

Proceedings, Annual General Meeting, 1991

The 94th Annual General Meeting of The South African Institute of Mining and metallurgy was held in the Gold Room of the Transvaal Automobile Club in Johannesburg on Wednesday, 14th August, 1991.

Obituaries

The President announced the deaths of the following members of the Institute:

Honorary Life Fellow

and Past President

1956/57:

Dr William Bleloch

Other Members: W. Allen, E.T. Dunstan, G.D. Gouffé, D.D. McWilliam, W.R. Atkinson, J.J. Edwards, P.L. Grintock, M.S. Grobler, J.T. Brownell, A. Frank, J.H. Lombard, Dr R.A. Murray, A.P. Dippenaar, T. Schmoll, R.J. MacGregor, G. Schwartz, M.L. Jones, P.J. Stacey.

As a mark of respect to the memory of the deceased and in sympathy with the bereaved, all rose and observed a moment of silence.

Minutes

The minutes of last year's Annual General Meeting (15th August, 1990), which were published in the September 1990 issue of the *Journal*, were confirmed.

Welcome

The President extended a hearty welcome to Dr Paul du P. Kruger, the recipient of the Brigadier Stokes Memorial Award, Mr T.I. Steenkamp (President of the Chamber of Mines of South Africa), Mr J.B. Raath (Government Mining Engineer), and Dr R.D. Marcus (President of the South African Engineering Association). He also welcomed senior members of industry, Honorary Life Fellows, Past Presidents, Presidents of sister institutes and other associations, Members, and other guests.

Honorary Life Fellowship

President: Honorary Life Fellowship is awarded by Council to Corporate Members of the Institute who have rendered outstanding service to the industry or to the Institute. It is my pleasure to announce that Council has agreed to confer Honorary Life Fellowship on Dr Horst Wagner for his dedication to his profession and the honour he has brought to his profession and to the Institute.

Dr Wagner was born in Salzburg, Austria, in 1939, and received his primary and secondary education there. After completing his National Service in the Austrian Army, he commenced his studies at the Mining University, Leoben, in 1959. He graduated as a mining engineer in 1963, and was appointed Junior Lecturer in the Department of Mining Engineering at Leoben. In 1968, he was awarded a Ph.D. degree for his research on rock-cutting and, in the

following year, emigrated to South Africa to join the Research Organisation of the Chamber of Mines of South Africa (COM) as a Research Officer.

In 1972, Dr Wagner was appointed Chief of the Strata Control Division of the Chamber's Collieries Research Laboratory. He served as Assistant Director of the newly formed Mining Operations Laboratory from 1976 to 1978, when he was appointed Director. In 1984, he was appointed Assistant Research Adviser to the COM with specific responsibilities for research into rock pressure, problems on gold mines, and coal mining. He became Director General of the Chamber of Research Organisations in 1986.



Mr H.G. Mosenthal with Dr H. Wagner, recipient of Honorary Life Fellowship

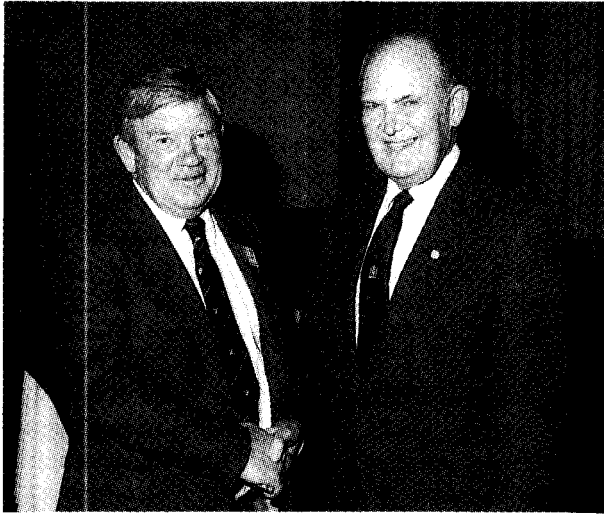
Following major restructuring of the Chamber of Mines, Dr Wagner was appointed Senior General Manager, Operations, with responsibility for the Research Organisation of the Chamber, the Safety and Technical Services, the Rand Refinery, Nufcor, and the Rand Mutual Assurance Company. He is a Fellow of The South African Institute of Mining and Metallurgy, and has been on the Council since 1979. He served as President in 1986/87, and as Treasurer for the next 5 years.

