



NEWSLETTER – SEPTEMBER 2004 – Vol 12(2)

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Letter from the Editor

Dear Colleagues,

Summer is over (in the North Hemisphere) - well, at least we called it Summer ☺ Anyway I hope you all had a good rest.

I am glad to be able to give you wonderful news from the ILO, a real gift for all involved in occupational health and safety: the ILO Encyclopaedia of Occupational Health and Safety and CISDOC are now available online, free of charge ! The number of people who may now access these outstanding sources of information has increased tremendously, thus bringing knowledge, which may be life saving, to all corners of the world.

As announced on the previous Newsletter, WHO held the meeting on “Control Banding” in Utrecht (a lovely town) and you will find relevant information in this issue. As you will see, the name of the approach was changed to “Occupational Risk Management Toolbox” because “Control Banding” applies only to certain cases, and the concept is being expanded to deal with as many workplace hazardous situations as possible. The most important point in this

development, though, is the philosophy of “enabling to act for prevention/control without having to necessarily depend on quantitative evaluations”, which are not always possible in many parts of the world, particularly for small enterprises. Besides guiding in the decision to control, this approach also includes the development of specific advice for controlling known hazards and specific operations. This approach not only allows persons, who are not trained occupational hygienists, to take decisions (up to a certain point) as to the need to control and as to the selection of control options, but it is also of great value for occupational hygienists, who have the knowledge to understand the need to control and to design control options, but who are “blocked” to take action due to a lack of instrumentation for quantitative measurements (often legally required).

There are control solutions available, for a number of hazardous exposure situations, which can and should be shared among as many professionals and in as many parts of the world, as possible. For this reason WHO is starting a Data Base on Solutions; further details are given in this issue but I would like to say that we expect many contributions from colleagues around the world.

I take this opportunity to congratulate Dr David Grantham (FAIOH) who has received the prestigious IOHA Lifetime Achievement Award 2005.

I am hoping for an increased flow of information from all national associations affiliated to IOHA, as well as from individual members; do not worry with lengthy papers or literary style. Your views, comments and suggestions, as well as practical examples of simple solutions (or doubts) encountered in your day-to day occupational hygiene practice, will be of great benefit to other colleagues fighting the same battles, hence worth to be shared.

Thank you and best greetings to all.

Berenice I. F. Goelzer
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IOHA Lifetime Achievement Award 2005

IOHA and the AIOH are pleased to announce that Dr David Grantham (FAIOH) has been awarded the prestigious IOHA Lifetime Achievement Award. This is an International Award where nominations are received by IOHA from all of its member organizations. Having David selected from this esteemed group is a very significant honour. Many of the membership know David as the Editor of the AIOH Newsletter and the bearded man with the hat at our conferences, but there is much more to David. Apart from being the senior hygienist in Queensland for the last 13 years David has written the book 'Occupational Health & Hygiene: Guidebook for the WHSO' (currently being republished by the AIOH), established courses in occupational hygiene in QUT, lectured at QUT and run courses in Malaysia. David has never eased up and continues to mentor young hygienists in Australia and overseas, while continually working on AIOH projects. This year David was awarded the Australia Day Public Service Medal for his contributions in Queensland.

News from Members Associations

Japan Association for Working Environment Measurement (JAWE)

The Japan Association for Working Environment Measurement (whose Chairman is Mr. KUNIOKI KUBO, Senior Vice President of JFE Steel Corporation) conducted the seminar on "Environmental Risk Management in the Workplace" on 8th July 2004, under a contract with the Japan International Co-operation Agency (JICA). There were eleven participants in the Seminar, from different countries, namely Brazil, Cambodia, China, Egypt, Indonesia, Kenya, Pakistan, Philippines, Samoa, Thailand and Turkey (see attached photo).



During the Seminar, Mr. Masayoshi Karasawa, Executive Director of JAWE, presented "The Role of Working Environment Control for the Prevention of Occupational Diseases", and next, Dr. Ayako Sudo, the Director of the Training Institute of JAWE, explained the system and activities of JAWE, as well as the registered training system for the Licensed Industrial Hygienists in the field of Working Environment Measurement in Japan.

After the two above-mentioned sessions, JAWE invited the eleven participants, from eleven countries, for a tour of the Association in order to present the facilities, equipment and analytical instrumentation of the JAWE Training Institute.

At the end of the Seminar, there was a Questions and Answers Session. The Seminar will continue in the next fiscal year, by the request of the Japan International Co-operation Agency (JICA).

