

## COUNCIL FOR 1989/90

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Dr O.K.H. Steffen

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Mr H.G. Mosenthal

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K.A. van Gessel

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Orange Free State Branch

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Vaal Triangle Branch

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Prof. M.D. Brayshaw

Prof. J.S.J. van Deventer

J.A.D. Britz

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B.C. Alberts

J.D. Austin

Prof. A.N. Brown

H.E. James

Dr P.R. Jochens

Prof. R.P. King

G.Y. Nisbet

Prof. R.P. Plewman

Dr R.E. Robinson

P.W.J. van Rensburg

P.A. von Wielligh

(Deceased)

### KEY OBJECTIVE OF THE INSTITUTE

*To initiate and give effect to the means whereby the requirement for technology and scientific knowledge of the minerals and metals section of the South African economy are satisfied; and to represent and promote the interest of its members.*

### ARRANGEMENT OF THIS REPORT

In accordance with the current management policy, this report on the activities of the Institute is presented under seven main headings:

1. The Interests of Individual Members
2. Technical Meetings
3. Publications
4. Regional Development
5. Engineering Science and Technology in South Africa

6. International Liaison
7. Management and Administration.

## 1. THE INTERESTS OF INDIVIDUAL MEMBERS

Portfolio Holder: J.P. Hoffman

### Key Performance Areas

*In the interests of individual members, the SAIMM*

- *undertakes to assess the qualifications, experience, and level of responsibility of applicants for membership, and allocates a membership certificate in an appropriate grade as a means of granting appropriate professional and technical status to individuals who practise in the minerals and metals sector;*
- *undertakes to prepare and publish career-guidance brochures, bursary handbooks, audio-visual and video programmes, optional school-curricula material, etc., and participates in the activities of the Phoenix National Committee to stimulate scholars and students to select careers in the minerals and metals sector of the South African economy;*
- *guards the professional interests of engineers, scientists, technologists, and technicians by providing a corporate voice and by representing their interest on bodies such as the South African Council for Professional Engineers (SACPE), and the Joint Council for Scientific Societies (JCSS);*
- *through representation on bodies such as SACPE, assists with the evaluation of curricula at universities and technikons with a view to improving the level of education of graduates and diplomates and to ensuring that the courses are relevant to the needs of the minerals and metals sector;*
- *makes awards, in the form of medals, prizes, and certificates, in order to recognize technical excellence, to stimulate a sense of pride in high standards of performance, and to encourage individuals involved in the minerals and metals sector to share the results of their work through publication; the following are eligible for SAIMM awards: individuals for the very highest achievements in the South African mining and metallurgical industry, SAIMM members and non-members for papers of the highest standard published in the Journal or other SAIMM publications, and students from universities and technikons for exceptional academic performance;*
- *arranges technical excursions, banquets, and other social events to create opportunities for professional association and fellowship for its members.*

## 1.1 Membership Committee

J.P. Hoffman, Chairman

B.C. Alberts	Prof. R.P. King
J.D. Austin	Dr J. Lurie
R.D. Beck	G.Y. Nisbet
Prof. A.N. Brown	Prof. R.P. Plewman
J.A. Cruise	Dr R.E. Robinson
Prof. R.J. Dippenaar	D.A.J. Ross-Watt
C.E. Fivaz	Dr O.K.H. Steffen
J.S. Freer	P.C. van Aswegen
H.G. Mosenthal	P.W.J. van Rensburg
H.E. James	P.A. von Wielligh*
Dr P.R. Jochens	Dr H. Wagner

\* Deceased

### You are a member of the SAIMM

Being a member of a professional organization such as the SAIMM shows that you consider yourself and your speciality or discipline a profession. Do not wait for your company to offer to pay your membership fee. Your company will not make you a professional: only you can do that.

The national headquarters of the SAIMM is in Johannesburg, but there are branches in the main centres of the country. Each branch arranges evening meetings that can be technically or socially orientated, where you can meet people of similar interests and also of a different interest to broaden your horizon. You may listen to a speaker and have a question-and-answer period. Often special seminars, colloquia, conferences, or schools are conducted on subjects of particular interest to members, where you learn about new and changing ideas.

The SAIMM was established in 1894 to advance the science and practice of mining, metallurgy, and materials engineering, and to promote high standards in the profession. It provides a vehicle for co-operative action in trying to achieve those things considered to be of importance to the members. Our action programme includes the following:

- The improvement of the technical competence of our members through continuing education programmes that include seminars, conferences, extension courses, and plant visits. Some of these activities are conducted at our branches: Western Cape, Vaal Triangle, Orange Free State, Witbank/Middelburg, Johannesburg, and Pretoria.
- Provision of factual career information about mining, metallurgy, and materials engineering to scholars, parents, and teachers.
- Participation in the ongoing process of reviewing and updating tertiary educational facilities and curricula.
- Liaison with the South African Defence Force in order to improve the utilization of engineers doing National Service.
- The provision of guidance to recent graduates and to industry in the effective use of the 'Engineer-in-Training' period to the benefit of employee and employer.
- The promotion of industrial sponsorship for the departments of mining, metallurgy, and materials engineering at universities and technikons.
- The publication of a journal, *Journal of the South African Institute of Mining and Metallurgy*.
- Liaison with the other engineering institutions in matters of general importance to engineers, including national issues that involve representations to Government and matters of public relations.
- Attracting technicians and technologists to mining, metallurgy, and materials engineering, and the more effective utilization of Professional Engineers.

## 1.2 Career Guidance and Education

J.L. Nel, Chairman

Prof. A.N. Brown	Dr J. Lurie
M.C. Demmer (co-opted)	K. McCarogher (co-opted)
Prof. R.J. Dippenaar	Prof. H.R. Phillips
Prof. R.H. Eric (co-opted)	N. Stoffberg (co-opted)

TABLE I

SUMMARY OF NEW APPLICATIONS AND MEMBERSHIP MOVEMENTS FOR 1989/90 AND COMPARISON OF MEMBERSHIP GRADES AND TOTAL MEMBERSHIP 1988/89 AND 1989/90

Membership grade	Members July 89	New members	Transfers in	Transfers out	Reinstatements	Resignations	Deceased	Struck-off	Computer adjustment	Net gain / (loss)	Members June 90
Honorary Life											
Fellow	27						1			-1	26
Honorary Fellow	8								-1	-1	7
Life Fellow	56						1		-1	-2	54
Fellow	426	34	12	7		5	3	8	-2	21	447
Retired Fellow	182		7			7	9	3	1	-11	171
Life Member	1									0	1
Member	749	30	16	8	6	10	1	16	2	19	768
Retired Member	39					1		1	-4	-6	33
Associate	738	28	104	19	5	15	1	41	-6	55	793
Retired Associate	26					1	1		-2	-4	22
Student	225	85		105	4	1	1	10	1	-27	198
Co-affiliate	131	13				3				10	141
Total	2608	190	139	139	15	43	18	79		53	2661

D. Gaynor (co-opted) P.M.T. White  
 Prof. R.P. King J.P. Rossouw (co-opted)  
 Dr B.K. Loveday

During the past year, the decision made previously to concentrate on only a few core projects was again confirmed. The following activities were supported.

Material science at the extra-curricular school at the Pretoria Normaal College was further developed and combined with the course in petrochemistry. This resulted in better utilization of lecturers and had the advantage of reaching a larger number of scholars. Plans are under way to support the winter school with lectures and two short visits.

Owing to the efforts of Professor R.P. King, plans are well advanced to introduce a similar course at the Johannesburg College of Education. The implementation is scheduled for the second term of this year.

At the University of the Witwatersrand, Project Seed was again supported with good results. The introduction of a similar programme at the University of Pretoria during the summer holidays is being investigated.

Notice was also taken of the possible introduction of optional topics in the curriculum of South African schools. This innovation arises from the continued effort of The Chamber of Mines Education and Training Group. This will create the opportunity for inputs into the school curriculum by the mining and metallurgical industry.

A number of projects and publications were discussed and taken note of, such as the Summerbridge programme of the University of the Witwatersrand, SAFUES activities, an education conference held at the CSIR Conference Centre in Pretoria on 28th November, 1989, on 'The Crisis in Engineering Education', and the report arising from a workshop arranged by the Joint Committee of the South African Engineering Association and the Society for Professional Engineers on 'Skills Plan' by the Engineering Group of Eskom.

### 1.3 Awards and Adjudication Committees

#### Awards Committee—Mining

Dr G.A. Fourie, Chairman  
 Dr C.J. Fauconnier (co-opted) R.P. Mohring  
 J.A. Cruise K.A. van Gessel  
 R.W.O. Kersten (co-opted) Dr H. Wagner

#### Awards Committee—Extractive Metallurgy

Dr L.A. Cramer, Chairman  
 R.D. Beck Dr B.K. Loveday  
 G.A. Brown P. Smith (co-opted)  
 Prof. R.H. Eric (co-opted) P.C. van Aswegen

#### Awards Committee—Metals Technology

Prof. R.J. Dippenaar, Chairman  
 P.J. de Koker (co-opted) J.L. Nel  
 J.P. Hoffman Dr P.T. Wedepohl (co-opted)

#### Adjudication Committee—Mining

Dr G.A. Fourie, Chairman  
 G.T.G. Emère K.A. van Gessel  
 Dr C.J. Fauconnier (co-opted) D.J. van Niekerk  
 D.A.J. Ross-Watt (co-opted)

#### Adjudication Committee—Extractive Metallurgy

G.A. Brown, Chairman  
 R.D. Beck Dr B.K. Loveday  
 Dr L.A. Cramer P. Smith (co-opted)  
 Prof. R.H. Eric (co-opted) P.C. van Aswegen

#### Adjudication Committee—Metals Technology

Dr P.R. Jochens, Chairman  
 P.J. de Koker (co-opted) J.L. Nel  
 J.P. Hoffman Dr P.T. Wedepohl (co-opted)

#### Brigadier Stokes Memorial Award

The Brigadier Stokes Memorial Award, which takes the form of a platinum medal and a cash award, is awarded to an individual for the very highest achievement in the South African mining and metallurgical industry, and is not necessarily based on technical expertise.

