



**issa**

INTERNATIONAL SOCIAL SECURITY ASSOCIATION

*Section on Prevention in the Mining Industry*



## NEWSLETTER | # 8 | July 2015



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into the future**

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*Section on Prevention in the Mining Industry*



**Theodor Bülhoff**  
President



**John McEndoo**  
Vice-President



**Cristian Moraga**  
Vice-President



**Peter Schrimpf**  
Vice-President



**Helmut Ehnes**  
Secretary General

## An idea is spreading throughout the world

Vision Zero is a prevention strategy pursued by ISSA Mining, driven by its Seven Golden Rules for Safe Mining. Since the last edition of the ISSA Mining-Newsletter, ISSA Mining seized many platforms to introduce and discuss this approach, receiving excellent feedback from mining stakeholders throughout the world. Important mining countries such as Chile and Mongolia are adapting this promising path into a safe future for our industry.

A unique platform for this was the First ISSA Mining Strategy Workshop in August, combining the expertise of 50 delegates from 20 countries (see feature story starting page 5). Also the interest of 130 international visitors at the Symposium

“The Sustainable Global Prevention Strategy for the Mining Industry and High-risk Industrial Sectors” during the XX World Congress on Safety and Health in Germany (see page 12) is a very good signal indeed, showing the openness to learn from each other.

Let us not forget the importance of the task. On 13 May 2014, 301 miners died in a coal mine in Soma, Turkey. This disaster received plenty of media attention, but is only one of many occurring year after year and throughout the world. Vision Zero and ISSA Mining’s Seven Golden Rules can help to avoid human and economic tragedies like these. Let’s work together to make Vision Zero become a reality in mining!



# International Mines Rescue Body Conference 2015: Meet experts & friends in Germany

In September 2015, mine rescue experts from across the world will meet in Hanover, Germany, for the International Mines Rescue Body Conference (IMRB) sponsored by the Dräger company.

IMRB conferences are a unique opportunity for mine rescue experts from around the world to meet peers and share on innovations, trends and practical experience.

Seize the chance to connect and to network at the conference and at inspiring field trips to unique mining sites!

## Unique platform for exchange with international experts

Get updated in expert presentations and share your knowledge in workshops and panel discussions. Three different sessions will offer the platform to learn from other experts.

## Session 1 "Mine Rescue Management System and Effective Operations"

- Crisis management system
- Improved rescue and self-rescue strategies
- Best practice
- Logistics

## Session 2 "Emergency Preparedness"

- Response planning  
Training and qualification
- Requirements and demands on mine rescue brigades and technical equipment
- Guidelines for mine rescue

## Session 3 "Future Trends"

- New solutions (technical equipment, strategies)
- Research and development

- Additional equipment for effective emergency response (e. g. fall protection, communication systems, emergency respirators)

The call for papers is open until 30 June 2015.

## Lots to hear, lots to see

IMRB 2015 offers a variety of opportunities to discover German mining sites as well as other interesting locations.

## Destinations of the IMRB 2015 field trips

- Ibbenbüren underground coal mine
- Ibbenbüren power generation plant or processing plant
- Sigmundshall potash mine
- Zielitz mine
- Konrad mine
- Rammelsberg Mountain
- Autostadt in Wolfsburg

## Meet the Dräger company, discover Lübeck!

As a solution provider for mine health and safety as well as emergency response operations, Dräger is the primary sponsor of the IMRB 2015. For generations, miners have relied on Dräger for quality products to protect their lives. Dräger's technology encompasses an integrated safety concept that can be used to improve mine safety – from respiratory protection and gas detection for daily operational safety, to self-contained self-rescuers and refuge shelters for emergency situations.

In conjunction with IMRB 2015, Dräger offers an interesting program in Lübeck including a visit to the Dräger company's production facilities. Located in the North of Germany, Lübeck is the home of Europe's largest ferry port acting as



a gateway to the Baltic Sea region and beyond

Official website:  
[www.imrb2015.de](http://www.imrb2015.de)

Find out and register on the official website:  
[www.imrb2015.de](http://www.imrb2015.de)

Sponsored by

**Dräger**



Herrenhausen castle in Hanover, Germany, is the venue of IMRB 2015



A unique trip to Lübeck is an optional part of the program courtesy of primary sponsor Dräger company

### IMRB 2015 key facts

**Date:**

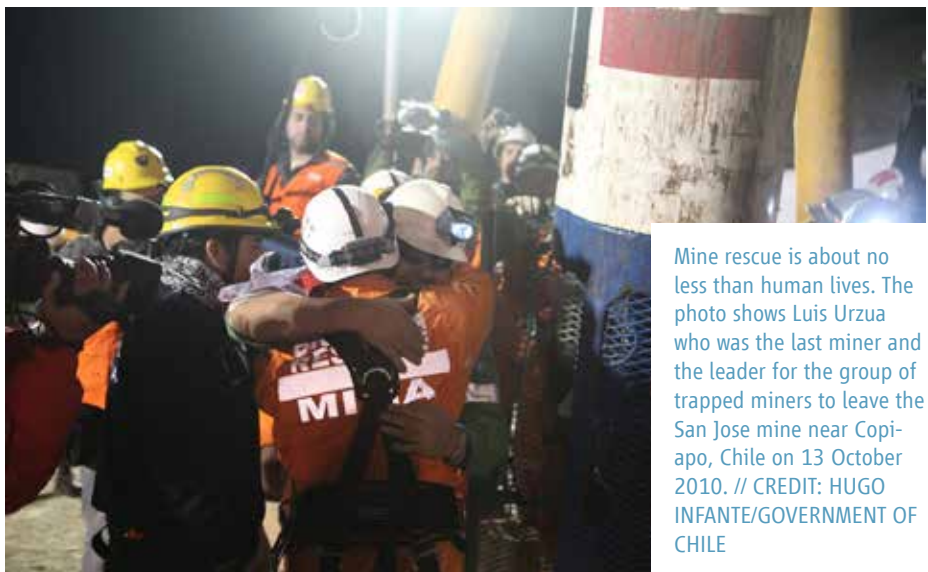
6 to 10 September 2015 (conference); optional tour program until 11 September

**Venue:**

Hanover, Germany, Herrenhausen castle (field trips to various locations)

**Optional:**

Guided tour through Lübeck, including a visit to Dräger's production facilities.



Mine rescue is about no less than human lives. The photo shows Luis Urzua who was the last miner and the leader for the group of trapped miners to leave the San Jose mine near Copiapo, Chile on 13 October 2010. // CREDIT: HUGO INFANTE/GOVERNMENT OF CHILE

## “Knowledge is the mechanics, relationships are the lubricant”

“The ultimate winners here will be the workers”: Teresita Cucueco wrapped up a truly international two day workshop. In August 2014, more than 50 prevention experts from over 20 countries united to compare data on mine accidents and incidents, analyze priorities in mine safety and decide on ISSA Mining’s strategy for the coming years.

To define its strategy and products for the coming three years, ISSA Mining invited key stakeholders of the international mining industry to its first Strategy Workshop. The delegates met 28 and 29 August 2014 in Maikammer, Germany to exchange national findings and to conduct workshops on defining and prioritizing future projects to promote the Vision Zero prevention strategy as well as ISSA Mining’s Seven Golden Rules for Safe Mining.

After an introduction into BG RCI’s OSH academy by Executive board member Ulrich Meesmann moderators Helmut Ehnes and Wolfgang von Richthofen opened the first ISSA Mining Strategy Workshop of its kind. The hosts gladly acknowledged the impressive variety united in the meeting, bringing together policy makers, managers, engineers, physicians and mine rescuers from a large share of the major mining countries.

### Chile and Singapore: Keynotes show path into the future

The keynote by Cristian Moraga of Chile’s Mutual de Seguridad gave comprehensive insight into mining operations in Chile as well as its challenges such as high altitudes up to 5,000 meters. Mining, in particular copper mining, is the strongest pillar of Chilean economy. His evaluation of statistical data showed that mining in Chile reaches lower accident rates than in the construction sector, and even lower than commerce and ser-



Moderators Helmut Ehnes and Wolfgang von Richthofen guided through the two day workshop.

vices. Fatalities remain the challenge of Chilean mining though. Mutual provides occupational risk prevention support and occupational health care services to 1.9 million workers from 70,000 associated companies ranging from large to small size and belonging to all economic sectors, especially mining and construction. The non-for-profit Occupational Health and Safety insurance institution operates 70 clinics as well. Cristian Moraga explained Mutual’s strategy, aligning perfectly with ISSA Mining’s Vision Zero approach.

The second keynote was given by Ho Siong Hin, Commissioner of Work Safety in Singapore and Vice President of the International Association of Labour Inspection (IALI). In his inspiring talk he explained how the government supported framework fosters a culture in which industry and regulators became partners in a pervasive prevention strategy. This approach recognizes OSH clearly as a factor to promote economic success. The strong commitment of the prime minister, the expertise of an international panel of experts and a mindset aiming at solutions as opposed to limiting views on fault finding form the base of a promising outlook into health and safe-



How do you sustainably qualify in matters of OSH? Ulrich Meesmann explained BG RCI’s approach reaching 7,000 participants per year.

ty at work – and the promising road to a successfully implemented Vision Zero strategy.

### Country Perspectives: What are the challenges in 20 mining countries?

Next, representatives of each participating country explained the major

challenges in health and safety of the particular region.

Gregor Hohenecker from Austrias Insurance and Prevention Provider AUVA introduced a manual for small sized open pit quarry operators. Vic Pakalnis of Canadian consultants Mirarco discussed fatalities in mining as a global challenge for prevention. He explained a trend of loss time injuries decreasing while fatality rates remain constant; a trend also observed by the International Council on Mining and Metals (ICMM) and a particular field for helping each other. Technology is an important factor in increasing safety, said Mr Pakalnis, where collaboration in conferences and beyond also shows vast potential for improving the overall level of mine safety. Alex Gryska of Canada's Workplace Safety North added another reason to improve safety: the shifting expectations of young workers in selecting prospective workplaces. Recruiting and retaining young workers is an important factor for the mining sector, and is also influenced by the awareness of mining as a safe industry. On the role of international conferences, Mr Gryska said "Knowledge is the mechanics, relations are the lubricant".

Ricardo Vhymeister explained the implementation of a safety culture in Chilean mining and a national commitment to improve safety.

Ho Siong Hin introduced the international experts to the promising way of Singapore in bringing the safety culture to the next level. The Industrial Safety act of 2006 and the 2008 national strategy involved all partners in Singapore. Regulators and the industry together form a think tank to produce a pervasive strategy, while the prime minister is strongly committed. Occupational safety and health is clearly understood as a supportive factor for Singapore's economic success. The mindset aims at solutions, not at fault finding towards the industry.

Min Zhang, Director of the Department of Occupational Health Standard Research of the Chinese Center for Disease Control

and Prevention explained that pneumoconiosis is still a main severe occupational disease in China, and negatively impacts the sustainable development and well-being of the labor forces. Silicosis as common in mining accounts for almost half of the pneumoconiosis cases, cement pneumoconiosis are recorded in approximately 3% of the cases. China's findings in improving safety and health at work as assembled in the Corporative Initiatives on Systematic Prevention and Control of Occupational Diseases show a close resemblance of ISSA Mining's Seven Golden Rules for Safe Mining, Prof Zhang pointed out.

Chetan Garg introduced mining in India, performed in some 500 mines of which approximately 100 operate underground. The challenge in India, Mr Garg explained, is to establish the mindset for safety aware leadership.

Ali Mozafari of the Ministry of Cooperatives, Labor and Social Welfare of the Islamic Republic of Iran talked about the safety in Iranian mining. His presentation included the system of labor inspection and the need for resources in this field, as well as the aspects of safety culture and the need for improvement



Dr. Nevzat Kavaklı, Deputy Undersecretary of the Ministry of Energy and Natural Resources Turkey

particularly in small mines.

Kasım Özer, Director General of Occupational Health and Safety at the Ministry of Labor and Social Security, Turkey, discussed risk assessment as a relatively new method in Turkey. Mandatory now in

high-risk businesses such as mining and construction, failure to produce an appropriate document will lead to a business shutdown. Mr Özer explained that 98% of Turkish workplaces are located in small and medium-sized enterprises; a third of these businesses employ less than ten people.

Do Thi Thuy Nguyet explained the many international collaboration projects including the long lasting cooperation of Vietnam's Ministry of Labor, Invalids and Social Affairs with ISSA Mining. In 2012, Ms Do Thi Thuy Nguyet reported, Vietnam recorded 635 fatalities.

Consultant Martin Isles from England, an OSH expert for the mineral producing industry for decades, explained the Zero Harm Initiative, aiming to increase the workforce's competence as well as the focus of occupational health. The industry is driving the initiatives Safer by Competence, Safer by Design, Safer by Sharing, Safer by Partnership and Safer by Association.

While businesses naturally compete in sales, they cooperate in matters of occupational safety and health. There are no barriers, explained Mr Isles. 93% of the UK business conducted a sufficient risk assessment. The rapid start of business operations following the recession also meant hiring a larger number of unexperienced workers, which brought the accident rate back up.

Talking about the European Negotiating Platform on Silica Dust (NePSi), the UK expert described the competitive air in meeting health supporting standards; a success no regulation could have been reaching, Mr Isles added. A better compliance rate is a more desirable goal than low threshold values.

The summaries given by the international high-level experts proved once more the similarities weighing out the differences in pursuing improved safety and health in mining, thus opening vast potentials for collaboration in prevention for higher impact at lower resources.



**An emotional approach: Prevention clip from Canada touches the heart and reaches the mind**

“This is why I work safe” is an amazing and inspiring production, the international audience agreed upon. Created by Glencore, Canada, the clip portrays miners at the workplace and photos of their loved ones. “This is the reason why they work safe”, is the joint message of all miners shown during the 2 minute film. Alex Gryska explained the films story: celebrating 5 million work hours without an accident, Glencore’s miners sent in 500 photos within just two days. Glencore decided to assemble this impressive gesture into a unique clip, visualizing clearly why people at Glencore work safely.