News from the ILO (by Emmert Clevestine)

The ILO's International Occupational Safety and Health Information Centre are pleased to announce that the ILO Encyclopedia of Occupational Health and Safety and the CISDOC bibliographic database on OSH are now available to the world for free on the ILO website. Internauts are invited to point their browsers at <http://www.ilo.org/encyclopaedia/> and http://www.ilo.org/dyn/cisdoc/index_html (underscore, not full stop, between "index" and "html").

Now in its fourth edition, the ILO Encyclopedia is a unique and widely respected reference. Its 1000 articles and copious illustrations have been available on paper, CD-ROM and the World Wide Web since 1998. Responding to calls from International Labour Conference Delegates and the ILO Governing Body to provide free access to more resources, the InFocus Programme on Safety and Health at Work and the Environment (SafeWork) has now made the Encyclopedia the centerpiece of its "SafeWork Bookshelf", which presently also includes the ILO/WHO/UNEP International Chemical Safety Cards.

CISDOC is the fruit of 30 years of screening the occupational safety and health literature of the world for interesting and useful books, articles and audiovisual materials that occupational safety and health specialists can use in their fight against workplace accidents and diseases. It already guides users to over 62,000 publications, and 2000 more references are added every year.

The Encyclopedia and CISDOC are still available from their long-time vendors. The two are searchable together on the World Wide Web at <http://www.ilocis.org>, and CISDOC is combined with other important occupational safety and health databases on CD-ROMs from the Croner unit of Wolters-Kluwer (UK) and from the Canadian Centre for Occupational Health and Safety.

An important tool is included with the Encyclopedia and CISDOC: the CIS Thesaurus. This trilingual (English/French/Spanish) collection of terms is used by the ILO to index CISDOC references, and by a number of occupational safety and health libraries around the world to organize their collections. In the Internet age, it is a valuable source of "meta-data" for making Web pages easier to find.

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News from WHO

Update on the Control Banding Approach

Following on previous information on Control Banding already provided on the IOHA Newsletter (including the links to HSE, IOHA and ILO sites), I would like to inform you on a recent development. WHO and IPCS organized and held a "Planning Meeting on Control Banding: The Practical Application in Developing Countries", in Utrecht, the Netherlands, on 3-16 June, 2004.

It was a very successful meeting with lively and valuable exchanges of ideas and experiences among participants from many countries. The full Report from the Utrecht Meeting is available online at both the IOHA and ILO sites (which are, in fact, interlinked), as follows:

<http://www.ioha.net/content/view/14/>
http://www.ilo.org/public/english/protection/safework/ctrl_banding/index.htm

A couple of excerpts from the Report are hereby presented.

Title of the Methodology

The title of the methodology has been changed for a number of reasons. The title “Control Banding” is suitable for the method initially developed by the HSE and transformed into the “International Chemical Toolkit”, for chemicals that are used, either in the liquid or powder form (not produced, or somehow resulting from a work process).

However, the principle of using proven measures for controlling risks without, or before, carrying out quantitative evaluations opens wider possibilities. But this approach does not fit neatly into the “banding” terminology. This is the case when specific guidance is given for specific risk factors, e.g. Silica, where the hazard is already known, as well as the potential for exposure in specific tasks and how to achieve adequate control. HSE has developed control guidance to control exposure to airborne dust containing silica using this approach; this is called “Silica Essentials”. It is possible and desirable to expand the concept to other hazards and also to specific operations, such as welding or paint spraying. Moreover, the translation of the term “Control Banding” into other languages has posed problems.

For these reasons, a broader title to indicate the use of this concept has been sought and the decision was to name it “Occupational Risk Management Toolbox”. In order to avoid misunderstandings, for a period of time, the term “Occupational Risk Management Toolbox” will be accompanied by “Control Banding”, in brackets.

Extending the Scope of the Control Banding Approach

It is desirable to extend this kind of approach to other occupational risk factors, such as physical agents, biological agents and ergonomic factors. In fact, the SOBANE methodology has already been applied to Noise, Heat Stress and Ergonomics (in addition to Chemicals).

This kind of “no quantitative measurement approach” is of particular importance for biological agents since, for most of them, quantitative evaluation is not even considered and the paradigm is “recognition-control”. It should be mentioned that NIOSH has been working on semi-quantitative methods for moulds.

It is envisaged that the Toolbox will also contain a set of other Toolkits for a number of other occupational risk factors (including working conditions) that will be developed over time.

WHO Data Base on Solutions

An international, comprehensive and dynamic data base containing control solutions for specific operations would be extremely valuable since preventive knowledge already applied and tested may be used in similar situations. Some solutions may need to be adapted; however, having detailed information on already proven preventive measures may be of great help (even if not exactly applicable, the principle may provide good ideas).