Fifty-Year Membership Award

President: This award is made to Mr P.W.J. van Rensburg who, in addition to attaining 50 years' membership of the Institute, has served on the Council of The South African Institute of Mining and Metallurgy for the past 26 years, and as President in 1973/74.

Brigadier Stokes Memorial Award

President: The Brigadier Stokes Memorial Award was instituted in 1980 to commemorate the outstanding contribution to the South African mining industry made by Brigadier R.S.G. Stokes, who was an Honorary Life Fellow and Past President of this Institute. The award is



Mr H.G. Mosenthal and Mr P.W.J. van Rensburg, recipient of a Fifty-Year Membership Award

made to an individual for the very highest achievement in the South African mining and metallurgical industry. It gives me great pleasure to announce that the award for 1991 is to be made to Mr Paul du P. Kruger.

Paul du Plessis Kruger was born in Cradock on 22nd May, 1937, and matriculated at Gill College, Somerset West, in 1954. He qualified at the University of the Witwatersrand as a mining engineer in 1959. In 1973 he was awarded an M.B.L. degree by the University of South African School of Business Leadership, where he received the Old Mutual Merit Award. He and his wife, Gina, have two daughters, Greta and Ciska.

Paul Kruger joined Sasol's Sigma Colliery in 1964 as Technical Assistant, and later became Mine Manager of that Colliery at Sasolburg. In 1974, he was put in charge of the development of the two underground collieries, the Sasol 2 Oil from Coal plant, and the town of Secunda. Since the beginning of 1982, he has been responsible for all three Oil from Coal operations, having been appointed a Director of Sasol Limited in 1986 and Managing Director in 1987.

The Secunda Mine Underground Colliery complex is the largest of its kind in the world and, since 1985, has produced 29,5 million tons of medium-grade coal per annum. This underground complex consists of four collieries, namely Middelburg, Brandspruit, Bossiespruit, and Chrisdraai. The establishment of the complex by Paul Kruger, as leader of the Sasol Mining Team, won the National Award of the Associated Scientific and Technical Societies of South Africa in 1987. In less than 10 years, the world's biggest underground coal-mining operation was brought into full production, i.e. a colliery complex was created with a daily output of more than 100 000 tons of coal from a seam with an average thickness of 2,9 metres at depths of 130 metres and more.

Paul Kruger's vision led to diversification in the form of the creation of downstream chemical products, emulsion explosives, fertilizer, and, more recently, polypropylene.

His strategic decisions will ensure that Sasol, which was at one time an uncertain and even risky oil-from-coal venture, is a profitable and internationally respected coal-mining, syn-fuel, and chemical-manufacturing private-sector company.

Paul Kruger is acutely aware of the impact of mining and chemical industries on the environment; the extensive game parks situated around the Sasol plants underline his personal commitment to nature and to environmental conservation. The establishment of the Sasol Coal Information Centre for Soil Conservation is a monument to Paul Kruger's efforts to promote harmonious relations between total extraction mining and agriculture.

The planning of the new Syferfontein Open Cast Colliery near Trichardt involved the production of 7 million tons of coal per annum and, at additional cost, avoidance of the environmental damage caused by mining operations in such a way as to enhance the area so that it can provide even more sanctuary for wild life than the farmlands that surround it.

South Africa can be proud of the achievements of Sasol and the innovative policies of Paul Kruger, and it is my very great privilege, on behalf of The South African Institute of Mining and Metallurgy, to present the Brigadier Stokes Award to him.