**Eight International Workshops: How can ISSA Mining help to improve safety?**

Next to a high-level exchange of expertise, the ISSA Mining Strategy Work-

shop aimed at identifying priorities and streamline initiatives to bring the ideas of the Seven Golden Rules for Safe Mining into mining operations throughout the world. Following the workshops on each of the Seven Golden Rules as well as communication, the experts voted on the initiatives showing the highest potential for change, thus being prioritized in ISSA Mining’s work program for the years to come. Workgroups were established to put the ideas into the reality of mining businesses throughout the world.

**The Outcome: Future Projects**

**Working Groups 2015 – 2017 as constituted in Maikammer, Germany, 29 August 2014**

**Rule 1 “ Take Leadership and Commitment”**

**Products:**

- Organization of a series of conferences on VISION ZERO & 7 GOLDEN RULES in cooperation with regional partners, organizations, employer associations, unions or universities
- Define seven reasons to support seven principles
- Obtain signed commitments form 30/60/150 managers during a three year period

**Rule 2 “Identify hazards and risks”**

**Products:**

- Development of an ISSA Mining recommendation for Risk Assessment and Accident Analysis



“This is why I work safe” Glencore miners explain in an emotional video clip.

- Implement practical risk assessment
- Establish partnerships

### Rule 3 “Set Targets for Safety”

#### Products:

- Establishing and promoting a work program for ISSA Mining
- Collect better statistics
- Design programs for vulnerable groups

### Rule 4 “Ensure a Safe System”

#### Products:

- Development of a simple, useful tool to analyze and improve the OSH organization of the mine by employers and managers themselves – the OSH-ORGcheck
- Collect management systems in use (in particular Integrated Management Systems)
- Design training programs

### Rule 5 “Use Safe and Healthy Technology”

#### Products:

- Promote use of safe and healthy machines: visibly support Safer by Design
- Include manufacturers (plus ISSA Mining membership)

### Rule 6 “Improve Qualification”

#### Products:

- Development of criteria, procedures and label to classify training activities of ISSA Mining members with the quality seal ISSA MINING EXCELLENCE
- Internet platforms for community and members, Viral networking

### Rule 7 “Invest in People”

#### Products:

- Development of criteria and organizational procedures for the establishment of an ISSA MINING GLOBAL MINE SAFETY AWARD for best practice and innovation in OSH

### Marketing



50 experts critically evaluated the findings of eight workshops to identify the most promising concepts.



How to identify hazards and risks? Commissioner Ho Siong Hin summarized the ideas of the ISSA Mining work group for Golden Rule #2.

#### Products:

- Video statements “Benefit of being a member”
- Social networking platforms incl. “Rule of the month”, photo contests for each rule Support industry image

### Successfully on the road to Vision Zero

“A good atmosphere for discussion”; “I hope for future cooperation”; “Many new ideas and new relationships”; “This

was extremely beneficial”; “Remarkable”: the delegates unanimously wrapped-up an efficient meeting with plenty of usable outcomes.

Together with the international experts, ISSA Mining will implement the results into its work for the years to come.

### Learning by first-hand experience: site visits add to exchange

In conjunction with the two day workshop, the delegates seized the opportunity to





International teams delivered fresh impulses for ISSA Mining's work.

The afternoon of the same day, the delegates had to chance to get behind the wheel and experience first-hand how intensive driver training for safety is conducted by the German Road Safety Council. Not without a comprehensive introduction into road safety concepts applied nationwide, presented by CEO Christian Keller though.

The next stop led to the Hahnstätten plant of SchaeferKalk, using one of the purest limestone deposits in Europe. Plant manager Volker Mari and Ulrich Wagner, Head of OHS, explained SchaeferKalk's integrated approach to continuously improve health and safety



50 delegates, 20 countries, one goal: improve mine safety and health throughout the world.



Learning from excellence: The outstanding safety record of BASF SE found large interest in the international OSH experts.

gain impressions from top-level OSH corporations. Not only the traditional mine tours below and above ground added to the exchange, but also a world champion in health and safety and a training track for safe driving opened their doors. Stage 1 of the site visit tour was an international champion of safety culture. BASF opened its gates, the chemical company uniting more than 110,000 employees worldwide.

Dr. Hans-Peter Neumann, Senior Vice President Safety, Security and Emergency Response and Senior Manager Corpo-

rate Communications Annette Kunde explained the outstanding results BASF SE achieves in safety and gave insight into the OSH training center. The hosts also explained the remarkable dimensions: the Ludwigshafen plant visited by the ISSA Mining delegation is the largest contiguous chemical site in the world belonging to a single company. While chemicals accounted for 22% of the 2013 sales, the remaining turnover was generated by performance products, functional materials and solutions, agricultural solutions and oil & gas.

in production and the OSH core team, comprised of some of the plant's employees to develop and improve health supportive and safe working conditions. And explained the eco-friendly approach of the aggregate producer: SchaeferKalk ensures efficient production and energy saving. The plants are run from a central control room using process control systems. The company has been awarded the Sustainability Award 2012 for sustainability in environmental protection and biodiversity by the trade association MIRO and the Sustainability Award of





Gentlemen, start your engines: Road safety as an experience on the Hockenheim track.

the Raw Material Industry by the state Rhineland-Palatinate 2014.

More than 3 million tons of limestone are excavated every year, and up to one million tons of lime are calcinated.

The international guests gained a first-hand insight as they joined the demonstration of safely blasting 30,000 tons of limestone.

The last day led underground, right into the heart of German coal mining. Coal



Safety and health promotion meets eco-friendly production at SchaeferKalk's limestone plant.

mining corporation RAG demonstrated its operations in two mine tours to Prosper Haniel and Auguste Victoria. RAG managed to reduce work accidents per one million work hours by a breathtaking 93% between 1995 and 2014 with 3.9 work accidents per one million work







Ho Siong Hin



Coal mining corporation RAG was the gateway to underground mine tours.

hours, and cut fatalities from 416 cases in 1960 to 30 in 1990, 6 in 2000 to then reaching the only acceptable figure: zero. The process to achieve these world-class improvements was explained, covering the steps focusing on technology, organization and people. RAG's Dieter

Mantwill, Manager OSHE, also shared the "lessons learned" with the international experts for OSH in mining. And what if something still happens? RAG is prepared, showed a visit to its mine rescue service, completing an impressive tour into German coal mining.



## All eyes on Vision Zero

An international symposium in the frame of the XX World Congress on Safety and Health in Frankfurt, Germany asked what strategies can be applied to improve occupational safety and health in mining. 130 experts came to hear from international high-level speakers on 25 August 2014.

Titled „The Sustainable Global Prevention Strategy for the Mining Industry and High-risk Industrial Sectors“, the two hour symposium united eight speakers from six countries with a highly interested audience.

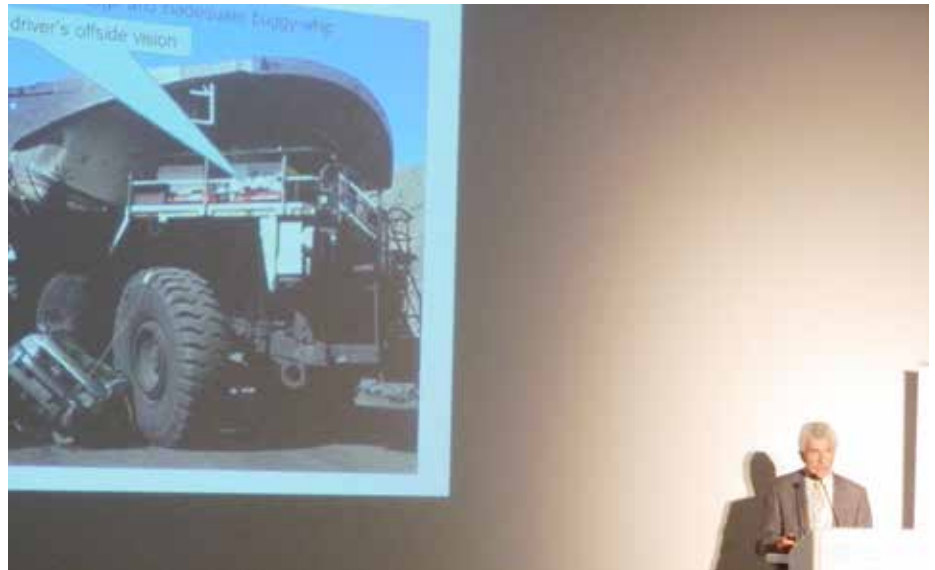
ISSA Mining’s Helmut Ehnes led through the event and opened by explaining the importance and challenges of mining. Ehnes pointed out the risks for miners and showed the strategy and tools of ISSA Mining – the Vision Zero prevention strategy and the Seven Golden Rules for Safe Mining. Investing in safety and health is feasible, said Ehnes, promising a return on investment of 2.2 dollars for each dollar invested according to an international study.

### Identify hazard potentials

Filip Coumans of BST Solutions Belgiums made the audience aware of the need to look closer at the hazardous potential of recorded accidents at work. While the total number of accidents worldwide is declining, this does not go as much for severe accidents and fatalities, said Coumans. Not all injuries show the potential of Serious Injury and Fatality (SIF), he explained. A reduction of injuries at the bottom of the triangle as viewed in traditional safety models does not correspond to a proportionate reduction of SIFs. He called to look at the sources of accidents of particular severity level to gain new insight into prevention.

### Prevention shows success

OSH expert Fatma Nur Basayar intro-



How long do we want to accept unsafe mobile equipment asked OSH specialist Martin Isles in his impressive talk.



130 experts attended the Symposium S15 on Vision Zero in mining

duced the „Project on Improvement of Occupational Health and Safety Conditions at Workplaces in Turkey“ (ISGIP). Focussed on companies in the cluster from 10 to 250 employees in five provinces, ISGIP covers the sectors metals, mining and construction.

The OSH expert of the Directorate General of Occupational Health and Safety of the Turkish Ministry of Labour and Social Security explained ISGIP aims to improve the health and safety conditions of workers and help raise awareness on health and safety issues. Best practice

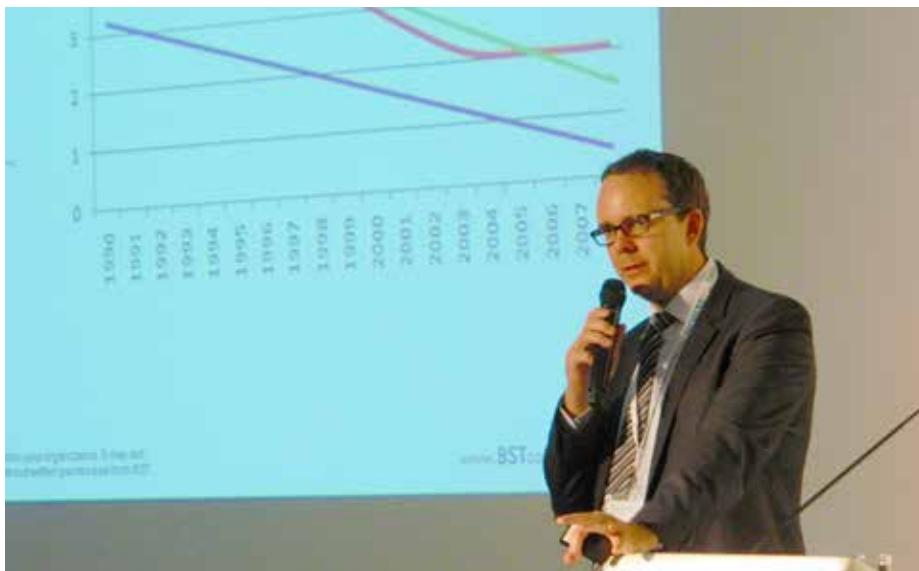


centers were established, seminars for more than 1,000 participants given. Appropriate OSH tools as well as conferences supported the aim. In a second step, the initiators will widen the focus to more industrial sectors.

Prof Ibrahim Buzkan of the Bülent Ecevit University in Zonguldak, Turkey, explained the strata and the geological impact on work safety in an examined coal mining region in Northern Turkey, the Northwestern Anatolian Coal Basin.

Investigations show, said Buzkan, that some of the most crucial reasons for casualties and deaths in work accidents in this region can be attributed to the geologic and tectonic structures being complex and negligence in caring for petrographic structure. His recommendations to improve safety included better education of managers and miners both as well as a closer update of technology. Buzkan called for adequate knowledge on the coal bearing strata, coal seams, geological, lithological and petrographical properties of each coal seam.

Leigh McMaster, Head of Sustainable Development and Relations of Solidarity South Africa explained the Safety Culture Transformation in the South African Mining Industry. A decrease in fatalities could be recorded particularly over the last years, attributed to closer collaboration of the stakeholders. Parts, McMaster explained, could be achieved by Visible Felt Leadership, a transformation



A new paradigm: Filip Coumans called for a new view in analyzing incidents



Mine Rescue as a matter of life and death was in the center of Alex Gryska's discussion, for trapped miners as well as for the rescue team.

of the culture by a designed framework of steps and risk management. The elimination of ethnical discrimination played a role as well in the change process. The indicators show that these measures are successful.

Alex Gryska from Canadian body Workplace Safety North talked about a job which is easily among the most risky professions: that of mine rescue. Mine rescue teams have to be prepared to deal with situations including fires, explosions, rockfalls, toxic gases, influx of water, and injuries. Rescue from heights and elevations can be part of their challenges. In order to perform dangerous work like this, rescuers are not only highly trained technical specialists but most importantly they are individuals who know how to manage risks and make good decisions under extremely hazardous circumstances, explained Gryska as the General Manager Ontario Mine Rescue. The International Mines Rescue

Body, established in 1998, was created as a result of a tragic event that resulted in the death of six mine rescuers. In this network, experts in mine rescue share information regarding the organisation of rescue brigades in different countries, rescue missions, methods and principles of rescue training, rescue equipment, research finding and evolving solutions and new rescue technologies.

British Health & Safety Special Advisor Martin Isles discussed the safety and ergonomics of mobile earthmoving machines. He used impressive examples of past accidents in which people died due to technical deficits in equipment design. In more practical examples he demonstrated deficits in ergonomics and unsafe access systems to mobile machinery. As a solution for operators, Isles introduced the web-portal safequarry.com, in which checklists for several types of machines are available. The collection addresses the design vacuum between

customer- and manufacturer's issues.