The Award was established in 1980, and the previous recipients were as follows:

1980	Dr H.F. Oppenheimer
1981	Dr W. Bleloch
1982	Dr F.G. Hill
1983	Dr A.W. Whillier (posthumously)
1984	Prof. D.G. Krige
1985	Dr R.E. Robinson
1986	Prof. M.D.G. Salamon
1987	Dr T.F. Muller
1988	Dr W.J. (Wim) de Villiers
1989	Dr R.A. Plumbridge.

The Award for 1990 is to be made to Mr W.G. Boustred for his significant contribution to the mining industry in South Africa, particularly for his initiative in establishing coal as a major South African commodity and contributor to the country's wealth.

#### Gold and Silver Medals

Papers published in the *Journal* from March 1989 to February 1990 by members of the Institute were considered for medals.

#### Gold Medals

None.

#### Silver Medals

M.U. Ozbay and Dr J.A. Ryder for their paper published in the February 1990 issue of the *Journal* entitled 'The effect of foundation damage on the performance of stabilizing pillars'.

C.L. Workman-Davies for his paper published in the July 1989 issue of the *Journal* entitled 'Noise and hearing in a trackless-mining environment'.

M.D. Adams for his paper published in two parts in the February and March 1990 issues of the *Journal* entitled 'The chemical behaviour of cyanide in the extraction of gold'.

P.C. Pistorius and Professor R.F. Sandenbergh for their paper published in the July 1989 issue of the *Journal* entitled 'The influence of galvanic corrosion tests of resistance in the metallic conduction path'.

### Student Prizes

Prizes were awarded to the following students for the best student dissertations in part fulfilment of the BSc (Eng) degree:

#### Mining

G.C. Roets, University of Pretoria  
'Beheerde skietwerk te Optimum steenkoolmyn'.

#### Extractive Metallurgy

No prize.

#### Metals Technology

André van Bennekom, University of the Witwatersrand  
'The use of surface coatings for improving the wear and corrosion properties of 304L and 316L'.

#### Technikon Witwatersrand

The prestige prize awarded to the best student at the completion of the fifth year of the Masters Diploma in Technology in Metallurgical Engineering: M.H. Fox.

The prize awarded to a final-year student who throughout the course has maintained an aggregate of 80 per cent or more: M. Preece during the Four-year Course for the National Higher Diploma in Metalliferous Mining.

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

The prize winners were as follows:

#### University of the Witwatersrand

##### Prestige Prize:

Mining R. Rossouw  
Metallurgy E. Thompson

##### Book Prize:

Mining I. Ashmole  
Metallurgy No award

#### University of Pretoria

##### Prestige Prize:

Mining J.J.L. du Plessis  
Metallurgy J.S. du P. Potgieter

##### Book Prize:

Mining H. Hafenscher  
Metallurgy No award.

### Delfos & Atlas Copco Travel Grant

The Institute administers this grant under the Chairmanship of Mr G.Y. Nisbet. The 3 recipients in 1990 were:

Mr M.M. Fischer, Manager Mining, Beatrix Mine  
Mr G.D. Perry, Assistant Manager Trackless, Vaal Reefs  
Exploration and Mining Company Limited—East Division  
Mr D.J.O. Standish-White, Senior Underground Manager, East Driefontein Gold Mining Company Limited.

The winners will visit Brazil, Mexico, and Chile.

The Institute and the mining industry are most grateful to Delfos & Atlas Copco for this very fine gesture to the mining industry.

### 1.4 Banquet

Dr H. Scott-Russell, Chairman

R.D. Beck

H.G. Mosenthal

J.A. Cruise

R.A. Snodgrass (co-opted)

A most successful banquet was held at The Carlton Hotel on Saturday, 3rd March, 1990. The evening was well supported by the attendance of 545 people. The success was largely due to the generous contributions of 36 sponsors.

The guest speaker was Mr Tony Norton, President of the Johannesburg Stock Exchange, who intrigued the gathering with the theme 'The JSE: Market place or temple?' Dancing to the sound of the Dan Hill Band continued into the small hours. Once again The Carlton rose to the occasion.

### 1.5 Constitution, Rules, and Policy

C.E. Fivaz, Chairman

B.C. Alberts

J.P. Hoffman

J.D. Austin

H.E. James

R.D. Beck

Dr P.R. Jochens

Prof. A.N. Brown

Prof. R.P. King

Prof. R.J. Dippenaar

The latest amendments were incorporated in the Constitution and were translated into Afrikaans.

The By-Laws were revised to accommodate the amendments made to the working procedures of the Council, its committees, and the branches. These amendments were also translated into Afrikaans.

A totally revised edition of the Constitution and the By-Laws will be printed in the 1990/1991 Council year. The Institute will accordingly have an updated version available for its members, which will form part of its 'family of documents'.

#### 1.5.1 Special Projects

The Strategic Plan, which was made available in 1986, was updated. The Business Charter was also updated, and still serves as a key document in the running of the Institute's affairs. The Charter defines the areas of responsibility, sets standards, outlines standard practices, and describes critical performance areas in detail.

A set of key documents of the Institute, known as the 'family of documents', is in the process of being printed and will be available at the beginning of the new financial year. The Business Charter, giving details of the main portfolios of the Institute, as well as other key elements, e.g. membership, critical performance areas, objectives and mission of the Institute, and administration procedures, will be included in this 'family of documents'. Also included will be information regarding publications of the Institute, monographs, symposia, etc.

## 2. TECHNICAL MEETINGS

**Portfolio Holder: H.G. Mosenthal**

**Key Performance Area**

*In pursuance of its objectives regarding the dissemination of technical information, the SAIMM*

- organizes congresses, symposia, colloquia, schools, discussion groups, etc., to promote the transfer of cur-

rent and new technology, and to satisfy the needs of its members for continuing education by the exchange of technical information, the communication of ideas, and the identification of technological problem areas.

The technical meetings during the year were organized by the Mining, Extractive Metallurgy, and Metals Technology Groups, and the Special Interest Groups of Surface Mining, Process Control, and Computer Applications.

The International Deep Level Mining Conference, which is to be held in conjunction with the Electra Mining Exhibition, took up a great deal of time and organization.

The Technical Programme Committees realize that, in order to attract sufficient delegates to symposia and schools, the standards must be high. This is particularly true at present with the economic slow-down that is being experienced.

### 2.1 Technical Programme Committee—Mining

D.A.J. Ross-Watt, Chairman  
 E. Adlard (co-opted) Dr A. Patterson (co-opted)  
 Prof. S. Budavari (co-opted) Prof. H.R. Phillips  
 J.A. Cruise P.D.K. Robinson (co-opted)  
 G.T.G. Emère Dr H. Scott-Russell  
 Dr G.A. Fourie K.A. van Gessel  
 R.P. Mohring D.J. van Niekerk (co-opted)  
 H.G. Mosenthal

Three events were held during the year.

In September 1989, a colloquium entitled 'Shaft Sinking: Current Practices and Future Trends' was held at Megawatt Park. This Colloquium proved to be most popular, with 253 delegates attending. Twelve papers of a high technical standard were presented.

At the end of September 1989, a school entitled 'Total Utilization of Coal Resources' was held at the Witbank Civic Centre. The 49 papers presented covered the full spectrum of activities that could lead to better utilization

of coal resources. The event was organized in conjunction with the South African Coal Processing Society with assistance from the Witbank Branch of the SAIMM. The need to more fully utilize the appropriate branch of the SAIMM in events of this nature was made evident. This very successful school was attended by 326 delegates in all, including partial registrations.

In June 1990, a repeat school entitled 'Rock Engineering—Management Strategy for Safety and Economy' was held at the Johannesburg Sun Hotel. In all, 56 delegates attended.

A school entitled 'Ventilation and Refrigeration', rescheduled from May 1990, was postponed to July 1990.

### 2.2 Technical Programme Committee—Extractive Metallurgy

P.C. van Aswegen, Chairman  
 Dr H.E. Bartlett (co-opted) Prof. R.H. Eric (co-opted)  
 R.D. Beck J.S. Freer  
 M.D. Brayshaw Dr B.K. Loveday  
 G.A. Brown Dr M. Moys  
 Dr L.A. Cramer P. Smith (co-opted)

A repeat school on 'Accounting for Gold' was held at Delta Park from 20th to 22nd November, 1989. The purpose of the school was to bring together people from metallurgical, mining, surveying, and related disciplines to discuss problem areas associated with gold accounting on operating mines. There were 60 delegates.

The Western Cape Branch arranged a very successful international colloquium on 'Developments in Froth Flotation' from 3rd to 4th August, 1989. The object of the Colloquium was to inform the local and international minerals-processing industry about the latest developments in froth and column flotation, with emphasis on recent developments in South Africa. Altogether, 27 papers were presented, including 7 from overseas authors. The Colloquium was attended by 153 delegates, who

TABLE II  
 SCHEDULE OF TECHNICAL CONFERENCES, 1989/90

Description	Title	Venue	Attendance
Extractive Metallurgy: Western Cape Branch – International Colloquium	Developments in Froth Flotation	Gordons Bay	150
Mining Colloquium	Shaft Sinking: Current Practices and Future Trends	Megawatt Park	268
Mining/Metals Technology School	Total Utilization of Coal Resources	Witbank, Civic Centre	664
Special Interest Group – Computers Seminar	Computerized Mine Scheduling	Kelvin House	76
Metals Technology School	Ladle Metallurgy: Principles and Practices	University of Pretoria, Sportburo	63
Extractive Metallurgy School	Accounting for Gold	SA Nature Conservation Centre, Delta Park	79
Computer Applications Group Half-Day Seminar	4 GL's in the Mining Industry	Kelvin House	20
Mining Repeat School	Rock Engineering: Management Strategy for Safety and Economy	Johannesburg, Sun Hotel	56
Metals Technology – First South African Colloquium	The Engineering Development and Application of Composite Materials	The Indaba Hotel	95
Mining School	Ventilation and Refrigeration	Mintek	80

appreciated the high standard of the papers presented.