Mr Kruger: It is with great humility that I accept this prestigious Award. I have listened to the accolades, and, having done so, I should like to remind you of something we all know: one person alone could not possibly have achieved those outstanding results. So it is in this case for, if it had not been for the Sasol Mining Team—a group of young men and ladies of whom I am extremely proud (and I am not touting so that you will want to recruit them, Mr Chairman)—our winning of this Award—and, in fact, the success of the whole Sasol operation—would not have been possible. Thank you very much for this Award. I am happy to accept it on behalf of the dedicated people at Secunda and Sasolburg, as well as the founding fathers of Sasol, who laid the excellent foundation on which we, the younger generation, have been able to build.



Mr Paul du P. Kruger, recipient of the Brigadier Stokes Memorial Award, and Mr Mosenthal

Presentation of Medals and Certificates

The President, who would be presenting the medals and certificates, asked Mr Cruise to announce them.

Mr Cruise: Papers that were published in the *Journal of The South African Institute of Mining and Metallurgy* from March 1990 to February 1991, and that were written by members of the Institute, were considered for the award of medals.

Only two gold medals have been awarded. These go to Professor R.P. King and W.W. Stange for their paper in three parts entitled 'Towards more effective simulations of CIP and CIL processes'. Part 1, 'The modelling of absorption and leaching', was published in the October 1990 issue of the *Journal*; Part 2, 'A population-balance-based simulation approach', and Part 3, 'Validation and use of a new simulator', were published in the November and December 1990 issues respectively. Unfortunately Professor King is not present, but his son, Andrew, will receive the medal on his father's behalf. Mr L.C. Woollacott, a co-author but not a member of the Institute, receives a certificate.



The gold medal was awarded to Professor R.P. King and Mr W.W. Stange. Mr L.C. Woollacott, a non-member, received a certificate. The photograph shows Mr A.J. King, who received the gold medal on behalf of Professor King, Mr Woollacott, Mr Mosenthal, and Mr Stange

Three silver medals have been awarded. The first goes to H.A.D. Kirsten for his paper entitled 'The equivalence of fibre and mesh reinforcement in the shotcrete used in tunnel-support systems', which was published in the July 1990 issue of the *Journal*. P.R. Labrum, a co-author, but not a member of the Institute, will receive a certificate.

The second silver medal is awarded to Professor M.D.G. Salamon for his paper entitled, 'Deformation of stratified rock masses: a laminated model', which was published in the January 1991 issue of the *Journal*. Professor Salamon is overseas, and unfortunately his son, Nicholas, is also overseas until Monday; he will collect the medal on behalf of his father on his return.

W.H. van Niekerk and Professor R.J. Dippenaar receive



Mr P.R. Labrum, who received a certificate, and Dr H.A.D. Kirsten, the recipient of a silver medal.

the third silver medal for their paper entitled 'Blast-furnace coke: a coal-blending model', which was published in the February 1991 issue of the *Journal*.

A certificate has been awarded to R.R. Mankowski (a non-member) for his paper entitled, 'Internal power losses occurring at the wavefront of travelling transverse disturbances of mine hoisting cable', which was published in the December 1990 issue of the *Journal*. Mr Mankowski is not present.

Presentation of Student Prizes

Prizes were awarded to the following students for the best dissertations in part fulfilment of the B.Sc. (Eng.) degree.

Mining: J.P. Botha, University of Pretoria, for 'Spanningsgedrag van steenkoolpilare' and J.J.L. du Plessis, University of Pretoria, for 'Boor-en-skietpraktyk in steenkool op Duvha-Dagboumyn'.

Extractive Metallurgy: J.R. de Wet, University of Pretoria, for 'The influence of organic foulants on the



Professor R.J. Dippenaar and Mr W.H. van Niekerk, recipients of silver medals



Mr J.J.L. du Plessis and Mr J.P. Botha (both of the University of Pretoria), who received student prizes for their dissertations



Mr J.R. de Wet (University of Pretoria) receiving his prize for his dissertation from Mr H.G. Mosenthal



Mr H.G. Mosenthal presenting a prize to Mr P.J.L. Fernandes (University of the Witwatersrand) for his dissertation

regeneration of carbon used in CIP circuits'.

