

VISION ZERO.

The New Global Strategy for Safe Mining



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INTERNATIONAL SOCIAL SECURITY ASSOCIATION

Helmut Ehnes – BG RCI



MINING IS
SUBSTANTIAL



MINING IS
HIGHTECH



**MINING IS
GREAT**



**MINING IS AN
ECOLOGICAL
FACTOR**



INNOVATIVE

MINING IS

IMPRESSIVE

MINING IS





**MINING IS
TEAMWORK**



**MINING IS
AMBITIOUS**



MINING IS

BEAUTIFUL

BUT MINING HAS OTHER FACES



MINING CHANGES



HARD WORK

MINING IS

MINING IS LIFE OR DEATH



Photo Credit:
HUGO INFANTE/GOVERNMENT OF CHILE

MINING DESTROYS



MINING MEANS BAD IMAGE



MINING HURTS





MINING CAUSES

PAIN



MINING
SICKENS



MINING KILLS

LET'S TALK ABOUT SAFETY

2 Million

work-related fatal diseases

340 Million

work accidents worldwide

360.000

fatal accidents at work

4.0%

economic loss worldwide - annually

Mining:

The fatality rate of miners is

8 x

higher



We need a strategy!

We need a strategy!



VISION ZERO.

The Story of

VISION ZERO.

1811

**As consequence after
severe explosions
of his powder mills
in Wilmington (USA),
Eleuthère Irénée du Pont**

- **made his managers responsible !**
- **defined safety rules !**
- **improved technology !**



VISION ZERO.

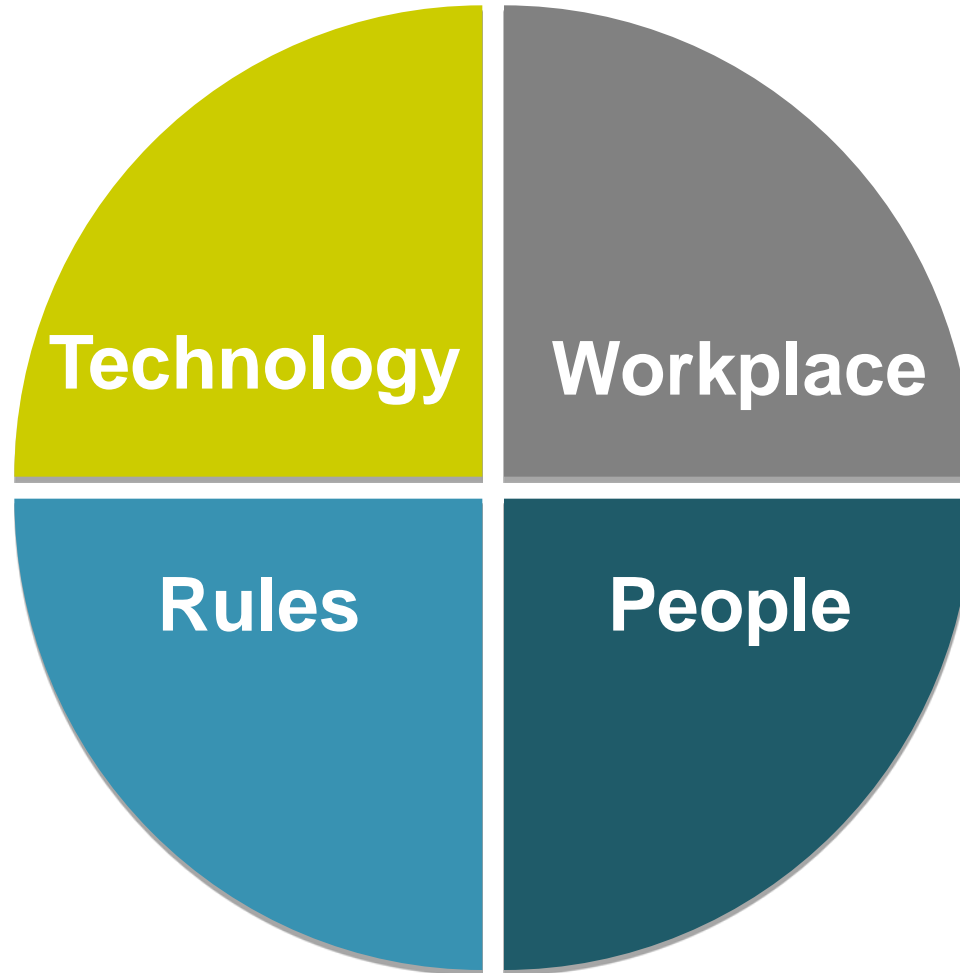
DEFINITION:

„Vision Zero is a prevention strategy for a safe future without fatal or serious occupational diseases, work accidents and traffic accidents in mining.“

VISION ZERO.

Fields of Action

Fields of Action for VISION ZERO



VISION ZERO.

Illusion?

or

Mission possible?



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SEVEN GOLDEN RULES



VISION ZERO.