A Special Interest Group on Process Control was formed during the year and was received with great enthusiasm. Two very successful visits were arranged.

### 2.3 Technical Programme Committee— Metals Technology

Prof. R.J. Dippenaar, Chairman

Dr A. Harding (co-opted) J.L. Nel  
J.P. Hoffman C.A. Scheepers (co-opted)  
Dr B. Metcalfe (co-opted) D. Wilson

A very successful school was held in which Professor R.J. Fruehan acted as principal lecturer. The School concentrated on ladle metallurgy, and a vast amount of fundamental as well as applied information was disseminated.

The Committee participated in the proceedings of the First International Corex Conference, and was invited to present a paper on the environmental aspects of Corex. This paper was read by Professor R.J. Dippenaar.

A Colloquium on Composite Materials will be held in July, and preparations are in progress for two more international conferences in the near future.

Contact with The Institute of Metals was maintained. The annual Short Presentations Competition was held in the previous Council year to coincide with the Materials Week.

### 2.4 Mines and Works

D.A.J. Ross-Watt, Chairman

B.C. Alberts Dr G.A. Fourie  
Prof. A.N. Brown R.P. Mohring  
J.A. Cruise H.G. Mosenthal

This Committee responded to the draft changes and additions to the Mines and Works Act and regulations regarding machinery (GME 1/3/2 of 15th January, 1990) via the Government Mining Engineer. The SAIMM response supported the Chamber of Mines' comments in this regard.

### 2.5 International Deep Mining Conference

Dr H. Scott-Russell, Chairman

R. Andrew Dr B. Metcalfe  
J.D. Austin G.R.W. Mills  
P. Barnardo P.D.K. Robinson  
D. Barry D.A.J. Ross-Watt  
G.A. Brown R.M. Seal  
N.J. Devine P. Smith  
P.J. Eccleston K. Wainwright  
E.C. Hunter I.C. Watson  
Dr M.N. James  
Dr P.T. Wedepohl

Work has progressed well on this Conference, which is planned for the period 12th to 21st September, 1990. This includes pre-conference tours, formal proceedings, social functions, and one-day technical tours. The venue and facilities have been finalized, and the arrangements are in hand.

A second brochure, including registration details, was produced and distributed widely. An excellent response

in terms of technical papers should result in the publication in book form of over 100 papers.

The refereeing and editing of papers formed a major task of the Committee during the year.

Commitments for sponsorship are being sought, and this is progressing steadily.

### 2.6 Committee For The Environment

J.S. Freer, Chairman

G.A. Brown P. Steyn (co-opted)  
Dr L.A. Cramer I. Tudhope (co-opted)  
J.A. Cruise P.C. van Aswegen  
J. Greef (co-opted) K.A. van Gessel  
W. Holding (co-opted) D.J. van Niekerk (co-opted)  
R.P. Mohring M.A. Vorster  
Dr H. Scott-Russell

This is a new committee, which was set up at the beginning of the 1989/90 presidential year to advise Council on environmental matters.

Its terms of reference include the promotion of awareness among members of their responsibility towards the environment through the Institute's technical programmes, career guidance and education, regional development, and journal. It will also initiate, through Council, action towards Government on environmental matters affecting the Institute and its members, and will provide the point of contact for the Institute's representative on EPPIC.

The Committee is planning a workshop to define its strategy and plans of action, with a view to becoming recognized as the professional authority in South Africa on issues relating to mining, minerals and metals technology, and the environment.

### 2.7 Special Interest Group—Surface Mining

Prof. A.N. Brown, Chairman

The format of the Group's activities was modified during the year. No evening meetings are to be held, mainly because members find it difficult to attend.

Activities that overlap with those of the South African Institute of Quarrying were avoided. That Institute is a very active body serving the interests of those involved in the quarrying industry more than adequately.

In future, 2 to 3 visits per year will be made to large open-pit and strip mines, even if the attendance is small. Where possible, visits will be arranged by the branches and will fall under the Technical Programme—Mining.

A visit to Palabora Open Pit took place on 7th June, 1990, and was attended by 12 persons, who found the visit very interesting. This is the largest open pit in the country, and the planning to extend the mine underground was of great interest. The social-development programme of the mine for the upliftment of the local community was encouraging to see.

### 2.8 Special Interest Group—Process Control

Dr M. Moys, Chairman

Dr Larry Cramer was Chairman of this group until May 1990. He was transferred to the Precious Metals Refinery (PMR), and passed the mantle of Chairman to Dr Moys.

Dr Cramer organized several visits, the most recent being visits to the metallurgical plants at the Doornkop and East Driefontein Gold Mines.

The format of a visit is generally as follows. After a start and introduction at about 14:00, several short presentations are made by plant personnel on topics of relevance to process-control developments on the plant to be visited. Delegates are then taken through the plant in small groups. The afternoon closes with a social event.

Dr Moys organized a visit to Cooke Plant in July. A visit to the PMR is planned for the end of the year; before that it is intended to visit an instrument manufacturer who is involved in developing process-control instrumentation particularly relevant to the minerals industry.

Meetings are generally well attended, and there is no doubt that they satisfy a real need among SAIMM members.

## 2.9 Special Interest Group—Computer Applications

P. van Schaardenburgh, Chairman

The Special Interest Group—Computer Applications (SIGCA) recently affiliated with the Institute. It previously operated under the Computer Society of South Africa (CSSA) as the Mining Special Interest Group (Mining SIG).

The Committee members of SIGCA are drawn primarily from the mining houses operating in the RSA, and are either end users, such as mining engineers, metallurgists, geologists, and surveyors, who have a direct interest and practical experience in computerized data-processing applications, or members of the IS or DP Divisions.

The Committee is augmented by representatives from the computer industry in the RSA, who are mainly recruited from major vendor houses supplying hardware and software to the mining industry. These representatives are either full members or are seconded to the Committee by invitation.

The Committee typically consists of 12 to 14 members.

The major objectives of SIGCA are to promote an awareness of the use, need, and strategic importance of computers within the mining industry, and to provide a platform for the dissemination of computer methods and techniques.

SIGCA therefore regularly organizes half-day or full-day seminars on topics that are directly or indirectly related to the computerized business of mining and cover all disciplines of mining.

Announcements about seminars and registration forms are distributed via the SAIMM and the CSSA.

The last seminar held was on 26th April, 1990, on the topic '4 GL's in the Mining Industry'.

## 3. PUBLICATIONS

Portfolio Holder: R.D. Beck

Key Performance Areas

*The SAIMM*

- publishes a monthly journal with a balanced content and of high technical standard as a means of promoting technology transfer in all areas of interest to its members, and as a communication medium to keep its members informed on matters relating to their professional interests;

- publishes monographs, the proceedings of international symposia and conferences, and other publications of a high technical standard on topics related to fields such as underground mining, surface mining, extractive metallurgy, metals technology, and materials science as a means of promoting technology transfer within South Africa and as a mechanism for the display of South African skills to an international audience;
- enters into reciprocal international agreements for the advertising and marketing of publications to the financial advantage of its members.

The standard of the *Journal* was again maintained this year, with more papers in the pipeline. Mr Paul White led an active committee, who are instituting modifications to the *Journal*, which will include items of more general interest and papers of a more descriptive or practical nature. These will be easily identifiable from the high-standard research papers that have been the norm for the *Journal* over the years.

Revenue from advertising tended to be lower this year, but picked up towards the end of the year. A greater effort to draw advertising will be required in the future to cover the costs of the expanded *Journal*.

The 'News on the Job Market', which is now into its second year, was less successful. However, more effort to bring advertising will restore it to the flourishing state of the previous year.

As highlighted under **Book Publications**, a number of volumes moved into the production stage during the year, but delays were experienced as a result of authors not meeting deadlines. Although it is understandable that pressure of work should relegate the time-consuming task of writing chapters for Institute publications to a back seat, those authors who meet the deadlines are justifiably concerned that their work may be out of date by the time of final publication. Mr Rick Mohring enthusiastically co-ordinated his Committee, a number of whom were co-opted to put together specific volumes. His efforts bode well for volumes to be published shortly.

Book sales were maintained during the year, and plans for increased publicity were put in place, which will bear fruit in the future.

### 3.1 Journal

P.M.T. White, Chairman

J.D. Austin	Dr B.K. Loveday
R.D. Beck	Prof. H.R. Phillips
P.J. de Koker (co-opted)	P. Smith (co-opted)
Dr G.A. Fourie	R.A. Snodgrass (co-opted)
P.R. Janisch (co-opted)	

### Programme Advisory Board Members

Dr H. Wagner, Chairman

P.M.T. White, Vice Chairman

Mining	Dr C.J. Fauconnier
	G.T.G. Emère
	Dr H. Scott-Russell
	K.A. van Gessel
Extractive Metallurgy	G.A. Brown
	J.S. Freer
	Dr P.R. Jochens

Thanks to the efforts of the previous Chairman, Ronnie Snodgrass, and Secretary, Caroline Jansen, a three-to four-month lead time of papers was maintained, and the flow remained promising. A good balance was maintained between mining and extractive-metallurgical papers but, as was the case last year, there was a shortage of papers on metals technology.

One of the Committee's goals was to expand the readability, and consequently the readership, of the *Journal* without in any way compromising the quality. This will be achieved by the step-by-step introduction of new, non-research sections of relevance to the industry and of more general appeal to members. The first innovation is the President's Page, which focuses on issues and interests of the industry, the Institute, and their members. Other sections to be introduced as appropriate will include Legal Notes, General Papers, and Technical Notes, as well as Contributions from Readers. It is also planned to solicit expert papers on particular 'hot' topics as identified.