RAG Mining Solution's HSE manager Dieter Mantwill showed that Vision Zero can be reached. Permanent initiatives and continuous improvement led to zero fatalities, after several hundred fatalities 50 years ago, and a drop of work accidents of impressive 93% from 1995 to 2014, then 3.9 accidents per 1 million working hours. The fields covered were first technology, then organization, then people. Safety at work is a prerequisite for profitable production, Mantwill pointed out, not a burden of investment.



"Zero" is possible: German hard coal producer RAG plays in the champion's league of mine safety. Dieter Mantwill explained how this success was achieved. // Credit: BG RCI/Enderlein



### More information

On the occasion of the World Congress on Safety and Health at Work 2014, ISSA Mining published an article on the Vision Zero and the Seven Golden Rules for safe mining in English, Spanish and German.

Download:  
<http://steine-und-erden.net/ekf/index.html>



Leigh McMaster showed the successful steps taken in South African mining.



Vision Zero and the Seven Golden Rules to go: Helmut Ehnes introduced a special edition of an industry magazine covering ISSA Mining's strategy and tools in three languages.

## XX World Congress on Safety and Health at Work 2014 attracts 4,000 experts

**A world without fatal or serious occupational accidents is possible, the organizers of the XX World Congress on Safety and Health at Work have appealed. The Global Forum for Prevention ran 24–27 August 2014 in Frankfurt, Germany, as the largest global occupational safety event.**

Nearly 4,000 occupational safety experts, politicians and scientists from 139 countries discussed ways of making work safer and healthier. The triennial Congress is co-organized by the International Labour Organization (ILO) and the International Social Security Association (ISSA), and was hosted this time by the German Social Accident Insurance (DGUV).

According to the ILO, 2.3 million people worldwide die annually as a result of occupational illnesses and accidents at work. In addition, there are 860,000 occupational accidents every day, with consequences in terms of injuries. The direct or indirect cost of occupational illness and accidents at work is estimated

at US\$2.8 trillion worldwide.

“These figures are unacceptable and yet these daily tragedies often fail to show up on the global radar. Clearly, there is still much to be done. Serious occupational accidents are, firstly, human tragedies but economies and society also pay a high price,” said ILO Director-General Guy Ryder. “The right to a safe and healthy workplace is a basic human right – a right to be respected at every level of development and in different economic conditions. Respecting this human right is an obligation – as well as a condition for sustainable economic development. Prevention is possible, it is necessary and it pays.”

“Investment in risk prevention has led to remarkable socio-economic benefits,” declared ISSA President Errol Frank Stoové, referring to a recent ISSA study that calculates the return on investments in prevention as averaging more than twice the amount invested. However, with a dramatically changing world of

work, the health and well-being of workers remain a concern, in particular due to mental and ergonomic strain. This requires that we develop new, integrated strategies for prevention, which connect the safety, health and well-being of the individual.”

“Vision Zero is no ivory tower idea. It’s feasible,” is the view of Dr Joachim Breuer. The Managing Director of the German Social Accident Insurance (DGUV) pointed to the occupational accident statistics for DGUV. “A hundred years ago in Germany there were 10,000 deaths a year at work. Last year the figure was less than 500 deaths for the first time.” The number of reportable accidents had been halved in the past 20 years alone. “This success is not just specific to Germany – it’s repeatable. Experience and many examples from our international co-operation efforts have shown us this,” Dr Breuer stated.

Dr Walter Eichendorf, President of the 2014 World Congress, added: “Solutions



„The right to a safe and healthy workplace is a basic human right“, reminded ILO Director-General Guy Ryder.



The Managing Director of the German Social Accident Insurance Dr Joachim Breuer is convinced that Vision Zero is feasible.



4,000 experts made Frankfurt the world capital of prevention for four days in August.



to occupational safety problems are being developed worldwide. There are examples of best practice, with measures being tested and evaluated in the most diverse of countries. The exchange of ideas at the World Congress prevents anyone from having to start again from zero."

Comprehensive information is available in the documentation area of the congress website:

<http://www.safety2014germany.com/>



◀ At the Symposium S04 „Resources for prevention“, solutions for small and medium-sized enterprises were offered. One was the talk of Dr Annette Icks and Helmut Ehnes: “Safety Culture meets Economic Success: The German Initiative for Sustainable SME’s and Family-owned Enterprises (Offensive Mittelstand)” // Credit: BG RCI/ Enderlein



German BG RCI showed a tool to support systematic risk analysis in companies of all sizes. ▶



Reach Zero, but don't start at zero: The exchange of ideas at the World Congress prevents anyone from having to start from scratch, said Dr Walter Eichendorf, President of the 2014 World Congress

## In dialogue on Vision Zero and the Seven Golden Rules

Vision Zero and ISSA Mining's Seven Golden Rules for Safe Mining find excellent feedback throughout the world. ISSA Mining introduced its strategy and tools on various international platforms and discussed the underlying concept with many stakeholders in mine safety across the world. The following reports give insight into some chances seized for dialogue and exchange



140 participants, six countries, one goal: sharing best practice for safer jobs.  
// Photo courtesy Andrian Galach



### ISSA MINING GENERAL ASSEMBLY ELECTS NEW BOARD

## Ulrich Meesmann to succeed Theodor Bülhoff as President

In connection with the workshop "Promoting national program on occupational safety and health and the prevention culture in hazardous industries" (see page 30), ISSA Mining hosted its 33. General Assembly on 15 March 2015, in Ba Rai, Vung Tau, Vietnam.

Next to discussing the strategy to support Vision Zero and the Seven Golden Rules for Safe Mining, the international delegates voted new board members.

Ulrich Meesmann, Member of the executive board of the German Social Accident Insurance Institution for the raw

materials and chemical industry (BG RCI) was voted President. His term will begin 1 April 2016, when current ISSA Mining President Theodor Bülhoff President will retire.

Cristian Moraga Torres, General Manager of Mutual de Seguridad C. CH. C. Chile, was voted ISSA Mining Vice President. Mr Moragas focus will be South America in particular, he will share the Vice Presidency with John McEndoo, South Africa and Peter Schrimpf, Germany.

Bui Hong Linh, former Deputy Minister of the Ministry for Labour, Invalids and Social Affairs Vietnam (MoLISA), is

meanwhile retired and left ISSA Mining's board as well. President Theodor Bülhoff and Secretary General Helmut Ehnés thanked Mr Bui Hong Linh for his many years of active support. His successor at MoLISA, Deputy Minister Doan Mau Diep, joined the assembly as a guest and to keep in touch with ISSA Mining. MoLISA is looking for options to stay actively involved in ISSA Mining's work.





### Cristian Moraga

Cristian Moraga is the CEO of Mutual de Seguridad CChC in Chile. As a civil industrial engineer Cristian Moraga looks back on 16 years of experience in the health and insurance sector, including managerial posts in the last 13 years.

Mutual de Seguridad CChC is a nonprofit Occupational Health and Safety insurance company, created by the Chilean Chamber of Construction in 1966. Its mission is to provide workplace health and safety services to associated companies, within the framework of the 1968 Workplace Safety and Health legislation in Chile.

Mutual de Seguridad CChC provides occupational risk prevention support and occupational health care services to 1.9 million workers from 70,000 associated companies, ranging from large to small size, belonging to all economic sectors, but especially construction and mining.

The delegates came together to realign ISSA Mining’s work at the 33. General Assembly in Vung Tau, Vietnam. MoLISA’s Deputy Minister Doan Mau Diep (standing) is designated for the role of ISSA Mining-Vice President for Southeast Asia, the final approval is pending.



### Ulrich Meesmann

Ulrich Meesmann is an executive board member for the German Social Accident Insurance Institution for the raw materials and chemical industry (BG RCI), among other responsible for prevention. Ulrich Meesmann has worked as a lawyer in the field of German accident insurance for more than 20 years and has been at the management level since 1996.

BG RCI insures over 1.2 million employees in roughly 36,000 German companies against the consequences of occupational accidents and occupational diseases. In addition to the mining industry above and below ground, BG RCI also insures companies in the chemical industry, construction materials, leather, paper and sugar industries.

Ulrich Meesmann accepted the vote as ISSA Mining’s new president. His term will start April 2016 succeeding Theodor Bülhoff.

## Turkey: Ministry of Energy and Natural Resources, ISSA and ISSA Mining sign cooperation agreement

The Ministry of Energy and Natural Resources of the Republic of Turkey, the International Social Security Association (ISSA) and its International Section on Prevention in the Mining Industry (ISSA Mining) signed a Memorandum of Understanding (MOU) in Ankara 16 April 2015 agreeing to cooperate on aspects of safety and health in the field of mining. The parties aim to improve the mining industry and to increase the capacity of managers, experts and authorities in the Republic of Turkey.

The collaboration will include the implementation and promotion of the Vision Zero Strategy and the Seven Golden Rules of ISSA Mining, setting a special focus on the prevention of mine fires and explosions, ventilation, rescue

operations, support design and mine design, and cover the organization of vocational training. The signatories also agreed to exchange knowledge and experience and to adopt best practices in the field of mining.

### 50 leaders and experts join workshop on mining

On the occasion of the signing ceremony, the Ministry of Energy and Natural Resources initiated a workshop which brought together some 50 representatives of the Turkish mining industry. Helmut Ehnés introduced ISSA as well as ISSA Mining including the Vision Zero Strategy and the Seven Golden Rules of ISSA Mining. The Turkish partners explained the recent status of the legal framework for mine safety as well as the

inspection structures. After signing the memorandum, the delegates collected ideas on implementation in a brainstorming. The experts also discussed the findings so far of the 2014 Soma mine disaster, in which 301 miners lost their lives.

The next step under the Memorandum of Understanding will be to form a steering committee to decide on further actions.

A more detailed version of this text is available online

<https://www.issa.int/-/cooperation-to-improve-health-and-safety-in-the-turkish-mining-industry>

### The MENR and ISSA Mining intend to cooperate on

- leadership and responsibility of employers and managers
- risk assessment in mining
- training concepts for safety engineers and safety experts
- emergency response and mine rescue strategies
- fire and explosion prevention
- requirements for explosion safe electrical installations
- ventilation management and technology
- safe blasting technology
- education and training concepts for managers and miners
- health risks and prevention in mining
- safe mining technology
- personal protective equipment (PPE)
- preparation, control and supervision of mining projects
- dust-fighting techniques
- methane drainage and methods
- remote gas monitoring centers and early warning systems.



The signatories Helmut Ehnés, Theodor Bülhoff and Dr. Nevzat Kavaklı, Deputy Undersecretary Ministry of Energy and Natural Resources.





Some 50 mining stakeholders came together on the occasion of the MoU signing. ISSA Mining was represented by President Theodor Bülhoff, Secretary General Helmut Ehnes, Senior Consultant Matthias Stenzel and Regional Representative Nevzat Bağlı.

## Collaboration discussed in Indonesia

Mining contributes significantly to Indonesia's economy. To allocate potentials for sustainable operation including the health and safety of miners, the Directorate General of Mineral and Coal invited ISSA Mining together with important regional stakeholders to discuss options and modes of cooperation.

Initiated by ISSA Mining member and mine inspector Dr.-Ing. Herry Permana, 16 Indonesian mining experts came together with ISSA Mining's Helmut Ehnes and Julio Franzani. The local delegates stemmed from the Directorate General of Mineral and Coal in Jakarta, Universities and institutes, training facilities and operators of coal, nickel, copper and

gold mining. The meeting was conducted at the Directorate General of Mineral and Coal in Jakarta 20 March 2015, coordinated by ISSA Mining member Dr.-Ing. Herry Permana and supported by Dr. R. Sukhyar, Director General of Mineral and Coal. Helmut Ehnes explained ISSA Mining and its structures as well as the prevention strategy Vision Zero and the tools for implementation, as described in the "Seven Golden Rules for Safe Mining".

During an active and open three hour discussion it was decided to form a working group in order to define prioritized topics and modes of collaboration.



Discussing safety and health in mining: stakeholders from the Directorate General of Mineral and Coal, University of Pembangunan National of Yogyakarta (UPN "Veteran" Yogyakarta), University of Indonesia, Institute of Technology Bandung, Training and Education Center of Energy and Mineral Resources, Ministry of Energy and Mineral Resources of Indonesia (MEMRI), Adaro Indonesia, PT. (Coal Mining), Freeport Indonesia, PT. (Copper and Gold Mining), Kaltim Prima Coal, PT. (Coal Mining), Vale Indonesia, PT. (Nickel Mining), Berau Coal, PT. (Coal Mining), Indonesian Coal Mining Association together with the ISSA Mining representatives.



From left: Julio Franzani, Dr.-Ing. Herry Permana, Helmut Ehnes

## Most effective strategies for health and safety at work discussed in Rome, Italy

**“How to combine enterprises’ growth and competitiveness in times of crisis while promoting health and safety at work”, asked a seminar organized by the Ministry of Labour and Social Policies Italy and the National Institute for Insurance against Accidents at Work (INAIL) within the frame of the Italian Presidency of the EU Council. The event ran 4 – 5 December in Rome at the Pontificia Università Urbaniana.**

The seminar aimed to stimulate the debate on identifying the most effective strategies for health and safety at work and reinforcing the coordination with European institutions, International organizations and social partners. On the basis of a comparison with other European countries, the delegates also discussed the recent developments and prospects to achieve a substantial reduction of accidents at work and of occupational diseases.

European stakeholders discussed experience and options in the plenary session “New strategic Framework on Health and Safety at Work 2014–2020”,

followed by parallel workshop sessions “Supporting companies and reducing administrative burden while preserving protection standards: effectiveness of measures and vigilance reinforcement”, “Risk assessment in SMEs: challenges and opportunities. Presentation of OiRA project (Online interactive Risk Assessment)” and “Efficient ways to promote health and safety at work”, a workshop in collaboration with the International Social Security Association (ISSA) European Network.

### ISSA-INAIL Technical Seminar Session on “Efficient ways to promote safety and health at work”.

INAIL and the Ministry of Labour and Social Policies of Italy invited to the embedded ISSA European Network Technical Seminar Session on Efficient ways to promote safety and health at work.

After Welcoming remarks given by Massimo De Felice, President of the National Employment Accident Insurance Institute of Italy (INAIL), the opening presentation of ISSA Prevention was provided by Olaf

Petermann, Chairperson of the Special Commission on Prevention on behalf of the ISSA Secretary General Hans-Horst Konkolewsky.