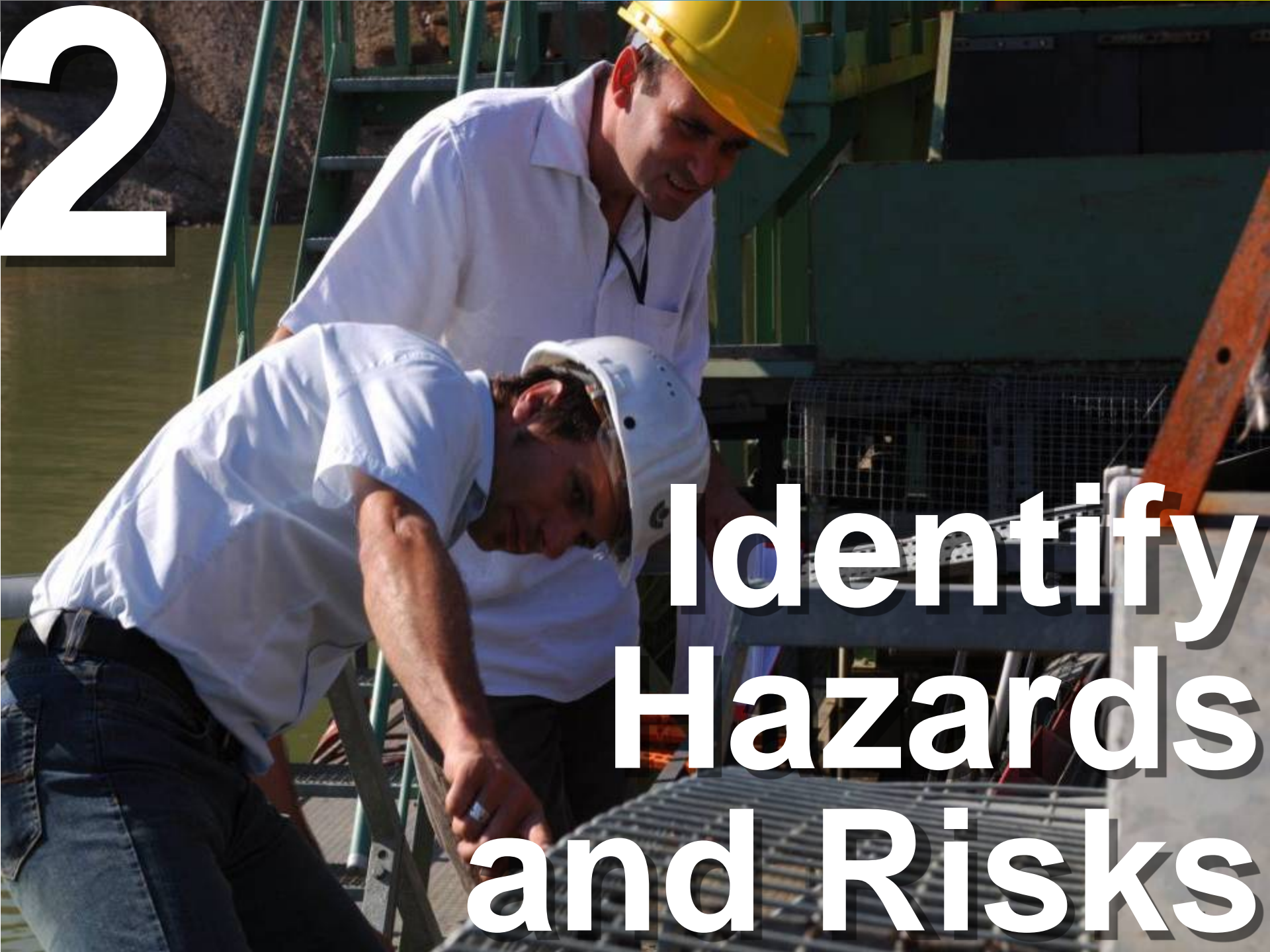
1

A photograph of two men in a construction or mining setting. The man on the left is wearing a white hard hat, safety glasses, a blue shirt, and a high-visibility yellow vest. The man on the right is wearing a yellow hard hat, safety glasses, and an orange jacket. They are both looking towards the right side of the frame. In the background, there is a large piece of yellow machinery, possibly a loader or excavator, and a pile of grey material, likely gravel or crushed stone.

