



IOHA

April 2008
Vol 16, No. 1

NEWSLETTER

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Letter from the Editor

Dear Colleagues,

I am very happy with the good news and the number of contributions from readers that were received for this issue of the Newsletter, which was never so long!

IOHA continues its valuable work throughout the world. The 7th IOHA International Scientific Conference was a great success and the organizers must be congratulated. In February 2008, IOHA received a letter from the World Health Organization informing that their Executive Board "decided to maintain IOHA in official relations with WHO" and, at the same time, commended the efforts of our association in support of WHO work in occupational health, and thanked its members for their continuing interest in working with WHO.

Congratulations to our colleague and friend Kurt Lechnitz for receiving the IOHA Lifetime Achievement Award, in Taipei, in February 2008. No one deserved this honour better than Kurt, who has done so much over so many years to promote our profession at a high level in Germany and in many other countries; his long time work with IOHA has also been outstanding.

"Félicitations" to our colleague and friend Guy Bourgeoisat, from France, for being honoured this year with the prestigious William P. Yant Award. This was so well merited; Guy has enthusiastically fought to promote our profession at a high level in France and has been a dedicated IOHA Board Member since 1995.

There were many contributions related to the prevention of silicosis, including on national and international initiatives that together will hopefully eliminate this disabling, deadly and preventable disease. Just to mention a few contributions: from NIOSH we received information on the Americas Silicosis Initiative; from Brazil, news about their national campaign and related studies; from the Netherlands, information on their work to fight silicosis in the construction industry, among many others. If you are dealing with silica and dust problems, do not miss reading about the Silica Exposure Webcommunity and "join the club" by becoming a member - it is an excellent forum for discussions and exchanges of experiences on the subject. Once more, I would like to quote Alice Hamilton, pioneer occupational physician and hygienist: "...*obviously, the way to attack silicosis is to prevent the formation and escape of dust...*"; this statement, almost a century ago, was and should continue to be a strong incentive for primary prevention. It seems that, at last, there is hope for the elimination of silicosis; let's fight together for this!

Still related to dust, we had a very motivating contribution from Japan, concerning asbestos: the cross-check project in relation to analyses of asbestos in construction materials, which aims at ensuring quality in assessing this serious occupational and environmental problem. It is so important to ensure quality in all occupational hygiene tasks; one should never forget the great difference between "work done" and "work well done".

One aspect of paramount importance for the continuity and, in some places, for the very existence of occupational hygiene is training. Knowledge and experience have to be effectively passed on, so that quality in professional practice can be developed and ensured. It is good to see colleagues from different countries getting together to share their expertise in preparing training modules and activities.

There are many other very valuable contributions in this Newsletter and I am sure that you will enjoy this issue.

I would like to thank all colleagues that sent contributions for this Newsletter and, once more, ask for comments and suggestions for its improvement. Your feedback is extremely important.

Best greetings to all

Berenice Goelzer
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News from the IOHA Board

Report from the meeting of the IOHA Board – 17 February 2008

Sent by Pamela Blythe, Executive Secretary, pamela.blythe@ioha.net

1. The meeting was chaired by Rob Ferrie (IOHA President) and attended by representatives of ACGIH, AIHA, the Australian, British, Canadian, German, Hong Kong, Italian, JAWE, Malaysian, Norwegian, Polish, Southern African, Swedish, Swiss and Taiwanese organisations, with Pamela Blythe from the Secretariat in attendance and Domenica Cavallo from Italy as an observer. Apologies for absence had been received from the organisations in Brazil, Colombia, Finland and France.
2. 7th IOHA Conference, 18-22 February 2008, Taiwan: 460 participants from 39 countries registered for this conference. An extended report on the conference will be included in a forthcoming issue of the Newsletter.
3. 8th IOHA Conference, 28 September-2 October 2010, Rome, Italy: Planning is now becoming more detailed and focussed. Reports progress will be provided to each future meeting of the Board.
4. 9th IOHA Conference, February 2012, Malaysia: Planning is at an early stage, and reports on progress will be provided to each future meeting of the Board.
5. The Board has committed to organising sessions/delivering papers at the World Congress in Safety & Health, Korea in July 2008 and ICOH 2009 in Cape Town.
6. Some years ago, Memorandums of Understanding had been signed with both ICOH and IEA (International Ergonomics Association), but had been allowed to lapse by all parties. As the Presidents of ICOH and IEA were both attending the Taiwan conference, informal tripartite talks were planned to re-establish the relationships.
7. The recommendations of a sub-group of the Communications Committee regarding the re-design of the website were accepted. Work is to begin as soon as possible to make the website a more user-friendly and informative/timely resource for external audiences.
8. The Board received a draft paper aiming to define the interface of Occupational Hygiene with other related professions. The draft will be discussed by IOHA member organisations over the coming months, feedback provided, and then discussed again at the next Board meeting (September/October 08).
9. The Board is currently reviewing the application for membership from the Korean Society of Occupational & Environmental Hygiene.
10. The regular report on activities of the National Accreditation Recognition Committee was discussed. Noel Tresider is now Chair of this Committee. Under review at the moment by the Committee are three applications for recognition and two revisions to currently recognised programmes.
11. In response to the concerns of some member organisations about the lack of validation of the control banding concept and the possible perception that IOHA has “endorsed” control banding (CB) without qualification, a draft report was commissioned from a small ad-hoc working group to better define IOHA’s position on the use of control banding.
12. The Board established a small working group to develop a position paper on Occupational Hygiene training (outside of Universities), which would include the non-technical criteria essential for the delivery of meaningful courses. This paper will be discussed at the next Board meeting.
13. From time to time, IOHA is contacted by persons/organisations wishing to donate equipment and/or publications to third parties. At the moment, IOHA has no mechanism for brokering this service, but is investigating whether it may be possible to do so in future via its website.
14. Registered Charity status has not yet been achieved, but remains a major goal of the Association. This is a governance issue that will allow IOHA to continue to operate in a “protected” manner.
15. The Board was very pleased to learn that through our advocacy efforts the title “Environmental and Occupational Health and Hygiene Professional” had been included in a resolution of experts to ISCO 2008. (ISCO is the International Standard Classification of Occupations, under the auspices of ILO, and conducts these reviews approximately every 10 years). This is an important step in getting recognition for the occupational hygiene profession.
16. A draft statement is being prepared on the occupational hygienist’s role within REACH. This draft will be discussed at the next meeting of the Board.
17. The next meeting of the Board will be held in September/October 2008 in Geneva, Switzerland.

7th IOHA International Scientific Conference

Report on behalf of the Conference Organisers
Sent by Chih-Chieh Chen, IOHA Board Member, Taiwan, ccchen@ntu.edu.tw



The 7th International Occupational Hygiene Association Scientific Conference was held from February 18-22, 2008, at the Taipei International Convention Center in Taiwan. After many months of preparation, the organizers were pleased with the result — and so were the participants.

A total of 498 delegates and 22 accompanying persons from 34 countries attended the conference, and over 183 participants signed up for the pre-conference Professional Development Courses (PDCs). The program consisted of 11 PDCs, various Parallel Sessions, five Mini-Symposiums; eight Keynote Presentations and two Poster Sessions. There were 120 abstracts accepted into the parallel sessions, and 109 abstracts allocated into 9 poster categories.

The conference featured a number of high profile keynote speakers who are lecturers and experts of occupational hygiene from all over the world. The opening ceremony was also a highlight of the conference as Shui-bian Chen, president of Taiwan gave the welcoming address. The president even stayed for a photograph with the conference's invited guests. Finally, IOHA president, Thomas Grumbles, presented the Lifetime Achievement Award to Kurt Lechnitz of Germany.

In addition to the scientific program, the conference also included an exhibition. Thirty four exhibitors from government departments, associations and corporations displayed their products and services. A ribbon cutting ceremony was arranged for the exhibition opening. A special exhibit was organized which displayed Taiwan's history of occupational hygiene for the past 5 decades.

There were several social events during the conference, providing great networking opportunities for the delegates to make new friends and meet old acquaintances.

The President's Reception was held on Sunday, 17 February, and 50 special guests including the IOHA board were invited to dine on the top of the world on level 85 of Taipei 101 Building.

On the first night of the conference, a Welcome Banquet was held for all the participants. The delegates enjoyed the great food and traditional Chinese entertainment from the Song-Kuan lion dance group. On the following day, the Pinshi sky lantern tour was also a hit, attracting over 70 attendees who experienced the Chinese traditional event called "the light of hope". Sky lanterns were released to pray for good fortune and health. In order to allow the delegates to further understand the Taiwan culture, a conference Culture tour was arranged for Wednesday afternoon (20 February). The delegates visited the world-class National Palace Museum and took the express elevator up to the observatory tower of Taipei 101 building.

On the evening of the last day, a Farewell Party was organized to celebrate the conclusion and success of IOHA2008. The party commenced with the exciting performance of "Bian Lian" (Face-Changing). Everyone was amazed by the performance. Traditional craft stalls (such as paper-cut silhouettes, Dough figurines, and Chinese knots) were set up for the participants to try the Chinese art themselves.

A photo gallery with memories of the past few days of IOHA2008 Conference was also displayed. After the conference, many of the delegates either booked the post-conference tours or joined the Technical visit and caught the Taiwan High Speed Train to the south of Taiwan. All delegates carried home new and memorable experiences.

2008 IOHA Life Achievement Award

This year, very appropriately, the IOHA Life Achievement Award, was given to Kurt Lechnitz. Highlights of his Award Lecture on "Occupational Hygiene and Cost Benefit" are hereby presented and the full text will be available on the

IOHA website. The photo below shows Kurt receiving the Award from IOHA President Tom Grumbles.

Occupational Hygiene and Cost Benefit

By Kurt Lechnitz, IOHA Board Member, Kurt.Lechnitz@t-online.de

Occupational hygiene activities are primarily targeted to protecting workers health and to safeguarding the community. For occupational hygienists it is clear that better working conditions are profitable for their company. Otherwise it is also clear that the current state of methods of cost-benefit-analysis do not always allow for conclusive answers to be made to the question whether occupational hygiene is a benefit activity. Much development work still has to be done to establish data sources which will allow to quantify the benefits. The issue of social and human values has to be incorporated into the calculation.

Occupational hygienists are qualified to do an excellent job in their discipline. But to communicate the benefits of occupational hygiene to decision-makers has not received, overall, the level of professional attention. There are companies in which silence surrounds the working conditions. Managers do fear that the recording of unhealthy workplaces may stir up the workforce and cause discussions. Here the management strategy is to discourage the occupational hygienist from taking the job too seriously.