Next, national case studies were shared by speakers from Germany, Poland, Finland, Switzerland, the Russian Federation, and Italy.

ISSA Mining Secretary General Helmut Ehnes contributed his talk “Safety Culture meets Economic Success: The German Initiative for sustainable SME’s and Family-owned Enterprises”. In it, he described how a growing network in Germany develops hands-on tools for small and medium-sized enterprises finding excellent feedback with the target group, and how this comprehensive, well-appreciated approach transports systematic health and safety aspects immanently.

As rapporteur for this workshop, Helmut Ehnes presented the findings and conclusions of the European experts at the plenary session the next day. These included aspects such as clear prevention messages especially for SME’s, the understanding of OSH as a business supporting factor, and a clear commitment by managers. Further conclusions included the options of financial incentives for prevention including bonus/malus systems, and occupational safety and health as an integral part of business operations.



European decision makers met in Rome to discuss effective strategies for health and safety at work.



# Zero is possible: ISSA Mining at 7th China International Forum on Work Safety

The theme of the 7th China International Forum on Work Safety, running 23–24 September 2014 in Beijing, was “Enhancing Work Safety Foundation and Improve Safety-enabling Capacity”. It revolved around topics including underground mine refuge, management and control of major hazard sources of chemicals, prevention and control of occupational hazards in workplaces, safety inspection by governments and social supervision and promoting the progress of safety foundation of enterprises.

The 7th China International Forum on Work Safety brought together once again safety and health professionals, business leaders and government officials to learn about the latest trends and developments that impact safety and health.

Helmut Ehnes shared a talk on „Zero is possible – the new prevention strategy of ISSA Mining” in Technical Session 4, Safe Coal Mining Secured by Geological Engineering and Hazard Control.

This session was also co-organized by ISSA Mining; Helmut Ehnes chaired the second half uniting contributions of Zhao Qingbiao, Chief Engineer, Jizhong Energy Group, Damian Eggleston, Engineered Solutions Dräger Safety, Shi Zhijun, CCTEG Xi’an Research Institute, Ashis Bhattacharjee, Ph.D., Professor Department of Mining Engineering Indian Institute of Technology, India and Ju Bolong, Engineer, China Coal Research Institute.

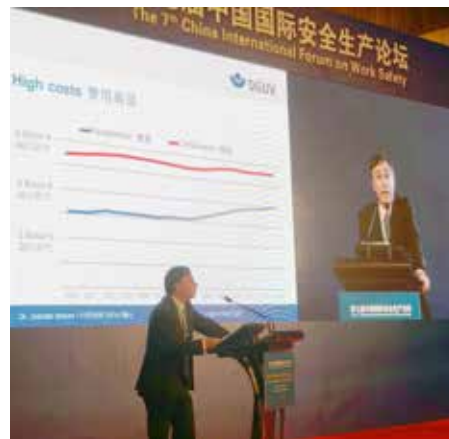
## A future field: Explosion protection

The forum also gave room for valuable discussions with important stakeholders. Mr. SUN Huashan, Vice Minister of the State Administration of Work Safety, P. R. China expressed that collaboration in the field of explosion prevention will be an important issue. The ISSA prevention sections for mining and chemistry will gladly pursue this approach.

<http://www.cwsforum.com/en/>



Yang Dongliang, Minister SAWS, China, gave the keynote address at the 7th China International Forum on Work Safety



Dr. Joachim Breuer, DGUV Germany, showed the vast financial dimension of accidents at work and occupational diseases



As in previous years, the China International Forum on Work Safety proved to be a high-level platform for exchange



Mining is indispensable, yet the most hazardous trade. Prevention is vital, was the message of ISSA Mining Secretary General Helmut Ehnes

## Close to 1,000 participants join Philippine OSH conference, sign resolution

**Almost 1,000 participants from across the Philippines and international experts gathered to attend the 14th National Occupational Safety and Health Congress on November 20–21, 2014 at the Occupational Safety and Health Center (OSHC), Philippines.**

“I endeavor all the participants to join us in the OSH advocacy and help us bring Philippine working conditions to world class quality by inspiring Filipino workers to strive for productivity by ensuring their protection,” said Labor Secretary Rosalinda Dimapilis-Baldoz during the opening ceremony.

The theme “Expanding Social Protection through Occupational Safety and Health” recognized the contribution of comprehensive safety and health policies and practices to address vulnerabilities, improve the quality of life of our workers and create quality employment in the country while also reflecting the role of healthy and safe Filipino workers in sustaining the competitiveness of enterprises and in shoring up the economic growth of the Philippines.

The vast spectrum of topics extended from the challenges in establishing OSH programmes for the informal sector to institutionalizing OSH management in larger establishments. The two-day event presented OSH updates and information that included

- OSH in the key employment sectors such as the construction, maritime, bus transport, government, manufacturing, mines, services and BPOs
- New regulations on safety and health by focal government policy agencies
- Research on risk assessment and communication
- Best practices and interventions for workplace improvement
- Effective training modalities and

technological innovations by local and international experts

### Wide array of OSH topics

43 different OSH topics were discussed in three plenary and 10 simultaneous sessions. Speakers included Ms. Ingrid Christensen of the International Labor Organization (ILO Bangkok) on decent work and OSH; Er. Ho Siong Hin of the International Association of Labor Inspection (IALI) and Commissioner for Workplace Safety and Health, Ministry of Manpower, Singapore discussing fair and safe globalization through ethical and effective labor inspection; Mr. Helmut Ehnes, Secretary General ISSA Mining on “Safe Mining Worldwide: Vision Zero and Seven Golden Rules; Mr. Kyung-Hun Kim of the Korea Occupational Safety and Health Association (KOSHA) and ILO Bangkok sharing a talk on the common personal protective equipment certification system for the ASEAN economic community; and Mr. Young Sub Lim, Vice-President of KOSHA speaking on the sustainable development of OSH in Korea.

“This Congress is a valuable opportunity for us and our partners to strengthen the continuously growing culture of safety and health. Ensuring that our workers whether here or abroad are free from accidents and illnesses is of utmost importance to us,” said Labor and Secretary Rosalinda Dimapilis-Baldoz.

### About 1,000 participants sign joint resolution developed during congress

In the interest of promoting voluntary compliance to OSH standards safeguarding workers and sustaining the maturing safety and health culture in the country, close to 1,000 participants signed the Joint Resolution that has been devel-

oped during the course of the 14th National Occupational Safety and Health Congress.

The participants have committed to continue advocacy initiatives at the national and enterprise levels in cooperation with local and international OSH partners and networks as well as to participate in the development of mechanisms for voluntary compliance and tripartite assessment systems. This is in accordance with the implementation of the new DOLE Labor Laws Compliance System (LLCS) - an amalgam of developmental and regulatory approaches that addresses issues and concerns while ensuring decent and productive work. This will benefit all establishments especially the micro, small and medium enterprises.

<http://www.oshc.dole.gov.ph/509/>

<http://www.oshc.dole.gov.ph/511/>



Zero Accidents is also the aim on the Philippines, as promoted by the Zero Accident Program (ZAP)





International experts shared solutions and inspiration



"I am truly grateful that we have many advocates who are not only working for the productivity of their own companies but generously push for the competitiveness of other establishments by imparting their knowledge, experiences and discoveries on Improving worker protection", said Executive Director Ma. Teresita S. Cucueco, MD, CESO III of the Occupational Safety and Health Center (left)

## How to design prevention and return to work programs? Korean delegates exchange on the German way

**Under the roof of the International Section of the ISSA for a Culture of Prevention, a delegation led by Deputy Director KWAK Chulhong of the Korean Ministry of Employment and Labor visited the head office of the German Social Accident Insurance Institution for the raw materials and chemical industry (BG RCI) in Heidelberg 9 December 2014.**

At his welcome note, Thomas Köhler, Speaker of BG RCI's board of directors and President of ISSA Chemistry underlined the importance of the international exchange of knowledge and experience in order to further develop occupational safety and health for the benefit of employees. A world without severe accidents at work is possible stated Köhler, and reminded that this has to be the jointly pursued goal. The visit is another excellent example of how the 2008 Seoul Declaration is gaining momentum, as intended by the signatories whom committed at the XVIII World

Congress on Safety and Health at Work, the World Summit on Safety and Health in Seoul, Republic of Korea in 2008, said Köhler, and underlined the particularly fruitful collaboration with the Section of the ISSA for a Culture of Prevention, as administered by the Korean Occupational Safety and Health Agency (KOSHA).

Dr Volker Wittneben explained the basic structure of the statutory German accident insurance system, the delegation acknowledged the level of organization and performance of the German system as introduced by the manager of BG RCI's prevention center Heidelberg for the unit chemistry, paper and sugar. The system as a whole serves as a blueprint for the design of its equivalent in the Republic of Korea.

The next stop was the Henkel plant in Heidelberg, where many products of the Teroson brand are manufactured, used as adhesives, sealing, coating and reinforcing for car bodies and industrial

assembly. During this tour, the company's health and safety management system was particularly in the focus. Frank Laupichler, head safety engineer of the plant, used different enterprise projects as examples showing how important well organized occupational safety and health is considered for a worldwide active enterprise such as Henkel.

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<http://english.kosha.or.kr/english/main.do>

<http://www.seouldeclaration.org/>

<http://www.issa.int/web/prevention-culture/about>  
.....



The high-level delegation from Korea showed high interest in the German model as explained by Dr. Volker Wittneben (far left) and Thomas Köhler (center)



## International OSH experts share models of best practice in Ukraine

Andrian Galach invited, and 140 participants from six countries gladly came: the Editor-in-chief of the magazine «Industrial safety» hosted the 2nd International Conference «Industrial Safety. Best Practices - 2014» in L'viv, Ukraine, 11 - 13 November 2014.

The International Scientific and Practical Forum united experts in the field of occupational safety and health of more than 100 enterprises in Ukraine, as well as government bodies, academic institutions, representatives of employers and trade unions. ISSA Mining Senior Expert introduced Vision Zero and the Seven Golden Rules for Safe Mining.

The high level opening included addresses of the Ministry of Energy and Coal Industry of Ukraine, the Ministry of Economic Development of Ukraine, Ministry of Social Policy of Ukraine as well as other ministries, employers and trade unions.

Experts shared new findings in the sessions

- Occupational health and safety in Ukraine. Nowadays and Horizons
- Occupational health systems in Fuel and Energy Industry
- The best practices. Risk Management
- Best practices: Current models of Occupational and Industrial Safety Management System

- Round Table " Safety and Health training and tests "
- Psychophysiological monitoring in OSH management at workplace
- Media materials as a tool for the development of occupational safety and injury prevention
- Best Practices
- Medicine and health: current status and prospects

140 participants, six countries, one goal: sharing best practice for safer jobs.  
// Photo courtesy Andrian Galach





**Workers'  
safety and health first:  
Learning  
from Singapore**

The concept of zero accidents plays a significant role in Singapore's excellent prevention work. On 12 March 2015, ISSA Mining's Cristian Moraga (second left), Helmut Ehnes (third left) and Julio Franzani (second right) met Commissi-

oner for Workplace Safety and Health, Singapore and IALI Secretary General Ho Siong Hin (fourth left) at the Ministry of Manpower in Singapore to exchange on "Vision Zero" and tools for application.

## Next Stop Mining: Innovation Tour on Industry 4.0 leads Chilean delegation to BG RCI, Germany

On 22 July 2014, 14 Chilean delegates came to BG RCI's office in Nuremberg, Germany to exchange on innovative concepts for occupational safety and health. The visit was part of the "Inspiration Tour Innovation: Industry 4.0 in Germany" and had been arranged by CAMCHAL - Cámara Chileno-Alemana de Comercio e Industria A.G..

BG RCI Prevention Manager and ISSA Mining General Secretary Helmut Ehnes introduced ISSA mining as well as BG RCI's prevention strategy and services.

BG RCI is the German Social Accident Insurance Institution for the raw materials and chemical industry, insuring some 1.2 million employees in Germany.

The delegation comprised of managers from consulting firms, manufacturers of electronic safety- and control systems, energy efficiency consultants and more suppliers for the mining industry, including safety systems, communication systems and equipment sales.



Eyes on safety: Helmut Ehnes explained OSH in mining





Delegates of the "Inspiration Tour Innovation: Industry 4.0 in Germany"

## Prevention programs and Return to Work: Academic exchange in Beijing

ISSA Mining Secretary General Helmut Ehnes gladly followed an invitation by Prof. PhD. Min Zhang, Director of the Occupational Health Standard Research Department at the National Institute for Occupational Health and Poison Control (Chinese CDC), for an academic exchange with

experts in Beijing, China.

On 28 September 2014, Ehnes introduced ISSA Mining and its prevention strategy for the sector as well as the German system for the prevention, rehabilitation and compensation of accidents at work and occupational disease.

The meeting with 20 professors gave a platform for a highly interesting academic exchange on prevention and compensation systems as well. During the intense discussion many questions could be answered from both sides. The German connected system on prevention, rehabilitation and compensation found large interest in Beijing.



How to design prevention programs? Helmut Ehnes exchanged with experts at the Occupational Health Standard Research Department in Beijing

## Experts from nine countries continue dialogue on OSH in Vietnam and other ASEAN-OSHNET members

The 2015 Vietnam workshop, conducted as in previous years by ISSA Mining together with the International Labour Organization (ILO), ASEAN-OSHNET and the Ministry of Labour-Invalids and Social Affairs (MoLISA) Vietnam, ran 16–17 March in Ba Ria – Vung Tau, Vietnam.

Themed “Promoting the national program on occupational safety and health and the prevention culture in hazardous industries” some 25 speakers gave input on national and international solutions. The two day event included experts from Vietnam, Malaysia, Indonesia, Thailand, the Republic of Korea, India, Chile, Cambodia and Germany.

The workshop was conducted in conjunction with the 17th National Week for Occupational Safety and Health and Fire-Explosion Prevention and the 33. General Assembly of ISSA Mining.

### Vision Zero and the Seven Golden Rules for the ASEAN region

The participants agreed on proposed recommendations on active prevention against occupational accidents and diseases at workplace, particularly in hazardous industries, including:

**1.** To develop and effectively implement the National Programme on OSH in order to actively prevent occupational accidents and diseases at workplace and on the roads, achieving the aim of reducing the frequency rates of occupational accidents and diseases in hazardous industries including mining, electricity, construction, chemicals and agriculture.