Metals Technology: P.J.L. Fernandes, University of the Witwatersrand, for 'The effect of WC grain size on the corrosion resistance of WC-Co'.

Of the prizes for Technikon students, A.C. van Niekerk of the Technikon Witwatersrand receives the prestige prize awarded to the best student at the completion of the fifth year of the Masters Diploma in Technology, Metallurgical Engineering.

The prize for the final-year Technikon student who, throughout the course, maintained an aggregate of 80 per cent or higher, goes to Mr P.J. Lewarne of the Technikon Witwatersrand, for the Four-year Course for the National Higher Diploma in Extraction Metallurgy.

Other prizes for students of the Universities of the Witwatersrand and Pretoria were presented at faculty prize-giving ceremonies held at the respective universities.



Mr A.C. van Niekerk (Technikon Witwatersrand) receiving the Prestige Prize from Mr H.G. Mosenthal



Mr H.G. Mosenthal with Mr P.J. Lewarne (Technikon Witwatersrand) who received the prize for the Four-Year Course for the Higher National Diploma in Extraction Metallurgy

Annual Report and Accounts

The President presented the Annual Report, highlighting a few events that he regarded as especially significant.

Dr Wagner then presented a summary of the financial status of the Institute in which he mentioned that, had it not been for the International Deep Mining Conference, the loss suffered by the Institute during the past year would have been even greater.

This was followed by the adoption of the Annual Report and Accounts as given on pages 301 to 326 of this issue.

Office Bearers and Members of Council for 1991/92

President: I have pleasure in announcing that, in accordance with Clauses 3.2 and 3.3 of the Constitution, the retiring Council has elected the following Office Bearers for the ensuing year:

President:	Mr R.D. Beck
President Elect:	Mr J.P. Hoffman
Senior Vice President:	Dr H. Scott-Russell
Junior Vice President:	Dr B.K. Loveday
Immediate Past President:	Mr H.G. Mosenthal
Honorary Treasurer:	Mr J.A. Cruise.

In terms of the election of ordinary members of Council, there is a letter from the scrutineers stating, 'We have to report that we inspected the nomination papers for members of Council for the 1991/92 session and have found that the ballot papers sent out to Corporate Members of the Institute were in order. There is a return of 586 papers, representing a return of 29 per cent. There was one spoilt paper. As a result of our scrutiny we find that the following members have been elected:

Dr N.A. Barcza, G.A. Brown, B.R. Broekman, Professor R.J. Dippenaar, J.S. Freer, P.R. Janisch, R.P. Mohring, K.C. Owen, P.D.K. Robinson, D.A.J. Ross-Watt, P. Smith, K.A. van Gessel, D.J. van Niekerk, P.M.T. White. In addition, Dr J. Lurie and P.J. Knottenbelt were elected unopposed to represent Non-corporate Members of Council.

In terms of Clause 3.2.8 of the Constitution, the Chairmen of the Branches will also serve on Council. They are: Johannesburg Branch, Mr K.R. Greve; Pretoria Branch, Professor R.F. Sandenbergh; Orange Free State Branch, Mr D.R. Fleming; Witbank/Middelburg Branch, Mr W.J. Abel; Western Cape Branch, Professor F.L.D. Cloete; North Western Transvaal Branch, Dr L.A. Cramer.

The following Past Presidents have signified their willingness to serve on Council for the ensuing year: P.W.J. van Rensburg, Professor R.P. Plewman, Dr R.E. Robinson, Dr P.R. Jochens, G.Y. Nisbet, Professor A.N. Brown, J.D. Austin, H.E. James, Dr H. Wagner, B.C. Alberts, C.E. Fivaz, Dr O.K.H. Steffen.