Making enterprises aware of costs caused by poor working conditions must become an essential part of occupational hygiene programmes. New ways are needed to get the attention of management. Occupational hygienists need tailwind from government, from WHO, from ILO etc. At least for chemicals, support is already in the pipeline, such as the Dubai declaration on "strategic approach to international chemicals management (SAICM)". The scope of SAICM includes environmental, economic, social, health and labour aspects of chemicals; risk reduction is a key element. Referring to SAICM, the European parliament and the council have adopted a regulation concerning "registration, evaluation, authorisation and restriction of chemicals (REACH)". Occupational hygiene experience is needed to fulfil SAICM and REACH. On the Session of the ILO Governing Body in 2006 a document on occupational safety and health was issued. It discusses how improved occupational safety and health (OSH) contributes both to reducing human suffering and also to increasing the quality and quantity of jobs. Several activities are formulated, such as:

- Governments should commit themselves to the principle that "safety pays".
- Lawmakers in concert with public and private insurers should strive to ensure that costs of work-related injury and ill health are kept internal to the enterprises responsible.

- A high priority needs to be given to OSH within national educational curricula and awareness-raising programmes.
- OSH professionals need to make better use of the broadcast media to reach and influence audiences.
- The national enforcing authorities should also be adequately resourced, so that such legislation can be effectively and consistently enforced.
- Multinational enterprises do have a major influence on working conditions in the factories of their exporters in developing countries. That means corporate social responsibility (CSR) is an important contribution to improve occupational health and safety on global level.

To prepare my paper I had addressed several people; managers, workers, union members, occupational hygienists, physicians, safety experts, and others. It was interesting to observe the different attitudes. I had the opportunity to meet a whole range of characters. I met many bosses who were against any investment on occupational hygiene, but I also met persons who were very open to our discipline and especially to the idea that not only the economic cost has to be included into the cost benefit calculation, but in addition the non-economic cost such as cost of pain, fear and loss suffered by the victims, and their families.



This is the point where I have to include into my consideration the philanthropic aspect. Philanthropy is the effort or inclination to increase or at least maintain the well-being of humankind. It is an altruistic activity which is intended to promote human quality of life. Philanthropy is located between the two poles of social value and economic value. In the social value arena we deal with factors beyond measurement. Some people do understand that these factors are of value; for other people they are not worth at all to be considered.

Why are people acting so differently? What do people have in mind? Here I quote the US scientist Marc D. Hauser who is expert in organismic biology. He states that our biology sets up a range of possible behaviours and if a biological perspective on morality is true, then the moral principles must be encoded in the DNA; some genes are for harming, some genes are for helping. In addition moral decisions are influenced by education, by training and by the society which determines what is right or wrong.

I think we should consider the genetic aspect when we have to deal with our bosses. It might at least help us a bit to understand the behaviour of people when they are confronted with economy and social value. But if they are born without a moral compass and if their genetic code does not have a place for social value, then one needs

more than the usual means to make the boss a friend of better working conditions for the employees. It might be that somebody has to determine what is right or wrong; these additional means are rules, are regulations, is enforcement and finally sanctions are needed

News from Member Associations

From Australia

Australian Institute of Occupational Hygienists –25th Annual Conference

Sent by Noel Tresider, Secretary, 2007 Conference Committee, noelpetroch@msn.com.au

The Australian Institute of Occupational Hygienists (AIOH) 25th Annual Conference was held at the Grand Hyatt Hotel, Melbourne from December 1 to 5, 2007.

The first AIOH Conference was in Melbourne in 1982, and it had been some time since the AIOH conference graced this fabulous cosmopolitan Australian city.



The profession of occupational hygiene is constantly striving for excellence both in science and in the protection of people and the environment. It was on this theme that the AIOH's 2007 Conference was based – "Striving for Excellence".

The Conference was officially opened by the Hon. Tim Holding, MP Victorian Minister for Finance (including WorkCover/Transport Accident Commission), Minister for Tourism Minister for Finance, and followed by a speech from Mr. John Merritt - WorkSafe Victoria Executive Director.

Of particular interest at this Conference was the role of risk assessment and management within occupational hygiene and its allied fields. The Safety Equipment Australia Keynote Speaker was Dr. Dennis Paustenbach (below) CEO of ChemRisk, USA who is a world renowned expert on chemical risk assessment. He also gave us insights into the challenges ahead with his presentation "Reflections on the Future Practice of Industrial Hygiene"

Other topics featured included: Risk Assessment - Risk Communication by Ms Katherine Teh-White (a highly regarded communicator), and this included an interactive panel segment in which a panel of specialists comprising a toxicologist, a journalist, an activist and an industry representative teased out some interesting challenges confronting us and the profession in the future.



Familiar topics such as dermal exposure, ventilation, indoor air quality, and nanotoxicity were also presented by experts in the field such as Dr John Cherrie (IOM), Dr. Rosemary Nixon, Prof. Yuguo Li (Hong Kong University), Dr. Steve Brown, Prof. Brian Priestley.

Continuing education sessions (CES) for OH&S practitioners once again provided the opportunity for delegates to develop and maintain knowledge and skills in a variety of disciplines and fields of interest; and to gain valuable maintenance points for the various certification schemes such as COH and CIH (ABIH).

There were also the traditional social events – the AIOH Welcome Cocktail Function, the 3M Function, and the AIOH Conference Dinner. These functions offered a great opportunity for networking and developing new contacts.

The Welcome Drinks Function on Sunday evening was sponsored by Active Environmental Solutions. This was a relaxed reception where delegates could catch up with old friends and meet new ones prior to the launch of the extensive scientific program that was to be held over the following three days.

AIOH Conference Dinner (L-R above: Geza Benke (AIOH



President 2008), John Cherrie (BOHS President), Rob Ferrie (IOHA President), Cathie Garner, Don Hart (AIHA President), Cindy Hart, and Ian Firth (AIOH President 2007).

On the Lighter side - 3M Australia Function always a feature of any AIOH Conference, was based on the theme "EXPERIMENT WITH 3M" where delegates came in fancy dress as their favourite scientist.

Some new innovations at this conference were the introduction of AIOH Conference Ambassadors whose role was to assist new-comers to our conference, and the high visibility vests worn by Conference Committee members to clearly identify them.

This conference set a new record for attendance and hopefully met the expectations of delegates, and achieved the objective of "Striving for Excellence".

From Japan

Joint Conference and Exhibition on Occupational Hygiene and Working Environment Measurement, Nagoya, Japan, November 2007

Sent by Masayoshi Karasawa, Special Advisor, JAWE, director@jawe.or.jp
and Norihiko Kohyama, JOHA, kohyama@toyonet.toyo.ac.jp

The Japan Association for Working Environment Measurement (JAWE), whose Chairman is Mr. Kizoh, Hirayama, Managing Director, General Manager, Personnel & Labour Relations Division, Nippon Steel Corporation, and the Japan Occupational Hygiene Association (JOHA), whose chairman is Dr. Haruhiko Sakurai, Professor emeritus of Keio University, held their "Joint Conference and Exhibition on Occupational Hygiene and Working Environment Measurement 2007" in Nagoya", 14-16 November 2007. Nagoya City is located in the Central Region of Japan and also it is the biggest city in the Region.



The Joint Conference and Exhibition 2007 in Nagoya consisted of three parts, namely presentations, symposium and exhibition.



There were 63 scientific presentations, as well as 9 manufacturers' presentations. The scientific presentations reported on research in occupational hygiene and working environment measurement, and included topics such as:

- Development of 1,3-butadiene Detector Tube for Working Environment Measurement
- Exposure to Dust, Aflatoxin, and Causal Fungi during Discharging of Imported Corn
- A Proposal for the Occupational Exposure Limit of Ethylene Glycol Dimethyl Ether
- An Evaluation Method of Multi-components Organic Vapours using Real time Monitoring Equipments
- Formaldehyde Contamination Level and Exposure Prevention by Measuring Dissection Laboratories
- Examination of the Quantitative Analysis of Asbestos in Construction Material Products by X-ray Diffraction Method
- Examination of Pre-treatment Methods for Ultra-Quantitative Analysis in order to Analyze the Content of Crystalline Silica down to 0.1% in Weight in

- Construction Products by X-ray Diffraction Method
- Practical Use of Graphic Indication of Dust Concentrations for Exposure Management in Welding Workplaces

The full list of the themes of the scientific presentations as well as the manufacturers' presentations is available from the authors.

The manufactures' exhibits presented new analytical instruments, apparatus and personal computer softwares, such as: new types of detector tube to analysis for formaldehyde, Washing and Regeneration Returnable System of Filter Media for Dust Respirators, new type Immersion Liquid Kit for Dispersion Staining to analyze asbestos, and, phase-contrast and polarizing optical microscopes for asbestos analysis equipped with the new 40-power dispersion object lens; particle size-selective sampling apparatus; sampling pumps; detector tubes, and, new personal computer systems to assist in working environment measurements, personal protective equipment and clothing were also exhibited.

The joint symposium theme was "Past, Present and Future of Occupational Health Management". It was planned in order to deepen the understanding as well as to cope properly with the recent Occupational Safety and Health problems in Japan, especially regarding risk assessment and risk management in work places,

In the Joint Symposium, there were four presentations, namely:

- Transition in Health Management, by Takata, Tsutomu, Professor Emeritus, Medical Dept., Kitasato University,
- Historical Transition in Working Environment Management, by Koshi, Shigeji, former Director General, National Institute of Industrial Health (in behalf of him, Mr. Yoshihito Konishi, Director, Investigation & Research Department of JAWE, presented Dr. Shigeji Koshi's address.)
- Transition in Working Environment Viewed from Industrial Standpoint by Tamura, Koichi, I Metal Technology Co., Ltd., Historical
- Transition in Working Environment Viewed from Working Environment Measurement Agency, by OKAMOTO, Satoru, Kyoto Industrial Health Association, a foundation

This was followed by a discussion on these topics, conducted by Dr. Takayasu Kato (Good Life Design Co., Ltd., Japan) as well as Mr. Niiya, Yoshihide (Daido Bunseki Research, Inc.)

