

Report of ISM Commission 1 (and 3, 4, 5)

In 2011, ISM commission 1 had one commission meeting which was planned and organized as a joint commission meeting of the commissions 1, 3, 4 and 5. The meeting took place in May this year in Freiberg (Germany).

The meeting was organized by the chairman of commission 1 and chaired by chairman of commission 3. The chairmen of commission 4 and 5 were unfortunately not able to participate for business reasons.

9 colleagues from 4 countries attend the meeting: Canada, Germany, Russia and Switzerland.

During the first day, the agenda was worked through:

Commission work

After some formal work, the commission meeting started with brief reports about the commission work.

These reports launched a longer discussion about general commission activities and possible future commission work:

- The current commission work and its outcome have not been satisfying in recent times for some reasons:
 - The lack of active working commission members and of special (mine surveying) topics has decreased the level of interest for colleagues to collaborate on commission meetings and sessions.
 - There is a possible misunderstanding of the term “Mine Surveying” in different regions.
 - In some countries “Mine Surveying” is a standalone profession (e.g. “Markscheidewesen” in German speaking countries) with more tasks than just surveying in mining,
 - whereas in other countries it is just a special part of surveying.

The agreed outcome of the discussion was to increase the interest for collaboration:

- Future commission meeting should be organized in connection to international symposia (symposia are shorter than congresses) with a high level of interest in mine surveying related topics e.g. surveying, mining, environmental issues, ground movements, etc. which includes all competences of the ISM commissions
 - Commission meetings could be held as a “mine surveying” session within a symposium with a separate chapter within the symposium proceedings
 - Such “mine surveying” sessions should offer special and interesting topics of current interest for the mine surveyor community to ...
 - prevent competing with other associations concerning surveying, mining, environmental issues, ground movements etc.

- offer the organizing host additional and interesting special mine surveying contributions to the symposium
- Such “mine surveying” sessions within a symposium would mean to leave the formal limits of the commissions.
 - In fact commission meetings have been joint meetings in the recent times, so that the differentiation of the several commissions has been less and less visible. So, there is no need to change the formal statutes immediately.
 - To focus future “ISM”-work on special topics, the detailed work could be done in smaller workgroups without yearly schedules
- A suggested special general topic can be: Development of special technology in mine surveying

The commission chairmen should discuss among themselves possibilities to realize those ideas.

Contributions

After this discussion, 3 contributions were given about new developments in

- instrumentation at LEICA Geosystems,
- new developments in surface movement and slope monitoring at DMT
- and about opportunities for foreign scientists to build up a school of mine at the Irkutsk State University in Russia

Field Trip

On day 2 of the commission meeting, a fieldtrip lead to the old mine site “Reiche Zeche”, which is part of the Freiberg University.

The underground visit took about 2 hours with a lot of interesting information about the old mining works.

The field trip ended with a rustic lunch at the Mine Surveying Institute at the Freiberg University.

The date and venue for the next meeting is not fixed yet and need to be discussed among the commission chairmen regarding the above mentioned ideas.

All details of the meeting are published on the ISM website under the section of the commissions.

Ralf Schulte
Commission 1 chairman

Australian National Report for the 38th ISM Presidium Meeting in Sun City, RSA

Prepared by: Dr Andrew Jarosz (Australian Representative, Presidium Member)

This report presents the activities and achievements of two Australian professional mine surveying organisations, e.g. Australian Institute of Mine Surveyors (AIMS) and the Mining and Engineering Commission of the Surveying and Spatial Sciences Institute (SSSI). It covers the last twelve months (July 2009 – June 2010).

The Australian Institute of Mine Surveyors (AIMS) is an organisation with members located mainly in the Eastern states (Queensland, New South Wales and Victoria) of Australia.

Engineering and Mine Surveying Commission of the Surveying and Spatial Sciences Institute (SSSI) continues traditions of the IEMSA (Institute of Engineering and Mine Surveying Australia) with members located mainly in Western Australia.

There were many achievements in the last 12 months, particularly:

1. An outstanding joint AIMS/SSSI Australian Mine Surveying Convention was held in Perth (12-14 Aug 2009), seeing our largest contingent ever brought together.
2. AIMS initiated talks between the governing survey bodies from WA, NSW and QLD. The AIMS Executive and invited members, including representatives from WA, reviewed and regenerated a business plan for the next 2 years. The planning session was conducted in house and held in Brisbane covering many areas of AIMS' management, member services and future dealings. A plan was developed regarding AIMS direction and goals for the coming years.
3. Discussions were also conducted with SSSI regarding future dealings and representation of Australian mine surveying profession nationally and internationally. During these meetings discussions were held regarding AIMS becoming the Mine Surveying representative for SSSI in Western Australia, initially, and then all of Australia. This would be controlled under an agreement between AIMS and SSSI in terms of a Memorandum of Understanding. This understanding would see AIMS control and administer the Mining and Engineering Commission of SSSI under our current organisation structure and policies. The MOU is currently with the SSSI Board for their consideration. The agreement between AIMS and SSSI should ensure that mine surveyors would have, as an industry, a common voice to government bodies, educational institutions and associations alike.
4. Many regional professional seminars were held. Two (2) were held in Queensland, one (1) in Victoria, five (5) in New South Wales and two (2) in Western Australia. These were all well attended and from all reports were well received.