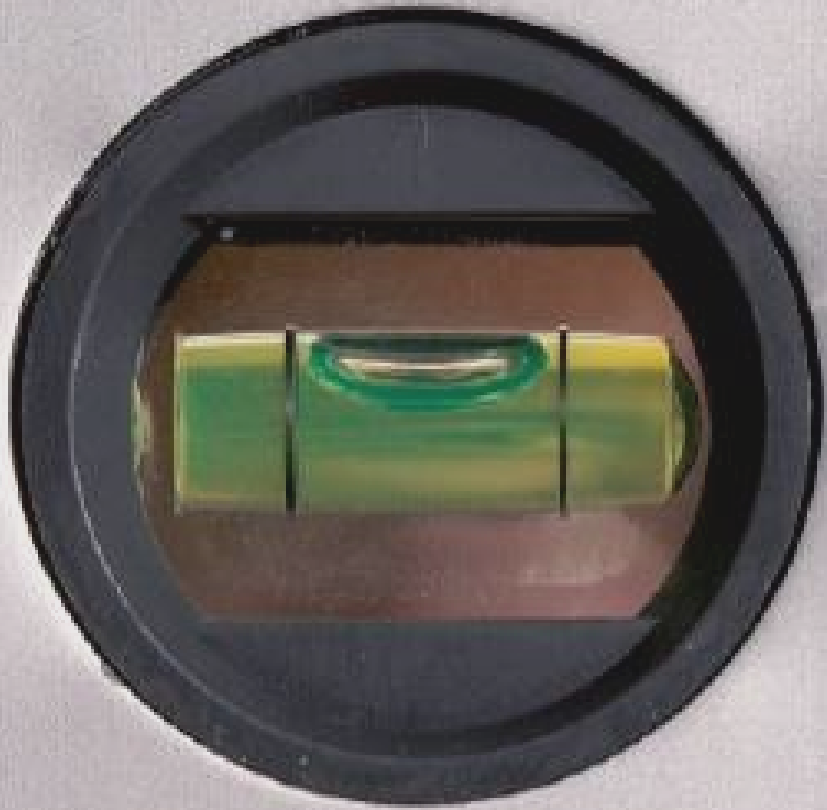
Take Leadership Commitment

2

Identify
Hazards
and Risks



3



**Set
Targets
for
Safety**

Ensure a Safe System

4



5



Use
Safe & Healthy
Technology

6

Improve Qualification



7

Invest in
People



SEVEN GOLDEN RULES

1 LEADERSHIP 1 LEADERSHIP 1 LEADERSHIP 1 LEA

SEVEN GOLDEN RULES

2 RISK ASSESSMENT 2 RISK ASSESSMENT 2 R
1 LEADERSHIP 1 LEADERSHIP 1 LEADERSHIP 1 LEA

SEVEN GOLDEN RULES

3 TARGETS 3 TARGETS 3 TARGETS 3 TAR

2 RISK ASSESSMENT 2 RISK ASSESSMENT 2 R

1 LEADERSHIP 1 LEADERSHIP 1 LEADERSHIP 1 LEA

SEVEN GOLDEN RULES

4 SAFE SYSTEM 4 SAFE SYSTEM 4

3 TARGETS 3 TARGETS 3 TARGETS 3 TAR