The financial situation of the *Journal* needs to be watched carefully. Every effort will continue to be made to keep costs in check while pro-actively seeking to expand revenues. The main sources of revenue are sales and advertising (commercial and jobs). It is hoped that a more generally readable journal will increase sales, while a greater marketing effort will bring in more advertisements. The latter activity is starting to bear fruit, and it is expected that there will be a significant increase in advertising revenues during next year.

In 1994 the Institute will celebrate its centenary, and the Committee has started planning and preparing for the publishing of a special commemorative edition. This function will be taken over by the Centenary Committee when such a committee has been formed.

The 1989/1990 Committee has been a particularly innovative and active body, and has set initiatives in motion that will benefit the *Journal* in the years to come. Additionally, now that the secretary, Miss Caroline Jansen, has been unburdened of the duties of the Book Publications secretariat, she will have more time to devote to promoting the *Journal* as an advertising vehicle for the industry.

The valuable contribution of all the above people is gratefully acknowledged, as is that of the Programme Advisory Board, the Referees, the Editor, Dr Helen Glen, and the Proofreader, Mr Fred Roberts.

### 3.2 Book Publications

R.P. Mohring, Chairman

J.D. Austin	R.W.O. Kersten (co-opted)
Dr H.E. Bartlett (co-opted)	V.J. Moore (co-opted)
R.D. Beck	Prof. H.R. Phillips
Dr L.A. Cramer	P.M.T. White
Dr G.A. Fourie	

Two completed volumes were received from the printers this year, namely *The Metals and Minerals Industry in South Africa—Part I* and *Treatment and Re-use of Water in the Minerals Industry*. Marketing of these publications is under way, but to date the response has been disappointing.

Six volumes are in the production stage, with a further four potential volumes under consideration. Production schedules have had to be extended because the authors, as a result of other work pressures, have not met the deadlines.

A volume containing the proceedings of the International Deep Level Mining Conference is in the production stage, and it is expected that this volume will be published before the conference is held in September 1990.

A major marketing drive was initiated locally and overseas, and advertising material was prepared and mailed to interested parties. It is expected that sales of the Institute's volumes will pick up as a result of this effort.

The move from Kelvin House to Cape Towers resulted in storage problems for the book stocks. Due to the kind offices of Gold Fields of South Africa, storage facilities were provided at Luipaardsvlei. The Committee is actively attempting to resolve the stock and storage problems.

It was decided during the year to computerize the marketing and accounting functions. The first phase has been completed, and test runs are under way.

A change of secretaries took place during the year, Maureen Woodward replacing Caroline Jansen, who had made a valuable contribution to the work of the Committee.

## 4. REGIONAL DEVELOPMENT

**Portfolio Holder: R.D. Beck**

**Key Performance Areas**

*To promote the interests of members based in different regions, the SAIMM*

- supports the establishment of branches to satisfy the local needs of its members for professional association and the exchange of technical information;
- co-operates with other member societies of AS&TS and with associations and interest groups that have close ties with operating mines and metallurgical plants by holding joint technical meetings and collaborating in the field of publication.

### 4.1 Regional Development Committee

R.D. Beck, Chairman

Prof. M.D. Brayshaw	Dr H. Scott-Russell
J.A.D. Britz	J.C. Steenkamp
A. Killat	Prof. J.S.J. van Deventer
R.P. Mohring	K.A. van Gessel
B. Moore	P.W.J. van Rensburg
Prof. R.F. Sandenbergh	D. Wilson

The following branch reports show the high level of activity in the branches of the Institute. Each branch has developed its own character, but all share the same enthusiasm for putting together good-quality talks and visits for their members. Two branches, Western Cape and Vaal Triangle, are involved in functions aimed at introducing scholars to the mining industry. Other branches are being encouraged to look at similar activities, and at interaction with university and technikon students in their areas. The Pretoria Branch has already started on the latter.

The local section of the IMM in Namibia, with whom the Institute has liaison, continues to look after SAIMM

members in that area, a number of interesting talks and visits having been organized.

Interaction with bodies active in the mining and metallurgical industries continued.

Discussions were held with the mining associations in the northwestern and eastern Transvaal regions. Both bodies believe that the duplication of effort is counter-productive, and the Institute will continue to strive for liaison so that its members' interests can be better served in those areas.

The history and the activities of the Branches were described in a Spotlight article in the June issue of the *Journal*.

## 4.2 SAIMM Branches

### 4.2.1 Johannesburg Branch

B. Moore, Chairman

J.J. Cilliers (co-opted)	Dr E. Kirby
J. Dixon	R. Meade (co-opted)*
G.T.G. Emère (co-opted)	D. Milella
Dr N.C. Gay	Dr C. Seymour
K. Greve	P. Smith

\* Resigned from the Committee during the year.

The Johannesburg Branch of the Institute has had a busy year. The Branch strove to achieve and maintain the high standard of general meetings and technical visits set by the previous committee. The Committee remained enthusiastic throughout the year as a result of the encouraging support received from members. The general meetings were consistently well supported.

The following general meetings were held:

June 1989	(AGM) 'Mining towards the 21st Century'—Prof. N.C. Joughin
September 1989	'Sua Pan Soda-ash Project'—B. Beaming
November 1989	'Gold—A Blessing and a Curse'—Dr A.M. Edwards
February 1990	'Mossgas'—K. Stallbom
May 1990	'Northam'—I.C. Watson

The Committee thanks the speakers who gave of their time to prepare and present their respective papers. Each of the general meetings was followed by a cocktail party, which provided an opportunity for members and their guests to interact socially. The Committee expresses sincere appreciation to the generous sponsors for making these cocktail parties possible. The Institute made use of the Branch's general meetings to present 50-year membership awards to the Johannesburg-based members who qualified. It certainly was most gratifying to witness the rewarding of such dedicated support to the Institute.

During the year, two technical visits were organized.

The first was a two-day visit to the eastern Transvaal in August 1989, and consisted of visits to Lavino Mine, Tubatsi Smelter, and Middelburg Steel & Alloys. The hospitality afforded the visitors was outstanding. Some 22 persons attended what was a most interesting visit. A high social rapport was attained among the participants, new friends being made and old acquaintances re-established. Accommodation for the visit was arranged at the Overvaal Resort at Loskop Dam.

The second visit took the form of a one-day excursion to New Vaal Colliery and the adjacent Lethabo Power

Station. The visit, which was technically stimulating, was enjoyed by all. Following the visit, the mine and power-station management hosted a barbecue on the banks of the Vaal River. The Committee expresses its appreciation to all who made the technical visits possible.

The Institute's secretariat was, as always, most helpful, and assisted the Branch in all its endeavours. Many thanks are due to Celeste Mackintosh and her team. Thanks are also expressed to Beverley Austen, who so ably undertook many of the clerical duties associated with the organization of Branch activities.

In May this year, the secretariat vacated their office in Kelvin House subsequent to its change of ownership to Gencor. The Institute's loss is shared by the Johannesburg Branch, who regard Kelvin House as a most convenient venue with excellent facilities, and the Committee is directing its full attention to finding alternative venues. The programme for the remaining half of 1990 has been finalized and should not disappoint.

### 4.2.2 Orange Free State Branch

J.C. Steenkamp, Chairman

H.M.W. Eschenberg	J.G. McCallum
D.R. Fleming	H. Olinger
W.J.N. Gelderblom	Dr M.A. Orridge
A.H. le Roux	E.N.D. Westgate

The Annual General Meeting was held at the FSG Mine canteen on 25th July, 1989. It was well attended (47 persons) by members and their guests. Mr C.E. Fivaz, President of the SAIMM, was the guest speaker. His address centred mainly on some of the challenges facing the industry as it approaches the turn of the century.

The Committee met at regular two-monthly intervals, and endeavoured to increase the activities of the Branch by short technical visits and addresses by guest speakers at general meetings covering a wide variety of topical interests.

Two technical visits were arranged during the year. The first, in September 1989, was made to the AECI Zomerfeld explosive factory. A total of 57 members attended. Mr Bruce Addison, Regional General Manager, had arranged a most interesting programme covering demonstrations of the latest explosive accessories, a talk on emulsion explosives, and a tour showing the manufacture of Powergel and Anflex. The visit ended with a sumptuous 'sheep-braai' on the 'farm'.

The second visit, attended by 25 members, was arranged for 29th November, 1989, by Dr Brian Brink, Senior Medical Superintendent of the Ernest Oppenheimer Hospital and the Ithuseng Spinal Rehabilitation Centre. The host, Dr Einstein, and his staff went out of their way to show how badly injured people can be rehabilitated so that they can lead an active life both in first- and third-world scenarios. It was of special interest to learn that each patient has a rehabilitation programme in which he or she passes through various skill levels, and is continually assessed both while at the unit and after leaving it, thereby allowing a more productive placement back on the mines.

The annual excursion took place in June 1990, consisting of visits to the Johannesburg Stock Exchange and the Rand Refinery.

Three general meetings were held during the year.

The first was held in the FSG Mine canteen on 25th October, 1989, where the guest speaker was Mr Graham Lloyd, President of the Goldfields Chamber of Commerce and Vice President of ASSOCOM, OFS. The meeting was attended by 25 persons.

Mr Lloyd gave a very interesting talk on the Chamber's organization in South Africa, and its interaction with other bodies and with mining companies. He explained the new Commercial Exchange, how it will function in Welkom, and how the mines can make use of it. The adaptation of commerce to the current economic situation in the mining industry was briefly discussed. He also showed, using overhead slides, very interesting CPI information published by ASSOCOM, which stimulated a number of questions from the floor.