Many institutions, such as HSE, NIOSH, INRS and others, as well as individual practicing occupational, hygienists, already have a significant collection of tested controls. An inventory of what already exists should be elaborated, as well as guidance for its application.

Nevertheless, there is a need to develop more solutions, which are adequate for SMEs, and also more case studies in developing countries.

It should be kept in mind how important it is to search for control options which prevent the hazard at the source, such as substitution, modification and certain work practices. Control measures, such as exhaust ventilation, may be excellent if well designed, well installed, properly operated, routinely checked and adequately maintained. However, even control systems which are initially checked and proved efficient, may eventually deteriorate and become inefficient, no longer providing the expected protection. This is very dangerous as it gives workers a false sense of security. It should also be pointed out that, particularly concerning inhalation hazards, personal protective equipment should be regarded as a last resort.

Anticipated preventive action is best since it avoids/removes the problem at an early stage thus avoiding the need for expensive retrofitting later. In this connection, one important concept is "Cleaner Production" (UNEP: <http://www.uneptie.org/pc/cp/>) because less polluting technologies, most of the time, also prevent workers' exposure to risk factors.

Some years ago, WHO collected case studies on control solutions for small enterprises. The protocol was simple: exposure assessment before any control measures were implemented and the same assessment, afterwards. A number of interesting situations and control ideas were thus identified (for example, the decrease in lead absorption when workers were convinced to stop biting on lead wires to test their hardness!).

Now, WHO has undertaken the task to set up a comprehensive Data Base on Control Solutions and I have been asked to coordinate this effort. Therefore, please, send me suggestions and comments, as well as case studies.

Two actions are necessary:

- (a) to identify already existing control guidance and case studies, and organize them for easy access and use;
- (b) to develop a simple protocol for new case studies, to be carried out particularly in developing countries.

It is also important to identify support sources for the new case studies. However, some creativity can be of help and perhaps much can be done even with limited funds. For example, students may select pragmatic control solutions for specific types of work as topics for their theses (these may be not as sensational as other very complicated topics -often never used in practice! but will certainly have an outstanding impact on reducing ill health due to bad working conditions).

Persons in a position to influence the selection of topics for research and investigations (particularly at universities, governmental institutions and funding agencies) should promote more applied research on practical prevention and control solutions, particularly accessible to small enterprises.

It is hoped that national associations and individual occupational hygiene professionals will contribute to the Data Base, even if only with ideas on how to further promote this initiative, as it can be an important development for the protection of workers' health worldwide.

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The SOBANE Risk Management Strategy

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Introduction

The framework European Directive (European Communities 1989) requires that the employer ensures the safety and health of the workers in all the aspects related to work by implementing the general prevention principles: avoid the risks; evaluate the risks which cannot be avoided; fight the risks at the source; adapt the work to workers.

The application of these principles in the field raises many problems. One of them is the coordination between Occupational Health (OH) practitioners (occupational physicians, safety engineers, ergonomists, psychologists and others) and industry, particularly small and medium size enterprises (SMEs).

After a short review of some concepts, a strategy is presented that makes it possible to avoid, solve or minimize the problems and organize, effectively and economically, a cooperative effort towards greater efficiency in prevention.

This document is addressed not only to occupational health practitioners but also to the employers responsible for the implementation of prevention programs and to the workers who "live" this prevention every day.

Concepts

Workplaces or work situations

By "workstation", it is generally understood, in a restrictive way, the place and conditions (noise, heat, dimensions, spaces...) in which an operator performs a certain task. This concept is obsolete due to the fact that, in the new forms of work organization, operators no longer work at a specific worksite day after day, but in a "work situation" where they interfere with workers from a set of workplaces. The expression *work situation* refers to all the physical, organisational, psychological and social aspects of the life at work, which can influence the behaviour and well-being of the worker and work efficiency.

Occupational Health Practitioners and Experts

It is hereby designated by “*occupational health practitioners*” professionals, such as safety officers, occupational physicians, occupational hygienists, ergonomists, who have been trained in safety and health at the work and are able to recognize, evaluate, prevent and reduce exposure to occupational risk factors. The training and the competence of these professionals may vary, but no distinction will be made hereafter between the different types of practitioners.

It is hereby designated by “*experts*” professionals, who come in general from specialized laboratories, with qualifications as well as methodological and technical means to look further into a particular problem. In general, however, these competences and means are limited to a particular aspect: electricity, toxicology, acoustics, mental effects, psychosocial problems...