2 RISK ASSESSMENT 2 RISK ASSESSMENT 2 R

1 LEADERSHIP 1 LEADERSHIP 1 LEADERSHIP 1 LEA

SEVEN GOLDEN RULES

5 TECHNOLOGY 5 TECHNOL

4 SAFE SYSTEM 4 SAFE SYSTEM 4

3 TARGETS 3 TARGETS 3 TARGETS 3 TAR

2 RISK ASSESSMENT 2 RISK ASSESSMENT 2 R

1 LEADERSHIP 1 LEADERSHIP 1 LEADERSHIP 1 LEA

SEVEN GOLDEN RULES

6 COMPETENCE 6

5 TECHNOLOGY 5 TECHNOL

4 SAFE SYSTEM 4 SAFE SYSTEM 4

3 TARGETS 3 TARGETS 3 TARGETS 3 TAR

2 RISK ASSESSMENT 2 RISK ASSESSMENT 2 R

1 LEADERSHIP 1 LEADERSHIP 1 LEADERSHIP 1 LEA

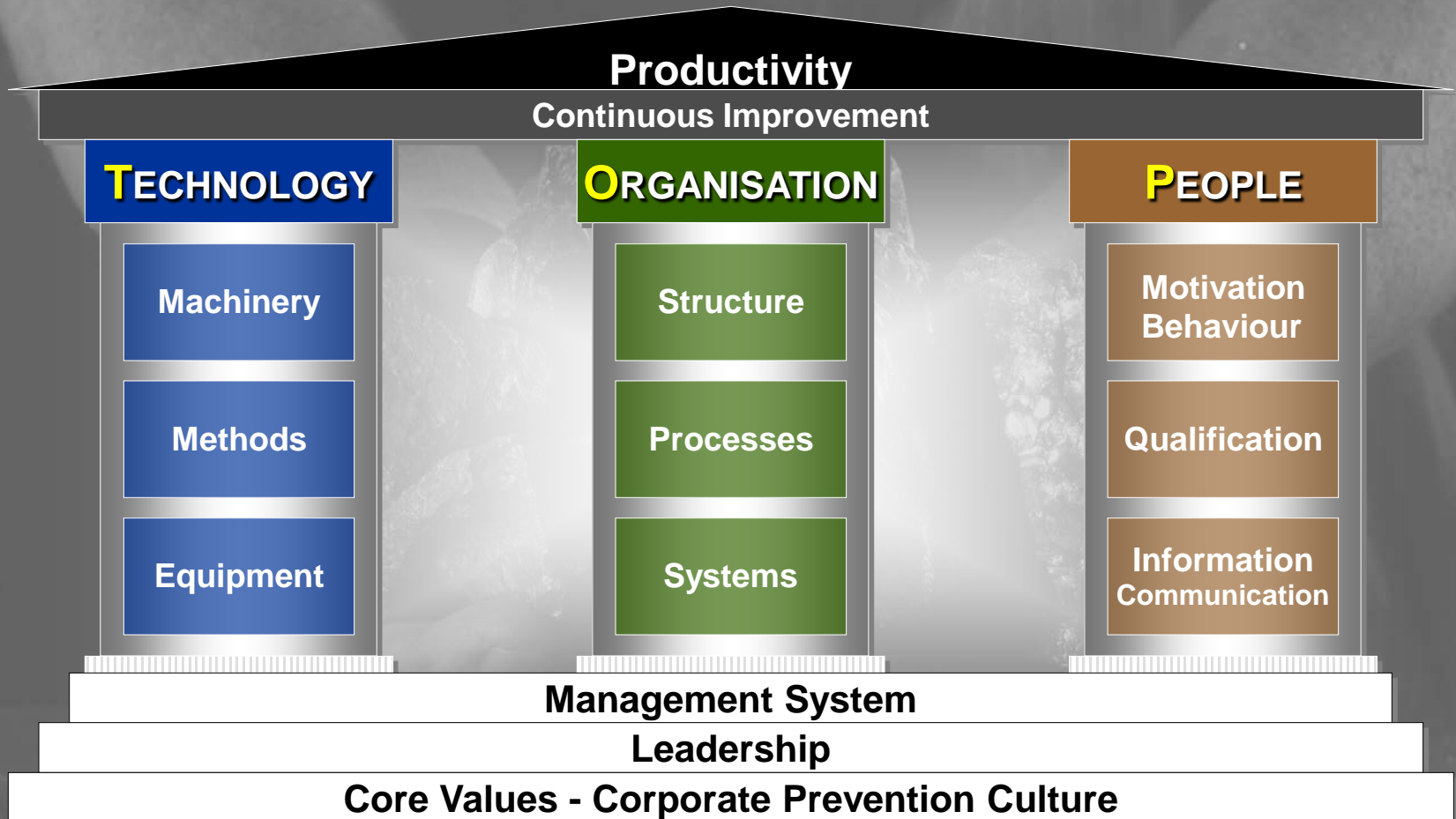
SEVEN GOLDEN RULES



VISION ZERO.

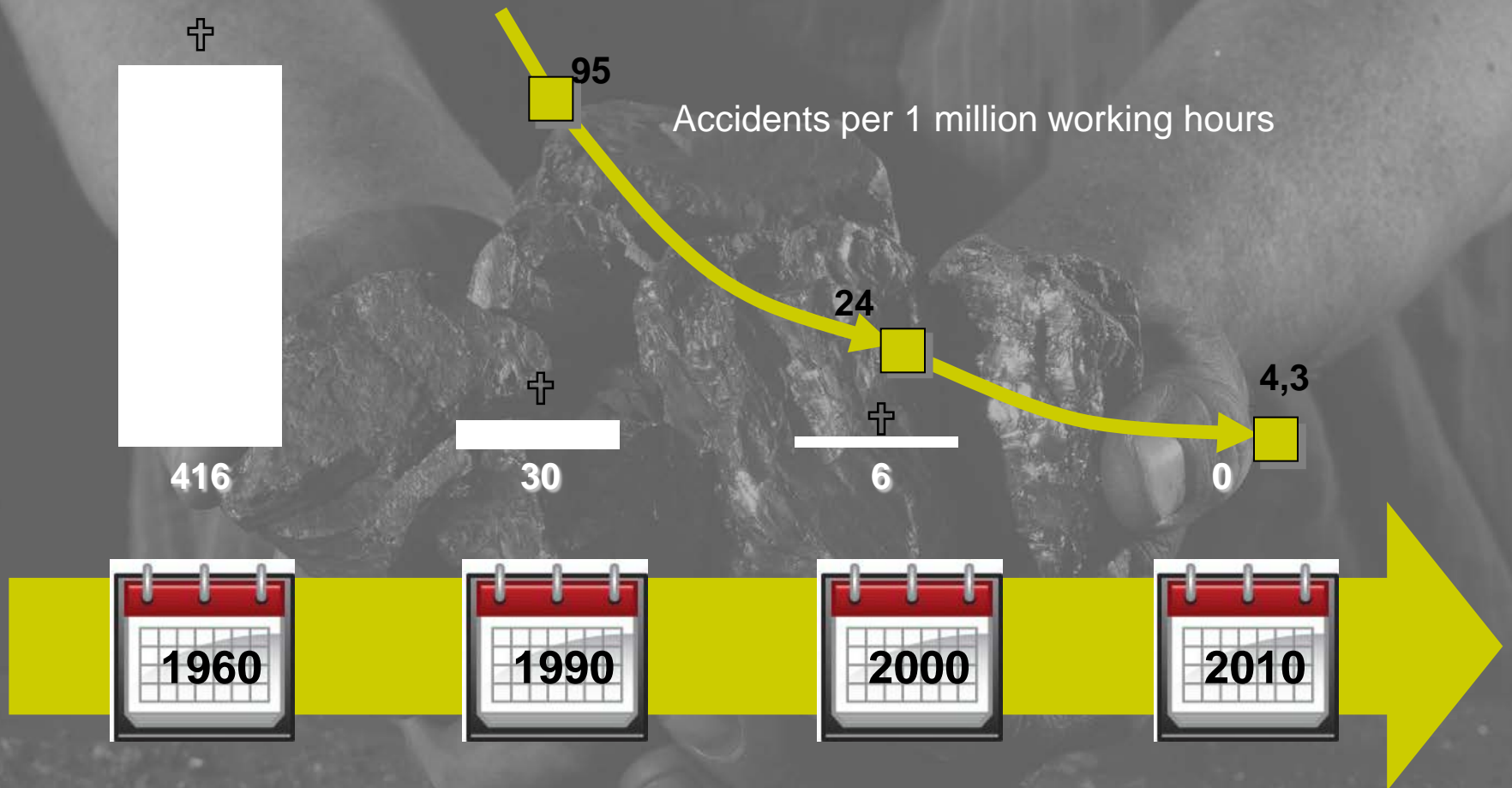
Success!