The second general meeting was held in the Welkom Mine canteen on 28th February, 1990, and was attended by 19 persons. The guest speaker was Mr Rais Vermaak, Vice Chairman of the Goldfields Regional Services Council. Mr Vermaak gave a very interesting talk on the constitution and envisaged operation of the local Regional Services Council, and its interaction with other bodies and with mining companies.

A few observations from his presentation include the fact that the Council is a new constitutional structure, and an autonomous, multi-racial, and non-political organization offering representation to the mines, as well as to industry, commerce, and farming. The aim is to provide a better infrastructure and various services to all communities. However, it will not take over the functions of local bodies. Its funds are derived in the form of levies, and finance is distributed to projects requiring the most urgent attention in the region.

The third general meeting was held in the Unicorn Club, St. Helena Gold Mine, on 2nd May, 1990, and was attended by 36 persons. The guest speaker was Mr J. Geldenhuys, Regional Manager of ESKOM in the OFS.

Mr Geldenhuys described the ESKOM hierarchy, and gave an indication of the extent of ESKOM's investment within the region. He stated that a total of 20 000 kilometres of power lines criss-cross the OFS. He went on to highlight some of the common challenges facing South Africa at present, and discussed ESKOM's approach to each area. The challenges were ably illustrated and included education, population growth, decreasing business activity, pollution, unemployment, and housing.

The audience raised numerous questions concerning power cost, the viability and availability of solar, hydro-, and nuclear energy, and ESKOM's role in education, all of which were expertly dealt with.

The membership fluctuated throughout the year owing to transfers, etc. and now stands at 147.

#### 4.2.3 Pretoria Branch

Prof. R.F. Sandenbergh, Chairman	
P.H. Botha	P.C. Pretorius
Prof. A.N. Brown	A.P. Theart
G.S. Esterhuizen	C. Swart

The Pretoria Branch had a successful year in which a number of well-attended meetings were held. The Committee functioned well, and the organization of the

various events went smoothly owing to the enthusiastic support of all the Committee members. Four Committee meetings were held during the year and were attended by all the members.

The Annual General Meeting of the Branch was held on 31st July, 1989, at the Sports Centre of the University of Pretoria, and was attended by some 60 people. Dr O.K.H. Steffen addressed the meeting on the role of the mineral industry in the future development of Africa. This was followed by a very pleasant cocktail party sponsored by Mixmega.

A mini-symposium on 'Surface Treatment for Optimal Utilization of Materials' was hosted by the Branch on 7th March, 1990. It was opened by Dr O.K.H. Steffen, and papers were delivered by Professor G.T. van Rooyen of the University of Pretoria, Dr B. de Lange of Surfcoat, Mr A. Duggin of RARE Coatings, and by Mr H.P. Gradisching of BMW (SA). The Symposium was attended by approximately 80 people, and was followed by a cocktail party. This event was kindly sponsored by the Security Division of Dresser South Africa. The feedback on this event was very positive, and similar symposia are planned for the future.

The 28th Annual Hendrik van der Bijl Memorial Lecture was presented at the University of Pretoria on 29th May, 1990, and was again supported by the Branch. The lecture was given by Dr A.C. Liebenberg, who is a well-known consulting civil engineer with the Cape Town firm of Liebenberg & Stander. His lecture was entitled 'The Role of the Consulting Engineer in the New South Africa'. The event was arranged by the South African Association of Consulting Engineers and was not well attended.

The Committee is satisfied with attendances at the events hosted by the Branch, and is especially encouraged by the attendance of many newcomers and with the success achieved in involving students of the Departments of Mining Engineering and of Materials Science and Metallurgical Engineering at the University of Pretoria in Branch activities.

#### 4.2.4 Vaal Triangle Branch

Prof. M.D. Brayshaw, Chairman

K.R.E. Beard	J.A. Terblanche*
B.J. Lodewijcks*	M.A.L. van der Walt
A. Maass	Dr M.J.U.T. van Wijngaarden*
A.M. Saayman*	P.R. van Wyk
P.A. Taljaard*	

\* Resigned during the year.

The 1989/90 session began on a good note with the Annual General Meeting held at UBCO Club on Thursday, 27th July, 1989, with President Gene Fivaz reporting from Johannesburg. Professor Johan de Kock from the Department of Mechanical Engineering at Potchefstroom University spoke on some recent inventions that had been made in his department.

The new Committee's first function was held on 12th September, 1989, and featured Dr Nick Wiehan from UNISA, who gave a very entertaining speech on industrial relations. Approximately 55 people attended and enjoyed a worth-while evening.

To stimulate further interest, particularly in Commit-

tee meetings, it was agreed that each member of the Committee present a short delivery concerning his particular job of work. These presentations have proved enormously successful, and have injected some new life into the monthly meetings.

A Committee social was held on Saturday, 25th November, 1989, which was attended by all the Committee members, taking the form of an enjoyable braai at the home of Mr Kenny Beard, the previous Branch Chairman.

The next meeting of the Branch was held on 20th February, 1990, and involved a visit to New Vaal Colliery. This was a successful visit and generated much interest among the 20 or so members who attended from industry. The visitors were shown around the open-cast mine and the coal washery, and were treated to a lunch-time barbecue.

Probably the biggest and most successful event on the calendar was the scholars' evening, which was held on Thursday, 26th April, 1990. This event was aimed at arousing interest in the metallurgical profession among Standard 9 and 10 scholars in the Vaal Triangle. Between 200 and 250 scholars and parents attended the evening at the Vanderbijlpark High School, and were entertained by two excellent speakers (Professor D.W. Horsfall from the University of the Witwatersrand, and Professor Gert Pienaar from the University of Pretoria), and were also treated to two educational video films. The evening featured some 22 professionals representing the seven mining houses in South Africa, who were available to speak to interested parents and scholars, as well as to answer questions. The evening was very successful, with many students expressing a positive interest in a future career in metallurgy. This event should be held annually in the Vaal Triangle, and should be given more exposure in the media to attract a greater amount of interest.

The next event on the calendar featured the Coopers & Lybrand 'Just in Time' simulation, and was hosted by Mr Kenny Beard of that organization. The simulation involves the hypothetical establishment and running of a manufacturing business venture in which the delegates play the various key roles in the enterprise. Some valuable lessons were learnt, and the evening was very stimulating for all who attended.

The Branch remains concerned about poor attendances at some functions, and every effort has been made to increase interest in the activities of the Branch through both personal and company contacts. The Committee has appealed to the various core committees that meet in Johannesburg to schedule national events in the Vaal Triangle and so foster a new and much-needed metallurgical culture in the region.

#### 4.2.5 Western Cape Branch

Prof. J.S.J. van Deventer, Chairman

J.J. Cilliers (co-opted)

Dr R.D. Knutsen

Prof. F.L.D. Cloete

Prof. C.T. O'Connor

Dr J.-P. Franzidis

The Committee held seven meetings after the last Annual General Meeting.

The Western Cape Branch aims to create an awareness of the minerals industry in the region, especially with a

view to attracting graduates to a career in mining. Therefore, the main functions of this Branch are the annual mineral-processing symposium held in collaboration with the Department of Chemical Engineering at the University of Cape Town (UCT) and the Department of Metallurgical Engineering at the University of Stellenbosch (US), a mining careers day for schools, and a students' visit to the mines in the northwestern Cape.

With Dr J.-P. Franzidis as Chairman, the Branch held a most successful international colloquium on 'Developments in Froth Flotation' in August 1989 at the Van Riebeeck Hotel on the beachfront of Gordon's Bay. A Spotlight article on this event appeared in the November 1989 issue of the *Journal*. Of the 153 delegates, 88 were SAIMM members. The first day was devoted to reagents and process development, while the second day was concerned with column flotation. A total of 27 papers were presented, of which 7 were by overseas delegates. Professor E.T. Woodburn of UMIST, UK, delivered the keynote address on the vision-based characterization of three-phase froths. Review papers were presented by Dr R.R. Klimpel (USA) and Dr J. Yianatos (Chile). The Colloquium ended with a panel discussion chaired by Professor F.F. Aplan (USA).

The third Annual General Meeting and Dinner of the Branch were held on 3rd August, 1989, in the Lord Charles Hotel outside Somerset West. The Dinner, which coincided with the Colloquium Banquet, was attended by about 170 people. Mr B.J. Schoeman, managing director of Karbochem, delivered the main address.

A visit was made by 22 members and students to the National Accelerator Centre of the CSIR at Faure in October 1989 to coincide with a maintenance shut-down. Since general maintenance of the cyclotron takes place only twice a year, the group was especially privileged to view the magnets and high-technology devices inside the shielding walls. A corrosion evening in collaboration with the Western Cape Branch of the SAICHE is planned for later in 1990.

A visit was arranged to Kleinzee, Aggeneyns, and the smelter at O'okiep from 29th March to 1st April, 1990, under the auspices of the Branch. Mr J.J. Cilliers and Professor B.D.A. Paddon of UCT accompanied a group of 13 students from that university and 4 from US. The visit proved a great success, and it is hoped to repeat the exercise next year.

The Branch arranged its fourth and most successful schools day on 23rd April, 1990, with a view to introducing matric pupils to careers in the minerals industry. At UCT, the event was attended by 126 pupils from 26 schools, and was hosted by the Departments of Chemical Engineering and Materials Engineering. The Departments of Metallurgical and Engineering and Geology at US attracted 86 participants from 18 schools, two as far afield as Montagu and Caledon.

This year, the 8th Annual US-UCT Mineral Processing Symposium was arranged for 3rd August, 1990, at the Van Riebeeck Hotel in Gordon's Bay. Besides a plenary lecture on recent developments in hydrometallurgy by Dr M.A. Ford of Mintek, research students and staff of the two universities presented papers and posters on hydrometallurgy, flotation, and simulation.