In the Conference, Professor Emeritus Tsutomu Takata (Kitasato University), as the Vice Chairman of JAWE, granted the Superior Award to Ms. Kumiko Arai et al. (The Occupational Health Research and Development Centre, Japan Industrial Safety & Health Association - JISHA), as

the winner of the Best Scientific Presentation Award in 27th Conference and Exhibition of JAWE on Occupational Hygiene and Working Environment Measurement 2006, Sendai, regarding "A Method for Analyzing 2,3-Epoxypropylphenyl Ether as a High Boiling Point Compound" (presented by Ms. Arai).

In addition, the Best Manufacturer's Presentation Award was granted to Koken Ltd. Japan for consecutive two years and a best manufacturer's exhibition award was granted to GASTEC Corporation, Japan in the Conference in Nagoya, respectively.

In addition, both Mr. Arimichi Handa, Director, Office of Working Environment Improvement, Ministry of Health, Labour and Welfare, Japan, and Mr. Hideo Ozawa, Director General, Aichi Prefectural Labour Bureau, addressed congratulatory messages.

In the evening of the second day, the Reception for Exchange was held; it was opened with welcoming

From AIHA - USA

2008 William P Yant Award

Guy Bourgeoisat, from France, receives the 2008 Yant Award; this was so well deserved. Guy has promoted Occupational Hygiene in France with great enthusiasm and perseverance; he is a founding member of SOFHYT (French Occupational Hygiene Society), of which he was twice president.

Guy Bourgeoisat studied chemistry and engineering in France, but did his graduate studies in occupational

speeches by Dr. Takayasu Kato, Chairman of the Organizing Committee of JOHA and by Mr. Kitaura, Masahiro (Director, Tokai Branch Office, and Japan Association for Working Environment Measurement), Chairman of the Organizing Committee of JAWE. Then, Professor Emeritus Tsutomu Takata, as JAWE Vice Chairman, addressed a greeting and proposed a toast.

The Joint Conference was attended by more than 300 participants, as well as guests including from the Headquarters of the Ministry of Health, Labour and Welfare, as well as from Aichi Prefectural Labour Bureau. Many Japanese Experts in occupational health participated in this event and the full list is available from the authors.

The next Joint Conference on Occupational Hygiene and Working Environment Measurement will be held in Kyoto City, located in Kinki Region of Japan, from 12 to 14 November, 2008.

hygiene in the USA, at the University of Michigan, in Ann Arbor ("Go Blue, Guy"). After 25 years with 3M, the last seven years being Industrial Hygiene Manager for 3M France, Guy spent six years with L'Oréal group (France), having very recently retired as Industrial Hygiene Manager.

For the next issue, we promise photos and a summary of Guy's Yant Lecture.

News from ICOH

29th International Congress on Occupational Health

The 29th triennial Congress of the International Commission on Occupational Health (ICOH2009) will be held in Cape Town, South Africa from 22-27 March, 2009. The Scientific Program has been posted on the website (www.icoh2009.co.za), and the Call for Abstracts has been issued, with an end date of 21 July 2008 for receipt of Abstracts.

Early bird registration ends 30 April, 2008. Grants are available for some presenters from developing nations. A

student prize will be awarded. Please quickly send in your Abstract and alert your colleagues. Two page brochures containing the scientific sessions and other key details can be downloaded from the website for printing and distribution.

Please, note that the CALL FOR ABSTRACTS is from now through 31 July 2008;

Details on the site: www.icoh2009.co.za

News from WHO

Implementing the WHO Global Plan of Action on Workers' Health

Sent by Ivan D. Ivanov, MD, PhD, Occupational Health, WHO, E-mail: IvanovI@who.int

In May 2007 the 60th World Health Assembly unanimously endorsed the WHO Global Plan of Action on Workers

Health 2008-2017. This Plan provides a political framework for development of policies, infrastructure, technologies

and partnerships for achieving a basic level of health protection in all workplaces throughout the world. The Health Assembly also urged the 193 Member States of WHO to develop national plans and strategies for implementing the Global Plan of Action and to work towards full coverage of all workers with essential interventions and basic services for prevention of occupational diseases and injuries. The progress made in implementing the WHO Global Plan of Action will be reviewed by the World Health Assembly in 2013 and 2018.

Recognizing that occupational health is closely linked to public health and health systems development, WHO is addressing all determinants of workers' health, including risks for disease and injury in the occupational environment, social and individual factors, and access to health services. Furthermore, the workplace is being used as a setting for protecting and promoting the health of workers and their families.

The objectives for WHO global action in the coming ten years include policy instruments on workers' health, workplace health protection and promotion, occupational health services, evidence for action and practice, and workers' health in other policies. Thus, such action contributes to the global health agenda with regards to health security, climate change and Millenium Development Goals.

In implementing the Global Plan of Action WHO is organizing regional meetings with experts from ministries of health, labour and other stakeholders (African Region - August 2007, Western Pacific and South East Asian Regions - November 2007, Eastern Mediterranean Region - May 2008, European Region - September 2008). The priorities for WHO action encompass two global campaigns on elimination of certain occupational diseases, such as asbestos-related diseases, as well as immunization of

health care workers against Hepatitis B. WHO is also developing packages for delivery of essential preventive interventions by basic occupational health services and a strategy for strengthening health systems in the area of workers health. The establishment of national schemes for development of healthy workplaces is also given a priority.

Furthermore, WHO is organizing the work of the global network of collaborating centres for occupational health to provide direct support to achieving the objectives of the Global Plan of Action at the national and the international levels. WHO is also scaling up its collaborative efforts with the International Labour Organization and is actively engaging in dialogue with the international organizations of trade unions and employers. The involvement of non-governmental organizations, particularly those in official relation with WHO, is important for implementing the global plan of action. Currently, WHO is collaborating with the International Commission of Occupational Health, the International Occupational Hygiene Association and the International Ergonomics Association.

Global occupational hygiene community can contribute to implementing the WHO global plan of action by developing practical tools for assessment and management of occupational risks. It is also necessary to identify and popularize cost-effective and evidence-based interventions for primary prevention of occupational diseases and accidents in settings with constrained resources. Least developed countries need particular support in building adequate human and institutional capacities to manage occupational risks, including technical expertise, laboratories, know how about planning, implementation and evaluation of preventive measures.

For further information on WHO activities in workers' health, please contact workershealth@who.int

8th Meeting of the Global Network of WHO Collaborating Centres in Occupational Health, 19 – 20 March 2009

Sent by Evelyn Kortum, WHO E-mail: kortume@who.int, and Marilyn Fingerhut, CDC/NIOSH E-mail: maf2@cdc.gov

The WHO Network of Collaborating Centres in Occupational Health will hold a meeting, on 19-20 March 2009, in Stellenbosch, South Africa. This meeting, which includes Directors of the 65 Collaborating Centres, presidents of IOHA, IEA and ICOH, WHO Regional Advisors in Occupational Health and representatives of the ILO, will precede the 29th International ICOH Congress,

taking place on 22-27 March 2009 in Cape Town. The Network meeting will focus on plans and projects that will intensively contribute to the implementation of the Global Plan of Action on Workers' Health, endorsed by the World Health Assembly in May 2007. The WHO Global Plan was presented in the November 2007 issue of the IOHA Newsletter.

News from the European Union

Sent by Birgit Müller, EU-OSHA, muller@osha.europa.eu

The **European Agency for Safety and Health at Work** was set up by the European Union to help meet the information needs in the field of occupational safety and health. Based in Bilbao, Spain, the Agency aims to improve the lives of people at work by stimulating the flow of technical, scientific and economic information between all those involved in occupational safety and health issues.

Website: <http://osha.europa.eu>

European good practices to help cut workplace illness for millions

Nine organisations have been honoured with a European Good Practice Award for helping to prevent musculoskeletal disorders, the most common form of work-

related illness in Europe. Across the EU, 25% of workers complain of backache and 23% report muscular pains. The winners were announced in February at the closing event of the 'Lighten the Load' campaign which promoted an integrated approach to tackling musculoskeletal disorders, embracing prevention and retention, rehabilitation and reintegration of workers. More details are available at: <http://ew2007.osha.europa.eu/europeansummit/>



At the conclusion of 'Lighten the load', EU-OSHA's campaign on musculoskeletal disorders; from left to right, above: **Jukka Takala**, Director EU-OSHA; **Vladimír Špidla**, EU Commissioner for Employment, Social Affairs and Equal Opportunities; **Marjeta Cotman**, Slovenian Minister of Labour, Family and Social Affairs.

On this occasion the Commissioner emphasised that *"tackling MSDs is a priority for the EU if we are to create more and better jobs in Europe. It is essential if European workers are to enjoy not only better quality jobs but a better quality of life and a higher standard of living."*

Work programme 2008

This year will see a new approach to campaigning, moving to a two-year cycle and involving a greater focus on networks. Starting with the Risk Assessment campaign,

this new model is intended to make the Agency's campaigns more effective in achieving the objectives of the new Community Strategy.

The last in the Agency's series of four flagship reports on new and emerging risks will be published, focusing on chemical risks. Furthermore, projects on carcinogens and occupational cancer will give an overview of the topic and addressing more specifically how occupational exposure limits for these substances are being set in the EU.

Moreover, information and OSH programmes will be provided for the road transport sector, targeting SMEs especially. A report on insurance premiums and other financial incentives for improving safety and health performance will be published. The Agency will begin preparation of a report on how training in teaching risk assessment is provided to teachers.

Latest EU-OSHA Publications

Expert forecast on emerging biological risks
http://riskobservatory.osha.europa.eu/risks/forecasts/biological_risks/

Expert forecast on emerging psychosocial risks
<http://osha.europa.eu/publications/reports/7807118>

Work-related musculoskeletal disorders: prevention report
<http://osha.europa.eu/publications/reports/TE8107132ENC>

Report - Prevention of work-related musculoskeletal disorders in practice
<http://osha.europa.eu/publications/reports/TE7606536ENC>

Literature Study on Migrant Workers
http://osha.europa.eu/priority_groups/migrant_workers/migrantworkers.pdf

OSH in figures: Young workers - Facts and figures
<http://osha.europa.eu/publications/reports/7606507>

Silicosis Prevention

NIOSH and the Americas Silicosis Initiative

Sent by **Maria Lioce-Mata** (CDC/NIOSH/OD) cru6@cdc.gov, **Faye Rice** (CDC/NIOSH/EIDIV) flr2@cdc.gov,
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When Chilean artisans worked in the past, they used hand tools to artfully shape and cut stone. Today, craftsmen working in small open-air settings with two to four workers use power tools for the same task. While efficient, these contemporary tools pose a major health risk by generating dust with high levels of airborne crystalline silica. When workers breathe in this dust, it can result in silicosis, a serious but preventable lung disease.