SUCCESS: RAG 3 Pillar TOP-Model




SUCCESS: TOP- Model of RAG

(German Hard Coal Mining Company, 30,000 employees)



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SUCCESS:
Zero Harm Programme at
Nickel Rim South Mine
(Glencore OSH Strategy)
90% Reduction of LTI's



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SUCCESS: Value of Companies

(Results of a Study from German Universities and
the Value Group GmbH)

„The value of companies,
investing in people,
is benchmarked by

40 %

better than that of others.“



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SUCCESS: Return on Prevention

(Results of an ISSA research project)

ROP = 2.2

Each Euro invested in occupational safety and health generates a potential for increased commercial success of 2.20 Euro.



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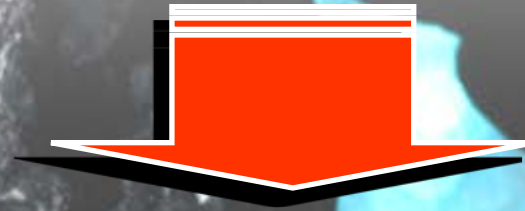
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7 GOLDEN RULES



VISION ZERO.



CULTURE OF PREVENTION



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International Sections for Prevention of ISSA



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INTERNATIONAL SOCIAL SECURITY ASSOCIATION

13 International Sections of ISSA on Prevention of Occupational Risks

- Financially independent
- Own membership
- Key actors of ISSA's prevention programme
- Organized in industrial branches



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INTERNATIONAL SOCIAL SECURITY ASSOCIATION

- **Safety and health in mining**
- **Independent and international**
- **Non profit organisation**
- **Worldwide platform**
- **All mining industries**



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Aims



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Aims of ISSA Mining

- **Protect miners from accidents and damage to their health.**
- **Support employers and managers in their responsibilities.**
- **Improve social security in mining.**
- **Care worldwide for acceptable working- and social conditions.**
- **Influence OSH politics on a global level.**





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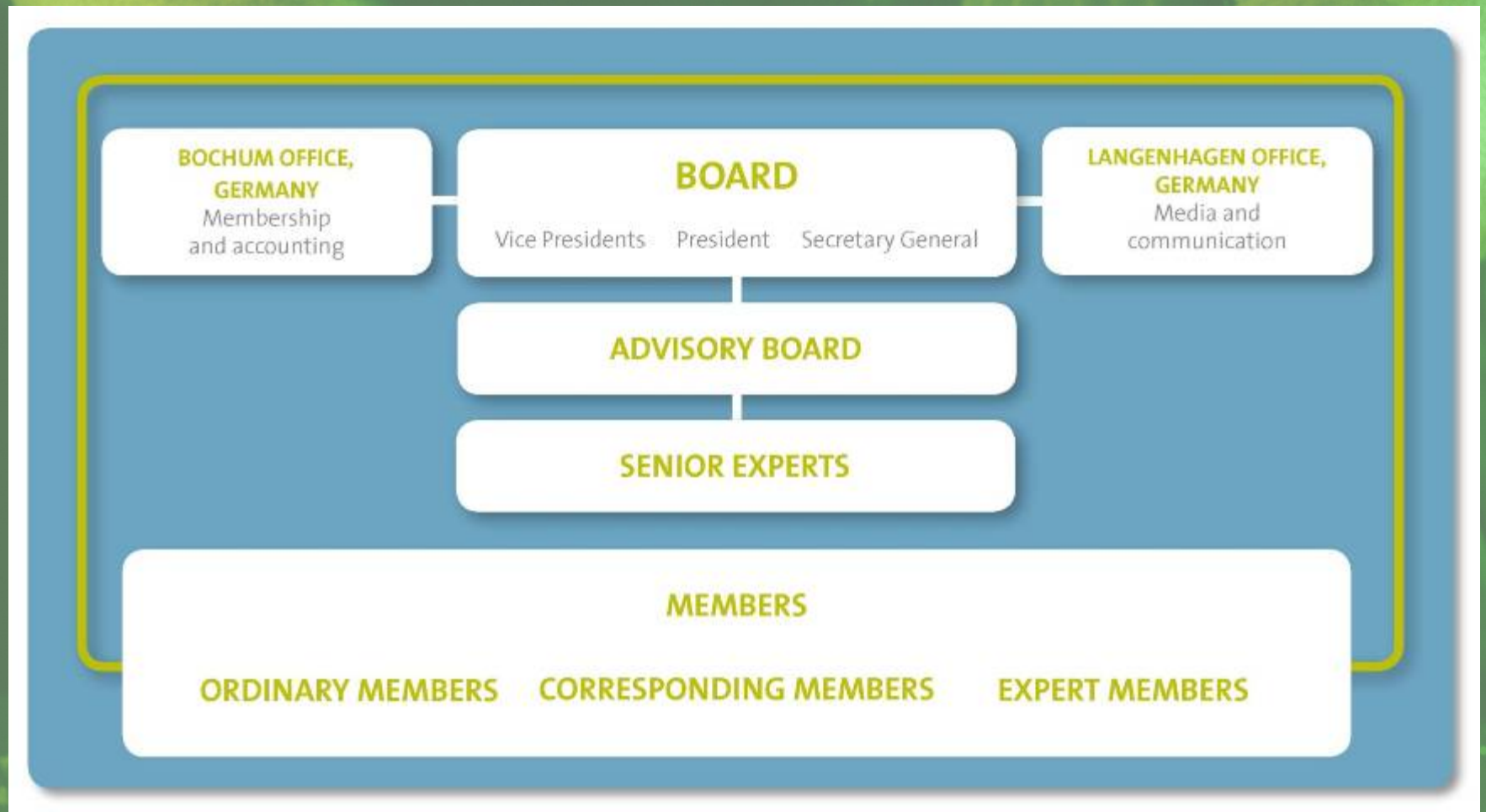
Structure