#### 4.2.6 Witbank/Middelburg Branch

J.A.D. Britz, Chairman	
W.J. Abel	C.P. Goodale
A.M.P. Henderson	T. Schmoll
K.W. Falconer	R.B. Smith
L.G. van Biljon	E. Ford

A visit to Barberton planned for the weekend of 13th October, 1989, was called off at the last minute because of the many cancellations received.

On 5th December, 1989, a one-day symposium was held at Douglas Colliery Recreation Club on the topic 'Coal Mining in Witbank—100 Years'. The Witbank/Middelburg Branch assisted with the arrangements. The Symposium was a great success, and was very well attended.

The general meeting of 13th March, 1990, was held at Kriel Colliery so that the Evander/Secunda members could easily attend. The idea was to try and get the Evander/Secunda members to become active. Invitations were sent out to all the members, as well as to some senior management members, in the area, but only one of the members attended the general meeting. Two papers were presented: 'Marketing Aspects of the Metals Industry' by R.A. Herbertson, and 'Selecting Steel for Abrasive/Corrosive Wear Application' by Dr Keith Barker.

A technical excursion to Secunda Colliery Central Workshop on 21st May, 1990, was attended by 12 members, and was much enjoyed by all of them.

The Annual General Meeting was held on 25th July, 1990, at the Middelburg Country Club, and was attended by Dr O.K.H. Steffen. The same committee was re-elected at the meeting, with two additional members.

The outgoing Committee has planned one event for the new Council year, leaving the incoming committee to arrange events for the rest of the year. The event is to take place in September 1990, and is a general meeting at Goedehoop Colliery at which technical papers will be presented.

### 5. ENGINEERING SCIENCE AND TECHNOLOGY IN SOUTH AFRICA

**Portfolio Holder: Dr O.K.H. Steffen**  
**Key Performance Area**

#### *The SAIMM*

- *participates in the work of AS&TS (The Associated Scientific and Technical Societies of South Africa) in order to play its part in making a meaningful contribution to the general advancement of science and technology in South Africa.*

#### 5.1 The Associated Scientific & Technical Societies of South Africa (AS&TS)

Committee	Representative	Alternate
Controlling Executive	Dr O.K.H. Steffen	C.E. Fivaz
Kelvin Management	H.G. Mosenthal	R.D. Beck
Science and Technology	J.D. Austin	
	H.E. James	Prof. A.N. Brown
	J.L. Nel	

#### 5.1.1 Controlling Executive

Mr L.R. (Bob) Robinson succeeded to the Presidency of the AS&TS in November 1989. Purchase of the Observatory site was negotiated with the CSIR and finalized, and the rezoning and registration of the property were completed. After it became clear that the financial demands of the entire scheme required the sale of Kelvin House, the sale, to Gencor, was negotiated and finalized on favourable terms. The main activity of AS&TS during the year concerned the decommissioning of Kelvin House and the establishment of new headquarters at the Observatory.

It had initially been planned to undertake an ambitious building programme in Observatory requiring some R3,5 million. The wisdom of incurring such a debt at this particular time was questioned, and it was decided to renovate all the accommodation existing on the site, which would be adequate at present. The building project will be delayed until the necessary funds are available. The renovations are now complete, and all the societies desiring to relocate have done so.

Because the SAIMM nerve centre is in the city centre, it was decided to establish the SAIMM offices at Cape Towers. Committee meetings will be held there and in the Chamber of Mines building. A few other societies have also decided not to relocate to Observatory.

The AS&TS passed through a difficult financial period during the year. Difficulties were understandably due to the running of two establishments, the decommissioning of Kelvin House, the move to Observatory, the taking over and registering of the new property, and the renovations to the existing buildings. The financial position is sound, with a capital amount of about R1 million in hand.

There is no doubt that the move to Observatory will be of great benefit to science and technology in the long term, and the fruits will be picked by future generations. As always, the SAIMM has accorded the AS&TS its unequivocal support.

Fund raising for the building project is going ahead, and an Education Fund with corporate, as well as private, tax benefits has been sanctioned and registered with the Receiver of Revenue. It is intended to create an Education Trust.

#### 5.1.2 Science and Technology

AS&TS again took the leading role in organizing the World Environment Day Symposium. It was held at Mintek on 5th June, 1990, and was exceptionally well attended. The theme was 'Air Pollution'. The EPPIC Award was made to the Environmental Evaluation Unit at the University of Cape Town for their course on 'Practical Techniques in Environmental Impact and Assessment'.

Close ties are maintained with PROTEC and AFROTECH Technology Exchange Programme. The slogan of 'Ex Africa pro Africa' has been adopted. The provision of funding for the programme and its expansion is being promoted vigorously. A visiting academic from Malawi is at present in the RSA, and a Chemical Conference in Malawi was held with an RSA contingent of 20 people in attendance.

The *Journal of Science* has been taken over by the Bureau for Scientific Publications.

The National Award was made jointly to two bodies: to ESKOM's Engineering Group and its Professional Team for their fundamental contribution to power generation and transmission, with particular reference to the Lethabo Power Station and the 765 kV transmission system; and to the Chamber of Mines Research Organization in recognition of outstanding research and practical application in protecting underground workers from adverse heat-stress effects through selection and heat-acclimatization procedures.

The biennial conference dealing with 'The Crisis in Science and Technology' has been postponed.

## 5.2 The South African Council for Professional Engineers (SACPE)

### Nominees on SACPE Council

	<i>Mining</i>	<i>Metallurgy</i>
Representative	H.G. Mosenthal	H.E. James
Alternate	R.P. Mohring	Prof. R.J. Dippenaar

### Professional Advisory Committees

#### *PAC Mining*

H.G. Mosenthal	R.P. Mohring
J.B. Raath	D.A.J. Ross-Watt
Prof. R.P. Plewman	D.J. van Niekerk
J.A. Cruise	Prof. A.N. Brown
Dr O.K.H. Steffen	Prof. D.G. Krige

#### *PAC Metallurgy*

H.E. James	R.D. Beck
Prof. G.T. van Rooyen	Prof. R.F. Sandenbergh
Prof. R.P. King	Dr A.K. Haines
Dr P.R. Jochens	C.E. Fivaz
Dr B.K. Loveday	Prof. R.J. Dippenaar

During the past year, the PAC Mining and PAC Metallurgy Committees of SACPE continued their important work of screening the qualifications and practical experience of applicants for registration as Professional Engineers. Several training programmes for engineers-in-training submitted by local mining and metallurgical organizations were screened by the Committees prior to being accepted by SACPE. Assistance continues to be provided by nominees of the Institute in the accreditation of courses offered by universities and technikons in the disciplines of mining and metallurgy.

## 5.3 Committee for Professional Engineers

C.E. Fivaz, Chairman

B.C. Alberts	H.E. James
K.R.E. Beard (co-opted)	Dr B.K. Loveday
Prof A.N. Brown	H.G. Mosenthal
Dr L.A. Cramer	Prof. R.P. Plewman
Prof. R.J. Dippenaar	D.J. van Niekerk (co-opted)
Dr G.A. Fourie	

Since the Institute decided not to become a member of SAVI or SPE when these bodies were constituted, a Committee was formed to deal with matters concerning members of the Institute who are Professional Engineers. It is intended that this Committee will extend its responsibility in the new year to include members who are registered technologists and technicians.

The two main issues that were addressed were as follows:

- the promotion and monitoring of legislation affecting Professional Engineers and their vocation,
- consideration of areas in which the interests of Professional Engineers are not being met and necessary action to rectify the situation.

Regarding the first issue, contact was made with the Government Mining Engineer in an attempt to ensure that the documents sent by him to the Institute cover the interests of Professional Engineers as comprehensively as possible. The receipt of documentation is continuing satisfactorily. The new Minerals Bill has not yet been promulgated and is awaited with great interest.

Regarding the second issue, nine areas were identified as requiring attention to a greater or lesser extent. It transpired that the infrastructure for addressing the majority of these areas already exists within the Council of the SAIMM, and all that was required was to ensure that the necessary awareness existed with the appropriate members of Council.

One matter that remains to be addressed is the accountability for the work Professional Engineers perform. This can be done meaningfully only after the new Minerals Bill has become available.

In the meantime, the Committee meets as and when necessary.

## 5.4 Affiliation of Societies Representing Engineering Technicians (ASRET)

<i>Representative</i>	D. Wilson
<i>Alternate</i>	Dr J. Lurie

A general committee meeting of all the member societies of ASRET was held on 22nd August, 1989, with the main purpose of obtaining agreement in principle to the dissolution of ASRET and the formation of a new body to represent engineering technicians. The new association would consist of individual members with various grades of membership. This association would then meet the requirements of membership of SAVI.

The Ninth Annual General Meeting was held on 26th September, 1989. The President proposed a motion that ASRET be dissolved, which was adopted unanimously. The President advised those present that a constitution had been prepared for the new body, which would be known as The Association of South African Registered Engineering Technicians or ASARET.

The Executive Committee has met on a monthly basis since the Annual General Meeting, and has concerned itself with winding up the affairs of ASRET.

As ASARET is an association of individuals, the SAIMM will no longer be entitled to representation on the Council. A decision is still to be taken regarding whether SAIMM members will become 'patron' members of ASARET, and at present the only link between the two organizations is through registered engineering technicians who are members of both organizations.

## 5.5 South African Association of Registrable Engineering Technologists (SAARET)

<i>Representative</i>	Dr J. Lurie
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In order to streamline the functioning of the Commit-

tee in two ongoing areas of concern, two sub-committees were established: Education and Training, and Publicity. Dr J. Lurie was elected to the former.

The following designations were approved for members:

Honorary Member	Hon MSAARET
Member	MSAARET
Student	Student SAARET.

Progress was made in drawing up profiles of engineering technologists—an exercise to counteract the general lack of appreciation of the role and value of the technologist. Those for mechanical, electrical (heavy current), and civil engineering and fire technology were completed. Those for mining and metallurgy are currently being prepared.