Occupational exposures to respirable crystalline silica are also associated with lung cancer, pulmonary tuberculosis and airways diseases, and may be related to the development of autoimmune disorders, chronic renal disease, and other adverse health effects.

Concerned about these threats, the Chilean National Institute for Public Health (ISP) invited three industrial hygienists from the National Institute for Occupational Safety and Health (NIOSH) to examine work conditions among the ornamental stone carvers in the small historical town of Pelequén, Chile. A NIOSH industrial hygienist Aaron Sussell said *"the silica dust levels were some of the highest I've seen anywhere in the world – and there were no controls to prevent silicosis"*; the following photos show some of the conditions he encountered.

NIOSH plans to assist ISP in implementing an intervention to introduce dust control measures in these small shops.

NIOSH has expertise in all aspects of silica measurement, control of exposure, and diagnosis, treatment, and medical surveillance of silica-related disease. This expertise is sought by international and national organizations to address the problems in developed and developing countries, where occupational silicosis is believed to be widespread. For many exposed workers, prevention measures are non-existent. China recorded more than 500,000 cases of silicosis from 1991- 1995. In Brazil, more than 4,500 workers with silicosis have been cumulatively reported in the state of Minas Gerais alone. In India, millions of workers are at risk.



In 1995, the World Health Organization (WHO) and the International Labour Organization (ILO) began a campaign to eliminate silicosis from the world by 2030.



In 2005, WHO and its Regional Office, the Pan American Health Organization (PAHO), the ILO and the Chilean Ministry of Health (MOH) requested that NIOSH provide technical assistance to these organizations and cooperating countries to build adequate capacity to eliminate silicosis in the Americas. In response to this request, NIOSH (a WHO Collaborating Center for Occupational Health) initiated a program called "Americas Silicosis Initiative" in partnership with WHO, PAHO and the ILO. It is the first regional approach to silicosis and is based upon the sharing of expertise to benefit many

countries. Substantial work was accomplished in Chile in 2006 and was underway in 2007 in Chile, Brazil, and Peru, including:

- Training of physicians from Chile, Brazil, and Peru by US, Chilean and Brazilian experts
- Development of a silica laboratory at the ISP in Santiago (including training for laboratory technicians from Chile, Brazil, Peru and Uruguay)
- Training of workshop participants from Chile, Peru, Brazil and Uruguay in methods of dust control
- Development of simple guidance for employers to put controls in place
- Conducting of field visits to small quarries and stone crushing and stone craft worksites to develop customized guidance sheets

The impact of NIOSH's technical assistance was seen in July 2007 when Chilean Ministries of Health and Labor jointly hosted representatives of the Ministries of Brazil, Argentina, Uruguay, Mexico and Peru in a regional planning meeting that has brought these countries into the Americas partnership.

The Americas Silicosis Initiative includes a cost-effective, novel educational approach called "Control Banding" to assess and control exposure to the hazardous crystalline silica dust.

NIOSH technical assistance to partners in Brazil, Chile, and Peru enables these countries to develop their own capacity to implement National Plans to eliminate silicosis. This kind of partnership is a model for other countries and is helping to meet the ILO/WHO goal to eliminate silicosis by 2030.

Global collaboration in silicosis prevention benefits NIOSH in its effort to reach small business in the United States through experience and lessons learned in applying simple guidance to control silica exposures in small enterprises with partner countries in the Americas. At least 1.7 million United States' workers are potentially exposed to respirable crystalline silica in a variety of industries and occupations, including mining and construction, and many are exposed to concentrations that exceed limits defined by current regulations and standards. OSHA is currently working on new regulations and NIOSH is working on new forms of simple guidance for employers and workers.

In October 2007, a NIOSH technical expert visited Chile to present the United States' experience in controlling silicosis with the use of respirators in the workplace at the "Breathe Safely" seminar. He met with the Chilean ISP on silica control topics related to respiratory protection, and proposed a joint project on developing respiratory protection programs for small and medium business enterprises. ***Prevention activities with the cooperation of government, labor and industry are ongoing, and are the keys to silicosis elimination.***

NIOSH Disclaimer: The findings and conclusions in this report are those of the author(s) and do not necessarily represent the views of the National Institute for Occupational Safety and Health.

The National Programme for the Elimination of Silicosis in Brazil

Sent by Eduardo Algranti, Pulmonary Medicine, FUNDACENTRO, Brazil, eduardo@fundacentro.gov.br

The National Program for the Elimination of Silicosis, Brazil (NPES-B) started in mid 2002, with the following objectives, in conformity with the goals of the Joint ILO/WHO Programme for the Global Elimination of Silicosis:

- To reach a significant reduction in the incidence of silicosis by 2015
- To eliminate silicosis as a public health problem by 2030

The NPES-B has developed a series of actions under the designations of Policy and Legislation, Information, Education and Research tailored for application in the following four groups, also taking into account parameters such as risk magnitude, sector awareness and priorities:

- Mining: mineral extraction and processing
- Construction industry
- Metallurgy
- Ceramic and Glass

The first 18 months were devoted to consolidating a framework of institutions that would sustain the programme. Three important goals have been reached so far:

1. The signature of bilateral Memoranda of Understanding for technical cooperation between FUNDACENTRO and the Ministries of Labour and Employment, Health, Social Welfare and Public Counsel, and also with the ILO/Brazil
2. An estimation of the potentially exposed population by economic sectors through a job exposure matrix method
3. A ban on the use of sand as a blasting agent in the Brazilian territory

Prior to launching of NPES-B, a specific Website was developed, under the FUNDACENTRO site (link: <http://www.fundacentro.gov.br/index.asp?D=SES>) and made available, in order to disseminate scientific and technical information on silica, silicosis and its prevention, as well as news and other relevant information on the programme. This site also aims at acting as a communication channel with the community, particularly all stake holders somehow associated to this problem.

Recently, the group dealing with mining attained an important goal concerning the elimination of dry finishing in the ornamental stones industry.

Further details can be obtained from Dr Eduardo Algranti (eduardo@fundacentro.gov.br).

Examples of studies related to silicosis prevention, carried out at FUNDACENTRO

As an example of an ongoing research project under NPES-B (PNES), it is relevant to mention the "Study of occupational exposure to silica in the manufacture of ceramic tiles", which has been carried out since 2005, by a FUNDACENTRO-São Paulo team that includes occupational physicians, occupational hygienists, analytical laboratory staff and statisticians, namely: Alcinéa Santos, Amarildo Pereira, Ana Maria Bon, Eduardo Algranti, Elayne Maçaira, Elizabete Mendonça, Leila Cristina Lima, Luiz Alberto Corrêa, Marco Antonio Bussacos, Maria Margarida T. Moreira Lima. Further details can be obtained through the team coordinator: Maria Margarida T. Moreira Lima, E-mail: maria.lima@fundacentro.gov.br.

The occupational health teams of FUNDACENTRO, both in São Paulo and in other Brazilian states, have carried out many other studies on the assessment and prevention of exposure to silica containing dusts; a few examples (far from exhaustive) are hereby mentioned:

Exposure to silica and silicosis in the National Programme for the Elimination of Silicosis in Brazil - PNES (*Exposición a sílice y silicosis en el Programa Nacional de Eliminación de Silicosis en Brasil - PNES*), Algranti, E., Handar, Z., Ribeiro F.S.N., Bon, A. M. T., Santos, A. M. A., Bedrikow, B. (*Ciencia&Trabajo*, v.6, p.1 - 13, 2004)

Respiratory impairment in Brazilian foundry workers exposed to sand, Mendonça E.M.C., Silva R.C.C., Bussacos M.A., Algranti E. (*Am J Ind Med* 2007; 50:83-91)

Occupational exposure to silica and silicosis among workers in the stonecutting industry in São Paulo (*Exposição ocupacional à sílica e silicose entre trabalhadores de marmorarias, no município de São Paulo*), 2006, p. Bon, A. M. T. (Doctoral Thesis, School of Public Health, University of São Paulo, Brazil)

Occupational exposure to dust in stone cutting: characteristic particle sizes (*Exposição ocupacional a poeiras em marmorarias: tamanhos de partículas características*), 2005, Santos, A. M. A. Tese (Doctoral Thesis, School of Engineering, Federal University of Minas Gerais, Brazil)

Method for the determination of crystalline silica in the dust resulting from processes in the manufacture of ceramic tiles (*Método de determinação da sílica cristalina na poeira dos processos de fabricação de revestimentos cerâmicos*) Moreira Lima, M. M. T.; Camarini, G. (*Cerâmica Industrial*, v. 11, n. 4, p. 21-27, 2006)

Further information can be obtained from the authors.

New Silicosis Prevention Campaign at the University of Washington, USA: Silica: It's More Than Dust

Sent by Mary Ellen Flanagan, mflanaga@u.washington.edu

The University of Washington, in partnership with trade and industry groups, is launching a silicosis prevention campaign. Construction workers are clearly at risk of

developing silicosis and other lung diseases if they breathe high levels of concrete and rock dust. One study showed silicosis deaths in the construction industry are higher than

any other industry in the United States. However, silica levels fluctuate because of the nature of construction work. This also makes air monitoring challenging on construction sites.

The University of Washington's Field Research and Consultation Group has developed an extensive database of air quality samples collected for a wide range of construction activities. This information was pooled from U.S. regulatory agencies, universities and other research groups, and several construction contractors.

These results are available on the website <http://depts.washington.edu/silica>. The site shows silica dust averages and ranges for common dust-producing

construction tools. There is also information on how well dust controls work and an interactive web page called "The Right Respirator for the Job" to recommend the best respirator when working with a specific tool in an open, enclosed, or confined environment.

This website was designed to help those in the construction industry anticipate and control silica exposures. In addition to the interactive tool, it has information for online reading or downloading.

An information campaign – including posters and hard-hat stickers – will direct workers and managers to the website. Posters and hard hat stickers are also available for downloading.

Silica Exposure Webcommunity

Sent by Andy Phillips, HSE UK, andy.phillips@hse.gsi.gov.uk

The Silica Exposure Webcommunity is hosted by the UK Health and Safety Executive and is one of a number of collaborative websites that allow its members to interact within their community and discuss issues of importance to them. Membership is open to all, though intended primarily for those who have a role to play in understanding and controlling exposures to respirable crystalline silica in the working environment. The community extends beyond national boundaries.