To implement the National Program and consider Vision Zero and 7 golden rules as an important part of Prevention Strategy of each nations which were

mentioned in the workshop, including:

- (1) Commitment of leadership board;
- (2) Identify the risks;
- (3) Set targets;
- (4) Ensure a safe system;
- (5) Use safe technology;
- (6) Strengthen capacity and
- (7) Invest in human resource.

**2.** To promote the ratification and the implementation of Convention No.187 of the ILO on the framework of the promotion policy on OSH.

**3.** To develop concrete and specific solutions and measures for promoting programmes, activities at national and enterprise levels to implement OSH activities in enterprises and develop preventive culture at workplace with focus on high hazardous sectors

**4.** To promote the tripartite cooperation and dialogues to effectively implement the OSH activities at national and enterprise levels; to encourage the active roles of employers and employees in building the safety culture at workplace and their participation in OSH programmes and activities.

**5.** To enhance the implementation of and compliance with laws, legislation on OSH of the employers and employees; to effectively communicate and disseminate the laws, legislation on OSH to enterprise, business units through different channels, including through mass media and social networks;

**6.** To enhance the capacity of and the effectiveness of OSH administration and enforcement through:

- Providing training and refresher training courses on professional skills and knowledge for OSH administrators and inspectors, particularly on the OSH specialized issues, new technologies and new challenges
- Strengthening the inspection force in order to meet the development of enterprises, sectors including informal sectors
- Increasing the number of inspection visits

**7.** To enhance active prevention against occupational accidents and diseases through education, training on OSH for workers and employers; to develop the network of OSH trainers.

**8.** To develop a database on OSH for the policy-making process as well as the monitoring and evaluation of the implementation of OSH policies.

**9.** To enhance the development and duplication of good practices on OSH in each sector and region including informal sectors.

**10.** To enhance international and regional cooperation on OSH through organization of conferences, workshops, exchanged visits amongst countries; to actively participate in international and regional activities to promote prevention culture globally, for the development of the individual countries and of the world.





Ulrich Meesmann, designated president of ISSA Mining (left) and Cristian Moraga, Vice-President ISSA Mining



Delegates from nine countries exchanged experience in prevention strategies.



“We are not lone fighters, but rather derive much of our strength from working together, whether in our own organisations, via networks and the exchange of information, via international cooperation or through events such as today’s”, said ISSA Mining President Theodor Bühlhoff on the occasion of the opening ceremony of the 17th National Week for Occupational Safety and Health and Fire-Explosion Prevention, 15 March 2015 in Vung Tau, Vietnam



Delegates from nine countries exchanged experience in prevention strategies.



Chilean Mutual de Seguridad is on the way to Vision Zero. Julio Franzani introduced new tools such as a mobile app



ILO Senior Specialist on Occupational Safety and Health Ingrid Christensen delivered recommendations on how to design and implement national prevention programs.



Peter Rödel, Cimalux, explained how a highly efficient prevention strategy was implemented in a cement plant.

## Innovations in Safety & Health

Roofbolts as a connection point for PPE against falls in potash- and salt mining, a safety competition for drivers of bitumen trucks, a campaign against texting on the wheel by an oil- and gas corporation, and a spill protection for concrete mixing transport trucks: 689 women and men entered the Award Work – Safety – Health 2015 by the German Social Accident Insurance Institution for the raw materials and chemical industry (BG RCI). 17 ideas were awarded 24 April 2015 in Frankfurt, Germany. 100,000 Euros have been given to the winners for outstanding ideas.



Roofbolts as a connection point for PPE against falls: This idea brought the Award Work - Safety – Health to German mining corporation K+S.

A total of 297 smart innovations were submitted to the 2015 round of BG RCI's award, aiming to make every day's work safer.

The Award Work - Safety – Health, established in 1997, collected 6,000 ideas during the previous years. It is part of German insurer and prevention service provider BG RCI's strategy to cut down accidents at work, occupational diseases, and work-related health hazards by all suitable means. The award seeks to discover optimization potentials in safety and health at work, and make new ideas available to a wide audience of managers and employees both.



Keeping roads clear of concrete spills and drivers safe: the cover engineered by Michael Gräbe of streeprotec.

All awarded contributions online at

<http://www.bgrci-foerderpreis.de/>  
(German only)

<http://www.bgrci-foerderpreis.de/>



„Texting kills“, finds a young project team of ExxonMobil Production in Germany. The message is now displayed on banners across freeways and other media aiming at the public.



51 winners, one common goal: better safety and health at the workplace.



## Outstanding examples of workplace stress management

On the eve of the World Day for Safety and Health at Work (28 April), the European Agency for Safety and Health at Work (EU-OSHA) held its Healthy Workplaces Good Practice Awards ceremony in Riga, Latvia. The awards demonstrate the benefits of adopting good occupational safety and health practices and highlight leading examples of active management of stress and psychosocial risks in the workplace.

As the current host of the Presidency of the Council of the EU, Latvia hosted the Healthy Workplaces Good Practice Awards ceremony on 27 April 2015, as part of a bigger conference devoted to occupational safety and health (OSH). The awards recognize innovative and outstanding examples of good practice in relation to EU-OSHA's Healthy Workplaces Manage Stress campaign and were presented by the Latvian Minister of Welfare, Uldis Augulis and EU-OSHA Director Christa Sedlatschek.

The Minister of Welfare of Latvia, Uldis Augulis, noted that many organizations incorrectly consider psychosocial risks to be a taboo subject: 'In about one-third of European establishments, a reluctance to talk openly about psychosocial risks and stress appears to be the main difficulty in addressing these issues. At present, only 20 % of establishments in Latvia have prevention plans in place, and so we hope the awards will increase awareness and inspire for better psychosocial working conditions in our country.'

Director of EU-OSHA, Christa Sedlatschek, emphasized the importance of tackling stress in the workplace: 'Psychosocial risk factors are often perceived as more challenging to deal with than other issues. But these risks can be dealt with using the same principles as any other occupational safety and health is-



Found eleven innovative solutions against workplace stress and psychosocial risks: The winners of the Healthy Workplaces Good Practice Award // Credit: EU-OSHA

sue, and that is what the Healthy Workplaces Good Practice Awards aim to show. For example, Siemens' multifaceted Life in Balance program improved the psychosocial working environment of the company in Belgium, and the Spanish Hotel Colón, with only 78 employees, implemented a participative psychosocial risk prevention procedure, improving both work organization and employees' well-being.'

Representatives from winning organizations, such as Daimler (Germany), Schuberg Philis (Netherlands) and Zavarovalnica Triglav (Slovenia), shared their experiences in successfully managing stress and psychosocial risks at work. However, much remains to be done. EU-OSHA's second European Survey of Enterprises on New and Emerging Risks (ESENER-2) found that one in five establishments in Europe that have to deal with difficult customers or time pressure indicate they do not have the information or tools they need to deal with these risks. The survey also found that only around one-third of establishments have an action plan in place to prevent

work-related stress. The Good Practice Awards should help highlight to others that workplace psychosocial risks can be prevented. All awarded and commended examples are presented in the Good Practice Awards booklet.

More on EU-OSHA's website:

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[https://osha.europa.eu/en/  
events/european-good-practice-  
awards-ceremony-at-the-latvian-  
eu-presidency-conference-on-  
occupational-safety-and-health](https://osha.europa.eu/en/events/european-good-practice-awards-ceremony-at-the-latvian-eu-presidency-conference-on-occupational-safety-and-health)  
.....

## Vale wins media award for the best prevention films and multimedia productions

**“How would you feel if a loved one did not come home?” Brazilian mining corporation Vale asks the viewers in its four minute black and white film. In strong images, people from different countries talk about the moment they learned that a loved one died in an accident at work. Initiated by death, the conversations begin to revolve around life.**

Vale is a global mining company with headquarters in Brazil, employing 136,000 workers in 37 countries including its own employees and contractors (services providers in permanent activities and projects). The diverse workforce speaks many different language and brings together different cultures.

With its awarded prevention film, Vale aims to bring across authentic messages, without overemphasizing the emotional approach. Embedded into Vale’s “Day of Reflection”, the production was used to help leaders in stimulating a di-

alog with their teams on both personal and corporate commitments that can be made to make Vale a safer place to work.

“How would you feel if a loved one did not come home?” is among the winners of the International Media Festival for Prevention 2014 in the framework of the XX World Congress for Safety and Health at Work in Frankfurt, Germany. An international jury decided upon nine winners out of 290 submissions from 33 countries.

“Occupational Safety and Health needs effective media in order to sensitize and transport knowledge. With this Festival,

we want to raise awareness”, emphasized Olaf Petermann, President of the ISSA Section for Electricity, Gas and Water. “The number of submitted products and the quality increase continuously”, adds Marc DeGreef, President of the ISSA Section for Information.

The next Media Festival which will take place during the XXI World Congress in Singapore in 2017.

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[www.safety2014germany.com](http://www.safety2014germany.com)

<http://mediafestival2014.3c3c.de/>

<http://mediafestival2014.3c3c.de/en/player/37.html>  
.....



**International Media  
Festival for Prevention  
Frankfurt 2014**



The moment of the death notice: Touching scenes taken from the awarded prevention film // Credit: Vale 2014



50 YEARS OF EXPERIENCE

## Bornack showcases innovations at anniversary event

On 18 September 2014, supplier Bornack said thank you to its customers and partners on the occasion of its 50 year anniversary. Bornack's "Hochwerk" gave the impressive stage for the event, a training- and event center in Marbach am Neckar, Germany. This facility allows to train work at heights at levels of up to 35 meters. ISSA Mining's Helmut Ehnes discussed rescue from heights and working in confined spaces with Klaus Bornack, whose enterprise stayed on top for 50 years.

A lot has happened in the past half a century. Raw materials and production technologies are developing and economic conditions are in constant change. In 1970, the first industrial safety law was passed in Germany, raising awareness of occupational safety both in companies and in society in general. After 1990, the European Union opened up the market, resulting in a convergence of the various safety philosophies in the field of rope protection in Germany, France and Great Britain.

All of these changes have had a considerable impact on BORNACK. In return, BORNACK has greatly influenced the rope protection market in Germany, thanks to its ideas and concepts, customer orientation, and openness to technical developments. BORNACK's innovations consistently pursue the goal of enhancing the safety of those working at altitude, and to this end, the company engages in constant dialogue with its customers. There have been many trend-setting innovations to come out of the BORNACK works over the last 50 years.

It all began in 1964 as a two-man sales business growing quickly until in 1970, Herbert Bornack established the first company specialising in the field of in-

dustrial safety. 1973, BORNACK began cooperating in production and marketing with the French manufacturer PROTECTA, in a collaboration that would continue successfully for the next thirty years. Then in 1981, BORNACK began marketing LATCHWAY systems, as one of the first five system partners in the world, subsequently growing into the world's biggest system user. In the 1980s, BORNACK developed numerous innovations and went on to establish itself even more firmly as a highly competent partner in the field of rope protection.

Sales of stop systems for rope protection reflected the risks involved in safe assembly and planning. Rather than going the route of quick business and individual component sales, BORNACK established the engineering company SAFEPOINT®-Sicherheitstechnik GmbH, which specialised in the production of ready-to-use safety systems. The BORNACK SAFEPOINT® product portfolio comprised the planning, manufacture, assembly, maintenance and repair of fixed rope fastening points.

The new century began with further expansions. In the year 2000, the FALLSTOP® RESCUE division was set up, offering professional equipment for use in rescue and intervention. In 2001, the Swiss subsidiary was founded and the training centre in Marbach am Neckar was set up. In 2005, the RR01 rescue slide, which was designed to facilitate rescue from tanks, was awarded the German Safety Prize.

In 2006, the training centre moved into the HOCHWERK® in Marbach am Neckar, a facility designed especially for training activities: the former power station is an indoor training landscape for people who work at heights. Over an area of 3,000 square metres, it offers a range of activ-



Bornack's training facility lets users experience levels up to 35 meters.

ities at various levels up to a height of 35.0 m.

In 2009, BORNACK became the first German company to receive IRATA certification. From that point on, training activities could be offered in compliance with world-recognised training and safety standards for rope-assisted working. That same year, BORNACK created SAFE LINK, a safety system with communicating snap hooks, aimed at a new target group. The FALLSTOP® ADVENTURE division focuses its attention on climbing parks and high rope courses. Following the relocation of the BORNACK headquarters in 2012 to Ilsfeld, all of the various divisions finally came together from their former dispersed locations to a single site.

In 2013, BORNACK received certification under ISO 9001:2008. Occupational safety and health protection also form an integral part of BORNACK's self-image, for which reason BORNACK obtained official certification in 2013 with the quality seal "Systematic Safety" (OSHA safety management) from the employer's liability insurance association. As a result, the company's own industrial work safety is now organised, practised and controlled even more systematically.

Further information available from [www.bornack.de](http://www.bornack.de).

## The GESO FireFinder M safety in mining

**The occurrence of smouldering fires of slack coal in close proximity of conveyor belt systems still cannot be prevented despite of extensive safety engineering. That is why it is necessary to find the source of any fire at an elementary stage and detect it precisely.**

The GESO FireFinder M system was developed in close cooperation with German mining operator RAG and tested in their Prosper-Haniel mine. In 2007 the GESO FireFinder M was awarded the safety award of the Institution for statutory accident insurance and prevention in the mining industry (Bergbau-Berufsgenossenschaft), today German Social Accident Insurance Institution for the raw materials and chemical industry (Berufsgenossenschaft Rohstoffe und chemische Industrie, in short BG RCI) in the category safety engineering.

The system is based on the technology of fibre optical distributed temperature sensing and guarantees a complete and continuous detection of any temperature anomalies along the whole conveyor belt system.

Intelligent analysing software differentiates between normal running variations in temperature and possible fire occurrences. In case of a fire or a hot idler it sets off an alert even with the exact location to the mining control stand.

If the air velocity is higher than 3.5 m/s, a smouldering fire with an area of about 0.25 m<sup>2</sup> cannot be detected with a standard CO sensor.

The fibre optical based system uses the thermal radiation of fire or other heat sources and that completely independent of the air velocity. It is designed to keep conveyor belt systems during its normal operation under surveillance to detect any smouldering fires under the

belt in a very early stage.