The SAARET Gold Medal for the best Master Diplomat in the country completing studies during 1989 was presented to a diplomate in the field of metallurgy, namely Wouter Johann Coertzen.

During the year, the structure of the programmes at technikons for Master Diploma in Technology (the educational requirement for registration) enjoyed considerable attention, and culminated in a request to re-establish the pure subject option for obtaining the diploma.

At the end of the year, membership of SAARET stood at approximately 1200, the majority of whom are registered Professional Technologists (Engineering).

### 5.6 Engineers' Liaison Committee

*Representative* Prof. A.N. Brown

The activities of the Pretoria Engineers' Liaison Committee are dealt with under the Pretoria Branch.

### 5.7 Programme for Technological Careers (PROTEC)

PROTEC continued to commit itself to achieving quantifiable results in a cost-effective way, and to this end every branch set itself clear and measurable objectives. The returns PROTEC offers to participants include an increased technological recruitment pool in South Africa; a contribution to a more stable economic environment for companies and their markets; an opportunity for employers and employees to work together in contributing to education; an opportunity for parents to be involved in education; opportunities for career progress to students; and relevant support skills for parents.

In 1989 PROTEC again achieved major success in increasing the number of students who progressed into tertiary education in technology. PROTEC students achieved a 32 per cent matric-exemption rate in mathematics and science. At the tertiary level, PROTEC students achieved an even more noteworthy general pass rate of 76 per cent. The SAIMM continued to support PROTEC by way of a grant.

### 5.8 Phoenix National Committee

*Representatives* J.L. Nel  
Prof. R.P. King  
*Alternate* Dr R.H. Eric

The Phoenix Fund is administered by the SAIMM, and the programme is carried out by the Chamber of Mines.

During 1989, when there was no turnover of Chamber staff responsible for the daily activities of the Phoenix Programme, the staff were able to carry out all the tasks and projects that had been set for the preceding twelve months. There are now four members of staff in the Chamber's Manpower and Education Department who are responsible for the daily activities of the Phoenix Programme, and who report to the Manager, Manpower and Education Services. During 1989, the Portfolio Holder for Education at the Chamber of Mines felt that it was necessary for the Chamber's Education Advisory Committee to critically examine the activities of the Phoenix Programme and all the other schools' liaison work that was being conducted by the Chamber's Manpower and Education Department, with a view to rationalizing and co-ordinating the work that the Chamber was carrying out on behalf of its member groups.

A series of workshops and meetings was arranged with the Chamber and member groups to clearly establish and define the role of the Chamber in relation to those groups. There did not appear to be any activities that were very similar to one another or duplicated in any way in the activities of the Phoenix Programme, and only a small number of Phoenix activities have therefore been discontinued as not falling within the mission of the Education Services Division.

Since the inception of the Programme, there have been 89 courses for 1984 science teachers and student science teachers, and 71 courses for 1628 selected scholars interested in engineering and geology. A new course was conducted in 1990 for 55 science lecturers from black colleges of education. These figures do not include those teachers or scholars/students who participated in one-day or half-day visits to the minerals industry. The primary focus of the Phoenix Programme is now in the field of science education (and to a lesser extent geography), some of the main goals being as follows:

- to influence education departments and planners of syllabi and curricula to include a better representation of the minerals industry (where possible with 'hands-on' experimental work) in the new science and geography curricula and syllabi that are being revised in modular form in primary and secondary schools and at black colleges of education;
- to design, develop, and produce curriculum materials that primarily relate the mining and minerals-processing industry to school science syllabi; and
- to conduct courses for science teachers and lecturers at black colleges of education to teach them how to implement, link, and use these curriculum materials with their students.

Phoenix staff have also represented the Chamber of Mines on the various committees that are at present involved in the revision of the science syllabi for Standards 5 to 10, and have had an opportunity to provide input and so obtain greater representation of the minerals industry in the new syllabi. One of the positive results is the inclusion in the new Standard 8 chemistry syllabus of an optional science topic on the 'Important Metals of South Africa'. This will involve the study of one of the following metals in those schools that elect to teach this topic: copper, manganese, chromium, iron, gold, platinum, or uranium. Phoenix staff, in conjunction with staff

from the Chemistry Department of the University of the Witwatersrand, have successfully negotiated to assist an education department in conducting courses for 540 of its science teachers (from 270 schools) over a six-week period during 1991 in which science teachers will be exposed to a one-day workshop on copper or manganese as an optional science topic. Negotiations are under way for a number of similar projects for other education departments and science teachers in 1991 and 1992.

The Phoenix Programme has continued to maintain contact and liaison with other organizations (both formally and informally) whose primary aim is to promote science education in schools and to encourage scholars to pursue careers in engineering, technology, and the earth sciences. The Chamber of Mines and the SAIMM are extremely grateful for the financial support received from the following companies and organizations during 1989: AECI, Mintek, Envirotech, Ferro Alloy Producers' Association, Haggie Rand, Iscor, Rio Tinto Management Services, and SASOL.

### 5.9 South African National Committee on Tunnelling (SANCOT)

*Representative* J.A. Cruise  
*Alternate* Prof. H.R. Phillips

Although civil tunnelling activities during the year under review were low-key, two major events were the award of a large tunnelling contract by the Umgeni Water Board and the calling of tenders for five major tunnelling contracts for the Lesotho Highlands Water Project.

SANCOT remained active, holding Council meetings each quarter, Working Group meetings at regular intervals, informal meetings, and the annual seminar 'Mechanical Underground Excavation' in November 1989, which was opened by Dr O.K.H. Steffen.

With respect to the International Tunnelling Association, with which SANCOT is affiliated, SANCOT was represented by three members at the ITA General Assembly Meeting held in Toronto. In addition, SANCOT continues to lead the ITA Working Group on Health and Safety in Work.

Mr J.A. Cruise was elected to the Executive Committee of SANCOT as its Honorary Treasurer.

### 5.10 The Environmental Professions Interdisciplinary Committee (EPPIC)

*Representative* J.S. Freer  
*Alternate* C.B. Roper

It probably bears repeating that EPPIC is a committee consisting of delegates from those professional institutes that have banded together on a voluntary basis to make their members aware, when planning and executing projects, of their personal responsibility for potential impacts on the environment.

The Environment Conservation Act No. 79 of 1989, on which EPPIC and the SAIMM had submitted substantial comment when it was still a bill, has been promulgated. The Department of Environment Affairs is on record as saying it is to be hoped that it can be administered in the spirit in which it was drafted, and that developers will shoulder their responsibilities towards the

environment, work with the authorities in a spirit of joint venture, and embrace the principles and practice of integrated environmental management as published recently by the Council for the Environment.

EPPIC's strategy is based on this opportunity. EPPIC sees itself as the window of communication between the professional institutes and the Minister of Environment Affairs through the Council for the Environment. EPPIC has presented its strategic plan to the Council and also to the Committee of Environmental Management, on which it now has representation. Going further, EPPIC intends to make representations to the committee of the President's Council charged with the task of drafting a policy for a national environmental management system in order to point out the channels it can offer to augment such a system by direct communication with the professional institutes and, through them, to their members.

As was the case last year, the Institute was again successful with its nomination for an EPPIC award. The De Rust Open Cast Silica Mine of the Industrial Minerals Division of Consol Limited won EPPIC's Johannesburg Regional Award for their planning and execution of mining in a manner designed to leave the site in harmony with the environment.

### 6. INTERNATIONAL LIAISON Portfolio Holder: Dr O.K.H. Steffen Key Performance Area

*To achieve its objectives, the SAIMM*

- *participates in and represents South Africa on bodies such as World Mining Congress and the Council of Mining and Metallurgical Institutions (CMMI), appoints Corresponding Members in areas such as the United Kingdom, Australasia, Canada, and the United States of America, Japan, and South America, and interacts with sister institutes in other countries to promote international exchange of scientific and technical information.*

Contact with institutes and members overseas was maintained during the year through official and personal channels. Corresponding members in various continents liaised on matters of interest, and SAIMM members were informed of this through notices in the post. The following Corresponding Members of Council participated in SAIMM affairs:

United Kingdom	Dr M.G. Atmore Prof. C.T. Shaw
Australasia	I.J. Corrans, R.H. Swan
Canada	Prof. B.W. Mackenzie
USA	Dr J.-M.M. Rendu Prof. M.D.G. Salamon
Japan	B. Hornabrook
Chile	Dr E.J. Magri
New Zealand	A.C. Burrow
Brazil	A.G. Netto.

### 6.1 Council of Mining and Metallurgical Institutions (CMMI)

*National Representative* Dr O.K.H. Steffen  
*Alternates* Dr M.G. Atmore  
Prof. D. Buchanan

The 14th CMMI Congress, held in Edinburgh, was well attended by South African delegates. Members' papers were presented on a wide range of topics in the minerals and materials industry. Pre- and post-conference tours added considerably to the value of the Congress.

### 6.1.1 15th CMMI Congress

*National Representative* Dr O.K.H. Steffen

The Council of the CMMI agreed that the 15th Congress would be hosted by South Africa in 1994 during the centenary year of the SAIMM. A Steering Committee including representatives of the mining industry and the Geological Society of South Africa will be convened in the new Council year to start organizing this Congress, which will be hosted jointly by mining industry organizations.

### 6.2 World Mining Congress

Dr H. Wagner, Chairman  
Prof. A.N. Brown J.B. Raath  
D. Gaynor R.A. Sesink Cleo  
Prof. R.P. Plewman

Meetings of the International Organizing Committee (IOC) of the World Mining Congress were held in San Francisco (USA) and Beijing (People's Republic of China). The meeting in Beijing was held in conjunction with the 14th World Mining Congress and was attended by Dr H. Wagner. The meeting was largely concerned with preparations for the 15th World Mining Congress, which will be held in Madrid (Spain) from 15th to 29th May, 1992.