I thank our Past Presidents for their continuing support, and congratulate all those who have been elected. I thank those who have agreed to serve another term of office.

Induction of President

President: It gives me great pleasure to introduce our new President, Mr Richard Beck. Richard was educated at Felsted School, Essex, England, from where, having won an Overseas Mining Association's Scholarship, he went on to the Royal School of Mines, Imperial College, the University of London. In 1969, he was awarded a B.Sc. (Engineering) A.R.S.M. in Mineral Technology. After a short period in the London office of Consolidated Gold Fields, he emigrated, in December 1969, to South Africa to join Gold Fields of South Africa.

He worked as a Post-graduate Metallurgist at Doornfontein Gold Mine, Greenside Colliery, and West Driefontein Gold Mine, and was then appointed Plant Superintendent at Zwartkloof Fluorspar Mine. This was followed by a spell on project work at Gold Fields Laboratories and Head Office before he proceeded to Libanon and Kloof Gold Mines. He was appointed Metallurgical Manager at East Driefontein Gold Mine in January 1973. He also spent time at Kloof Gold Mine in that capacity before being promoted to Group Metallurgist to assist with Base Metal Operations. In December 1978, he was seconded to the Black Mountain Mineral Development Company to take on-site responsibility for staff training, plant commissioning, and start-up. He returned to Head Office in July 1980 as Assistant Consulting Metallurgist with responsibility for Black Mountain and new metallurgical projects. In January 1984, he was appointed General Manager of Zinc Corporation of South Africa Limited and, in January 1986, he returned to Head Office as Consulting Metallurgist responsible for all metallurgy in the Gold Fields group—the position he currently holds.

His association with The South African Institute of Mining and Metallurgy began in 1973 when he joined as a Member. He became a Fellow in 1988, was elected a Member of Council in 1985, and President Elect in 1990. He is also a professional engineer, a chartered engineer, and a Fellow of the Institution of Mining and Metallurgy. He is an author and co-author of several publications.

Richard married Angela Stanley in 1973, and they have a son, Nigel, and a daughter, Sarah. His prime sporting activity in the past was athletics. Before leaving Britain, he set records over 400 metres for Essex County, the British Universities Sports Federation, and the University of London. He narrowly missed selection to the British team for the Mexico Olympics in 1968.

I congratulate Richard on his election and wish him a successful year. I should also like to mention that we have received a letter of congratulations for him from Cyril O'Connor, Geoff Hansford, Brian Paddon, Jan Cilliers, and J-P. Franzidis, all of whom are in the Department of Chemical Engineering of the University of Cape Town.

Incoming President: Thank you, Gordon, for that introduction. It is, indeed, a very great honour for me to be at the helm of this great Institute.

You have not only led us this past year, but have given us much wise counsel; a number of issues that were started during your year in office will certainly keep us busy in the coming year. As you have already reported, the Institute has contributed to the South African Engineering Association (SAVI), and will continue to play its part. Publications have taken a major step forward with the purchase of equipment for desk-top publishing. This certainly presents a new challenge, and we trust that our predictions will be fulfilled, and that costs will be reduced. Also in the coming year, we shall continue to talk to other organizations within the mining industry to see what grounds there are for co-operation.

In all this, we shall still look to you, Gordon, for advice in your position as Immediate Past President.

Finally, I thank Dawn for the support she has given you, and for the time she has allowed you to spend on Institute matters during your first year of retirement.

It now gives me great pleasure, on behalf of all members of this Institute, to present you with our traditional plaque as a memento of your year in office.



Mr H.G. Mosenthal receiving the President's plaque from Mr R.D. Beck

I look forward to my year in office secure in the knowledge that a number of our Past Presidents have again agreed to serve on Council. It is reassuring to know that, in the exciting year ahead, their sage counsel will always be available to keep me in order.