It is able to detect any slack coal smouldering fire at a distance up to 1,8m (distance between surface of smouldering fire and the sensor cable) under normal air velocity conditions, and hot idlers along the conveyor belt.

The total range of the monitoring area for one system in standard configuration is 8,000 meters.

The "heart" of the system is the Measuring Station. To meet the requirements of explosion prevention regarding the EC Directive 94/9 EU "ATEX" the measuring device (DTS) as well as the assemblies of the data communication and the power supply has been placed in a pressure resistant enclosure.

The Sensing Cable system consists of pre ready-made fibre cables which ensure easy connection between the cables with a special plug-in connector at both ends. It is created to be installed and to work under the harsh conditions of mining.

The "head" of the system is the control PC and the system software. It is installed above ground in the control stand of the mine. The underground "heart" and the aboveground "head" of the system are connected using the fibre cable network of the coal mine. The operator in the mine control room is at any time able to locate precisely any smouldering fire or hot idler in an early stage, and so it can be extinguished before it can spread.

Since the beginning of December 2012 a GESO FireFinder M is in operation along an underground conveyor system in a mine shaft of the company Worskutaugol beyond the polar circle. OAO 'Worskutaugol' produces and sells coking coal in the Russian Federation. OJSC Worskutaugol will invest around 4 billion RUB in development, maintenance, new

fixed assets and safety in 2014. In the beginning of April the installed system generated an alert call in irregular intervals from the exact same spot along the conveyor system that could not be verified at first as an inspection could not provide an explanation.

A detailed analysis showed a temporal correlation between the alert call and the time regime of the runtime of the conveyor system. During a new inspection while the conveyor was in motion a faulty idler was found to be the cause of the alert call. It had heated up because of a damaged bearing under the strain of the transported goods but had cooled down again during stoppage periods.

The implementation of the GESO FireFinder M enables the replacement of the faulty bearing in time to prevent greater damages.

In 2014 three more FireFinder M systems have been installed in Worskuta, Russia.

For detailed information please contact: [info@geso.eu](mailto:info@geso.eu)



Credit: RAG



## Strategic Framework sets out EU objectives for 2014–2020

To better protect the more than 217 million workers in the EU from work-related accidents and diseases, the European Commission presented a new Strategic Framework on Health and Safety at Work 2014 – 2020, which identifies key challenges and strategic objectives for health and safety at work and presents key actions and instruments to address these. This new Framework aims at ensuring that the EU continues to play a leading role in the promotion of high standards for working conditions both within Europe and internationally, in line with the Europe 2020 Strategy.

European Commissioner for Employment, Social Affairs and Inclusion László Andor said: “Today we are renewing the Commission’s commitment to continuously upgrade people’s working conditions in the EU. People have the right to work without facing health or safety risks in the workplace. Yet every year more than 3 million workers are victims of a serious accident at work in the EU and 4000 die in workplace accidents. Work related accidents and diseases affect all sectors and professions, irrespective of whether people are sitting behind a desk, driving a truck or working in a mine or on a construction site. They not only cause personal suffering but also impose high costs on companies and society as a whole. This new Strategic Framework aims to contribute to improving job quality and job satisfaction, while improving the competitiveness and productivity of European companies, especially small businesses, and reducing costs for social security systems.”

The Strategic Framework identifies three major health and safety at work challenges:

- to improve implementation of existing health and safety rules, in particular by enhancing the capacity of micro and small enterprises to put in place effective and efficient risk prevention strategies
- to improve the prevention of work-related diseases by tackling new and emerging risks without neglecting existing risks
- to take account of the ageing of the EU’s workforce.
- The Strategic Framework proposes to address these challenges with a range of actions under seven key strategic objectives:
- Further consolidating national health and safety strategies through, for example, policy co-ordination and mutual learning.
- Providing practical support to small and micro enterprises to help them to better comply with health and safety rules. Businesses would benefit from technical assistance and practical tools, such as the Online Interactive Risk Assessment (OiRA), a web platform providing sectoral risk assessment tools.
- Improving enforcement by Member States for example by evaluating the performance of national labour inspectorates.
- Simplifying existing legislation where appropriate to eliminate unnecessary administrative burdens, while preserving a high level of protection for workers’ health and safety.
- Addressing the ageing of the European workforce and improving prevention of work-related diseases to tackle existing and new risks such as nanomaterials, green technology and biotechnologies.
- Improving statistical data collection to have better evidence and developing monitoring tools.
- Reinforcing coordination with inter-

national organisations (such as the International Labour Organisation (ILO), the World Health Organisation (WHO) and the Organisation for Economic Co-operation and Development (OECD) and partners to contribute to reducing work accidents and occupational diseases and to improving working conditions worldwide.

The Strategic Framework identifies instruments to implement these actions: social dialogue, awareness raising, enforcement of EU legislation, synergies with other policy areas (e.g. public health, education) and EU funds, such as the European Social Fund (ESF) and the Employment and Social Innovation (EaSI) programme, are available to support the implementation of health and safety rules.

The Framework will be reviewed in 2016 in order to take stock of its implementation and to take into account the results of the on-going comprehensive evaluation of the EU occupational health and safety legislation which will be available by the end of 2015.

[http://ec.europa.eu/europe2020/index\\_en.htm](http://ec.europa.eu/europe2020/index_en.htm)



A WORLD WITHOUT FATAL OR SERIOUS OCCUPATIONAL ACCIDENTS IS POSSIBLE

## “Supply chain standards” as a priority theme of the German G7 Presidency

Disasters like the collapse of the Rana Plaza textile factory in April 2013 have raised awareness of the fact that, in a global economy, we share responsibility for ensuring that labour, social and environmental standards are implemented effectively worldwide.

According to ILO statistics, 2.3 million people die as a result of work every year, approximately 350,000 of them in accidents at work and around 2 million from work-related diseases. There are 168 million children in child labour, of whom 85 million work in extremely hazardous conditions. In addition, more than 21 million people are victims of forced labour. The cost of all of this is enormous, in both human and economic terms. The deaths from work-related accidents and diseases alone represent a loss of 4% of the world's annual GDP.

Within the framework of the German G7 Presidency, the Federal Ministry of Labour is working in partnership with the Federal Ministry for Economic Cooperation and Development to press for effective implementation of and compliance with international standards throughout the global supply chain.

The proposals for concrete action by the G7 governments are addressed towards producing countries, businesses based in G7 countries, and customers in G7 countries. Particular attention is to be devoted to improvements in the following areas:

- Prevention and occupational safety and health (with the establishment of a prevention fund, the so-called ‘Vision Zero Fund’),  
Mediation and complaints mechanisms for employees in producing countries,  
Multi-stakeholder networks on the



The Vision paper „Good work worldwide”

- implementation of agreed labour, social and environmental standards,
- Capacity building in producing countries, and Transparency for consumers about products.

### Conference in Berlin launches initiative

The joint initiative by the Federal Ministry of Labour and Social Affairs and the Federal Ministry for Economic Cooperation and Development began with the international G7 Stakeholder Conference “Promoting decent work worldwide through sustainable supply chains” in Berlin on 10 and 11 March 2015. Federal Ministers Andrea Nahles (Labour and Social Affairs) and Dr Gerd Müller (Economic Cooperation and Development) explained the reasons and ideas. “I have the vision to establish accident insurances worldwide”, said Andrea Nahles. “When 10% of the people hold 90% of the capital, and 20% of the countries use up 80% of resources – than we have a fairness- and a distribution problem”, Dr Gerd Müller added. He called for fair design of supply chains and reminded “Fairness leads to peace”.

At this two-day event, high-level representatives of governments, businesses, the social partners, international organisations and civil-society stakeholders



The German Social Accident Insurance (DGUV) intensively contributed to the conference related to the G7 Summit, by initiatives and suggestions as well as active participation in the forums. During the conference many interesting talks were led, among others with delegates from Bangladesh and representatives of international organizations. From left: Dr. Joachim Breuer (DGUV), Manfred Wirsch (DGUV), Atiqul Islam (President of the employer's association of the textile industry, Bangladesh), Dr. Rainhard Freiherr von Leoprechting (DGUV), Miran Ali (Bitopi Group, Bangladesh), Dr. Gregor Kemper (DGUV) .



discussed and developed important measures to promote sustainable supply chains worldwide, which will then feed into the further G7 process.

### German G7 Presidency

The Group of Seven (G7) will be meeting at Schloss Elmau in Upper Bavaria

on 7 and 8 June 2015. Participants are Germany, France, United Kingdom, Italy, Japan, Canada and the USA.

The Vision paper by Federal Minister Dr Gerd Müller and Federal Minister Andrea Nahles is available for download at

<http://www.bmas.de/EN/Our-Topics/Social-Europe-and-international-Affairs/International/supply-world-standards.html>

## Turkey ratifies ILO's Safety and Health in Mines Convention, 1995 (No. 176)

**Turkey is the thirtieth ILO member State to have ratified Convention No. 176, Safety and Health in Mines Convention, 1995. At the same time, Turkey ratified the Safety and Health in Construction Convention, 1988 (No. 167) as the twenty-seventh ILO member State. These conventions aim to improve the safety and health of millions of mine and construction workers worldwide.**

On 23 March 2015, the Government of Turkey deposited with the International Labour Office the instruments of ratification of the Safety and Health in Mines Convention, 1995 (No. 176) and the Safety and Health in Construction Convention, 1988 (No. 167). Turkey is thus the thirtieth and twenty-seventh ILO member State to have ratified, respectively, Convention No. 176 and Convention No.167, which aim to improve the safety and health of millions of mine and construction workers worldwide.

In depositing the instruments of ratification, Mr. Faruk Çelik, the Minister of Labour and Social Security of Turkey stated: "I am very pleased to inform the ILO that Turkey has ratified Conventions No. 167 and No. 176. In addition to these Conventions on occupational health and safety, Turkey has already ratified Conventions Nos. 155, 161 and 187. Ratifying all of these Conventions since 2004 shows Turkey's commitment to attaining international norms

and standards. The Turkish legislation on occupational health and safety was reviewed and totally renewed in 2012 with the enactment of the Occupational Health and Safety Act No. 6331 in compliance with ILO Conventions and EU Directives which enabled Turkey to ratify related ILO Conventions without hesitation. The main problem at the moment is lack of a safety culture in society rather than the lack of legislation or regulation in various sectors. So far, in all 81 provinces of Turkey, we have given seminars and conferences to thousands of people on the recent legislative changes and the importance of workplace safety. I express my gratitude to the ILO Director-General for the ongoing cooperation between Turkey and ILO, particularly on occupational health and safety. Jointly with the ILO and the International Social Security Association (ISSA), we organized and hosted the 19th World Congress on Safety and Health at Work in 2011 in Istanbul. Labour Ministers from 33 countries have committed to placing occupational health and safety issues high in their national agendas by adopting the Istanbul Declaration at this event."

Referring to Turkey's G20 Presidency of 2015, the Minister Çelik indicated that Turkey has placed occupational health and safety issue among the topics to be discussed throughout the year. He underlined that the Government, under the leadership of the Prime Minister, is

committed to take necessary measures to ensure safer workplaces for workers and employers within the spirit of social dialogue.

In receiving the instruments of ratification, Mr Guy Ryder, Director-General of the International Labour Office, said: "I am very pleased that Turkey is now one of the member States that have ratified Conventions No. 167 and No. 176, complementing its ratifications of the Occupational Safety and Health Convention, 1981 (No. 155), the Occupational Health Services Convention, 1985 (No. 161) and the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187). These ratifications reflect the commitment of the Government of Turkey in pursuing and strengthening its



Faruk Çelik, Minister of Labour and Social Security of Turkey (left) and Guy Ryder, Director-General of the International Labour Office // Credit: ILO

efforts to develop and promote a safety and health culture in the country including in two of the most hazardous sectors, construction and mining.”

Each year, mining and construction record among the highest rates of occupational accidents and fatalities, at the international level. The importance of protecting miners and construction workers led to the adoption of Conventions No. 167 and No. 176, complementing Convention No. 155 of 1981. Conventions Nos. 167 and 176 establish a clear framework of responsibilities, rights and obligations in the area of OSH, both at the national level and at the level of the enterprise, in these two sectors.

In May last year, the ILO, the Government and the social partners began a process to develop a Tripartite Roadmap for Improving Occupational Safety and Health, in particular in the mining sector. A first discussion on this Roadmap was held at a National Tripartite Meeting in October 2014. Since the beginning of 2015 the ILO is providing technical assistance to support the tripartite constituents of Turkey in the development and implementation of this Roadmap, in the light of the strategic framework of the Third National Policy (2014-2018). The ratifications of Convention Nos. 167 and 176 constitute a key step towards ensuring improved occupational safety and health conditions in mining and in construction and the ILO is engaged with the Govern-

ment of Turkey to facilitate the effective implementation of these Conventions in the context of the development of a safety and health culture in the country.

To date, Turkey has ratified 59 international labour Conventions. For more information, see:

[http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200\\_COUNTRY\\_ID:102893](http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102893)

C176 - Safety and Health in Mines Convention, 1995 (No. 176)

[http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100\\_ILO\\_CODE:C176](http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C176)

## EU-OSHA launches free e-guide on managing stress and psychosocial risks at work

As part of the Healthy Workplaces Manage Stress campaign, the European Agency for Safety and Health at Work (EU-OSHA) launched its e-guide on managing stress and psychosocial risks. Stress is an important occupational safety and health (OSH) concern in about 80% of European businesses and is one of the main reasons for lost working days in Europe. However, less than a third of European establishments have procedures in place to deal with work-related stress. The e-guide is a practical tool to help both employers and workers, particularly of small businesses, better understand and manage stress and psychosocial risks.

The e-guide is available in several national versions. In total, 34 country-specific versions will be published and each is adapted to the legislation, context and language of its nation. Each one also directs users to relevant national resources on stress and psychosocial risks. The e-guide is aimed, in particular, at tackling the needs of employers and workers of small enterprises.



The Managing stress and psychosocial risks e-guide will be available in 34 country-specific versions.