Small and medium-sized enterprises (SMEs)

Large companies usually have well trained occupational health practitioners in their staff and the social dialogue works rather well.

The situation is clearly different in the SMEs (where 60 to 80%, if not more of the workforce is) and the rates of accidents and occupational diseases are about twice as large. A part-time occupational health staff is sometimes present, but is often isolated. These SMEs must rely on external prevention services to fulfil the missions that they cannot effectively accomplish internally.

Specific methods of risk assessment and furthermore of risk prevention must be developed primarily for these SMEs, taking into account their limited means and availability of qualified occupational health and safety professionals.

Quantification vs. qualification of the risks: measurements vs. evaluation

A great number of methods are available to “assess” the different occupational risks. Many of them were developed by researchers whose responsibility and interest lie in the establishment of the general relations between constraints and effects, rather than in the solutions of problems in a particular work situation.

That is particularly the case for the environmental factors and the musculoskeletal problems (ISO 7933: 1991, Rappaport 1991, Radwin et al. 1994, Malchaire and Piette 1997, Occhipinti 1998). These methods are, most of the time, badly used, because difficult, complex and expensive.

From experience in the field, it should be concluded that the representative and correct quantification of the exposure and of the risk is very difficult and expensive and that the majority of measurements performed in industry have little value. It is thus necessary to encourage the OH practitioners who are measuring systematically and the employers who are asking for such quantitative data, to think about the real interest of these measurements, their

validity, their cost and to encourage them to "quantify" better and more validly, but advisedly, according to explicit objectives.

This conclusion is much the same as the standpoint of Goelzer in her Yant lecture in 1996, saying "*It is not unusual to see more attention given to exposure assessment and monitoring than to hazard prevention and control. The fascination exerted by sophisticated equipments and numbers is, for some reason, greater than the interest in designing pragmatic solutions to prevent exposure*". It is also similar to the point of view of the participants in the *Control Banding* workshop held in London in November 2002 (Anon). As underlined by Oldershaw (2002), "*A single simple personal sample may cost more than \$400: three quarters of the members states of WHO spend less than this per capita and per year in their health systems.*"

SOBANE Strategy of Risk Management

The number of risk factors and the number of work situations are so large that it is impossible to study them all in details. Actually, it would be useless since, in the majority of the cases, prevention measures can be taken right away on the basis of simple "observations" by the people directly concerned and who know in details the work situations day after day.

A detailed analysis can prove to be necessary when the work situation remains unacceptable once the obvious solutions have been implemented, and the participation of experts become essential only in some particularly complex cases.

This procedure is adopted spontaneously and logically in most cases. Following a complaint, a visit (*Screening*) of the work situation is done and obvious problems are corrected. If it is not the case, a meeting (*Observation*) is organised to discuss it more in details and identify solutions. If it cannot be solved directly, an OH practitioner is called for help (*Analysis*) and, in cases particularly difficult to solve, one has recourse to an expert (*Expertise*).

This spontaneous procedure remains however non systematic and in general not very effective due to, mainly, the lack of efficient tools to guide these *Screenings* and *Observations* and the facts that, frequently, the problems are transferred by the people of the field (workers and their management) to the OH practitioners and the experts and that these specialists take full responsibilities of the studies and recommendations.

It is therefore necessary to develop *Screening* and *Observation* tools for the people of the field and ensure the complementarity of the partners. This is the objective of the risk management strategy described below.

This strategy, called *SOBANE* (*Screening, Observation, Analysis, Expertise*), follows the criteria defined in Table 1.

Table 1: Characteristics of the four levels of *SOBANE* strategy

	Level 1	Level 2	Level 3	Level 4
	Screening	Observation	Analysis	Expertise
When?	All cases	If problem	In difficult cases	In complex cases
How?	Simple observations	Qualitative observations	Quantitative observations	Specialized measurements
Cost?	Very low 10 minutes per factor	Low 2 hours	Average 2 days	High 2 weeks
By whom?	People of the company	People of the company	People of the company + OH practitioners	People of the company + OH practitioners + Experts
Qualifications • work situation • health at work	Very high Low	High Average	Average High	Low Specialized

Level 1 - Screening

The objective at this level is only to identify the main problems and solve immediately the simple ones, such as a hole in the ground, a container containing a solvent and left abandoned, a computer screen turned towards a window...

This identification must be carried out internally, by people of the company who know perfectly the work situation, even if they have little qualification in safety, physiology or ergonomics. These people are the workers themselves, their immediate technical management, the employer himself in the small companies, with an internal OH practitioner, if available, in a medium-sized or large company. The tools must be simple and quick to understand and use and must be adapted to their industrial sector.