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INTERNATIONAL SOCIAL SECURITY ASSOCIATION

Structure of ISSA Mining



Structure of ISSA Mining: Board

President



**Theodor
Bülhoff**

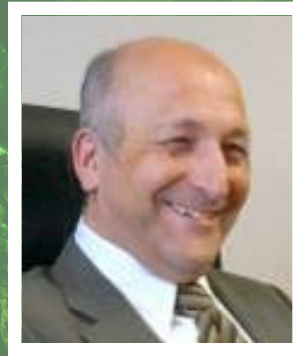
Vice-Presidents



**John
McEndoo**



**Bui
Hong Linh**





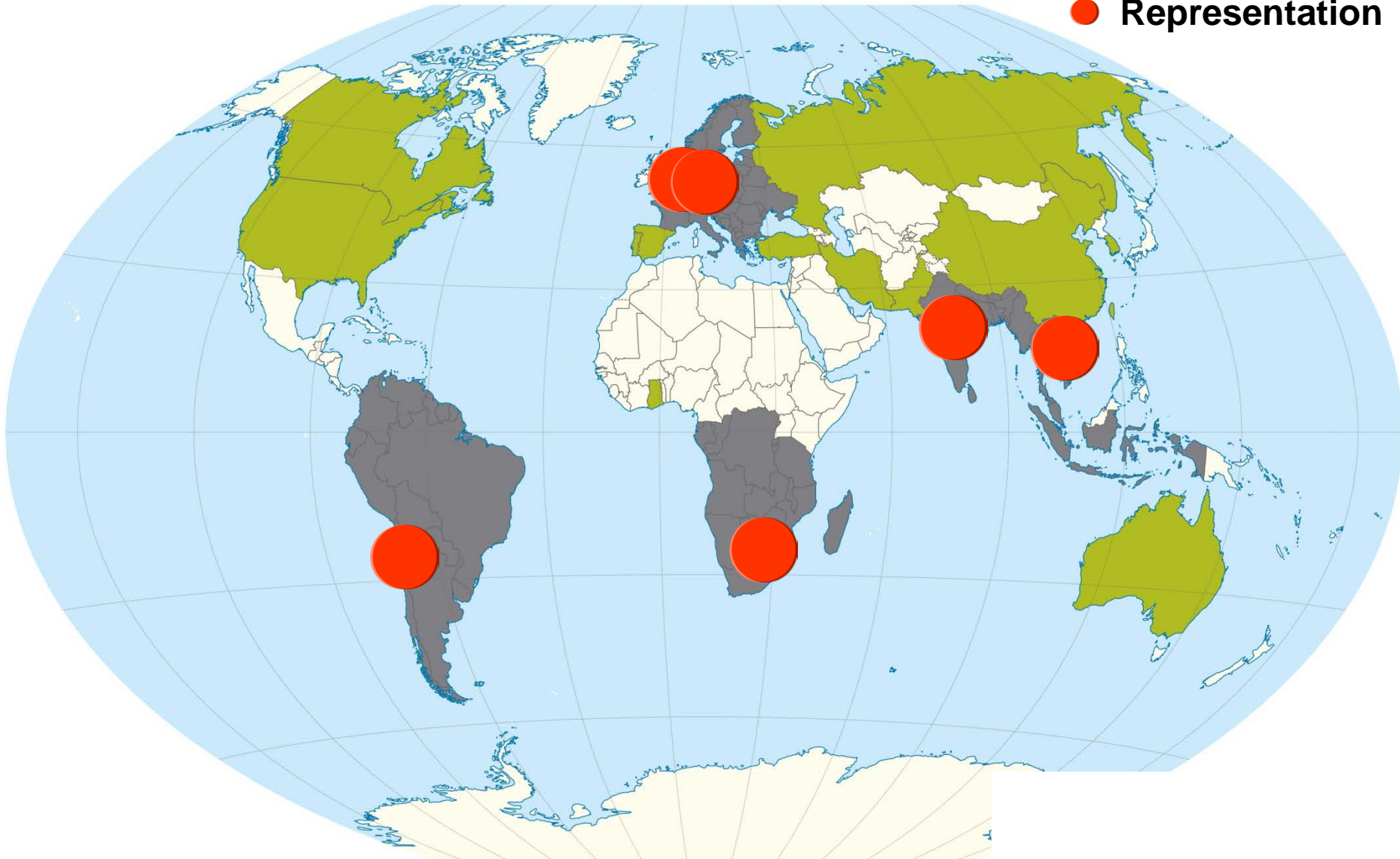
**Peter
Schrimpf**

**Secretary
General**



**Helmut
Ehnes**

-  **Members**
-  **Representation**





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Fields of Action



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Fields of Action of ISSA Mining