This Webcommunity aims at:

- helping people communicate with each other on areas of common interest;
- providing a centralised place to capture and share information about members' activities;
- sharing information about publicly available reports, documents and links, and,
- uploading documents of common interest to members.

The Silica Exposure web community can be found at: <http://webcommunities.hse.gov.uk/inovem/inovem.ti/silica/groupHome>

If you have an interest in controlling exposure to silica and the risks this presents, please consider joining the group and sharing what you have with others. It is hoped this group will become self sustaining and that members will see it as their resource and a means to share information and insights with like-minded colleagues around the world.

Members can start discussions, share documents, presentations and photos (but keep file sizes down please!), add web links and see who the other members are. Oh, and once in "web communities" and through the "Find another group" link on the Silica Homepage have a look around to see the wide variety of other health and safety related networking sites that have been created.

If you have any views about the use of collaborative tools in bringing together those in the wider world of hygiene please contact Andy Phillips at the Health and Safety Executive in the UK who, along with Colin Davy, manages this community. Andy has a keen interest in managing hygiene knowledge and can be contacted at andy.phillips@hse.gsi.gov.uk.

Reminder of the WHO GOHNET Newsletter on the Elimination of Silicosis

In view of the many contributions related to silicosis prevention in this issue, it is timely to remind you of the very good issue of the GOHNET Newsletter on this subject (No. 12, Winter 2007), always available online at:

http://www.who.int/occupational_health/publications/newsletter/gohnet12e.pdf

Silicosis in the Construction Industry – Studies in the Netherlands

Much work on silicosis in the construction industry has been carried out in the Netherlands. This is particularly important because in many places, it is still difficult to convince decision makers that silica containing dust is a threat in this occupational branch. For example, Evelyn Tjoe Nij from The Netherlands presented a thesis in 2003 about risk assessment for silica and silicosis prevention. Her work includes five studies about silica in the construction industry; some examples are mentioned below.

Dust Control Measures in the Construction Industry

Evelyn Tjoe Nij, Simone Hilhorst, Ton Spee, Judith Spierings, Friso Steffens, Mieke Lumens and Dick Heederik (Ann.Occup. Hyg., 2003, Vol. 47, No. 3, pp. 211–218)

Quartz is a human carcinogen and a causative agent of silicosis. Exposure levels often exceed exposure limits in the construction industry. The need for effective control measures is high, but the complex structure of the construction industry, the variability in sources of exposure

and the frequent changes of worksite makes it difficult to implement even simple and potentially effective control measures. The aim of this study was to evaluate the impact of control measures for reducing quartz dust exposure and to assess the extent of their use. Full-shift respirable dust measurements ($n = 61$) and short-term measurements among construction workers were performed and results of a questionnaire study among 1335 construction workers were analyzed. Full-shift measurements showed respirable quartz exposure levels up to 63 times the maximum allowable concentration (MAC) value (0.075 mg/m³). More than half of the measurements were above the MAC value. Determinants of full-shift exposure levels were not strongly associated with use of control measures however the short-term measurements showed large reduction factors (>70%) when wet dust suppression or local exhaust ventilation was used.

The effectiveness of control measures is potentially high, and a significant part of the construction worker population is indeed using them on a regular basis. Still, both the exposure study and questionnaire survey demonstrated that the use of respiratory protection is the most widely used preventive measure in the construction industry. Respiratory protection might not always reduce exposure sufficiently. Only the combined use of more than one control measure can reduce exposures to acceptable levels.

Risk assessment of silicosis and lung cancer among construction workers exposed to respirable quartz, Evelyn Tjoe Nij and Dick Heederik (Scand J Work Environ Health 2005; 31 suppl 2:49–56)

The aim of this study was to assess the magnitude of the silicosis and cancer risk among construction workers. In 1998, 1335 of 4173 invited construction workers with expected high cumulative exposure to quartz were studied for early signs. All available data indicated that construction workers exposed to quartz levels above occupational exposure limits are clearly at elevated risk of silicosis and other respiratory diseases.

Lung function decrease in relation to pneumoconiosis and exposure to quartz-containing dust in construction workers, Evelyn Tjoe-Nij, Gea de Meer, Jet Smit and Dick Heederik (Am. J. Ind. Med., 2003, Jun; 43(6):574-83)

This cross-sectional study was carried out, in view of the need for more knowledge on the prevalence of exposure related respiratory symptoms and decreases in lung function among quartz dust exposed construction workers. The occurrence of respiratory symptoms was recorded and spirometric lung function was measured. Results were associated with exposure data and presence of radiographic abnormalities and compared with a reference population. Pneumoconiosis (profusion category 1/1 or greater) was associated with increased risks of FEV1 and FVC values in the lowest 5% group, and with group-based

decreases of 270 ml/s and 180 ml, respectively. Average lung function of construction workers was somewhat lower compared to a Dutch reference population. Lung function was not associated with exposure, except for a reduction in FVC of 5 ml per year for those with higher exposure.

The conclusion was that, in quartz dust exposed construction workers, obstructive and restrictive lung function loss was detected.

Radiographic abnormalities among construction workers exposed to quartz containing dust, E Tjoe Nij, A Burdorf, J Parker, M Attfield, C van Duivenbooden, D Heederik (Occup. Environ. Med., 2003, 60:410–417)

Construction workers are exposed to quartz containing respirable dust, at levels that may cause fibrosis in the lungs. Studies so far have not established a dose-response relation for radiographic abnormalities for this occupational group.

The aim of the study was to evaluate the extent of radiographic abnormalities among construction workers primarily exposed to quartz containing respirable dust.

Therefore, a cross sectional study on radiographic abnormalities indicative of pneumoconiosis was conducted among 1339 construction workers involved mainly in grinding, (jack)-hammering, drilling, cutting, sawing, and polishing. Radiological abnormalities were determined by median results of the 1980 International Labour Organisation system of three certified "B" readers. Questionnaires were used for assessment of occupational history, presence of respiratory diseases, and symptoms and smoking habits.

The results showed the following: An abnormality of ILO profusion category 1/0 and greater was observed on 10.2% of the chest radiographs, and profusion category of 1/1 or greater on 2.9% of the radiographs. The average duration of exposure of this group was 19 years and the average age was 42. The predominant type of small opacities (irregularly shaped) is presumably indicative of mixed dust pneumoconiosis. The prevalence of early signs of nodular silicosis (small rounded opacities of category 1/0 or greater) was low (0.8%).

This study suggests an elevated risk of radiographic abnormalities among those workers with expected high exposure. An association between radiographic abnormalities and cumulative exposure to quartz containing dust from construction sites was observed, after correction for potentially confounding variables.

Ton Spee, from ARBOUW, has also carried out much work and has a wealth of information on this topic. Those interested in this subject may get in touch with Evelyn Tjoe-Nij (evelyn.tjoenij@tno.nl) and Ton Spee (spee@arbouw.nl).

Characteristics of dust from the manufacturing process of ceramic materials for tiles

Sent by Maria Margarida T. Moreira Lima, FUNDACENTRO, Brazil, maria.lima@fundacentro.gov.br

This study is part of a FUNDACENTRO's project as a contribution to the PNES (the Brazilian National Programme for the Elimination of Silicosis). The full text will soon be available at the FUNDACENTRO website.

In the ceramic tiles industry, data on the characteristics of dust generated in their processes is not sufficient to define the magnitude of the risk of occupational exposure to silica in this industrial branch in Brazil. This study was conducted with an exploratory and descriptive nature through

systematic observation of the industrial process steps with dust generation, the collection and analysis of air samples from the work environment and the mineralogical analysis of raw materials for ceramic tiles in order to identify their composition, as well as the mass concentration and the crystalline silica content of airborne particulate material in industries of glazed ceramic tiles for floors and walls.

Dust samples were analyzed with gravimetric and X-ray diffraction techniques. The dust samples indicated concentrations of respirable α -quartz between 0.01 mg/m³ and 0.16 mg/m³ in the main stages of the process. The mean concentration of respirable α -quartz in the sectors of clay grinding was 0.06 mg/m³; in the pressing sectors: 0.03 mg/m³; in the glazing lines: 0.02 mg/m³, and in the preparation of enamels and engobe sectors: 0.09 mg/m³. Raw ceramic bulk samples were analyzed by X-ray diffraction to identify the presence of other compounds that could be present in the dust generated by the processes. Minerals of the group of the micas, feldspars and smectite have been identified in the composition of all the ceramic masses, together with hematite and quartz, as the predominant mineral.

Nine plants in Santa Gertrudes Municipality, São Paulo State, with dry manufacturing processes, where the main raw material is red clay, were selected to this study.

The medical surveillance will be carried out this year. The data on the prevalence of silicosis in the ceramic tiles sector is not sufficient to define the magnitude of the silicosis risk in this industrial branch in our country.

For the author, the importance of this research is the actual discussion about others possible compounds (such as iron and aluminium) in the clay dust (especially red clay) that could modify the effects of quartz (Miller and Soutar, 2004).

The question is: *Why, in a situation of exposure to quartz containing dust, there are not silicosis cases as expected?* "Available evidence suggested that these risks might be low (in the heavy clay industry), possibly because the presence in the dust of other minerals, such as illite and kaolinite, which may reduce the harmful effects of quartz" (LOVE et al, 1999).

Miller, B. G. and Soutar, C. A. (2004) "Comparison of observed radiological abnormalities in the heavy clay industry with risks predicted by exposure-response relationships from high-potency quartz exposures at a Scottish colliery", Institute of Occupational Medicine, Edinburgh (Research Report TM/04/02). Available at: www.iom-world.org/pubs/IOM_TM0402.pdf

Love, R. G. et al. (1999) "Risks of respiratory disease in the heavy clay industry", *Occup. Environ. Med.*, **56**, N. 2, pp. 124-133

Occupational hygiene and silicosis prevention initiative in Mozambique

Sent by Custodio V. Muianga and Carol Rice, Department of Environmental Health, College of Medicine University of Cincinnati, muiangcv@email.uc.edu or alerdilr@ucmail.uc.edu

Since 2004 the Center for Industrial Studies, Safety and Environment (CEISA) at Eduardo Mondlane University (UEM) has been seeking low-cost, simple and innovative ways to reduce worker exposures to chemical airborne contaminants. In that context, control banding toolkits, such as the COSHH Essentials, the ILO Chemical Control Toolkit and the GTZ chemical management guide, were reviewed to evaluate the potentiality to be used in Mozambique. As a result, a tailored train-the-trainer program in Portuguese on chemical risk management in research and teaching laboratories was designed for delivery at the Eduardo Mondlane University, Mozambique.