5. The first AIMS University Scholarship was established and awarded. The scholarship is worth \$2500 per semester. The presentation was conducted at the awards evening held at the University of Southern Queensland in March. Patrick Metcalfe, the winner of scholarship, obtained high academic results at secondary school and has since progressed well during his studies at university.
6. TAFE Work Based Training Mine Surveying Program, first delivered in 2008, is continued in 2009 and 2010 and provides technical education to remotely located students based in Newman & Kalgoorlie, Western Australia. The program is designed for mine surveying students who are working full or part time. They are able to complete Cert 4 right through to an Advanced Diploma in Mine Surveying.

Over the last 12 months the WA Engineering and Mine Surveying Commission of SSSI was engaged in many activities, namely:

1. Actively contributed to the 2009 Kenner Review of the WA Mine Safety and Inspection Act 1994, providing at least four recommendations related to the mine surveying activities.
2. Continually was engaged and communicated with all Key WA mine surveying stakeholder groups:
 - a. WA mine surveyors
 - b. Surveying & Spatial Sciences Institute
 - c. Australian Institute of Mine Surveyors
 - d. Department of Mines and Petroleum - WA Mine Survey Board
 - e. Curtin University Surveying Programs
 - f. Central TAFE Surveying Programs
 - g. Survey equipment, software & service suppliers
 - h. WA mining companies
3. Delivered a number of workshops, seminars & networking opportunities to WA mine surveyors.
4. Assisted with the formation of KEMSIG (Kalgoorlie Engineering & Mine Surveying Interest Group).
5. Continued to work in partnership with the WA Mines Survey Board to address the following WA legal and professional mine surveying issues:
 - a. Lack of reciprocation of the WA Mine Surveying Certificate of Competency (Grade 1 & 2 Authorization) by NSW & QLD – positive progress is slowly being made on this issue,
 - b. Implementation of a compulsory oral exam for WA authorization candidates – it was made compulsory in March 2010,
 - c. Possibility of CPD / Annual registration requirements for WA mine surveyors – the Mines Survey Board has invited comment from all stakeholders before the issue will be progressed further.

It can be seen that over the last twelve months, there were a number of significant activities on the Australian mine-surveying scene. The active collaboration between AIMS and SSSI has a chance to lead successfully to single representation of Australian mine surveying professionals nationally and internationally.

2009 the Activity of ISM Commission 6

*Prof. Yu Chang Xing
Commission 6 Chairman*

2010 October 28- November 2 , ISM Commission 6 held the 4th International Conference in Irkutsk, Russia. This Conference were to joint with **Irkutsk State Technical University of Russia , The Russian Baikal union of mine surveyors, Russian Baikageoservis company.** About 60 peoples participants Conference. Total 11 papers were presented during Conference. Mr. Anatoliy Okhotin, Prof. of Mine Surveying Department of University, as Co-Chairman of Conference held this activities .

The Deputy Rector of University and Dean of Department attended Opening Ceremony. In speak of Deputy Rector,(see photo 1) he, in name of University , welcome the International Conference of ISM Commission 6 that it were held in **Irkutsk** and welcome authors and guests ,he were very pleasure for increasing the friendship with International Collegues and promoted the development each other.



— photo 1 Opening Ceremony
from Left: 1:Prof. Yu, 2. Prof. Anatoliy 3. Deputy Rector
4. Dean of Department



photo 2 ISM Commission 6 Chairman Prof. Yu
Speak on Opening Ceremony



photo 3 Prof. Yu present as a gift- Commission 6
Emblem (made in China Agate) to Prof. Anatoliy



photo 4 out side Irkutsk State Technical University

During Conference, hosts organized the visiting in a salt Mine which it were 40 km away Irkutsk about. Hosts organized a dance party for International quests too.

Conference print a proceeding of papers

On The Opening Ceremony, Prof. Yu Chang Xing, ISM Presidium Member, Honorary Member, Commission 6 Chairman made the report relating the working of Commission 6 in 2008~2009 and 4th International Congress Conference of Commission 6.

2011 Active Planing of ISM Commission 6

In 2011, the working planing of Commission 6 are 2 :

- 1) It will hold a activity in Asia -- India (or Mongolia), the sacle are 50 peoples about, may be to co-operation with local Country Organization and University. At present ,this planing are being contacted.**

- 2) According to the requirement of Henan Polytechnical University , China, they will unite Commission 6 and China ISM Committee to host a Academic Conference, about 100 peoples. Henan Polytechnical University,China have already proposed a preliminary report. This event are in consultation.**

Report of commission 1 to the Presidium

Meetings during the working period 2007 - 2010

2008: RWTH Aachen University, Aachen, Germany

2009; Camborne School of Mines, Penryn, United Kingdom

2010: VŠB - Technical University of Ostrava, Ostrava, Czech Republic

Present ISM commission 1 work:

Regarding the number of active members to ISM commission 1, the commission chairman is looking for alternative opportunities to work on international issues.

At the Aachen University are several mining students interested in international work. To meet their regulations and to get their degree, the students have to do and finally present some project work. These are a good base for commission work on several issues. But, regarding the turnover of students from year to year, students are barely to win as active members to the commission. Nevertheless, commission 1 is working according its work plan.

Educational concern

Commission 1 has started a new investigation about comparability of international mining and mining related programs with the special question:

- In which way are *mine surveying tasks* covered by educational programs.

At the moment there are two studies in work; results will come out in approximately at the end of 2010.

At RWTH Aachen University, the mining and mine surveying program will merge. With the beginning of winter semester 2010/2011, the new program will have a mining bachelor comparable with other international programs and a master program with a focus on mining and an optional choice of two modules within the mining focus, one will be mine surveying. Details were presented at the XIV International ISM Congress in Sun City, South Africa.

Guideline of best practice

Commission 1 has started a general study about the scope of work of internationally working mine surveyors. The goal is, to compare the outcome of this study with the current results of the guideline. Results are expected at the end of this year.