OSH politics



OSH management system and OSH organisation

Safe mining technology

Dust, noise, vibration and chemical agents

Health protection



Education and training

Mine rescue

Risk assessment

Safe behaviour

Personal Protective Equipment (PPE)



Advice on Accident Insurance, Compensation, Prevention



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Tools



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ISSA MINING GLOBAL NETWORK



BSW- MOLISA



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MOLISA / ISSA

**CONFERENCE ON SAFETY AND HEALTH
IN MINING AND NATURAL STONE INDUSTRY**

**HỘI THẢO VỀ AN TOÀN VÀ SỨC KHOẺ LAO ĐỘNG
TRONG KHAI THÁC MỎ VÀ ĐÁ**



**ISSA MINING
CONFERENCES**

Conferences and Workshops

- Da Lat, Vietnam
- Beijing, China
- Brussels, Belgium
- Hanoi, Vietnam
- Seoul, South Korea
- Xiamen, China
- Ankara, Turkey
- Yekaterinburg, Russia
- Zonguldak, Turkey
- St. Petersburg, Russia
- Lima, Peru
- Bytom, Poland
- Asunción, Paraguay
- Da Nang, Vietnam
- Johannesburg, South Africa
- Windhoek, Namibia





Emergency Escape Systems in Underground Mining
International Symposium in Beijing - China 2011

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MINE RESCUE

Symposium on Emergency Escape Systems: Criteria of Comparison

Mine
Rescue

Self
Rescue



Fire Protection



ISSA MINING NEWSLETTER



Health and Safety Manager Hans-Joachim Keller (right) comprehensively demonstrated the impressive level of OSH organization at Lafarge Cement.

Feature

New representative for India region: ISSA Mining welcomes Mining Engineer Chetan Garg

As of November 2012, Mr Chetan Garg from Madhya Pradesh, India, supports ISSA Mining's work in the India region. A graduate of the Indian School of Mines in Dhanbad and beneficiary of a full scholarship of the European Mining Commission, Mr Garg is currently working for Golder Associates in Gurgaon and brings experience from various international projects into ISSA Mining.

An initial meeting with ISSA Mining's team around board members Theodor Bühnoff and Helmut Ehnas on 5 November in Langenhagen/Germany, followed by a study tour with senior mining experts formed the platform of Mr Garg's future work for the interna-

tional network, aiming to improve mine safety.

The consecutive day led the Mining Engineer from India to Ladenburg/Germany, where mine rescue manager Wolfgang Roßelt introduced him to the task force rescue operations on the occasion of a line manager meeting Mine Rescue, crucial for the life of many miners, particularly relies on dialogue on best practice in emergency response and transnational collaboration. A site visit to the Ladenburg facility of TOTAL Feuerschutz GmbH, producer of fire protection technology including a live demonstration, proved to be another informative chance to enter exchange with suppliers of fire

protection equipment, respiratory devices and rescue equipment.

Hans-Joachim Keller, Health and Safety Manager of Lafarge Cement in Wülfsingen gladly welcomed ISSA Mining Senior Expert Gerhard Czuck and Mr Garg on 7 November. Mr Keller comprehensively presented the state-of-the-art health and safety concept of the internationally operating enterprise and led a guided tour through the plant along the material flow. The thermal use of recycling material found particular interest.

Meeting ISSA Mining Senior Expert Matthias Stenzel, an introduction to mining in the Ruhr area was on the agenda – the heart of

Mr Chetan Garg shares his background with the readers of the ISSA Mining Newsletter

“ I am a Mining Engineer and MBA from India's Most prestigious mining school, the 'Indian School of Mines' with a vast exposure to Indian mining industry and international with variety of mining like metal, hard rock, thermal coal and coking coal. Currently I am working with Golder Associates as a consultant and a associate of SME. My international experience includes working in Middle East, Jordan, Jamaica, China, Turkey and Europe (around 12 countries). My area of Mining working has been working from banks side for feasibility reports, lenders consultant and safety audits (internal and external). My interest areas are policy, rules and regulations for the mining industry along with techno-commercial developments. ”

German coal mining. This included a plant tour to the Garzweiler open cast lignite mining operations, run by RWE Power AG and a visit to the Auguste Victoria underground mine of RAG with their internationally acclaimed high standards on safety and health.

combine his mining expertise and regional touch in this important mining region with our well established network. Our future collaboration bears a vast potential for increasing safety by learning of each other”, the Secretary General expressed his optimism.

“After intense discussions on ISSA Mining tools and strategies, I am not returning only to represent this important organization in my home area, but also will take with me important impulses on modern safety management,” Mr Garg commented on his stay.