The method at this level 1, *Screening*, must seek to identify the problems in all work circumstances, and not at a given moment.

Level 2 - Observation

A problem unsolved at level 1, *Screening* must be studied more in details. The method must still be simple to understand and implement, quick and inexpensive, so as to be used as systematically as possible by the workers and their technical staff, with the cooperation of an internal OH practitioner when available.

The objective is again to lead these people to discuss the problem in order to identify prevention solutions as soon as possible. As at level 1, the *Observation* requires an intimate knowledge of the work situation under its various aspects, its options, the normal and abnormal

operations. The depth of the study at this level 2, *Observation* will vary according to the risk factor and according to the company and the qualifications of the participants.

The method should not require any quantification and therefore any measurements, so as to remain applicable even when these qualifications and techniques are not available.

Level 3 - Analysis

When the *Screening* and *Observation* levels did not allow bringing the risk to an acceptable value or when a doubt remains, it is necessary to go further in the *Analysis* of its components and in the search for solutions.

This stage requires the assistance of OH practitioners who have the necessary qualification, tools and techniques. These will often be external OH practitioners, intervening in close cooperation with those who conducted the stage 2, *Observation*, (and not in their place), to bring to them the necessary qualification and means.

The method can use more sophisticated terms and concepts. It can require simple measurements with common instruments, measurements however made with explicitly defined objectives of confirmation of the problems, investigation of the causes and optimisation of the solutions.

Level 4 - Expertise

In particularly complex situations, a study at level 4, *Expertise* might be required, with the additional assistance of an expert. Sophisticated or specific measurements will sometimes be necessary to optimise appropriate solutions.

The *Déparis* method presented hereunder intends to fulfil the needs for the *Screening* level. The methods for the *Observation*, *Analysis* and *Expertise* levels were developed and validated with regard to noise (Malchaire et al. 2000), thermal environments of work (Malchaire et al. 1999), lighting (Malchaire et al. 1998), whole-body vibration (Malchaire et al. 1998), hand-arm vibration (Malchaire and Piette 2001) and musculoskeletal constraints (Malchaire and Piette 2002). Additional methods were developed in the context of a European research project for the following aspects: chemical agents; biological agents; safety (e.g., falls, slips); fire and explosion hazards; electric safety; machines safety and work on VDU.

SOBANE General details, online:

In English: http://www.md.ucl.ac.be/hytr/new/Publications/livres/deparis_en.html

In French and Dutch: <http://www.sobane.be/>

In Spanish: <http://www.md.ucl.ac.be/hytr/new/sp/index.html>

In Portuguese: http://www.md.ucl.ac.be/hytr/new/Publications/livres/deparis_pt.html

Control Banding for Noise? (by Gustav A. Sehrndt)

Those wondering if noise control can be efficiently applied in small and medium size enterprises (SME) should look into a new approach in the field of hazardous substances. Following the European Week for the Control of Hazardous Substances, the UK Health and Safety Executive (HSE), in collaboration with industry and the trade unions, published "COSHH Essentials". It is aimed at introducing a simple system to handle hazardous material safely, which contributes to the enforcement of Occupational Hygiene regulations also in small and medium size enterprises. This approach is based on the UK Control of Substances Hazardous to Health Regulations (COSHH). Besides general advice, the employer gets direct advice for a specific industry and work process. This method provides a step by step guidance to assess and to control health risks to workers resulting from exposure to chemicals.

What can be learned relevant to the field of noise control? There is regional or national legislation that make it compulsory for machine manufacturers to give a noise declaration according to ISO International Standards. There are also definitions of threshold limit values for noise in the workplace or at the ear of the exposed worker, which have to be monitored, as well as obligations of the employer concerning noise control at the source, hearing evaluation (audiometry), as well as selection, distribution and surveillance of hearing protection. These elements can be seen as counterparts to obligations for producers of chemicals to provide safety data sheets and for professional users to apply adequate control strategies, e.g., local exhaust ventilation, health surveillance and - as a last resort - personal protective equipment.

For small businesses the compliance with the chemical regulations might be difficult and expensive, particularly concerning the quantitative assessment and monitoring of substance concentrations. COSHH Essentials now offer action plans and additional information for SME's concerning hazardous substances, which can facilitate and improve the implementation of necessary control measures. Starting with the hazard grouping according to the substance potential for harm (EC Classification) and the potential for exposure as a combination of the substance's physical properties and the amount used, expert occupational hygienists defined exposure predictor bands for solids and liquids and relate these to three control approaches. The result is a risk assessment scheme with exposure predictor bands, i.e. predicted concentration ranges for dust-in-air or vapour-in-air. Experts have judged, based on published exposure data and experimental validation, whether a specific control approach would ensure exposures that were low enough for each hazard group, otherwise the recommendation is to "seek expert advice".