I add my congratulations to our incoming Council and, in particular, extend a warm welcome to those joining Council for the first time. An unusually large number of members stood for Council this year, and, unfortunately, of course, a number were not elected. I am happy to report that most of these members have indicated their willingness to assist the Institute in any way possible. We shall be drawing on their support through various committees of the Institute.

I also pay tribute to the hard work done by the

Secretariat, whom Gordon has already named. I know that, with their support, we shall have a good year.

The gratitude of the Institute is also due to the employers of our office bearers and Council; without their support, we would not find time to play our role in the Institute.

I also know that I have a fine group of office bearers to support me; I take pleasure in welcoming Brian Loveday to this illustrious group, and invite him to join us on the rostrum.

Appointment of Auditors and Honorary Legal Advisers

Incoming President: I propose that Messrs Aiken & Peat be re-appointed as Auditors for the coming year, and that Messrs Van Hulsteyn, Duthie and Saner be re-appointed as Honorary Legal Advisers. *Agreed.*

General

The Incoming President invited those present at the meeting to make any comments or ask any questions about matters on which they required clarification. None being forthcoming and, there being no further business to transact, he asked the President Elect, Mr J.P. Hoffman, to take the Chair.

Presidential Address

The President Elect took the Chair, and Mr Beck delivered his Presidential Address entitled 'The image of the minerals industry', which is reproduced on pages 327 to 337 of this issue.

President Elect: Before I call on Ben Alberts to thank Mr Beck, allow me to make a few observations. I listened very intently to Mr Beck's address, and was struck by the fact that what he said could well be projected into all areas of the mining and minerals industry. Within half-an-hour, he exposed the nerves—one could almost call them the sensitive nerves—of the industry. He talked about technological advances...we must stay abreast and, in some cases, try to stay ahead of the rest of the world, so that we can always remain competitive. That is not easy. Mr Beck listed the reasons for this very carefully and very clearly. We have to bear in mind the impact on the environment of mining activities because of the ever-increasing demand that everyone must consider the next generation. The shortage of skilled staff is another problem and, in view of the advances in technology, I think this is going to be one of the areas in which we will have many difficulties.

Having said that, it gives me great pleasure to call on Mr Alberts to propose a vote of thanks to Mr Beck.

Mr Alberts: It is my privilege to be one of the first persons to address you, Mr Beck, as our new President. I thank you for, and compliment you on, your very thought-provoking and interesting Presidential Address. You have, in that Address, again proved the point that most good things start in the local pub! The problem that has been keeping you preoccupied for so long needs to be addressed and, in fact, has always needed to be addressed. The

Afrikaans saying, 'Daar is niks nuut onder die son nie', is confirmed by the quotations you took from the classical contribution to science made by Georgius Agricola, or to give him his German name, Georg Bauer, in the first Latin edition of his book, *De re metallica*, which was printed in 1556.

This book was translated from the Latin by Herbert Clark Hoover, who was the President of the United States from 1828 to 1832, and his wife. Hoover was a mining engineer, and so was his brother. I think that if the world currently had a few presidents who were mining people—mining graduates—I am sure that we would have a much better world to live in. Your quotations, Mr President, show that problems already existed in the mining and metallurgical industry in Agricola's time. These problems still bedevil the mining and metallurgical industry, and we must focus our attention on them because of their specific importance to the continued existence of this industry.

We realize that, in the 440 years that have elapsed since Agricola made his statements, no engineers and scientists have been able to supply satisfactory solutions to the problems he raised. This can be interpreted as a very serious indictment of engineers and scientists in the mining and metallurgical industry and in related societies and institutions.

In South Africa, the mining and metallurgical industry is, and will be, the cornerstone of the South African economy for many years to come. When we consider the problem you have addressed, namely the unfavourable image of this very important industry, we realize that there is indeed cause for concern. I therefore think that it is necessary for us to address those issues that are responsible for the creation of this image, which threatens the future success of the mining and metallurgical industry.