Dr Christa Sedlatschek, Director of EU-OSHA, said: ‘Although we cannot see or measure stress in the same way as many other health problems, it is a very serious issue. It can affect workers both emotionally and physically, but businesses and the economy in general can also suffer at the hands of stress. Just

like dealing with other OSH issues, tackling stress and psychosocial risks is both possible and worthwhile, and the launch of our e-guide puts a practical tool into the hands of employers and workers. It includes explanations, advice and examples, demonstrating that these issues can be managed in the same practical



and systematic way as any other OSH issue’.

Each version of the e-guide contains:

- simple explanations of risks, their causes and consequences for workers and businesses
- advice and instructions on how to spot problems early and take action
- practical examples of prevention and risk management, particularly for small businesses
- information on national resources

Created to improve understanding and raise awareness of stress and psychosocial risks at work throughout Europe, the e-guide also helps to overcome certain misconceptions that exist about stress, separating fact from myth. It is particularly intended for those in small enterprises who need guidance or advice on the first steps to take to tackle stress and psychosocial risks in the workplace. The e-guide is free of charge and each version is available to browse online or

can be downloaded for offline use.

Find the “Managing stress and psychosocial risks e-guide” online at

<https://www.healthy-workplaces.eu/en/tools-and-resources/a-guide-to-psychosocial-risks>

## OSHWiki – a web platform to connect the occupational safety and health community

OSHWiki is the first web platform which allows users to create, collaborate and share knowledge on occupational safety and health (OSH) in all languages. It’s a new way to network online with the OSH community, aiming to support government, industry and employee organizations in ensuring safe and healthy workplaces. The European Agency for Safety and Health at Work (EU-OSHA) launched OSHwiki at the XX World Congress on Safety and Health at Work 2014 in Frankfurt, Germany.

Dr Christa Sedlatschek, Director of EU-OSHA calls on OSH professionals to become part of OSHwiki and add to the body of OSH knowledge already available on the platform. On the occasion of the OSHwiki launch, Dr Sedlatschek said: The platform is an important step in the drive to improve health and safety in European workplaces and brings added value to those involved on both a professional and a personal level. OSHwiki allows experts to share their work with each other in one easy and convenient place, they can gain recognition from the global OSH community for their expertise, and benefit from having their work peer-reviewed by a wider audience.



Several hundred articles are available on EU-OSHA’s OSHwiki

OSHWiki is a reliable source of OSH information where accredited authors can create and edit content quickly and easily. Contributors include many national organizations for occupational safety and health as well as leading research institutes. With articles uploaded by OSH experts, topics found on the platform cover areas such as OSH management and organization, dangerous substances, ergonomics, psychosocial issues and

groups at risk. As a one-stop shop for OSH content, OSHwiki aims to be the go-to resource on health and safety for the OSH community and beyond.

Discover the OSHwiki content and community by visiting the platform at

<http://oshwiki.eu> and follow developments on Twitter @EU\_OSHA.

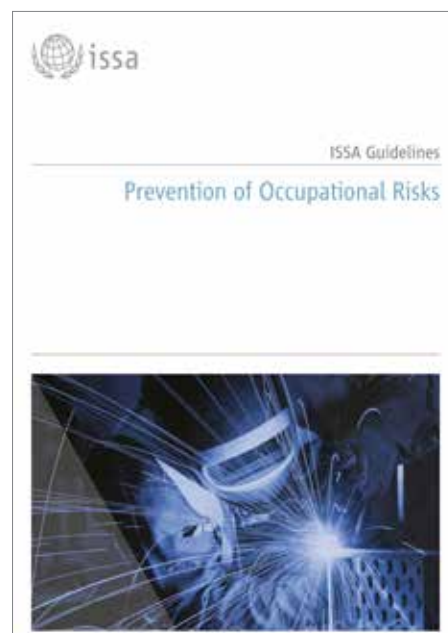
## Now online: ISSA Guidelines on Prevention of Occupational Risks

The ISSA Guidelines on Prevention of Occupational Risks address occupational risks that are insured by social security institutions. The Guidelines provide guidance on how social security institutions can develop, promote and conduct prevention activities with a view to reducing the number of work-related accidents and diseases and related compensation claims. The Guidelines offer social security institutions a comprehensive set of prevention concepts and tools to build up prevention capacities, infra-

structures, programmes and activities, taking into account their specific national and institutional circumstances.

.....  
This important resource is now available online on ISSA's website:

<https://www.issa.int/excellence/guidelines/prevention>  
.....



The comprehensive ISSA Guidelines on Prevention of Occupational Risks (65 pages in print) are now available online

OEL, BOEL, AGW, DNEL, VLEP, MAK, BAT - WHICH OEL APPLIES WHEN AND WHERE?

## The mobile App „limit values glossary“ answers these questions

Limiting exposure to dangerous substances at the workplace and the evaluation thereof is one of the core tasks of health protection.

If there are operations with dangerous substances in a company, or if dangerous substances can develop or be released in certain operations, the employer is obliged to evaluate all possible health and safety risks for the employees. In this process, occupational exposure limits (OEL) must be observed.

With the REACH regulation new limit values have been established which have to be derived by the producers themselves. In addition, international OELs can be very helpful in assessing the exposure to a substance if there is no national limit value available.

With this glossary App for smartphones and a website the ISSA, section chemistry wants to support all persons responsible for safety and health protection in applying limit values at the work place. These

persons are faced with the abbreviations of various OELs for example in the safety data sheets. In particular small and medium sized enterprises have special requirements because of the variety of OELs. The intention is to convey knowledge and facilitate the orientation in applying limit values with a modern means of communication.

It is a web based application so that it is freely accessible even if a company or organisation doesn't permit downloading apps from app stores.

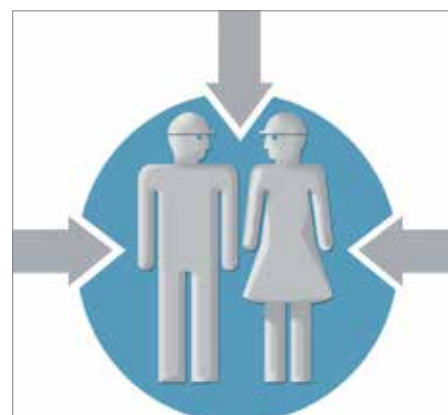
.....  
The internet addresses are

[www.limitvalues.net](http://www.limitvalues.net)  
or  
[www.grenzwertglossar.de](http://www.grenzwertglossar.de)  
.....

The glossary gives a summary of the most important national and European limit values which have been determined by various scientific or political committees. Explanations lean respectively on the official national definitions. Limit value defi-

nitions, for which information was freely accessible, were included. All contents are available in German and English.

The glossary does not claim to be complete, suggestions for additions are always welcome. The first priority was including the OELs of the countries represented in the working group dangerous substances of ISSA section chemistry, France, Italy, Austria, Switzerland, and Germany. Furthermore the US limit TLV (Threshold Limit Values) and PEL (Permissible Exposure Limits) were included.



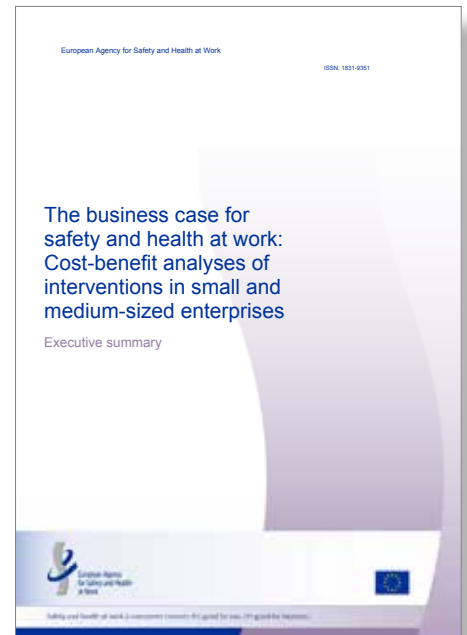
# Cost-benefit analyses of interventions in small and medium-sized enterprises

A summary by the European Agency for Safety and Health at Work examines the economic aspects of occupational safety and health (OSH) interventions in small and medium-sized businesses (SMEs). First, case studies in the existing literature were identified and examined. Second, 13 new case studies on OSH initiatives in European SMEs were developed, with a business case for each intervention prepared according to a common model. The OSH interventions studied were generally profitable, and these new case studies therefore provide a useful tool to allow

owners and managers of SMEs an insight into the potential benefits of improving OSH and the key factors involved in carrying out a cost-benefit analysis.

The full publication is available for download at

<https://osha.europa.eu/en/publications/reports/summary-the-business-case-for-safety-and-health-cost-benefit-analyses-of-interventions-in-small-and-medium-sized-enterprises>



The business case for safety and health at work: Cost-benefit analyses of interventions in small and medium-sized enterprises

Executive summary

# Translation is not enough, Canadian researchers find

New immigrant workers can be viewed as a vulnerable group in aspects of prevention. Bringing across messages is paramount in successful occupational safety and health; but is it enough to translate material? Researchers in Canada looked closer into this. The Centre for Research Expertise in Occupational Disease teamed up with a Community Health Centre to find out on the example of a large South Asian population which has migrated to Canada. Interviews with the target group gave important insights. The phrasing of prevention messages has to be adapted to the level of language skills in the target group, and the information has to be conveyed in a compact way, readable easily and fast. This goes basically for any prevention media in general. But there is more, the Canadian researchers found: cultural aspects play an important role as well. The workers interviewed stated after it was

hard to find a job, they did not want to lose it. At the same time, the South Asian immigrants had not been fully aware of employee rights in Canada, thus hesitating or refusing to bring up safety issues with their employer. In analyzing the existing information published by the Ministry of Labour for workers, feedback was collected such as "Wordy, too much info"; "Belongs in HR office"; "People don't have time to read all this"; "Need good language skills to understand". The researchers suggest to use descriptive images in awareness messages aiming at new-immigrant workers. In this case, the participants of the study felt also that clearer reassurance by the Ministry of Labour is necessary underlining that employers may not raise action against workers who bring up health and safety issues.



More information on the website of the Centre for Research Expertise in Occupational Disease:

<http://ceod.on.ca/2015/going-beyond-words-to-increase-prevention-awareness/>



## What does it take for organizations to make large improvements in health and safety?

Past research has identified the characteristics distinguishing workplaces that do well in injury and disability prevention from those that don't. But not much is known about how low performers in health and safety become good performers. The Canadian Institute for Work & Health conducted four case studies in the Breakthrough Change in OHS series, each telling the story of an Ontario organization that achieved firm-level, sustained improvement in health and safety performance. Each illustrates the factors critical to making large improvement in health and safety, based on an evidence-based model of breakthrough change developed through Institute for Work & Health research.

Past research has identified the characteristics of firms that perform poorly or well with respect to work-related injury and illness prevention, but it hasn't shown what it takes to go from one to the other. This study, led by Dr. Lynda Robson, a scientist at the Institute for Work & Health, aimed to help fill that gap. Robson and her team defined 'breakthrough change' (BTC) as large, intentional, firm-level improvement in the prevention of injury or illness. To find BTC firms, the team used records from Ontario's Workplace Safety and Insurance Board (WSIB) to identify organizations that, in just 10 years, went from being among the 50 per cent in their sector with the highest claims rates to among the 20 per cent in their sector with the lowest claims rates. The improvements had to be sustained for at least three years and not result from restructuring, claims management or by chance. Health and safety consultants from Workplace Safety & Prevention Services and Public Services Health & Safety Association then approached the BTC firms and, ultimately, four agreed to

take part as case studies. For each case study, the research team interviewed 10 people in various roles, as well as collected additional information such as WSIB claims records, Ministry of Labour enforcement records, joint health and safety committee minutes and other OHS-related documents.

### Breakthrough Change Model

The Breakthrough Change model illustrates the critical factors to large and sustained change experienced by the four case study firms.

Although the details differ, companies that go from being not-so-good to very good OHS performers tend to follow a similar path, as shown in the model on the right.

The change occurs in three phases: initiation, transformation and outcome.

### Initiation

Breakthrough change begins with some kind of external influence acting on the organization, ranging from a Ministry of Labour order to a demand from a key buyer for improved OHS.

Whatever the source, this influence brings three things into play within the company: organizational motivation to do better at OHS, an influx of new OHS knowledge previously unknown to the organization (e.g. from a health and safety consultant or through the hiring of a new OHS specialist) and the integration of that new knowledge into policy and practice through the work of a knowledge transformation leader.

This leader – the OHS coordinator, human resources manager, owner or some other person inside the workplace – tends to be a 'people person' who is

persistent, competent, trusted and organized.

### Transformation

The organization's OHS performance starts to improve because of five key elements. (1) The organization responds to OHS concerns (organizational responsiveness) and the workforce takes note, resulting in its increased participation in health and safety. (2) An energy develops within the workplace (positive social dynamics) involving management-worker collaboration, worker empowerment and individual passion for health and safety. This energy may be especially evident in a reinvigorated joint health and safety committee. (3) The workplace develops a continuous improvement pattern, in which improvements in OHS continue despite what has already been achieved. (4) At the same time, the organization makes improvements in areas other than OHS that also lower risk (simultaneous operational improvement) – e.g. engaging in lean, quality and organizational excellence initiatives. (5) Finally, there is a positive working environment (supportive internal context) characterized by good management-worker relations, low turnover, good communications and a supportive senior management team that allows both time and money to be spent on OHS initiatives.

### Outcome

The organization reaps the rewards of its change efforts. What was once new OHS knowledge becomes integrated OHS knowledge. New OHS policies and procedures are in place. OHS training is ongoing. Both managers and front-line staff engage in new OHS practices, such as communicating regularly about OHS, and identifying, assessing and controlling hazards. And people at all levels of the organization are held responsible

and accountable for health and safety. This results in decreased OHS risk, which in leads to decreased injury and illness related to work.

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### The Case Studies

#### Grocery Store

A large retailer was paying little attention to workplace health and safety until its owner became anxious about the safety of the young people he employed, spurring him to spend time and money on OHS and leading to an impressive tale of 'breakthrough change.'