As part of a PhD dissertation research at the University of Cincinnati, Department of Environmental Health, OH – US, various silica dust exposure control strategies were reviewed including the UK HSE Silica Essentials, the European Union Negotiation Platform on Silica – Good Practice Guide, and the US Blue Print Project: Guides for Managing Silica Control Programs in Construction. The usability of each of these toolkits in small-scale concrete and masonry demolition activities was evaluated, and the Silica Essentials Construction Series was translated to Portuguese with support and collaboration from NIOSH and are currently under external review.

The results include constraints of language differences (English to Portuguese), the availability of modern technologies (Internet access) and access to exposure controls (local exhaust ventilation, water suppression systems, and respiratory protection). Control guidance sheets include extensive text and technical information on both hazard and controls that may limit their usability for workers and some supervisors as a result of lack of time

and literacy. For silica dust controls, the use of task-based, good work practice principles was identified as a valuable concept to address both primary prevention of diseases through exposure reduction and eliminating the "knowledge application gap" regarding silicosis in Mozambique and other developing countries. Based on the Silica Essentials and the EU-NEPSI Good practice guide, task-based good work practice control guidance sheets for four demolition tasks were developed - one page for workers and multiple pages for supervisors. The exposure reduction strategy in these task-based control guidance sheets is based on good work practices, such as the use of:

- wet methods to suppress dust (spray, sprinkle or mopping);
- HEPA filtered vacuum cleaner to remove dust;
- natural ventilation by working at an upstream position of the silica dust generating source and allowing free air circulation through opening doors and windows when appropriate; basic personal protective equipment, and,
- basic hygiene and sanitation practice.

These task-based control guidance sheets are to be evaluated through a pre-and-post action-focused, hands-on worker and supervisor training intervention in small-scale concrete and masonry demolition operations in Mozambique. If the approach proves to reduce exposure, the approach may be replicated in other developing and developed countries as well as be expanded to other silica-generating activities and trades.

Websites for the above-mentioned Toolkits and guides:

COSHH Essentials: <http://www.coshh-essentials.org.uk/>

ILO Chemical Control Toolkit:
http://www.ilo.org/public/english/protection/safework/ctrl_ba nding/toolkit/icct/index.htm

GTZ chemical management guide:
<http://www.gtz.de/de/dokumente/en-chemical- management-guide-2006.pdf>

UK HSE Silica Essentials:
<http://www.hse.gov.uk/pubns/guidance/>

European Union Negotiation Platform on Silica – Good Practice Guide: <http://www.nepsi.eu/good-practice- guide.aspx>

US Blue Print Project: Guides for Managing Silica Control Programs in Construction:
<http://www.blueprintproject.org/silica.html>

Acknowledgments: To the University of Cincinnati Graduate Assistantship, to the National Institute of Environmental Health Sciences (for the Grant), the Eduardo Mondlane University, Mozambique, and my advisors at UC and NIOSH. The content is solely the responsibility of the authors and does not necessarily represent the official views of any institution mentioned above.

Custodio Muianga, now in the USA, is also from the Center for Industrial Studies, Safety and Environment. Eduardo Mondlane University. Maputo – Mozambique.

Translation into Portuguese of the WHO document on prevention and control of exposure to airborne dust

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This information is very relevant for readers who are interested in occupational health documents and guidelines in Portuguese. Moreover, this initiative is an example of the usefulness of having some key materials translated into national languages, as this not only provides wider reach for existing knowledge but also triggers ideas for its application.

The 1999 WHO document: “Prevention And Control Exchange: PACE, Hazard Prevention and Control in the Work Environment: *Airborne Dust*” was translated into Portuguese by a Brazilian institution (Senac São Paulo), a candidate to become a WHO Collaborating Center, under a collaborative project with WHO.

The WHO document in question dates back to 1999; since then many studies on dust and its control have been carried out, but the mechanics of dust generation and dissemination, the recognition of dust problems and the basic prevention and control principles have not changed. What is urgently needed is the application of such principles in the development of efficient preventive interventions. Silicosis has been known for centuries and has been proved to be preventable for many and many decades; however, it continues to incapacitate and kill workers today. Therefore, projects aiming at the promotion of primary prevention in this field are of fundamental importance.

This project, within the activity area on “Education, Training and Technical Materials” of the Global Network of WHO Collaborating Centres in Occupational Health, involves not only the translation but also the dissemination of the document. In this connection, a workshop was held at Senac São Paulo, in São Paulo, in December 2007, and consisted of:

- Presentations on the document and its “history”, linking it with the usual obstacles to prevention, as well as to the ILO/WHO International Programme on the Global Elimination of Silicosis, the 2008-2017 WHO Global Plan of Action on Workers’ Health and the Plan of Work of the WHO Network of Collaborating Centers.
- A brainstorming session with the participants on how to best promote prevention and, particularly, on how to best use and disseminate the document, and promote its practical application.

The discussions were very fruitful and a number of useful suggestions emerged; the participants were enthusiastic and agreed on becoming “multipliers” in the dissemination of relevant information. The document was distributed on a CD to the participants of the workshop and to a number of occupational health professionals, and has been posted online, free of charge, within the Senac Website; the direct link to this document is:

www1.sp.senac.br/hotsites/oms/documentos/pace.pdf

International Actions

International Training Modules

Sent by Roger Alesbury, roger.alesbury@uk.bp.com, Steve Bailey, Steve.R.Bailey@gsk.com, Brian Davies, bdavies@uow.edu.au, Noel Tresider, noelpetroch@msn.com.au

Background

Over the last two years, there have been meetings and workshops on global industrial (occupational) hygiene

training at occupational hygiene conferences in the USA, Australia and Europe in addition to numerous discussions between interested parties across the world. At the recent

IOHA Conference in Taipei, a workshop heard latest developments and progress with this work. This note provides the background on these activities, and an update on progress in developing a series of International training modules.

Occupational Hygiene Training Modules

Globally, demand for industrial hygienists is increasing. There is also evidence from a survey of multi national employers that ability to recruit in many parts of the world, and the lack of suitable training courses, are barriers to the development of the profession.

Following extensive consultation over the last two years, funding has been secured to develop a number of quality industrial hygiene training modules. These are aimed at bridging the gap between the traditional 'Principles' course and Masters level programmes, as a means of developing capability in parts of the world where demand growth is greatest.

The modules have been designed to provide a stepping stone for developing professionals in their early career, focussing on practical 'hands on' aspects of Industrial Hygiene. The focus is on teaching the practicalities involved with the initial identification, assessment, monitoring and control of hazards in practical situations.

The intent is to provide a comprehensive, quality teaching package that can be used by a variety of institutions across the world and is suitable for translation into local languages. As such they should be accessible and affordable. One-week modular courses are routinely used for teaching people in employment and the concept is found to be generally acceptable to employers, who are more willing to release employees for one week at a time rather than for prolonged periods. Each module is part of a series but can be taken in isolation and so there is no ongoing or long term commitment necessary in enrolling on one course. Attendance at courses on specific topics can also be tailored to local priorities.

The syllabi for the modules have been developed in partnership with BOHS and in consultation with AIOH and other IOHA member organisations. The content builds on an established format used by BOHS but updated to reflect current developments and to remove all reference to National or local legislation. There is also a greater focus on the need for practical 'hands on' experience during the teaching sessions.

Course materials are being developed by experienced professionals (the first two have been prepared by Professor Brian Davies and colleagues at the University of Wollongong). Following preparation of the material, this is peer reviewed and piloted prior to publication. The intent is that student manuals will be available free on the internet for download. The AIOH have also agreed to publish the student manuals and make them available at modest cost. Teaching materials will be made available to reputable course providers at no cost. In order to maintain quality and consistency, the intent is that courses should only be run by organisations with at least one professionally qualified hygienist and those that have the ability to provide quality teaching.

Each training pack includes: student manual, course programme, learning objectives, teaching slide packs/notes, practical workshops, self assessment

questions and mock examination. The intent is that following each course, students can sit an international 'assessment/examination' developed along the lines of the process currently used by BOHS for their national modules. Working with AIOH, the intent is that this will be available online and take into account the issues of language and culture. This will provide training that will contribute to the learning objectives required to sit examinations for IOHA recognised national Occupational Hygiene Accreditation Schemes. Although the course assessments will provide a record of achievement and building blocks toward professional development – they are not a replacement or substitute for the IOHA qualifications recognised under NAR. They are though a means of delivering aspects of the training required to prepare for those qualifications.

Although at a very early stage, there are also discussions about the possibility that these modules could in turn feed in, or form part of, other structured learning programmes toward a recognised academic qualification, such as an MSc.

Current Status

The status of development of the modules is shown below:

Chemical monitoring	complete (peer reviewed and piloted) – available now
Thermal environment	complete (peer reviewed and piloted) – available now
Noise	final drafting, pilot course January 2008, publication Q1 2008
Asbestos	final drafting, pilot course Q1 2008
Control of Chemicals	drafting Q1 2008, target availability Q2 2008
Ergonomics	drafting Q1 2008, target availability Q2 2008

Courses on Chemical Monitoring have been run in Australia and Azerbaijan, and plans are in place for a course in China in August 2008. The material is being translated into Spanish and will run in South America in 2008. Translation into German is also being arranged.

Courses on the Thermal Environment have been run in Azerbaijan and Australia and a course on Noise took place in China during January 2008. There are ongoing discussions about planning for other courses around the world.

Summary

These modules provide a means for delivering consistent, quality training on core aspects of occupational hygiene that complement and enhance existing training offers. They have been designed for early career trainees to bridge the gap between the principles level courses and masters level programmes. The focus is on practical, hands on aspects related to assessment, monitoring and control of the working environment.

The method of development, peer review and piloting is leading to a quality of material that is suitable to be translated and to be run locally to suit demand. As such, it is hoped it will increase the take up of Industrial Hygiene training and increase the number of people around the world preparing for IOHA recognised accreditation.

Discussions are being held within IOHA member organisations to look at the next steps to manage and

maintain this material.