If we consider the four issues you have raised, which are

- people are not informed,
- mining is not seen to be closely associated with technology,
- mining is perceived to be always detrimental to the environment, and
- mining is a high-risk occupation,

we can conclude that the most important problem is that people are not correctly informed. The solution to our problem looks easy: all we have to do is to inform people. However, informing the general public is no easy task. Just watch the reactions SATV interviewers get when they approach people on the street with a roving microphone and ask them questions that can be easily answered by an informed person! These indicate that the public at large is usually not well informed.

History shows that, in earlier times, information was passed from person to person on a verbal basis; printing was invented by a contemporary of Agricola's, Mr Gutenberg. In the specific area of communication, the advances over the last 70 years, particularly over the last 10 years, have been phenomenal. Consider, for example, the absolutely fantastic coverage of the Gulf War that we

received on a minute-to-minute basis!

A well-planned programme about the importance of the mining and metallurgical industry, the challenges presented by the industry, as well as the very good living conditions enjoyed by people in this industry, would definitely assist in enhancing the image of the industry. Perhaps, again, along the lines of *The Villagers*, miskien maak *Orkney snork nie* ook 'n bydrae.

A very important change, which has already taken place, and which will definitely have a favourable impact on the image of the mining and metallurgical industry is that, with the changes currently taking place in South Africa, most of the neighbouring African countries, as well as some of the countries further north, have expressed the wish that South Africans will assist them to re-start their industries. The most important industry in all those African countries is the mining industry. Those people have come to a very important conclusion, namely that the mining industry is an essential factor in the building-up of their country's economy, so they have a favourable image or perception of their country's most important industry. Namibia provides us with a very good example. You can talk to anyone in the political sphere in Namibia, as well as to most of the people in the street, and find that they are aware of the importance of the mining industry to their country's economy.

I hasten to say that the present difficult situation in the gold mining industry, which was caused by the drop in the price of gold, will no doubt have a favourable impact on the public's perception of South Africa's most important industry. People are becoming concerned because they want the mines to stay open, and they are suddenly beginning to realize the importance of this industry. This is true for the workers as well as for the people who supply materials, services, and equipment, and will force the politicians to admit the importance of this industry.

A difficult environment leads to technical innovation, as is shown by another important change that is taking place and that will, no doubt, have a favourable impact on the mining and metallurgical industry. The effectiveness of the national educational system is being addressed, and major changes are being planned to ensure that the products of this system will meet the demands of the industry. I find it very interesting that people at school are relatively well informed about most of the vocations that are shown on SATV on a regular basis, such as law, medicine, nursing, police, etc. The school system in Germany is a 'dual' system, which provides for children to leave full-time school at a relatively early age (16 years), and to continue their education on a part-time basis while receiving in-service training in any of the nearly 400 recognized learnerships or apprenticeships. This system of education has a very specific vocational focus.

A candidate who has followed this route, and has completed his education, can progress to tertiary education or into his vocation with minimal bridging. Vocational guidance and career preparation form an integral part of

the German education system. Pupils are well prepared in entrepreneurial skills, life skills, and vocational preparation, values such as dignity of work, productivity, quality, and work ethics being instilled as part and parcel of the German educational and vocational system.

The German system I have just described definitely ensures that children are channelled into the industry much earlier, and are educated specifically for jobs in the industry. It is my contention, then, that the mining and metallurgical industry in South Africa has trained most of the people in South Africa, as well as a large contingent of black people from Mozambique, Malawi, and Zimbabwe, to the benefit of those countries. The fact that the industry focuses on training, and has experience in providing such training, would be of benefit under a new educational dispensation.

I should therefore like to conclude by saying that the new South Africa will bring many challenges, but will also highlight the importance of the mining and metallurgical industry, thereby assisting us to change its image in such a way as to ensure that the industry will benefit. The examples of areas where specific actions are being taken, indicated by our Incoming President, provide sufficient proof that the mining and metallurgical industry is tackling the problems in a professional manner. If the industry continues to do so—as I know it will—the problem will eventually be solved. Only then will we be able to say, 'We have now solved the problems that Georgius Agricola encountered in the mining and metallurgical industry in 1556'. Even though we shall have taken about 500 years to accomplish this, we shall be justified in feeling proud of our achievement.