Int. licensing requirements

After the presidium meeting in Ulaan Bataar, Mongolia, the ISM was asked to build a table of international licensing requirements and for mine surveyors. The chairman of commission 5 has overtook this duty. Commission 1 supports this work by investigations about new national German rules.

Ralf Schulte

Commission 1 chairman

September 22, 2010. Sun City, South Africa

THE REPORT OF 4TH ISM COMMISSION ACTIVITY FROM 2007 TO 2010

(between the ISM Congress in Budapest and Congress in Sun City)

After the last Congress in Budapest (Hungary) three meetings of the Commission were organized (Table 1). The Meeting in year 2008 was held at the Technical University Bergakademie Freiberg/ Germany and it was organized during the 9th Geokinematic Day Conference. The second meeting took place in Exeter at the Camborne School of Mines in July 2009. The third meeting was held in Poland in June 2010.

Table 1. List of meetings of the commission 4 in the last 3 years.

Venue	Members	Guests	Delivered presentations	Chairmen
Freiberg/Germany	9	0	2	R. Hejmanowski
Exeter	Joint meeting	-	3	M. Livingstone-Blevins
Cracow/Poland	6	0	1	R. Hejmanowski

Just after the ISM Congress in Budapest the new workplan of the commission was delivered. This workplan was established on the basis of suggestions of the members. The document was sent to all commission members in English.

The activity of the commission on the level of mining industry was in the time of three years enlarged. In September 2009 the special session during the World Mining Congress in Krakow was organized by the members of the commission. We had about 12 technical paper presentations. The Vice President of the ISM (Prof. Axel Preusse) lead the session. It was really important for the profession of mine surveyors to organize this session on the mining congress. Every two years the Commission members Co-organize an domestic mine surveyors conference in Poland.

The Commission membership has changed. During the last 3 years 5 new members joined the commission and 4 members have resigned (Table 2).

Table 2. New members of the commission 4.

✓ Alex Bals, from Anglo Gold Ashanti / South Africa (Kimberley, ZA 2008),,
✓ Jan Blachowski, from Wroclaw Technical University/Poland (Exeter, GB 2009),
✓ Agnieszka Malinowska, from AGH University of Science and Technology in Cracow/Poland (Exeter, GB 2009),
✓ Wojtek Skoblinski, from KGHM Polska Miedz S.A. /Poland(Exeter, GB 2009),
✓ Karsten Zimmermann, from DMT / Germany (Szczyrk, PL 2010),

The number of members is stable. We have at the moment 54 members. Unfortunately there are some problems with the communication between members. I experience that we invited the new members into the commission and they were passive from the beginning. Only about 30% of the membership is active in meaning the mail communication. That is why I would suggest to invite the new members for (let say) probationary time for one year in order to check their activity and to check their will to work in commission. This active part of the membership may improve in the future the activities of the commission.

In the work plan for the 4th Commission in the period between the ISM Congress in Budapest (2007) and the congress in Sun City (2010) where were worked out some rules and techniques which have been used in the ISM countries to predict land subsidence and to assess structures damage in mining areas.

As a part of this issue the work plan of best practices in deformation prediction was developed. Guidelines consist of several parts. In the first part was concluded a review of methods of rock mass deformation and ground surface prognosis caused by underground mining used in the world. Review concerned mainly numerical and empirical prediction methods and the approaches based on the influence functions. The analysis of efficiency of various methods in solving practical engineering problems related to risk assessment in the mining hazarded areas was presented. Furthermore the legal aspects governing the responsibility of mining companies for damage to buildings and technical infrastructure in various countries around the world were discussed. At the end an attempt were done to define optimal procedures of deformation prediction, which should in future become a guideline for good practice in this field.

The development discussed at last meeting of the Commission (in June 2010) requires further work, which should include:

- Publication of a shortcut in the international journal,
- Supplement to the methods and legal aspects omitted during the previous work (need of appellation to colleagues in the ISM for support and a broader discussion of the information),
- Development of comprehensive guidelines of good practices in the deformation prediction,
- Raise funds to print edition of good practices,
- Print "good practices in land subsidence prediction" under the auspices of the ISM.

It was not possible to rich all goals planned in 2008 but some of the goals could be modified and pushed to the next workplan.

There are some ideas for the activities of the commission 4th in the next 3-years period.

- The compilation of important and interesting information from meetings, conferences around the world and publishing them in magazines in different countries. Chairman of the Commission should be responsible for the information collection. Members of the Commissions will be responsible for publication in the domestic journals if such a possibility would exist. Therefore, the Chairman of the Commission asks for discussion on such a proposal via e-mail. In Poland, such information could appear in one of two major mining journals. Perhaps would be possible to simultaneously create a newsletter of IV Commission on the ISM web site.
- Stimulate activity in the Member States by proposing and conducting sessions under surveying and mining conferences at the national level. A similar session under the auspices of 4th Commission in 2008 was led by Vice President of ISM Axel Preusse during World Mining Congress in Krakow (<http://www.wmc-expo2008.org/en/node/654>).
- Joint publications of 4th Commission's members sharing experiences from different countries.
- Publication of good practices in deformation prediction.
- Development of good practices for deformation measurements (rock mass and land surfaces stabilities in the mining induced areas, slope stability).

Polish Report

ISM Congress 2010 in Sun City (South Africa)
09.2010

Mining

Poland is the leading copper and silver producer in the World. The KGHM Polska Miedz S.A. is the ninth producer of copper (see table 1) and eight producer of silver in the world.