Focus on Occupational Health and Safety in Southern Africa

Sent by Claudina Nogueira, National Institute for Occupational Health (NIOH), South Africa, claudina.nogueira@nioh.nhls.ac.za

Two international programmes in occupational and environmental health are well established in the Southern African Development Community (SADC) Region: the Fogarty International Center/University of Michigan Southern African Programme in Occupational and Environmental Health Training, and the SIDA (Swedish International Development Cooperation Agency)-sponsored Work and Health in Southern Africa (WAHSA) Programme. Both programmes held their annual meetings recently in Maputo, Mozambique, 11-15 February 2008. The meetings were attended by representatives from the United States, Sweden, Mozambique, South Africa, Tanzania, Zambia, Zimbabwe, Botswana and Lesotho; directors, managers, coordinators and administrators from both programmes were present, as well as official SADC representatives. A short summary of each programme is hereby presented; further information may be obtained from the author.

The Fogarty/University of Michigan Programme

The Fogarty/University of Michigan Programme is currently in its third five-year cycle, and its main objectives are the promotion of occupational and environmental health capacity building and training for the SADC Region, with a strong focus on academic development. The first ten years (two funding cycles) of the programme focused on developing academic and human resources for occupational health and safety capacity, initially in South Africa, and then in other SADC member states. Additionally, support was given for research projects of junior scientists in the SADC Region. The main goal of the third and current funding cycle is to further strengthen and develop the Resource Complexes that were established in previous cycles, in Tanzania, Zambia and Zimbabwe. At the recent Program Review Committee Meeting, Mozambique was welcomed as a newcomer to the Fogarty Programme, and initial plans were put in place for collaborative work to begin officially.

The WAHSA Programme

The WAHSA Programme is currently reaching the end of the first four years (Phase I) of a twelve year programme; its primary goal is to contribute to poverty reduction and the promotion of human rights in the SADC Region, through improvements to health, safety and working conditions, by means of designing and implementing interventions in workplaces.

The WAHSA Programme has a total of 10 projects and the priority issues identified to date include the following action-oriented projects: action on silica, silicosis and tuberculosis; action on the health impact of pesticides; action on health and safety in the informal sector; health and environment of healthcare workers; and accident prevention in the transport sector. The recent meeting was held as an evaluation of what has been achieved during Phase I of WAHSA, and proposals were made for the planning and implementation of Phase II and the way forward, which will focus on action-oriented proposals from Tanzania, Zambia and Mozambique. A number of products have resulted from work carried out in the various WAHSA projects during Phase I – these products are available for general use in the SADC Region.

Various stakeholders in the SADC Region are involved in both programmes; these include regional occupational health and safety agencies, academic institutions, occupational health experts and practitioners, government departments and ministries, employer and employee representatives. The recent meeting also aimed at developing closer synergy and partnership between the Fogarty and WAHSA Programmes, to achieve the ultimate long-term goal of both programmes – health and safety for all.

The “Maquiladora Health & Safety Support Network”

Sent by Garrett Brown, AIHA and ACGIH, gdbrown@iqc.org

The “Maquiladora Health & Safety Support Network” (MHSSN) is a volunteer network founded in 1993 by 400 occupational health and safety professionals who have placed their names on a resource list to provide information, technical assistance and on-site instruction regarding workplace hazards in the 3,000 “maquiladora” (foreign-owned assembly) plants along the U.S.-Mexico border. Network members, including industrial hygienists, toxicologists, epidemiologists, occupational physicians and nurses, and health educators among others, are donating their time and expertise to create safer and healthier working conditions for the one million maquiladora workers employed by primarily U.S.-owned transnational corporations along Mexico's northern border from Matamoros to Tijuana. Since 2000, the MHSN has also conducted projects in Central America, Indonesia and China.

One recent example of action by the MHSSN was a health and safety project in October 2007 at an open-pit copper mine in northern Mexico, at the request of a Mexican Miners union for an independent evaluation of the working conditions and the health status of the mine workers. This project demonstrated how workplace safety and health in the global economy can and should be improved through international collaboration, as well as highlighting a growing labor internationalism as unions from both side of the US-Mexico border participated.

In just two weeks, the MHSSN pulled together a volunteer team of eight occupational professionals to travel to northern Mexico, including three Mexicans (two occupational physicians and an industrial hygienist), four US citizens (an occupational physician, a registered nurse,

an industrial hygienist, and a Mexican-American pulmonary technician) and an industrial hygienist from Colombia.

Over four days, the OHS survey team interviewed and tested 70 miners, performed lung function tests (spirometry), and also spent four hours driving through the giant open-pit mine and walking through the multiple ore crushing and processing plants. A preliminary report was issued in November 2007 in Mexico City, where two members of the OHS Survey Team met with officials of the Mexican workplace health and safety agency.

In January 2008, the multi-national OHS survey team issued its final report, documenting numerous serious, uncontrolled hazardous exposures and safety hazards. One of the observed problems was that the dust collectors in the multi-building concentrator department had been disassembled and the duct work piled on the ground next to the enclosed buildings processing the copper coming from the open-pit mine. Serious health hazards from airborne dust started to occur three years ago, as these buildings were filled with dense clouds of rock dust, forming snowdrift-sized piles of settled dust two to three feet high through the plants. A bulk sample of the accumulated dust

was taken in October 2007 and sent to three U.S., AIHA-accredited laboratories, which found the dust was 23% crystalline silica with 50% of particles in the respirable range of less than 10 microns in diameter.

In this one small example, occupational health professionals from three countries volunteered their time and expertise to identify and evaluate occupational risk factors in an effort to prevent "a race to the bottom" in working conditions and workers' health throughout the global economy. The OHS professionals' efforts were supported by both the Mexican Miners union and the United Steel Workers union in the United States as the unions built bridges of "cross border solidarity."

Information on the MHSSN activities, as well as reports and photographs from many projects, are available online at: <http://mhssn.igc.org>. A full report on the copper mine project was published by Occupational Hazards magazine at:

www.occupationalhazards.com/zone/334/OHIndustrial_Hygiene/Article/78362/International_OHS_Through_the_Looking_Glass_of_the_Global_Economy.aspx

Contributions from Readers

Japan Association for Working Environment Measurement (JAWE) released the results of the Cross Check Project concerning the Evaluation of Asbestos in Bulk Samples and in Airborne Samples, conducted by JAWE in the fiscal year 2006

Sent by Masayoshi Karasawa, Special Adviser, JAWE, director@jawe.or.jp

According to the business programme of the fiscal year 2006, JAWE, whose Chairman is Mr. Kizoh Hirayama, Managing Director, General Manager, Personnel & Labour Relations Division, Nippon Steel Corporation, conducted independently, for the first time in Japan, a nationwide "Accuracy Control Project by Cross-check of Blind Samples for the Evaluation of Asbestos Contents in weight", in Bulk Samples and Airborne Samples.

As already mentioned on the IOHA Newsletters of July and December 2005, in Japan, the Ministry of Health, Labour and Welfare has enforced, since July 2005, a new regulation, namely the "Ordinance on Prevention of Hazards due to Asbestos". According to this regulation:

- prior studies must be carried out by concerned employers to establish whether asbestos was used or not in buildings or structures, which are planned to be pulled down;
- when it is not clear whether asbestos was used or not in such buildings or structures, analysis for the presence of asbestos shall be carried out by the employers concerned, otherwise adequate measures to prevent workers' exposure to asbestos should be taken as if asbestos had been used.

The purpose of this project is to improve the accuracy of analyses of contents in weight of bulk samples, such as

construction materials, as well as airborne samples, collected according to these provisions.

The total plan of this project includes:

- the preparation of three kinds of blind samples with regard to both bulk samples (blind bulk sample A, B or C), and airborne samples (also A, B or C), according to the degrees of difficulty of the analyses of asbestos in weight, and,
- their distribution to the participants of the project.

The participants who applied to join this project conduct analysis of one kind or more of these blind samples. The most difficult samples are ranked as A, intermediately difficult samples are ranked as B, and moderately easy samples are ranked as C.

The target group for this project are Industrial Hygienists in the field of Working Environment Measurement who belong to Working Environment Measurement Agencies or independent ones, as well as other analytical technicians who have the experience to analyze asbestos contents with regard to airborne samples or bulk samples.

In the fiscal year 2006, JAWE prepared only one kind of blind samples of both bulk and airborne samples, namely moderately easy samples ranked as C, and distributed the bulk samples or airborne samples, or both samples to the

participants according to their own applications. Then, the participants conducted analyses of contents in weight of asbestos by an X-ray diffraction (XRD) method or a counting method utilizing Light Phase Contrast Microscopy, and sent these results to JAWE. From the fiscal year 2007 on, JAWE will prepare three kinds of samples ranked A, B or C with regard to bulk samples and airborne samples, respectively.

In response to these results, the Experts Committee of Cross Check of Asbestos Analyses (Chairperson, Professor Toshio Nagoya, Waseda University) organized

by JAWE, evaluated the individual results and certified the ability of the only participants in the cross check project, who succeeded in the evaluation by the Experts Committee.

As bulk blind samples of construction materials, JAWE prepared independently four kinds of samples as listed in the following Table 1. Two kinds of bulk samples, consisting of a combination of Construction material samples and Sprayed material samples, were distributed to each participant, at random.

Table 1

Type of blind bulk samples	Construction material sample, labelled red, containing chrysotile	Construction material sample, labelled white, containing amosite	Sprayed material sample, labelled blue, containing chrysotile	Sprayed material sample, labelled green, containing amosite
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As to airborne samples, in order to keep the contents of asbestos in weight of each blind sample secret, JAWE prepared independently the membrane filters where airborne asbestos (in this case, chrysotile) had been collected, in a sealed chamber where the fibers had been previously dispersed. Each membrane filter was divided into 4 pieces, and these membrane filters were pre-treated with acetone and triacetin (glycerol triacetate), made transparent, sealed, thus being prepared for microscopic observation; then specimens were distributed to the participants by JAWE.

The number of participants, with regard to the bulk samples, was 257 (from 197 analytical agencies) and the number of participants, with regard to airborne samples, was 348 (from 253 analytical agencies).

According to the first evaluation by the Experts Committee of Cross Check of Asbestos Analyses:

- concerning the results of the analyses of asbestos contents in weight in bulk samples, it was evaluated as a success if the data resulting from the analyses was

within $\pm 30\%$ of each standard content in weight of each blind sample. The percentage of success in the first evaluation ranged from 60.6 to 68.8 % according to each blind bulk sample.