Perhaps a similar system of risk assessment for noise could be developed using not only such elements as the noise declaration, but also an approximation of the rating levels in a given workplace or activity. An example of this approach is the SUVA (*Swiss National Accident Insurance Fund*) method, derived from a collection of actual exposure data and based on its experience in 18000 Swiss enterprises, using noise tables instead of specific measurements (*N.B. – further details on the SUVA approach are presented below*). Noise exposure predictor bands can be established, to serve as guidance concerning the need for noise control measures.

Another approach, dispensing quantitative measurements in many situations, was developed by the Occupational Hygiene and Work Physiology Unit, Université Catholique de Louvain, in Belgium – the **S**creening, **O**bservation, **A**nalysis and **E**xpertise (SOBANE) Method, which is summarized below, with links for further details.

Information already available suggests that, in many cases, noise exposure can be assessed and the need for control established without time consuming and expensive quantitative measurements. This approach has the potential to make noise control affordable and consequently, to minimize the risk of any of the negative effects of noise exposure to numerous populations, particularly those in SMEs and in developing countries. For this reason, it deserves attention.

Whenever needed, preventive action should be recommended and action plans elaborated, including the design of specific measures, which require expert knowledge of acoustical measures to control noise at source and on the propagation paths, as well as knowledge on the properties of personal hearing protection.

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Request to Readers: Readers who are interested and have experience in this matter are kindly requested to send comments or ideas on how to proceed on these lines. How about the use of tables? How to best develop and use a protocol for the estimation of exposure to noise at work, for example, by asking questions such as: “if you cannot understand conversation at a distance of 1 meter (or X meters), there is no need to measure, just control”? Have you any suggestions? Please, kindly forward them to Berenice Goelzer (E-mail: berenice@goelzer.net) to be posted on the IOHA Newsletter thus starting an open discussion on this subject.

Note: Valuable comments by Dr Thais Morata (NIOSH) are gratefully acknowledged.

Complementary Information

The SUVA Method

(based upon information received from Beat W. Hohmann, Suva Bereich Physik, SUVA - Swiss National Accident Insurance Fund, CH-6002 Lucerne, Switzerland - E-mail: beat.hohmann@suva.ch)

The SUVA method, derived from a collection of actual exposure data and based on its experience in 18000 Swiss enterprises, uses noise tables instead of noise level measurements. Control action is then based on these estimates.

The SUVA's Noise Level Tables (at present, 71 tables) are available free of charge online, in German, French and Italian. The list of tables covering all the branches of industry and other professions may be seen following the link: www.suva.ch/waswo/86005 (to be opened as

PDF). Also, the complete noise level tables can be received, free of charge, by filling in the order form.

In order to apply the data from the SUVA's Noise Level Tables, no further knowledge on factors such as distance and noise propagation is needed, as the values given are typical noise exposure (immission) data for exposed workers. As an example, the data on noise exposure of professional (classical) orchestra musicians (www.suva.ch/waswo/86496) include the sound exposure due to concerts, rehearsals, individual training and preparation, i.e. all the activities of such a musician (based on a study recently conducted by SUVA).

Another example, for the woodworking industry, may be seen following the direct link: www.suva.ch/waswo/86294.

For the time being, the online version (Acrobat/PDF) contains only the second part with noise levels for machines, tools and activities, but not the first part with the general assessment for professions. Next year the full noise level tables will be available online in PDF.

An excerpt from a paper mentioning this approach is presented below.

Excerpt from the paper “Prevention of Hearing Injuries Caused by Noise”, by Beat W. Hohmann, Swiss National Accident Insurance Fund - Suva, CH-6002 Lucerne, Switzerland (presented at the The 32nd International Acoustical Conference, 10–12 September, 2002 Slovakia)

“In most countries, employers must assess the risk of NIHL, i.e. the noise exposure of the employees. But for small and medium sized enterprises (SMEs), individual noise measurements are hardly feasible. Therefore SUVA publishes noise level tables, which list typical noise levels of many tools and machines. Today, these 66 noise level tables (*N.B. – now, already 71 tables*) cover almost any branch of the industry and include shooting noise, music, etc.

