant with the format and contents required by the relevant Israeli legislation.
- Analysis of the forms and methods aimed at assimilation and dissemination of the information related to implementation of various aspects of GHS and relevant EU directives such as REACH.
- Participation in the work of the technical committee working on the update of the national standard 2302 related to the classification, marking and packaging of dangerous substances and the activity directed at the standard's implementation, including preparing and publishing of the guide to the standard's requirements.
- The Information Centre has also been instrumental in updating of the computer based training module for the drivers of dangerous goods.

A range of activities in technical and standards committees.

In this framework the Information Centre provides professional advice, background information and direction as required for the creating new and updating the existing national legislation and standards and necessary to ensure professionally competent activity of the technical committees. In 2007, the Information Centre took part in the following committees:

- The National Council on the Occupational Health of the workers;
- The technical committee on harmful dust and the Occupational Health committee under the auspices of the Ministry of Industry, Trade and Labour;
- The experts committees working on new and existing Israeli standards, such as: IS 3864: "Graphical symbols - Safety colours and safety signs: Safety signs used in workplaces and public areas; IS 4468 - welded steel tanks for oil storage; IS 4571: Double-wall underground fuel tanks: Production and cathodic protection, and others.

The Information Centre experts initiate the introduction of new subjects to be covered by new standards, such as shower and eye washing facilities for use in emergencies, devices for cutting off electrical current in emergencies, periodic tests for biological fume chambers, and others.



• **SPECIAL PROJECTS AND ACTIVITIES**

In 2007 the Institute continued its long standing policy of bringing to light, developing and promoting specific forefront issues, ideas and subjects in the field of the occupational safety in the framework of the special projects, such as:

1. The improvement of the occupational safety at the construction sites.

The project was focused on occupational safety for those working at height and on identification of the exposure to the silica dust and noise. Some 1800 construction sites in Israel have been visited by the instructors and 2 mobile training units.

The project has been completed by the end of 2007, but due to great success, an additional budget has been approved for its continuation in an upgraded version for the years 2008 - 2010 to involve about 1100 construction sites.

2. The Implementation of occupational autonomous safety management system in some 500 small and medium sized workplaces.

This innovative and distinctive project, carried out by the Institute in cooperation with the Manufacturers Association and funded by the National Insurance Institution, started in 2006 through 2007, and has now been approved for continuation in 2008 - 2009 for 500 workplaces.

It has been designed for and aimed at small and medium workplaces employing between 25 to 100 employees

The participation in the project is free of charge and is conditioned only by the plant management's commitment to implement the self sufficient safety system and following the management representative appointment to coordinate the activity involved in the project.

The participating workplaces are coached by the Institutes instructors who will instruct them on the following:

- The knowledge and use of practical tools that will lead to the reduction of hazards and to on-going improvement in the occupational safety level at a specific workplace.
- Instruction and guidance in carrying out safety self audits and work station hazard evaluations using the "Job Safety Analysis" method to identify and mitigate the occupational hazards at the workplace in general and at the defined working stations, in particular.
- Assistance in carrying out the instruction of the management and the workers. At the same time the workplaces will have an unlimited access to a wide range of professional

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tools to assist them to carry out the safety analysis and hazard evaluation aimed at executing a systematic follow up of the implementation of the recommendations and tasks in all areas of the occupational safety and the workplace management.

- The workplaces participating in the project are issued a prestigious participation certificate carrying, among others, the ILO logo.

3. The Development of educational software modules for the mobile training units and the upgrading of the existing modules.

This on-going project was launched in 2006.

1) Two interactive educational computer software programs, each in a number of languages, were developed for the four Institute's mobile training units for construction and industry applications.

(a) for the industrial applications the following subjects were selected: manual handling of loads; safety in operating dangerous appliances and their protection; safety in using tools and lifting devices; fire safety. The software is being developed in the Hebrew and the Russian languages.

(b) for the construction applications the training software is being developed in the Russian, Romania, Arabic and Turkish languages to focus on the following subjects: protection from the height related falls; scaffolding; digging and the soil works; electrical works at construction sites; exposure to silica dust.

2) Adjusting the existing software module from DOS to "Windows" working environment.

3) A dedicated management system is being created for all training material files to ensure optimal compatibility of the software to the specific organization requirements and needs.

4. The implementation of an integrated training and awareness raising project for the promotion of occupational safety and hygiene in agriculture.

The project is designed for promoting occupational safety and health in kibbutz and moshav agricultural settlements, regional councils and farms throughout the country. The Institute's activity in this project involves regular visits to the sites integrated with training events in various forms.