Looking at the level of every miner's qualification and the commitment of RAG's management in aspects of safety, the outstanding safety record did not come as a surprise!

“Our exchange on mine safety has been very insightful for both sides,” summarized Matthias Stenzel, who is looking back on decades of experience.



Theodor Bühnoff the future King.

led a live showing.





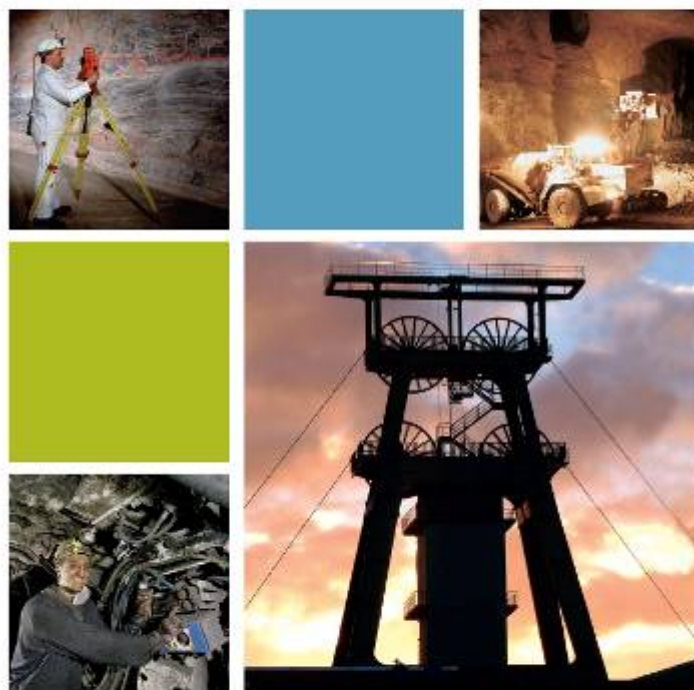
Safety and Health in Open Mining Operations



A recommendation by



Safety and Health in Underground Mining Operations



A recommendation by



Organisation of Occupational Safety and Health



A recommendation by



ISSA MINING RECOMMENDATIONS



ISSA MINING SAFETY AUDITS

IMSA - Independent Mine Safety Audits

Aims

- Feedback and consulting from international expert team
- Improve safety and health in mines
- Increase economic performance

Partners of the Pilotproject

Türkiye Taşkömürü Kurumu TTK,
Turkish Ministry of Labour and Social
Security, ISSA Mining



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New: Seminars on Vision Zero 7 Golden Rules



ISSA MINING
SEMINARS



New: Seminars on Vision Zero 7 Golden Rules

Structure

- Principles
- Arguments
- Implementation
- Good Practice
- Checkpoints



ISSA MINING
SEMINARS

www.issa.int/prevention-mining

ABOUT ISSA

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EMAIL PRINT TEXT SIZE

International Section of the ISSA on Prevention in the Mining Industry

The aim of the International Section of the ISSA on Prevention in the Mining Industry is to further and to improve social security in mining worldwide.

INTERNATIONAL SECTIONS ON PREVENTION

- Agriculture
- Chemistry
- Construction Industry
- Education and Training

- Announcements
- About
- Events
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- Resources
- External links

SECTION NEWSLETTER



The International Section of the ISSA on Prevention in the Mining Industry publishes a newsletter. If you would like to subscribe to this free service, please register by sending an e-mail to us.

Members of the Section on Prevention in the Mining Industry



ISSA MINING WEBSITE



ISSA MINING
2013

TURKEY

**MOU with Turkish Ministry of Labour and Social Affairs on Mine Safety,
January 2013**



MONGOLIA

OSH Conference & Exhibition

German – Mongolian Corporate Days

Ulaanbaatar, 6 and 7 May, 2013



23 exhibitors, 340 expert visitors

MONGOLIA: Field trip to Oyu Tolgoi



VIETNAM

Workshop: The Role of Labour Inspectors for Promoting Proactive Prevention

Da Nang, 16 – 17 July 2013



Labour inspectors from 32 provinces and 10 international experts.

CHILE

Meetings and Site Visits

June 2013

Exponor Antofagasta



Codelco – El Teniente

GERMANY

Study Tour: Delegation of Turkish Mining University Soma, July 2013



GERMANY

Study Tour for a Delegation from Vietnam

August 2013



CANADA

World Mining Congress

Montreal August 2013



CANADA

International Mine Rescue Board Biannual Conference

Niagara Falls & Sudbury, October 2013



Training
Training
Training

UKRAINE

Workshop: Vision Zero & 7 Golden Rules with ILO – October 2013





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Future Plans



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INTERNATIONAL SOCIAL SECURITY ASSOCIATION

- 
- **Extend and intensify our Global Network on all Continents**

Future Plans

Future Congresses and Events:

- Co-Organizing XX. World Congress on OSH, Frankfurt, Germany, August 2014
- Strategy Workshop & Study Tour, Germany, August 2014
- International Mine Rescue Conference, Hannover-Lübeck-Berlin, Germany, September 2015

Future Plans



Analyze Possibilities and Create a

Global Mining Award

for Best Practice in Safety and Health

Future Plans

Let's do it together - Join ISSA Mining now!

www.issa.int/prevention-mining

helmut.ehnes@issa-mining.org



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