Mr Beck's Presidential Address has indicated the importance of management experience gained by scientists, engineers, and managers over the years, and the application of that experience in their specific approach to problem-solving. I should like to emphasize that the co-ordinated and programmed way in which problem-solving is being undertaken should be seen as one of the major advantages that has resulted from the development of the management profession.

Mr President, I congratulate you on a very important contribution. You have given us food for thought, and I am confident that your Presidential Address will be, and can be, put to good use by the industry in solving some of the important problems that are preventing optimum performance.

Ten slotte, dan, wil ek graag aan u en u Raadslede 'n baie suksesvolle jaar toewens en die vertroue uitspreek dat u in hierdie jaar die geleentheid sal kry om die regte aandag aan die probleme wat u gestel het, en so duidelik gedefinieer het, te gee. Ek weet u sal dit doen en ek weet ons sal die resultate sien. Geluk met u bydrae! Ons wens u 'n baie goeie jaar toe.

Closure

President Elect: Baie dankie, Mnr. Alberts. Ek dink u mosie van bedanking rond hierdie voordrag van Mnr. Beck baie baie pragtig af, en ek dink dit bring ons dan ook by die einde van ons verrigtinge. With that, I declare this meeting closed.

*The accompanying photographs were taken by Jeremy Campion.



Richard Beck, Incoming President, and his wife Angela



Larry Cramer (Chairman, North Western Transvaal Branch) with his wife, NESTA



Buster Fowler, Dennis Malan, Vic Robinson, and Jos Lurie



Brian Loveday, newly elected Junlor Vice President, with his wife, Judy



Alan Munro with Ansie and Danle Krige



Ken Greve (Chairman, Johannesburg Branch) with his wife, Fiona and Dorothy and Peter Fewell

All about VAT

• *VAT tutor*, by Deloitte Pim Goldby. Available from that firm at Private Bag X3, Benmore, 2010. Transvaal.

This is a software package designed to run on most IBM-compatible personal computers. It is user-friendly and assumes no previous computer knowledge.

The course comprises ten modules, each of which represents, on average, a 40-minute lesson on a particular aspect of VAT. Accompanying the course is a printed workbook containing simple operating instructions, revision materials, summaries, practical examples, and a glossary of VAT terms.

Users can select the particular modules that are most relevant to them, and need not work through the entire program. Below is a table of contents, and the users whom various modules are aimed to assist.

<i>Module</i>	<i>Intended user</i>
<i>1. Introduction</i> Outline of the course and operating instructions	Training and/or financial management
<i>2. Mechanics of VAT</i> How VAT operates in practice—the concepts of input tax and output tax	All staff required to understand and administer VAT
<i>3. Rates of VAT</i> Standard-rating, zero-rating, and exempt supplies	All staff required to understand and administer VAT
<i>4. Registration</i> Discussion of who should register for VAT, when, and with what consequences	Financial management
<i>5. Goods and services</i> Goods and services included in the VAT net	All staff required to understand and administer VAT
<i>6. Supply</i> Explanation of the VAT concept of 'supply', when liability for VAT arises, and on what value it is calculated	All staff required to understand and administer VAT
<i>7. Special types of supply</i> Effect of VAT on imports, self-supplies, and fringe benefits	Financial management; staff involved in importing, data processing, and salaries administration
<i>8. Tax invoices</i> Invoicing procedures and documentation under VAT	Data processing and clerical staff (tax administration)
<i>9. Record-keeping and returns</i> Completion of VAT return; VAT record-keeping	Data processing and clerical staff (tax administration)
<i>10. Cash flow</i> The effect of VAT on a business's cash flow	Financial management.