5. The guidance to occupational hazards in selected professions - stage 2.

The stage 1 of the project dealt with some 50 different professions pertaining to the food industry. The stage 2 involved developing hazard datasheets on 160 professions in four



sectors, based on a set template which has been recommended by the steering committee of the International Labour organization.

The sectors chosen are:

- Construction;
- Chemistry;
- Process industry;
- Health professions.

With the completion of 160 new datasheets this project came to an end. It must be noted that the hazard datasheets are highly praised and are in great demand at workplaces.

6. Translation and adaptation of ILO CIS Technical Info Sheets in occupational safety and hygiene

The project involved translation and adaptation of some 161 CIS Technical Info Sheets intended for use by workers in a wide range of occupations. The Info Sheets have been based on a Good Practice approach and in the form of "Dos" and "Don'ts". The translated Info Sheets have been organized into 3 technical brochures in accordance with the subject: transport of dangerous goods by road, prevention of infectious diseases in hospital environment, monitoring the worker's health. The translated Info Sheets were highly praised by the users.

7. The guidance to occupational hazards for the construction projects.

This document will guide the entrepreneurs and the contractors to set up and run the occupational safety management system and safety program for a specific project and a specific site. In addition the guidance will provide technical tools to manage and implement specific safety requirements necessitated by the specific project environment and conditions.

8. Production of an interactive system for the development of awareness and understanding of occupational safety among the school students and new workers.

This project, developed by the ORT network in cooperation with the subject matter specialists endorsed by the Institute, applies to 13 areas of learning, including "Safety at school" and "Safety at home".

The development of this system, which started in previous years, has been completed in December 2007, and the system is being absorbed by the ORT into its set of learning subjects.



9. Development of safety self audits for the construction industry.

Within the framework of this project, novel for Israel, a guidance is being produced for carrying out safety self audits at construction sites. When completed, the self audits, used by the foremen, will serve as diagnostic tools for safety status evaluation at a given construction site.

The self audits are produced on the basis and following the example of the industry safety self audits translated and adapted to the use in Israel from the European Self Audit Handbook for SMEs. Using rich professional experience accumulated in the western world the self audits will be written in the language and level adapted optimally to the end users: contractors, foremen, work supervisors, safety managers, instructors and work inspectors. An experimental version of the guidance has been completed and consolidated at the end of 2007.

10. Tracing and managing sleep disturbances as a causal factor in occupational accident statistics.

The results of a research carried out in the framework of the Israel national occupational health and environmental safety research centre showed correlation between daytime drowsiness stemming from sleep disturbances in the workers and increased possibility for involvement in occupational accidents. The research indicated that the daytime drowsiness at least doubled the likelihood of the workers' possible involvement in an accident or injury at work. Following the research the IOSH implemented an intervention programme which included detecting the tendency in workers to feel drowsy during the daytime, investigating if its causal factor can be attributed to the sleep disturbances, informing the involved workers of the results. Group consultations regarding the sleep hygiene were carried out and in relevant cases the workers have been referred to sleep disturbances clinics.

A year long follow up indicated that the accidents and injuries rate within the group of the workers in whom daytime drowsiness was observed dropped by one third. Consequent to these rather dramatic results the IOSH was granted a budget for the intervention at additional work places.

11. Addition of new mobile training units.



At present the IOSH operates 4 mobile training units. In 2007 a budget has been approved to replace two "aging" mobile units by new ones, to ensure that the units can cope with growing demand for the training provided by the mobile units.

12. Occupational Safety and Health Management Systems - the Competent Institute.

The Competent Institute has been established at the Israel Institute for Occupational Safety and Hygiene to promote the implementation of the occupational safety and health management systems in accordance with the ILO Guidelines.

Within the IOSH the Competent Institute operates in the framework of the special projects department and is headed by the steering committee made up of representatives of various public institutions and government offices.

Among its activities the Competent Institute assists the plants and organizations in adoption of the system of occupational safety and health management, which includes 5 major components:

1. The activities focusing on raising of awareness and provision of written information pertaining to the rationale underlying the system of safety management and the means of the system set up at a workplace;
2. Training activities directed at personnel employed at positions related to the occupational safety, occupational safety and health management;
3. Provision of access - by means of the Internet site - to the professional databases, containing, inter alia, forms, sample procedures, question forms and various tools contributing to the implementation and maintenance of the system of safety management;
4. Issue of the participation certificates to the organizations - members in the "club of the organizations using the safety management system".
5. Providing practical assistance to the workplaces in implementation of ILO Guidelines on Occupational Safety and Health Management Systems ILO - OSH 2001.