Table 1. The biggest copper producers in the World in 2009 (mining production)

Firm	Production [K. T/year]	World share rate [%]
Codelco	1 781	11,2%
Freeport-McM Copper & Gold	1 650	10,4%
BHP Billiton	1 169	7,4%
Xstrata AG	894	5,6%
Rio Tinto	818	5,2%
Glencore	691	4,4%
Anglo American	686	4,3%
Southern Copper	490	3,1%
KGHM Polska Miedz S.A.	439	2,8%
Norisk Nickel	390	2,5%
remaining:	6 867	43,3%
All together:	15 875	100,00 %

source: CRU International, Copper Quarterly July 2010

In modern times hard coal is still considered as a strategic resource for Poland's economy, as it covers roughly 65% of energetic needs. Before and after World War II Poland has been one of the major coal producers worldwide, usually listed among the five largest. However, after 1989 the coal production is in decline, with the overall production for 1994 reaching 132 million metric tons, 112 million metric tons in 1999, 104 million metric tons in 2002 and 77 million metric tons in 2009. There is 30 hard coal mines in Poland. The biggest one is the LW Bogdanka S.A. which is operating in eastern Poland.

All copper ore and hard coal mines are the underground mines operating on the depth until 1200 m u.e.s.

The estimates of shale gas resources in Poland range from 1,4 to 3 billion cubic meters. This data was compiled by the U.S. consulting firms by comparing the geological conditions of Polish and American geological structures. Ministry of Environment has issued 44 licenses (5-year) to explore for shale gas in Poland, including Exxon Mobil, Chevron, ConocoPhillips and Marathon. The presence of such giants suggests that the caution given the data may be more truth than estimates. The first reliable data of shall gas resources in northern Poland will be given in spring 2011.

Teaching

Mine surveyors studies are offered by two universities in southern Poland.

On the AGH University of Science and Technology in Cracow this specialization is taught at the second level after bachelor study at the faculty of Geodesy and Cartography. The Silesian University of Technology teaches the mine surveying at the faculty of Mining as the specialization on the second level. After study the graduates mine surveyors can work in the mines to acquire the needed practice. After two years on the mine the graduates can pass an exam to be authorized underground or open pit mine surveyor.

Report was prepared by R. Hejmanowski

Chapter 10.7 – Mine Surveying of the SME Mining Engineering Handbook

(Report on the current state of developments by Dr Andrew Jarosz)

Here are the dates and some details regarding the development of Chapter 10.7 - Mine Surveying.

Start of September 2008: ISM Presidium Meeting, Kimberley, RSA. Announcement of the request from Peter Darling (handbook main editor) asking ISM for involvement with writing of the new Chapter 10.7 titled Mine Surveying. Establishment of the chapter development team: Dr Andrew Jarosz, Chair (Curtin University – WASM, Kalgoorlie, Australia), Dr Fred Cawood (Wits University, Johannesburg, RSA), Mr. Gary John Bardill (Bardill Barnard Chartered Surveyors, Sheffield, UK), Prof. Frank Hart (Bluefield State College, Bluefield, WV, USA).

End of September 2008: Development of the “Plan of Action”. Agreement on the chapter’s contents and assignment of responsibilities. (Sections: 1, 3, 4 and 7 = A. Jarosz; Sections: 2, 5 and 6 = F. Cawood, help with introduction = M. Livingstone-Blevins).

End of April 2009: Completion of the first draft (Contributors: F. Cawood, Section 2; A. Jarosz, Remaining Sections) and submission of the draft for comments to other members of the development team. Total length of the chapter over sixty pages. Thanks for extensive input and comments from Prof. F. Hart.

End of May 2009: Request from the main editor to reduce contents to ~30 pages.

End of July 2009: F. Cawood withdrew from the process (as he was overwhelmed by his standard university responsibilities).

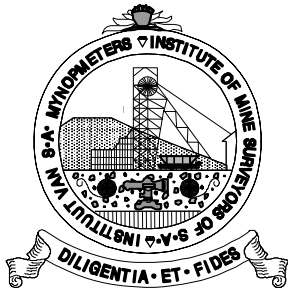
Start of October 2009: Collation of the reduced (from 65pp to 23pp), corrected and updated second draft of the chapter. Submission of the draft to the main editor, P. Darling

Start of November 2009: Draft has passed over the two additional hurdles: three technical reviewers and a production review.

December 2009: Chapter has been edited for grammar, sentence structure, word usage, punctuation, and consistency, as well as, conformance with SME’s book-publishing style.

February 2010: Manuscript of the chapter is created and it passes the proofreading stage.

It is my understanding that the Handbook is now in the last pre-production stage.



*Seat of the
International Society
for Mine Surveying
2008 to 2010*

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38th Presidium Meeting of the International Society for Mine Surveying

September 2010, Sun City, South Africa

Institute of Mine Surveyors of South Africa President's Report

The Institute of Mine Surveyors of South Africa (IMSSA) has continued to deliver on its objectives throughout the year through its active committees and regional branches, as well as ensuring it has representation on various industry forums, advancing the science and practice of Mine Surveying, promoting the character of the Mine Surveying profession of in South Africa and fostering professional etiquette.

The mine surveying profession has a significant impact on mine health and safety. The mining industry values the contribution of mine surveyors and relies on their observing, locating, processing and planning skills to guide operations on surface and underground on a daily basis.

The Institute is playing a critical role to ensure that the role of the mine surveyor is defined and appointees have the appropriate skills.

Executive Committee (Exco)

Exco meetings were dominated by International Society for Mine Surveying (ISM) matters and the IMSSA strategy to responsibly manage Congress organisation, sponsorship and cash flow

leading to, and post the XIV International Congress. Other matters on the Exco agenda for the year included Mine Survey education, and strategy.