However, most SMEs were not able to calculate the long-term noise exposure of their workers. In most cases, this resulted in an overestimation of the noise exposure and unnecessary hearing examinations. Therefore, based on Suva's extensive database, typical noise exposures for occupations and activities were calculated. One or two pages showing the typical noise exposure for the different occupations precede every noise level table now. Wherever this general assessment is not appropriate, the noise levels of tools or machines must still be used for the calculation of the noise exposure. In order to simplify this calculation, "noise units per hour" have been introduced which are proportional to the sound energy. Experts and SMEs have favourably received the method, and experience indicates that the estimations of noise exposure are now more realistic than before.

Besides intensively encouraging the use of hearing protection, the medical prevention program consists of hearing examinations, which take place in one of Suva's so called Audiobiles. These Audiobiles are mobile information and examination units, which travel to the working places all over Switzerland. About 50,000 workers are examined yearly in the 6 Audiobiles so that every worker is examined every four to five years.

Analysis of the results of these hearing tests (persons with ear diseases excluded) shows that the percentage of persons presenting slight or severe hearing loss has diminished continuously since the start of SUVA's prevention program.”

The SOBANE Method (material provided by Jacques B. Malchaire)

The SOBANE risk management strategy and the Déparis method for the participatory screening of the risks: Jacques B. Malchaire, Occupational Hygiene and Work Physiology Unit, Université Catholique de Louvain, Clos Chapelle aux Champs 3038, 1200 Brussels, Belgium.

The risk-prevention strategy, called SOBANE, has four levels: **S**creening, **O**bservation, **A**nalysis and **E**xpertise (*N.B. - There were initially three levels, which were later expanded to also include Screening*). The aim is to make risk prevention faster, more cost effective, and more effective in coordinating the contributions of the workers themselves, their management, the internal and external occupational health (OH) practitioners and the experts.

These four levels are: *Screening*, where the risk factors are detected by the workers and their management, and obvious solutions are implemented; *Observation*, where the remaining problems are studied in more detail, one by one, and the reasons and the solutions are discussed in detail; *Analysis*, where, when necessary, an OH practitioner is called upon to carry out appropriate measurements to develop specific solutions; *Expertise*, where, in very sophisticated and rare cases, the assistance of an expert is called upon to solve a particular problem.

The method for the participatory screening of the risks (in French: Dépistage Participatif des Risques), Déparis, is proposed for the first level screening of the SOBANE strategy. The work situation is systematically reviewed and all the aspects conditioning the easiness, the effectiveness and the satisfaction at work are discussed, in search of practical prevention measures. The points to be studied in more detail at level 2, Observation, are identified. The method is carried out during a meeting of key workers and technical staff.

The strategy has been implemented in 14 risk domains: 1. Social facilities; 2. Safety (accidents, falls); 3. Machines and Hand Tools; 4. Electricity; 5. Fire and Explosion; 6. Lighting; 7. Work on VDUs; 8. Noise; 9. Thermal Environment; 10. Chemical Agents; 11. Biological agents; 12. Musculoskeletal Disorders; 13. Whole Body Vibration; 14. Hand-Arm Vibration.

The method proves to be simple, sparing in time and means and playing a significant role in the development of a dynamic plan of risk management and of a culture of dialogue in the company.

A specific application for NOISE has been developed and detailed information is found at:

In English: <http://www.md.ucl.ac.be/hytr/new/Publications/bruit.html>

In French: <http://www.sobane.be/fr/bruit.html>

In Dutch: <http://www.sobane.be/nl/lawaai.html>

In Portuguese: <http://www.mte.gov.br/Temas/SegSau/Publicacoes/Estrategia/Ruido/Conteudo/717.pdf>

Further information can be obtained from author: malchaire@hytr.ucl.ac.be

News from the EU (material provided by Kurt Lechnitz)

European Guide “COM (2003) 0515” of Good Practice on minimum requirements for improving the safety and health protection of workers potentially at risk from explosive atmospheres

The European Commission has issued a Document which will be very useful to protect workers potentially at risk from explosive atmospheres.

Explosion protection is of particular importance to safety; since explosions endanger the lives and health of workers as a result of the uncontrolled effects of flame and pressure, the presence of noxious reaction products, and consumption of the oxygen in the ambient air, which workers breathe. For this reason, the establishment of a coherent strategy for the prevention of explosions requires that organizational measures be taken at the workplace. European Framework Directive 89/391/EEC requires the employer to implement the measures necessary for the safety and health protection of workers, including prevention of occupational risks, and provision of information and training, as well as provision of the necessary organization and means. Explosion hazards may arise in all undertakings which work with flammable substances. These include many input materials, intermediate products, final products and wastes from the routine work process.

The Guide covers the following topics:

ASSESSMENT OF EXPLOSION RISKS

Are flammable substances present?