13. Developing a probability template for the exposure evaluation at workplaces.

The project objective is to introduce a new method for evaluation of workers exposure at industrial plants and small enterprises.

There will be two concurrent stages to the project: one will be to develop the method based on the existing databases, such as hazards surveys and occupational hazards monitoring results. The second stage will examine the new method implementation to ascertain its validity and to ensure improvements if required. That will be achieved through the hazards surveys and hazards monitoring in a particular field of occupation: vehicle maintenance operations.

The use of the of the hazards survey and exposure monitoring results in combination with statistical tools, will enable the developers to create an exposure template for the purpose of predicting the probability of occupational exposure in various industries. The template will be of use to the work inspectorate, the occupational medicine and occupational hygiene specialists and the safety professionals. The template will have built in options for extending it to additional branches of industry.

14. Characterisation of the particle distribution in the air in nanotechnology involving processes.

An ever expanding range of nanotechnology applications is very like to profoundly affect numerous branches of industry and the society throughout the world. The vision of its creators is to channel the achievements of the nanotechnology to the use beneficial to the mankind, to improve the quality of life and economy, to embetter the use of environment and to contribute to the health of the population. The nanotechnology involves the use of engineered particles with the size less than 100 nanometer. With the introduction of the matter built of particles that small to the industrial applications the questions arise regarding possible safety and health hazards to the people exposed to them. Little is known, as yet, about the physical, chemical and biological properties of these particles, and many are of the opinion that their behavior is different from that of larger particles. Concomitantly, data is gathered regarding non engineered ultra fine particles produced in various combustion, physical and chemical processes associated emissions.

The industries in which the nanoparticles are being used at present are paints, adhesives, pesticides and plywood applications.

Nanoparticles cross all the barriers in the respiratory system. Diffusion and electrostatic forces are dominant mechanisms for their lodging and settling in the respiratory system. Toxicological research indicates that unlike larger particles the nanoparticles are

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capable of penetrating through the cell membranes and initiating inflammation and cellular damage.

Unlike larger particles, the nanoparticle mass is not a suitable parameter for exposure evaluation, since their mass in total dust mass does not exceed 1%. The activated surface area of the nanoparticles appear to correlate better with the health effects exhibited by the nanoparticles and is a more suitable parameter to monitor the occupational exposure than the particle mass. The number of particles in a unit of volume can be used to characterize specific sources for nanoparticles emissions.

The project will focus on 2 types of industrial processes:

1. Those in which of engineered nanoparticles are used
2. Those which emit in nanorange.

The particles dispersed in the air present a source for the exposure and as such will be characterized for concentration and surface area by means of special equipment which allows direct reading of the specific parameters and through the use of transmitter and scanning electron microscopes.

15. Evaluation of the occupational exposure to coolants in metal finishing.

Coolants are used in a wide range of industrial processes related to metal machining to ensure adequate cooling, lubricating or prevention of corrosion of the processed metal part.

Inhalation exposure can cause asthma, chemical pneumonia, hypersensitivity and chronic bronchitis. Skin contact can result in the development of irritant or allergic dermatitis. Several studies demonstrated the link existing between the exposure to the coolants and rise in the incidence of various types of cancer.

The evaluation of a potential exposure will be carried out by standard methods including a survey and questionnaires. Actual monitoring will involve 400 samples of coolants used in metal machining, a will take into consideration different variables, such as a type of the coolant, ventilation system output and regularity of maintenance.

16. IOSH web activities, 2007

2007 was a year of further progress in all web related activities of IOSH. The major achievements include, inter alia:

- 5 new sections were added to the main IOSH site: "Noise at workplaces", "Work related stress", "Musculoskeletal overload", "National competition for the most



prominent achievements in occupational safety - Yoseftal Award", " Safety Officers Course trainees support site".

- 2 forums have been launched: the upgraded Professional Forum and the Safety Management forum.
- It has become a tradition that the Internet unit of IOSH is instrumental in carrying out various important functions in the preparation and in the course of the Institute's bi-annual conventions, in the course of 2007 - it was towards the Institute's 13th convention.
- The expansion of the online library which can be accessed through the Institute's site continued in 2007. The electronic library, consisting of books, booklets, abstracts and the information sheets, was expanded to 1266 publications.
- 269 news and announcements, 102 of "this week answers", banners and news in English under the title "OSH Headlines from Israel" appeared on the IOSH site.
- 13 issues of the "Safety - on - Line" electronic newsletter and the "Safety Management" newsletter were prepared and distributed to some 200 e-mail addresses.