SA Council for Professional and Technical Surveyors (PLATO)

At the 2009 PLATO Annual Meeting, PLATO recognised the need for a Professional Certificated Mine Surveyor registration category, over and above the current registration categories of Professional Mine Surveyor, Mine Surveyor and Mine Survey Technician. The new category was approved as Mine Surveyor (Pr. Cert.). All mine surveyors in possession of a Government Mine Surveyor's Certificate of Competency may apply for this new category.

Both the University of Johannesburg and the University of South Africa received PLATO accreditation, meaning that graduates of these institutions will be eligible to register with PLATO. The issues highlighted at both institutions during the accreditation visits have been addressed, but staffing remains a concern and the filling of vacant posts a problem. A shortage of lecturers is an ongoing problem at tertiary education institutions and it is suggested that mining companies consider, as part of their restructuring plans, "parking" personnel at mining schools, rather than retrenching at great expense.

Education Committee

The Education committee consists of representatives of the University of Johannesburg, University of South Africa, University of the Witwatersrand, IMSSA Council members and volunteers from industry. The issue of the impact of the Higher Education Qualification Framework (HEQF) on the education model of the Mine Surveyor in South Africa received attention. Qualifications in their current forms will be phased out within the next five years and in order to align current qualifications with the new HEQF requirements, a working committee has developed models for all new qualifications; Certificate, Degree and Honours Degree. Postgraduate (masters and doctoral) degree models remain unchanged.

IMSSA obtained the rights to the books: *Problems and Solutions for Mine Surveyors* and *South African Mine Valuation* from the Chamber of Mines. The sales from these books are doing well with five reprints since permission was obtained. Progress was also made toward the updating of Mathematics for Mine Surveyors, thanks to a generous donation from Anglo American. This project is now close to completion.

Public Relations Committee

Despite the effects of the worldwide economic downturn the September IMSCON 2009 event was very successful. ISM matters were the main focus of the PR committee for the year, with extensive engagement with the professional conference organisers Global Conferences Africa.

Technical Committee

The new format Journal with relevant content is eye-catching. The Editor's outstanding efforts have been recognised by Council. The papers published in 2010 were mainly from the ISM Congress held in Budapest, complemented by a few locally authored papers.

Additional changes to the Constitution have been identified by the Technical Committee and will be addressed in the coming year, along with an investigation into the allocation of CPD points (continuing professional development).

The Technical Committee is also assisting with, and offering advice regarding the densification of the new active GPS Trig Net system – a function which will continue in 2011.

Branches

The three branches, Mpumalanga, North-West and Free State are functioning well, with attendance of branch meetings being maintained at a healthy level. This level of participation indicates that the format of participation and content of technical presentations is appreciated by Members.

Representation on Allied and Industry Forums

The Institute is the current official seat of the ISM which entails certain responsibilities particularly for the President of the ISM, Mike Livingstone-Blevins.

Regarding the *Mining Regulatory Advisory Committee (MRAC)*, which is a tripartite task group consisting of State, Employer and Labour representatives, the committee has revised chapters of the Mine Health and Safety Act affecting the appointment, duties and responsibilities of the Mine Surveyor.

The Institute and PLATO remain involved and serve on the SAMCodes committee (codes for reporting on mineral resources and ore reserves, and on valuation). For mine surveyors, competence to report reserves and corresponding value statements becomes possible upon registration with PLATO.

IMSSA is also represented at PLATO Council, the Mining Education Trust Fund and the Mine Professionals Association.

Strategy

Council has formulated strategy on the following key issues affecting mine surveyors, which will be addressed in 2011:

- Education – in particular the implementation of the new mine survey education model;
- Professional registration at PLATO and stronger links with the Southern African Institute of Mining and Metallurgy;
- The role of the mine surveyor in mine planning – in particular the provision made by Engineering Council of South Africa (ECSA) to provide for non-ECSA professional input; and
- Continuing Professional Development (CPD) points for mine surveyors.

Fred Cawood

Professor of Mine Surveying

President of the Institute of Mine Surveyors of South Africa

United Kingdom's Mineral Report ISM Congress 2010 South Africa

This report covers the current position for which statistics are available regarding the mineral industry in the UK. These are available for the period leading up to the summer of 2008. It will therefore not fully reflect the effect of the worldwide recession, or the period of economic expansion experienced by the building and construction industries in the UK during the last 6 months. This has been due to Government investment in building and infrastructure for the end of 2009 and the start of 2010. The facts and figures contained within are as derived from the UK Valuation Office Agency Property (VOA) Market Reports and data from the Quarry Products Association (QPA).

Construction Materials

According to the results of the quarterly market survey by the Quarry Products Association, sales of construction materials all increased in the fourth quarter of 2007, compared with the same period of 2006. (In 2006 crushed rock increased by 1%, while sand and gravel was down by 2%). For 2007 crushed rock volumes grew by 6%, sand and gravel by 2%, ready-mixed concrete by 3% and asphalt by 3%. The VOA report indicates that for the whole of 2007, a 5% increase in crushed rock and a 1% increase in sand and gravel produced an overall 3% improvement in aggregates sales volumes. Ready-mixed concrete growth for the year was 2%, confirming the continued growth of construction activity in 2007.