- concerning the results of the analyses of asbestos contents in weight in airborne blind samples, it was evaluated as a success if the data from the analyses was within $\pm 20\%$ of the result of the standard analysis by counting method conducted by the Experts Committee. The percentage of success in the first evaluation was 51.1%.

In view of these results, the Experts Committee proposed to JAWE to conduct advanced training courses for the participants who did not pass the first evaluation, with regard to bulk samples and/or airborne samples.

JAWE planned and conducted two kinds of advanced training courses for one and a half day according to the proposal of the Experts Committee. The curriculums of these advanced courses were as the following Table 2.

Table 2

Subject	Specific Items
X-ray diffraction (XRD) method for bulk samples	<ul style="list-style-type: none"> - additional lecture on the principle and the operation of XRD - practice of analyses with regard to the same blind samples distributed in the cross check project utilizing XRD installed in the Accuracy Control Centre of JAWE, under the guidance of a member of the Experts Committee or an analytical staff of JAWE - personal interview with the participants by a member of the Experts Committee or an analytical staff of JAWE
Counting method utilizing Light Phase Contrast Microscope for air borne samples	<ul style="list-style-type: none"> - additional lecture on the principle, the operation and the procedure of counting method utilizing Light Phase Contrast Microscope - practice of counting six visual fields with regard to the pre-treated filter which consists of the same blind sample distributed in the cross check project, by each pair among the participants - training of counting method with regard to the pre-treated filter, under the guidance of an analytical staff of JAWE, utilizing Light Phase Contrast Microscope equipped with five eyepieces for one trainer as well as four trainees, for the purpose of training of counting method - counting with regard to twenty five visual fields, under the guidance by an analytical staff of JAWE

There were 70 participants to the advanced course of X-ray diffraction (XRD) method and 67 of them participated again in the same cross check with regard to blind bulk samples.

In the secondary evaluation by the Experts Committee, 63 participants were evaluated as success in the cross check. Therefore the total ratio of success in the cross check with

regard to bulk samples reached 190 participants (among 257 total participants), namely 73.9 %.

On the other hand, there were 84 participants in the advanced course on the counting method, and all of them participated again in the same cross check project with regard to airborne samples. In the secondary evaluation by the Experts Committee, 54 participants were evaluated as success in the cross check. Therefore the total ratio of success in this cross check reached 232 participants (among 348 total participants), namely 66.7 %.

On 1st November 2007, JAWE released the names and the affiliation of the participants who succeeded in the cross check project and were certificated by JAWE as Rank C, namely 177 participants with regard to asbestos analyses by XRD method, and 217 participants with regard to Counting Method; this information also was released through the Website of JAWE..

JAWE is going to conduct "the Accuracy Control Project by Cross-check of Blind Samples for the Evaluation of Asbestos Contents in weight", with regard to all kinds of blind samples ranked as A, B and C of both bulk samples and airborne samples, in the fiscal year 2007.

Health effects and burden of disease due to exposure to chemicals at the workplace

Sent by Ton Spee, Chair, DOHS Foreign Affairs Committee, spee@arbouw.nl

It is important to disseminate information about a study performed by the Dutch National Institute for Public Health and the environment (RIVM), entitled: "Health effects and burden of disease due to exposure to chemicals at the workplace – an exploratory study". This report contains relevant figures on a very important and timely topic. In fact, one of the topics at the IOHA scientific conference in February 2008 was "occupational hygiene and cost benefit". The authors of the RIVM report estimate that in the Netherlands 1,900 people annually die prematurely due to occupational exposure to chemicals. This includes 600 deaths from occupational exposure to asbestos in the past, but nevertheless this is a very high figure. The Dutch working population is about 7.5 million people, meaning that every year about 1 out of 4,000 workers die prematurely due to occupational exposure to chemicals. For comparison: the annual number of deaths due to traffic accidents in the Netherlands is about 700. So the number of victims from occupational exposure to chemicals is about 2.5 times the number of traffic victims in the Netherlands.

Although the report is already several years old, it is timely to mention it and the English summary is posted below. The report is only available in Dutch, but can be downloaded free of charge from: <http://www.rivm.nl/bibliotheek/rapporten/320100001.pdf> (331 Kb). RIVM has made several follow-up studies, pointing in the same direction.

English abstract of the report

Health effects and burden of disease due to exposure to chemicals at the workplace - an exploratory study (Gezondheidseffecten en ziektelast door blootstelling aan stoffen op de werkplek - een verkennend onderzoek), Baars AJ, Pelgrom SMGJ, Hoeymans N, Raaij MTM van 85 p in Dutch, 2005, RIVM rapport 320100001

The RIVM investigated the probable contribution of exposure to chemicals at the workplace as the cause of some ten diseases. This exploratory study was requested by the Ministry of Social Affairs and Employment, and presents for the first time an integrated estimation of the burden of disease due to occupational exposure to chemicals. For nine investigated diseases the study resulted in a burden of disease of approximately 47,000 DALY's, including about 1,900 deaths, due to exposure to chemicals at the workplace. DALY stands for 'Disability Adjusted Life Years', in which premature deaths and years with diseases are weighted counted up. The largest contributions are formed by mesothelioma, lung cancer, asthma, and chronic obstructive pulmonary disease. The margin of uncertainty in the results is very large, mainly caused by the scarce and incomplete data, and amounts about a factor 5. It was not possible to estimate the burden of disease due to reproductive disorders following occupational exposure to chemicals. However, results of recent research in this area indicate concern.

New Guidance Documents by IRSST, Canada

Sent by Maura Tomi, Communications Division, IRSST, mautom@irsst.gc.ca

A prevention guide for material handlers and sales clerks

Everyone goes to superstores, but did you know that the employees working in them have a good chance of suffering from back pain? For this growing sector, a prevention guide "*Handling work and customer service in warehouse superstores*" has just been published by the Quebec Occupational Health and Safety Research Institute (IRSST) and Groupe-conseil AON. In addition to offering different practical advice, this document proposes solution scenarios that are easy to implement for better prevention of handling-related accidents and the associated back pain.

Target public and risk factors

Aimed at people who want to do prevention, the guide proposes a 5-part action process ranging from the identification of problems to the implementation of solutions. Several aspects have an impact on handling activities: the volume, weight and packaging of containers, the physical layouts in the sales area (height and accessibility of shelves), the equipment (mobile ladder, aerial platform, stepladder, etc.) and inventory control. The characteristics of each of these aspects can lead to injury or accident risks. This guide is designed to improve the work performance conditions of all employees that handle merchandise, from stockers to sales clerks.

Presentation

The result of five years of research and based on two scientific studies, this guide contains a checklist to identify problems, six solution fact sheets, as well as a grid to evaluate the solutions. It includes illustrations, relevant examples, a glossary, and a summary table of the references. Written in simple language, this prevention guide emphasizes the important things to know and the steps to be taken to make our warehouse superstores safer workplaces.

The guide and the fact sheets can be downloaded free from:

<http://www.irsst.qc.ca/files/documents/PubIRSST/RG-546.pdf>

IRSST - Loading Docks: Safety First - Tools to make safety management easier

The Quebec Occupational Health and Safety Research Institute (IRSST) developed a simple and user-friendly software program to evaluate measures for restraining trucks on loading docks. This *Doc-Quais* computer-based tool allows you to evaluate the initial safety level of your company's loading docks for the three main risks (unscheduled departure, slippage, tipping), and then to evaluate the effectiveness of different measures (physical or procedural) for restraining trucks on docks. The software generates a report and a follow-up plan that enables you to save the information and to follow the modifications proposed for improving the safety of your docks. *Doc-Quais* is accompanied by a user's guide to make it easier to use, as well as a questionnaire. A simplified and written version of the software is available in the form of a

technical fact sheet:

<http://www.irsst.qc.ca/files/documents/PubIRSST/RF-530.pdf>

The Doc-Quais computer-based tool can be downloaded free of charge at the following address:

www.irsst.qc.ca/fr/ outils_par_categorie.html#Utilitaires

The documents can be downloaded free:

<http://www.irsst.qc.ca/files/documents/PubIRSST/RG-530.pdf>

<http://www.irsst.qc.ca/files/documents/PubIRSST/R-530.pdf>

Estimation of the alternate work/rest regimen according to the 2007 recommendations of the ACGIH®

The Quebec Occupational Health and Safety Research Institute (IRSST) and the Université du Québec à Trois-Rivières (UQTR) conceived a computer-based tool, which allows estimating the alternate work/rest regimen during work in a hot environment. This tool is intended to support occupational health and safety practitioners in managing hot periods in the work environment.

The computer-based tool calculates the alternate work/rest regimen during work in a hot environment using the following parameters: metabolic rate, *Wet Bulb Globe Temperature* (WBGT) values, at the workstation and at the rest location, as well as the clothing worn by the worker.

The bilingual computer-based tool is available and can be downloaded from:

http://www.irsst.qc.ca/en/ outil_100042.html

Exposure to cleaning products

Sent by: Elayne de Fátima Maçaira, Fundacentro, Brazil, elayne@fundacentro.gov.br

Exposure to cleaning products has frequently been reported as a symptom trigger in workers with work-related asthma, diagnosed in workers' health clinics in the city of São Paulo. A study was conducted in order to estimate the prevalence of rhinitis and asthma symptoms and to analyse associated risk factors.

The methodology was to apply two questionnaires, namely: a respiratory symptoms questionnaire (MRC 1976) and the International Study of Asthma and Allergies in Childhood (ISAAC) questionnaire, to 341 cleaners working in the city of São Paulo, along with obtaining full occupational histories, and performing skin prick tests and spirometry. By timing the onset of their symptoms in relation to their occupational history allowed the estimation of work-related asthma and/or rhinitis. Risk factors related to selected outcomes were analysed by logistic regression.

The results demonstrated that: 11% and 35% of the cleaners had asthma and rhinitis, respectively; the risk of work-related asthma/rhinitis increased with years of employment in non-domestic cleaning, and, atopy was associated with asthma and rhinitis. There was a higher risk of rhinitis in women. Detailed results and statistical treatment of the data may be obtained from the author.

The conclusion was that cleaning workers are at risk of contracting work-related asthma and/or rhinitis, and the risk increases with years of employment in non-domestic cleaning. Women present higher risk of rhinitis than men.

This study was published: Maçaira EF, Algranti E, Mendonça EMC, Bussacos MA. Rhinitis and asthma symptoms in non-domestic cleaners from the São Paulo Metropolitan area, Brazil. *Occup. Env. Med.*, 64:446-453, 2007.

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