Can sufficient dispersal in air give rise to an explosive atmosphere?

Where can explosive atmospheres occur?

Is the formation of a hazardous explosive atmosphere possible?

Is the formation of hazardous explosive atmospheres reliably prevented?

Is the ignition of hazardous explosive atmospheres reliably prevented?

TECHNICAL MEASURES FOR EXPLOSION PROTECTION

Prevention of hazardous explosive atmospheres

Use of substitutes for flammable substances

Limiting of concentrations

Inerting

Preventing or limiting the formation of explosive atmospheres in the vicinity of plant

Removal of dust deposits

Gas alarms

Avoidance of ignition sources

Zoning of hazardous places

Extent of protective measures

Types of ignition source

Mitigation of the effects of explosions (mitigation measures)*Explosion resistant equipment**Explosion relief**Explosion suppression**Prevention of explosion propagation (explosion decoupling)***Application of process control engineering****Requirements for work equipment***Selection of work equipment**Assembly of work equipment***ORGANISATIONAL MEASURES FOR EXPLOSION PROTECTION****Operating instructions****Worker competence****Training of workers****Worker supervision****Permit-to-work system****Maintenance****Inspection and surveillance****Marking of hazardous places****COORDINATION DUTIES****Coordination arrangements****Protective measures to ensure safe cooperation****EXPLOSION PROTECTION DOCUMENT****Requirements under European Directive 1999/92/EC****Implementation****Specimen layout for an explosion protection document***Description of the workplace and working areas**Description of the process steps and/or activities**Description of the substances used / safety parameters**Results of the risk analysis**Explosion protection measures taken**Implementation of the explosion protection measures**Coordination of the explosion protection measures*

EU-Latin America and Caribbean Summit sees commitment to scientific partnership

Leaders from the European Union, Latin America and the Caribbean have agreed to launch a science and technology partnership with a view to encouraging collaboration within the EU's Framework Programmes for research.

The pledge was made at an EU-Latin America and Caribbean summit that took place in Guadalajara, Mexico, 28 May 2004.

Considering the importance of science and technology for the economic and social development of our countries, and guided by the outcome of the ministerial meetings and of the bi-regional working group on scientific and technological cooperation, we agree to launch a partnership in science and technology with a view to including Latin America and the Caribbean as a target region for the EU Framework Programmes, reads the Declaration of Guadalajara. The move is intended to contribute to 'deepening and developing bi-regional links and encouraging mutual participation in research programmes.

IOHA Next Scientific Conference

International Occupational Hygiene Association (IOHA) 6th International Scientific Conference, 19-23 September 2005

Location: Pilanesberg National Park, North West Province, South Africa

Theme: Promoting Occupational Hygiene in Africa and Globally

IOHA 2005 Call for Papers: The Organizing Committee for IOHA 2005 is pleased to invite you to submit papers for Oral or Poster presentation at IOHA 2005. A draft of the Monday to Friday Scientific Sessions and Professional Development Courses is available on the IOHA 2005 website.

Deadlines for Papers:

Abstracts: 1st December 2004 (Submissions after this date may not be accepted) Draft Papers: 28 February 2005 Final Papers: 31st May 2005

Approval of Abstracts: by 14th January 2005 (Scientific Committee)

Topics for the Scientific Sessions/Papers:

Agriculture; Asbestos; Biological Monitoring; Environmental Issues/ Management; Ergonomics; Exposure Assessment Strategies; Gender; Human Behaviour, Shiftwork and Stress Management; Informal Sector; Manufacturing; Mining; National Exposure Databases; New Developments in Occupational Hygiene; Occupational Health and Safety (OHS) Management Systems; Personal Protective Equipment (PPE); Physical Agents - Heat and Lighting; Noise and Vibration; Silicosis.

A number of important meetings/events are taking place to coincide with IOHA 2005. A planning meeting of the WHO Collaborating Centres in Occupational Health will take place in the Pilanesberg the weekend before IOHA 2005. The 4th Meeting of the ISO Technical Committee 146 Sub Committee 2 (Workplace Atmospheres) Working Group 6 on Silica will be held in Johannesburg the week before IOHA 2005. The Third International Control Banding Workshop (3ICBW) takes place at IOHA 2005. The Fourth International Cyberspace Conference on Ergonomics, CybErg'2005 "Meeting Diversity in Cyber/Online Ergonomics", is hosted from South Africa 15 September - 15 October 2005.

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For further information visit: <http://www.saioh.org/ioha2005/>

IOHA 2005 Call for Papers: <http://www.saioh.org/ioha2005/About.htm>