The QPA quarterly construction material trends survey indicated that there was a downturn in construction activity in the second quarter of 2008, compared with the same period of 2007. The VOA indicate that the second-quarter decline in crushed rock aggregates sales (-5%) followed a flat first quarter, while the decline in sand and gravel aggregates sales evident in the first quarter (-8%) was broadly maintained in the second quarter (-7%). The QPA says the downturn in construction activity is also reflected in the 6% decline in sales of ready-mixed concrete in the first half of the year, confirming that the reduction in orders for new housing, commercial and industrial construction recorded to date in 2008 is now impacting in the concrete market. The slowdown in the UK housing market in 2008 continued to effect construction products firms. Lafarge UK reported an 11% fall in revenues. Tarmac reported a 22% drop in operating profit in the first half of 2008 while Cemex UK experienced a 23% fall in gross profit for the first half of the year. As indicated above, Government investment in new infrastructure and building programmes has helped to slow and reverse this trend.

While asphalt volumes were for 2007 flat as a whole, despite some recovery in the second half. Steady growth was reported in 2008 for asphalt sales. This sector saw a 3% growth for the first 6 months of 2008 as road building schemes were being completed.

The industry also saw an increase in April 2009 of the aggregates tax imposed by the Government to £2.00 per tonne of aggregate mined. Interestingly Only 0.12% of the UK land area was being quarried in 2007, and the area of land restored was higher than the areas of land prepared for quarrying

Marine Aggregates

Marine aggregates are an important contributor to the UK minerals industry; especially for certain locations for which land based sources of sand and gravel are increasingly difficult to obtain, e.g. Wales. Recent figures for production indicate that these resources provide 90% of

fine aggregate demand in South Wales, 20% of sand and gravel demand in England contributing 50% of construction aggregate demand for London. Legislation such as the recently published Marine and Coastal Access Act 2009, aims to ensure a balance between aggregate production and environmental protection of coastal resources.

Recycled and Secondary Aggregates

The QPA fourth Sustainable Development Report which provides data up to 2007 indicates that the share of recycled and secondary aggregate of the total GB aggregates market was 25% in 2007 which is the highest share anywhere in Europe. Current trends indicate output of around 50 million tonnes which compares well with 36 million tonnes being produced in 2001.

Coal

Even though the UK still depends heavily on coal as a source of fuel for power stations the UK coal industry still is still reducing. The following table based on Coal Authority and Department of trade and Industry data indicates the continuing trend:

Year	Deep mined	Opencast	Total UK	Deep mines	Opencast sites
2005	9,563	10,445	20,498	13	35
2006	9,444	8,635	18,528	13	26
Reduction	1%	17%	10%		

The last deep mine in Wales closed in 2008 however the recently opened East Merthyr opencast site has recently bucked this trend. The site has permission for 10 million tonnes for utilisation at the nearby power station. Permission has recently been achieved for a new deep anthracite deep mine at Margam, South Wales. The number of mines in the UK for 2008 was 17, of which nearly 50 percent were small scale.

Energy Minerals

Production fell by 6% in 2006 and 8% in 2007, but the UK still managed to be a net exporter for that year. The recently very high oil price has allowed the industry to stabilise, and both onshore and offshore outputs remain constant. The UK, which had been self sufficient in gas, has in recent years found that this is no longer the case. Energy security is a real concern and continuing investment in varying sources of renewable energy, primarily wind, and a new examination of the merits of nuclear power are currently under way.

Metalliferous Minerals

The continuing high price of metals across the world has resulted in attention being turned to some of the traditional metal mining locations of the UK that had ceased production some time ago. Western United Mines Limited was created in November 2007 and announced investment in excess of £3.5 million by June 2008 towards mine development including new tunnelling and drilling at South Crofty, Cornwall. The Company was aiming to bring the mine back into tin production, possibly as soon as the end of 2009; however in August of 2010 they announced that they would be widening their exploration areas before commencing production.

Regarding copper production, Anglesey Mining entered into a formal agreement for the sale of its Parys Mountain project to Western Metals Ltd (WML) in April 2008. WML are currently carrying out surface drilling and extending underground development so that the

mine which has a potential life of 20 years, can be moved back towards production. The table below provides recent ore details provided by the company on their web site:

Table 1 - White Rock resources - JORC compliant

Category	Zone	Fe	Cu%	Pb%	Zn%	Ag g/t	Au g/t
Indicated	White Rock	1.75	0.36	2.22	4.27	39	0.43
Inferred	White Rock	0.4	0.3	1.6	3.5	45	0.38

Table 2 - Other resources - not JORC compliant

Category	Zone	Fe	Cu%	Pb%	Zn%	Ag g/t	Au g/t
Indicated	Engine	1.41	1.99	3.42	6.65	99	0.79
	Total	1.41	1.99	3.42	6.65	99	0.79
Inferred	Engine	2.8	3.2	1.9	4.5	22	0.1
	Carreg y Doll	1.4	2.1	2.6	4.8	12	0.2
	Total	4.2	2.8	2.2	4.6	19	0.1
Total		5.61	2.6	2.5	5.1	39	0.3

All	Total	7.76	2.0	2.4	4.9	39	0.33
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United Kingdom's Mineral Report ISM Congress 2010 South Africa

This report covers the current position for which statistics are available regarding the mineral industry in the UK. These are available for the period leading up to the summer of 2008. It will therefore not fully reflect the effect of the worldwide recession, or the period of economic expansion experienced by the building and construction industries in the UK during the last 6 months. This has been due to Government investment in building and infrastructure for the end of 2009 and the start of 2010. The facts and figures contained within are as derived from the UK Valuation Office Agency Property (VOA) Market Reports and data from the Quarry Products Association (QPA).