#### Group Home

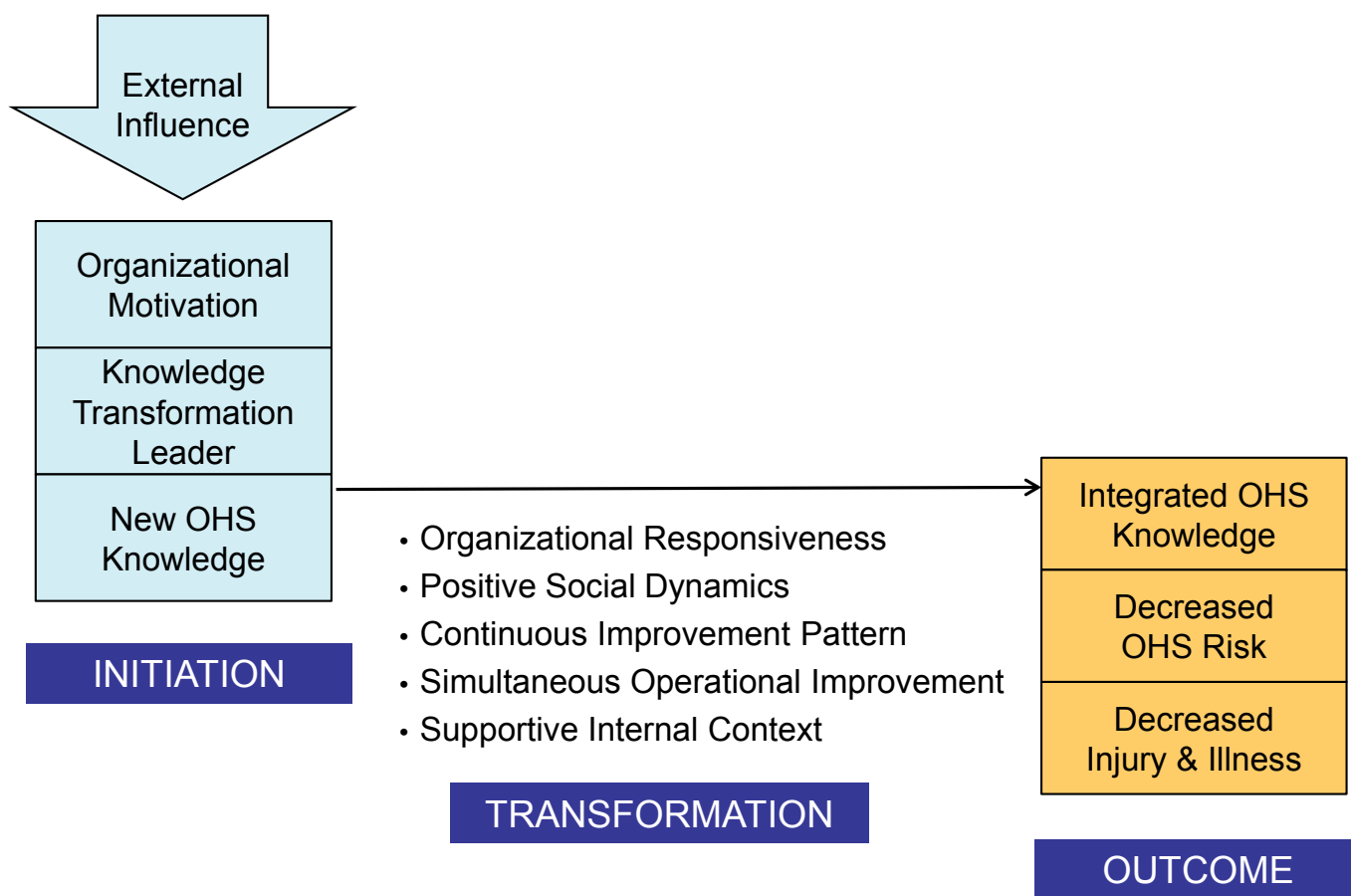
Occupational health and safety was simply not on the radar of a social services agency – until its eyes were opened to the fact that improving OHS outcomes dovetailed with its pursuit of excellence, setting the agency on its admirable path of 'breakthrough change.'

#### Metal Manufacturer

A metal manufacturer went from failing a government agency health and safety audit to creating an environment in which workers are empowered to raise safety concerns, knowing they'll be acted on quickly – all part of its remarkable trajectory of 'breakthrough change.'

The case studies are available for download at

[http://www.iwh.on.ca/btc\\_case\\_study\\_series](http://www.iwh.on.ca/btc_case_study_series).



Source: IWH

## Occupational Health and Safety Issues: Some issues on the Chilean context

**Chile is a country located in the south-western corner of South America, and has been recognized lately for its stable economic model and democratic institutions, conditions that have allowed continuous and quick development. Its institutional framework, the consistency of its public institutions and the efficient financial market were some of the reasons that made it the first South American country to be a member of the Organization for Economic Cooperation and Development (OECD).**

This development requires working thoroughly in a number of relevant aspects of the society and economic framework. One of them is the Occupational Safety and Health (OSH) issue. Chile has a system based on a social insurance for occupational accidents and professional diseases that was established in 1968, after a long discussion on how to put in place health and safety at work standards, and to give some guarantees to the workers in terms of social security, in the context of a developing economy with severe problems in terms of education and infrastructure. That discussion came to pass when the International Labour Organization (ILO) already had several recommendations and conventions on OSH, and on social security.

The Chilean OSH system has proven to be successful in terms of coverage and in terms of reducing the frequency rates of occupational accidents. The frequency rate have fallen from 35.3 accidents per 100 workers in 1969 to 4.3 in 2013. Nonetheless, in the last years, a strong discussion has been developing due to the actual economical scenario, the changes in the economic activity, the changes in the level of the education in the population, and the occurrence of relevant incidents such as the one that happened in the San Jose mine, where 33 miners were trapped underground, luckily successfully

rescued afterwards. In terms of mortality, the rates have not changed significantly nonetheless, and the actual situation of professional diseases is, at least, unclear.

This discussion implied adopting the ILO's 187 Convention (Promotional Framework for Occupational Safety and Health Convention, 2006), although Chile had not ratified the 155 ILO's Convention (Occupational Safety and Health Convention, 1981). This happened in April 2011, and the Country still has not yet defined its National Policy on Occupational Health and Safety, as required by the Convention. This is probably the result of a series of events that are discussed in an article by ISSA Mining member Ricardo Vyhmeister Bastidas, along with some sectorial data, showing its importance not only in terms of the mining sector, but in the development of this relevant issue in the whole Country's economy.

Read the full paper on ISSA Mining's website:

<https://www.issa.int/-/occupational-health-and-safety-issues-some-issues-on-the-chilean-context>

### About the author

ISSA Mining member Ricardo Vyhmeister Bastidas is an Industrial Engineer, University of Chile. MSc in Occupational Safety and MSc in Ergonomics, Universitat Politecnica de Catalunya. MBA Prevention Services Direction, Universitat Politecnica de Catalunya. PhD Candidate in Industrial Engineering UPC.

Ricardo Vyhmeister formerly worked as Occupational Health and Safety, Environmental and Community Relations Corporate Manager for Sigdo Koppers in Chile. This is an industrial assembly and

construction company, dedicated to large industrial infrastructure projects especially in mining, energy and chemical industries. The company actually executes works in Chile and Peru, gathering an average of 20,000 workers yearly. He recently acts as an independent consultant in the area of Occupational Health and Safety, through the SafeTech Company based in Chile.

He also develops as an associate member of the Occupational Safety Commission for the Chilean Construction Chamber and of the risk prevention roundtable for the General Contractors Committee of the same organism. He also participates in the technical workgroups of the Chilean Health Ministry, in the development of specific technical guidelines and health surveillance programs for noise and silicosis risks. Finally, also teaches in several instances in public and private educational institutions in Spain and Chile.

He has been part of the organization and scientific committees of the International Conference on Occupational Risk Prevention (ORP), developed every two years in different cities of Spain since 1999, and every two other years in Santiago de Chile since 2003.



Ricardo Vyhmeister



## Silica Dust, N95 Respirators and monitoring nanoparticles: Scientific findings

Yuewei Liu received his PhD in Occupational and Environmental Health in 2011 from Huazhong University of Science and Technology (HUST) and started to work at Hubei Center for Disease Control and Prevention. He also worked for the US National Institute for Occupational Safety and Health (NIOSH) from October 2012 to January 2014, mainly on Personal Protective Equipment (PPE) research. Together with his supervisor in HUST he conducted research studies in occupational health and safety, such as the large cohort study to investigate the associations between silica dust and adverse health effects, head-and-face anthropometric investigation of Chinese workers, N95 respirators evaluation for Chinese people, molecular mechanism studies on COPD, silicosis and lung cancer, etc.

Yuewei Liu shared a number of his papers with ISSA Mining. A selection of his findings is available online:

.....  
Long-Term Exposure to Silica Dust and Risk of Total and Cause-Specific Mortality in Chinese Workers: A Cohort Study

<http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001206>

Fitting Characteristics of N95 Filtering-Facepiece Respirators Used Widely in China

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0085299>

Assessment of Two Portable Real-Time Particle Monitors Used in Nanomaterial Workplace Exposure Evaluations

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0105769>



Yuewei Liu

## More events for the Mining Industry

2015		
21st Nordic Research Conference in Safety	25.–27.08.2015	Porvoo, Finland
International Mines Rescue Body Conference 2015 <a href="http://www.imrb2015.de">www.imrb2015.de</a>	05.–10.09.2015	Hannover, Germany
36th International Conference of Safety in Mines Research Institutes <a href="http://ICSMRI.CIM.ORG">ICSMRI.CIM.ORG</a>	25.10.–27.10.2015	Sudbury, Ontario, Canada
Bangladesh Symposium of the ISSA Construction Section	23.–27.11.2015	Dhaka, Bangladesh
2016		
International Mines Rescue Body Conference 2016	19.–26.08.2016	Sudbury, Ontario, Canada
2017		
XXI World Congress on Safety and Health at Work 2017: Global Forum for Prevention <a href="http://safety2017singapore.com/">http://safety2017singapore.com/</a>	03.–06.09.2017	Singapore

# Membership Application Form

ISSA Mining  
c/o Berufsgenossenschaft Rohstoffe und chemische Industrie (BG RCI)  
Hunscheidtstraße 18, D-44789 Bochum, Germany

## ISSA Mining Section Membership

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Title / First Name / Surname

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Address Institution

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Address private

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Telephone

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Fax

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E-Mail

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### Membership category:

- Ordinary Member      Annual subscription: 500 CHF
- Corresponding Member      Annual subscription: 100 CHF

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Place / Date / Signature





# IMRB GERMANY 2015

## INTERNATIONAL MINE RESCUE BODY

### MEET EXPERTS AND FRIENDS IN GERMANY

7<sup>th</sup> IMRB Conference  
Hanover, Germany  
6 – 10 September 2015

The IMRB convenes bi-annual conferences to connect experts and offer a platform for the exchange of experience and good practice. Germany will host the 2015 conference – a unique chance to meet with mine rescue and emergency response experts as well as mine managers and industry leaders from around the world.

The conference offers the opportunity to manufacturers to present safety and rescuing aids on September 8<sup>th</sup> and 9<sup>th</sup> in Castle Herrenhausen. Anyone interested in hiring floor space, please contact Wolfgang Roehl, +49 6221 5108 28500, [wolfgang.roehl@bgrci.de](mailto:wolfgang.roehl@bgrci.de), as soon as possible.

For further information visit [www.imrb2015.de](http://www.imrb2015.de)



# New members

## Ordinary members

- Kömür İşletmeleri A.Ş.  
Yenimahalle, Ankara, Turkey
- Lahore School  
of Public Health (LSPH)  
Lahore, Pakistan
- One Seven of Germany GmbH  
Luckenwalde, Germany
- ISSA Section on Prevention  
in Transportation  
Hamburg, Germany
- Zyght HSEC Technology  
Providencia, Santiago, Chile
- Berufsgenossenschaft  
Handel und Warenlogistik  
(German Social Accident  
Insurance Institution for the  
trade and distribution industry)  
Bonn, Germany

## Corresponding members

- Prof. Ashis Bhattacharjee  
Indian Institute of Technology  
Kharagpur, India
- Ali Mozafari  
Mining Engineer  
Center of Research and  
Training for Occupational  
Safety and Health (CRTOSH)  
Tehran, Iran
- Tsogtsaikhan Orgil  
Fire Safety / Safety Officer  
Occupational Safety and  
Health Department  
Erdenet Mining Company LLC  
Erdenet city, Mongolia
- Dr. Patricia Sánchez Pérez  
Miraflores, Lima, Perú

## Not a member of ISSA Mining yet?

### Join ISSA Mining and...

- Give input to global decisions in OSH politics for mining
  - Show your commitment to occupational safety & health
  - Prove Corporate Social Responsibility (CSR)
  - Play an active role in setting standards and recommendations
  - Get in contact with the leading non-profit organisations for OSH
  - Be part of an independent international network
- Get in touch with key players, suppliers and experts
  - Get involved in international events, congresses and workshops
  - Get advice on the Section's topics
  - Directly link with the International Labour Organization (ILO)

.....  
**Your link to membership:**

[www.issa.int/prevention-mining](http://www.issa.int/prevention-mining)  
.....

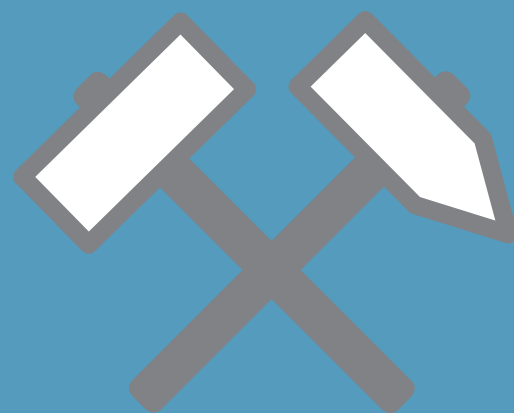
## Up-to-date, versatile and always available: ISSA Mining on the Web

What is the impact of nanotechnology healthwise? How can I reduce the risks arising from heavy equipment? How do we face the challenges of competently and safely Integrating miners? And where does standardization of respiratory protective devices go? ISSA Mining's website spans these and many other topics, brought to you by ISSA Mining experts and by courtesy of specialists of related associations and institutes.

ISSA Mining's website is continuously updated and tells about latest events in both OSH and the mining industry.

**Just one click away:**

.....  
[www.issa.int/prevention-mining](http://www.issa.int/prevention-mining)  
.....



## ISSA Mining Newsletter

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