Construction Materials

According to the results of the quarterly market survey by the Quarry Products Association, sales of construction materials all increased in the fourth quarter of 2007, compared with the same period of 2006. (In 2006 crushed rock increased by 1%, while sand and gravel was down by 2%). For 2007 crushed rock volumes grew by 6%, sand and gravel by 2%, ready-mixed concrete by 3% and asphalt by 3%. The VOA report indicates that for the whole of 2007, a 5% increase in crushed rock and a 1% increase in sand and gravel produced an overall 3% improvement in aggregates sales volumes. Ready-mixed concrete growth for the year was 2%, confirming the continued growth of construction activity in 2007.

The QPA quarterly construction material trends survey indicated that there was a downturn in construction activity in the second quarter of 2008, compared with the same period of 2007. The VOA indicate that the second-quarter decline in crushed rock aggregates sales (-5%) followed a flat first quarter, while the decline in sand and gravel aggregates sales evident in the first quarter (-8%) was broadly maintained in the second quarter (-7%). The QPA says the downturn in construction activity is also reflected in the 6% decline in sales of ready-mixed concrete in the first half of the year, confirming that the reduction in orders for new housing, commercial and industrial construction recorded to date in 2008 is now impacting in the concrete market. The slowdown in the UK housing market in 2008 continued to effect construction products firms. Lafarge UK reported an 11% fall in revenues. Tarmac reported a 22% drop in operating profit in the first half of 2008 while Cemex UK experienced a 23% fall in gross profit for the first half of the year. As indicated above, Government investment in new infrastructure and building programmes has helped to slow and reverse this trend.

While asphalt volumes were for 2007 flat as a whole, despite some recovery in the second half. Steady growth was reported in 2008 for asphalt sales. This sector saw a 3% growth for the first 6 months of 2008 as road building schemes were being completed.

The industry also saw an increase in April 2009 of the aggregates tax imposed by the Government to £2.00 per tonne of aggregate mined. Interestingly Only 0.12% of the UK land area was being quarried in 2007, and the area of land restored was higher than the areas of land prepared for quarrying

Marine Aggregates

Marine aggregates are an important contributor to the UK minerals industry; especially for certain locations for which land based sources of sand and gravel are increasingly difficult to obtain, e.g. Wales. Recent figures for production indicate that these resources provide 90% of

fine aggregate demand in South Wales, 20% of sand and gravel demand in England contributing 50% of construction aggregate demand for London. Legislation such as the recently published Marine and Coastal Access Act 2009, aims to ensure a balance between aggregate production and environmental protection of coastal resources.

Recycled and Secondary Aggregates

The QPA fourth Sustainable Development Report which provides data up to 2007 indicates that the share of recycled and secondary aggregate of the total GB aggregates market was 25% in 2007 which is the highest share anywhere in Europe. Current trends indicate output of around 50 million tonnes which compares well with 36 million tonnes being produced in 2001.

Coal

Even though the UK still depends heavily on coal as a source of fuel for power stations the UK coal industry still is still reducing. The following table based on Coal Authority and Department of trade and Industry data indicates the continuing trend:

Year	Deep mined	Opencast	Total UK	Deep mines	Opencast sites
2005	9,563	10,445	20,498	13	35
2006	9,444	8,635	18,528	13	26
Reduction	1%	17%	10%		

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Международное Общество по маркшейдерскому делу

International Society for Mine Surveying

Internationale Gesellschaft für Markscheidewesen

38th Presidium Meeting – Agenda – 20 to 24 September 2010

Sun City, South Africa

Special Note: The Presidium Meeting will be held during the XIV International Congress at Sun City in South Africa.

For this reason, the meeting will be kept short and focussed, with the rest of the programme being determined by the Congress.

1. The Opening of the 38th Presidium Meeting of the ISM
2. Confirmation of Attendees
3. Apologies for Absence
4. Acceptance of Agenda
5. Obituaries
6. Personal Notes
7. Confirmation of voting rights (confirmed 36th Presidium Meeting, 2008)
8. Approval of the Minutes of the 37th Presidium Meeting held on 21-26 September 2009, in Ulaanbaatar and Baganuur, Mongolia
9. Matters arising from the Minutes of the 37th Presidium Meeting
10. Admission of new members
 - a. Delegates of individual countries
 - b. Chairperson of the Congress Organising Committee – Germany – Andersen
11. Proposals of Honorary Membership
12. Correspondence
13. Nominations and acceptance of new members to Commissions

14. Commission Reports
 - a. Commission 1 – Dr Ralf Schulte
 - b. Commission 2 – Prof Vladislav N Popov
 - c. Commission 3 – Mr Norbert Benecke
 - d. Commission 4 – Prof Ryszard Hejmanowski
 - e. Commission 5 – Dr Martin Vrabel
 - f. Commission 6 – Prof Yu Changxing
15. Report by the SME Handbook updating committee
16. Confirmation of XV International Congress of the ISM to be held in Germany in 2013
 - a. Brief report on XV Congress preparation – Chairperson of the Congress Organising Committee
17. Confirmation of future Presidium meetings
 - a. 2011 – Germany
 - b. 2012 – Russia (confirmation not received yet – Australia?)
 - c. 2013 – Germany
 - d. 2014 – Australia (Western Australia or Queensland)
 - e. 2015 – ?
 - f. **2016 – Ukraine declined MUST RESOLVE FOR NEW VICE PRESIDENT**
18. Short reports and presentations from representatives of ISM member-countries on new and important changes affecting mining activities and of the prospects for mining and mine surveying development in their respective countries
19. Information regarding national events of interest to minerals surveyors (all Presidium Members)
20. Report by Chairman of Young Authors Prize Jury
 - a. 1st place
 - b. 2nd place
21. Date and place of next Presidium Meeting
22. Miscellaneous
23. Closure



Международное Общество по маркшейдерскому делу

International Society for Mine Surveying

Internationale Gesellschaft für Markscheidewesen

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Международное Общество по маркшейдерскому делу
International Society for Mine Surveying
Internationale Gesellschaft für Markscheidewesen

XIV International Congress

Extract from President's Opening Address – 21 September 2010

Founding and Functioning of the ISM

Founding of the ISM

I must assume that many of our delegates do not know the history to the ISM, so as was done at the XIII International Congress in 2007 in Budapest I will provide some information on the founding of the ISM and its functions.

The concept of an International Meeting of Mine Surveyors emerged in the former Czechoslovakia. The intent of such a meeting was to establish a forum in which problems and challenges relating to the broad activities of mine surveying could be discussed, and science and technology shared.

The first meeting took place in Prague in 1969 and was attended by people from several countries. It was a success.

From this first meeting, the concept grew to that of establishing an international forum, which we now know as the International Society for Mine Surveying, or the ISM. However, this was not an easy task, as the delegates did not have the authority or national mandate to establish such a body.

The leader of the Hungarian delegation volunteered to organise the next international meeting in Budapest for three years hence in 1972. A Founding Committee was established from the delegates of the 1st meeting. A Working Commission was established to formulate the Statutes of the Society for presentation at the Budapest meeting.

So what was the 2nd International Mine Surveying Conference was held in Hungary, in Budapest in June 1972. It was attended by 437 mine surveyors from 20 countries, coincidentally, the same number of countries represented at this Congress.

On the 6th of June 1972 a Members Assembly was held at which the first Executive Presidium was elected from Austria, the Soviet Union, Sweden, West Germany and Hungary.

Since the 2nd International Mine Surveying Conference, the organisation evolved and matured. Statutes were agreed and introduced, Commissions (standing working committees) established, the 3 to 5 year cycle of Congresses was introduced, as well as regular meetings of the Presidium and Commissions.

What started as a small gathering of people to share knowledge and experience grew at its peak into an international organisation of 43 member countries, recognised by the United Nations (UNESCO), thanks to the vision and dedication of its volunteer members.

All of this took place in during the Cold War, a period where East and West were not particularly trustful of one another and contact was made extremely difficult by the politics of the day. But the drive of the members of the ISM to share knowledge won.

As I said at the 37th Presidium Meeting last year in Mongolia:

“No Borders, no politics, just a fraternity united by our profession”

I think this is a superb achievement and deserves a round of applause!

Functioning of the ISM

The ISM is an association of specialists in mine surveying or in the fields belonging thereto and is a permanent member of the World Mining Congress.

Its purpose is to:

- share knowledge through scientific congresses and publications;
- maintain active commissions in specific focus areas or specialist fields;
- co-operate with other international societies in the fields of mining, geodesy, geology, geophysics, rock mechanics, etc; and
- foster worldwide co-operation in mine surveying.

The Presidium (or Board) is comprised of the:

- President
- Two Vice Presidents
- Delegates of individual countries – nominated by their national associations
- Honorary Members
- Chairman of the Congress Organising Committee

There are six Commissions, each led by a Chairman

- Commission 1 – Education, Legal Issues, Web-presentation and History
- Commission 2 – Geometry of Mineral Deposits / Mineral Resource Management

- Commission 3 – Instruments, Mine Surveying Measurements and Mining Cartography
- Commission 4 – Rock and Ground Movements, Subsidence Damages
- Commission 5 – Environmental Planning
- Commission 6 – China Focus Group addressing all of the above, as well as economic transformations, sustainable development, land reclamation and new energy resources.

The Commissions submit annual work plans to the Presidium, and reports on Commission activities during the year under review. Commissions are the working heart of the ISM - the first line of professional engagement and knowledge sharing.

The Presidium acts as the Board of the ISM, directing the organisation and ensuring that work is done and that the organisation responds to the environment in which it operates.

The Congress Organising Committee and the Scientific Committee have the enormous task of making events like this possible and maintain the standard of scientific content that is shared.

M G Livingstone-Blevins

President

International Society for Mine Surveying

21 September 2010



Международное Общество по маркшейдерскому делу
Internationale Gesellschaft für Markscheidewesen
International Society for Mine Surveying

Seat of the ISM:

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11 July 2010

Honoured Reader,

INVITATION TO ATTEND THE 38TH ISM PRESIDUM MEETING TO BE HELD IN SEPTEMBER 2010, IN SUN CITY, SOUTH AFRICA

Greetings from South Africa!

It is my pleasure to invite you to participate in the 38th Presidium Meeting of the International Society for Mine Surveying (ISM), to be held at Sun City, from 20 to 24 September 2010. The meeting will coincide with the XIV International Congress of the ISM.

The Agenda of the Presidium Meeting has been placed on the ISM website.

The programme for the meeting is governed by the Congress, therefore any queries regarding the Presidium should be directed to the professional conference organisers, or to the chairman of the congress organising committee:

Congress website www.ism2010.co.za, or

Mr Alex Bals (Chairman; Congress Organising Committee) abals@anglogoldashanti.com

I look forward to meeting you in South Africa in September.

Contact the President of the ISM:

Mr Michael G Livingstone-Blevins

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MARSHALLTOWN 2107

South Africa

Phone: +27 11 638 2476, Fax: +27 11 638 2018, mlivingstoneblevins@anglo.co.za

With best regards,



Mike Livingstone-Blevins
President
International Society for Mine Surveying



c.c.
Prof. Dr.-Ing. Axel Preusse

Vice President

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