The South African mining industry was well represented at the Beijing Congress, and was the second-largest foreign delegation after that of the USSR. With 2500 delegates and 900 exhibitors, this was the largest World Mining Congress held so far. A range of pre- and post congress tours provided an opportunity for South African delegates to learn more about China, particularly its diversified mining and mining-equipment industries. The South African delegation was well received, and many contacts were made with representatives from mining countries that have been difficult to access.

### 6.3 APCOM '90

*National Representative* Prof. D.G. Krige

No APCOM meeting was held during the past year. The next symposium in this series is scheduled for 17th to 21st September, 1990, in West Berlin. The SAIMM is supporting Professor D.G. Krige in his attendance as the national representative.

APCOM '90 promises to be an excellent meeting, with above-normal participation of countries from Eastern Europe. The Symposium, as well as any relevant matters arising from the International APCOM Council meeting that is to be held during the Symposium, will be covered by report in due course.

### 6.4 INFACON '92

*National Representative* Dr R.E. Robinson

The SAIMM is privileged to join Mintek and the Ferro

Alloys Producers' Association in organizing the 6th International Ferrous Alloys Conference in 1992. The first INFACON was held in South Africa in 1974, when the SAIMM played a prominent role. After four other conferences held in other parts of the world, South Africa was unanimously selected to host the sixth conference, which is expected to be one of the largest technical conferences ever held in South Africa. Dr R.E. Robinson, Past President and Council member of the SAIMM, who was Chairman of the 1974 INFACON Committee, is Chairman of the 1992 Committee.

### 6.5 1st International Chromium Steel and Alloys Congress

*National Representative* J.P. Hoffman

The above Congress will be held in Cape Town during the period 8th to 12th March, 1992. It will be held in conjunction with and parallel to INFACON '92.

The Chromium Steel and Alloys Congress is being organized by the SAIMM, and is aimed at engineers, scientists, and managers who are concerned with the production and application of chromium steels and alloys. It will focus on process metallurgy, and the production and application of chromium-containing steels and alloys. The main objective of the Congress is for the world to recognize South Africa's position and potential as a producer of chromium steel and alloys.

Delegates from all over the world will attend the full Congress. The first circular and call for papers were distributed at the end of June 1990.

## 7. MANAGEMENT AND ADMINISTRATION

*Portfolio Holder* Dr O.K.H. Steffen

The major activity during the year concerned the move to Cape Town. This was completed very successfully, and the new headquarters offers a very pleasant working environment for the secretarial staff. Two conference rooms included in the floor space are utilized by various committees, which has resulted in much closer co-operation between Council members and the secretariat. The following staff are now employed in servicing the needs of members and the administration of the Institute: Mrs C. Mackintosh (Manager), Miss P. Binstead, Miss C. Jansen, Mrs M. Woodward, Mrs M. Moodley, Miss K. Norman, and Mrs A. Panana.

The computerization of membership information, technical-programme management, and book publications has progressed very satisfactorily. The Council expresses appreciation to Mr Glen West for his very able and willing assistance in this regard, and to Rand Mines for allowing him to assist the Institute in these matters.

### 7.1 Forward Planning

The long-term planning schedule for the Institute is based on a four-year planning module. A comprehensive programme of events in the form of symposia and conferences has been scheduled for the next four years. Special efforts will be made to co-ordinate the activities of the Institute and those of other societies serving the mining industry, in the interest of optimizing the resources available at reduced cost to members, as well as to the industry.

## 7.2 Finance

Dr H. Wagner, Chairman

B.C. Alberts	J.P. Hoffman
R.D. Beck	H.G. Mosenthal
C.E. Fivaz	Dr O.K.H. Steffen

Despite the economic difficulties of the mining industry, the Institute had a successful financial year. The profit for the year was R28 979. Of this, an amount of R13 000 was transferred to various funds. This, together with the interest received from investments, helped to maintain the value of the funds in real terms. As in previous years, the value of the stocks of books and medals, on the insistence of the auditors, is shown in the accounts at a nominal figure of R4.

The move of the SAIMM offices from Kelvin House to Cape Towers necessitated the purchase of office furniture and equipment. This is reflected in the increase of R80 000 in the value of fixed assets. The book value of the Institute's investments decreased by R10 000 as a result of the sale of some investments to finance the purchase of office equipment. The market value of the investments increased from R1 288 100 in 1988/89 to R1 565 825 in 1989/90, reflecting the cooling down of the economy and the more difficult investment climate.

The generally favourable financial performance of the Institute can be attributed to the following reasons.

- (i) The income from schools and colloquia, according to expectations and as in previous years, provided the basis for the financial performance of the Institute.
- (ii) The income from advertisements in the *Journal* was according to budget, thanks to a determined effort by the Journal Committee.
- (iii) The costs of producing the *Journal* were contained.
- (iv) The expenditure on new book publications was lower than expected owing to some delays in book production.

As a result of the satisfactory financial performance of the Institute, it was possible to keep the increase in membership subscriptions below the cost of inflation.

Thanks are due to Martin & Company, who continued to act as the Institute's financial advisers; to the Secretaries for their efforts in containing costs; and to the Accountant and Auditors for excellent services rendered during the year.

### ADDENDUM New Members

#### *Fellow*

B.J. Addison, J.A. Basson, K.T. Buyskes, O.S. Byrne, I.D. Cockerill, K.P. Cornforth, G.D. Cronje, J.R. Cutland, R.C. de Villiers, A.A.B. Douglas, I.P. Douglas, L.J. Fourie, L.P.H. Greenhalgh, A.R. Griffiths, G.S. Hansford, K.J. Hay, P. Hindmarch, P.K. Hofmeyr, R.I. Klintworth, D.H. Laubscher, J.A. Luckmann, G.P. Murray, M.U. Ozbay, I.C. Roselman, C.P. Rossouw, M.E. Smith, R.L. de G. Solms, M.J. Storey, H.J. Swanepoel, T. Szwedzicki, G.C. Thompson, I.S.D. Tudhope, D.J.A. van Zyl, P.J. Venter.

#### *Member*

A.E. Arratia, U.R. Busch, J.P.S. Carrelo, F.K. Crund-

well, P. Davis, A.R. de Beer, A.W. Dougall, P.C. Freyberg, J.M. Gouveia Xavier de Paiva, H.J. Greeff, K.R. Greve, K.G. Kartun, G.T. Lewis, J. Lorosch, P.B. McCreadie, R.J. Moir, N.T.R. Pole, J.L. Porter, K.J. Richardson, Y. Sentarli, D.J.O. Standish-White, R.J. Strijdom, N.C.D. Trevarthen, M.S. Tyler, J.A. Urrutia, P. van Schaardenburgh, F.H. von Glehn, G.L. West, D.A. Williams, G.I. Wood.

#### *Associate*

K.E. Alvarez, L.M.C. Correia, G.D. Culley, D.R. Cunningham, L.M. Davey, C.B. Druce, K. du Plessis, C.T. du Preez, A.G.S. Forbes, M.H. Fox, H.P. Gallo-way, T.P. Goodlace, S.F. Horn, S.J. Hudson-Peacock, W.C. Knott, M.P. Lunney, C.H.D. Mitchell, B.W. Muller, J. Poynton, K. Premachandra, W. Pretorius, A.J. Pucjowski, G.A.J. Taljaard, R.C. Taylor, P.E. Thomas, J.E.M. Voges, S.W. Wai, S.C. Wood.

#### *Student*

E. Abraham, P.C. Ackermann, S.H. Badenhorst, G.J. Barnard, I.D. Benning, J.J.H. Bester, J.A. Bester, M.E.J. Bezuidenhout, K. Botha, M.G. Botha, H.J. Breytenbach, J.A. Britz, K.T. Broekman, J.D. Campos, K.L. Cheong, W.A. Cilliers, D. Claasen, R. Coetzee, S.J. Coward, P.D. Cronje, J.R. de Wet, G. Dippenaar, R.B. Downing, J.J.L. du Plessis, J.P. du Plessis, I. Els, L. Eybers, P.J. Fernandes, V.-M. Fitzmaurice, S.J. Ford, A.J. Fourie, N.J. Fourie, Z.B. Fourie, J.C.C. Geyer, R. Govender, C. Green, G.M. Hoffmann, W.C. Impey, J.A. Jansen, T.N. Kruger, P.N. Lategan, A. Laubscher, L. Lezar, G.K. Loveday, P.M. Lyons, S.G. MacDonald, D.P. MacGregor, I.O. Manini, P.A. MacAdam, C.A. McInnes, K.F. Meiring, L.J. Meyer, P.G. Meyer, T.A. Mokhele, L.M. Moodley, D.W. Morrison, B.A. Murphy, W.T. Musara, W.A. Nel, J.P. Oosthuizen, S. Pauw, D.W. Pelsler, S. Pillay, G.J. Pitt, J.P. Potgieter, M.W. Prinsloo, M. Proctor-Parker, G.E. Roberts, W.D.R. Robinson, R.C. Rossouw, S.M. Saffy, T. Saruchera, I.R. Saunders, H.J. Scholtz, E.J. Smuts, J.P. Strydom, R.C. Thomas, L. van Aswegen, J.H. van Huyssteen, N.J. Venter, P. Vermeulen, M. Visser, T.F. Visser, W.J. Wentzel, T.G. Wilson.

#### *Company Affiliate*

Afrox (Market Development), Basil Read Mining (Pty) Ltd, Chemilite (Pty) Ltd, Genmin Ltd, Grinaker Process Controls, Middelburg Steel & Alloys (Pty) Ltd, Mineral Deposits Ltd, Multotec, Rand Refinery Ltd, Rio Tinto (Pty) Ltd, SMX, Western Platinum Ltd., Zondereinde.

### Members Transferred to Higher Grades

#### *Transfer to Fellow*

L.A. Cramer (Member), P.J. Day (Member), A.M.L. de Sousa (Member), M. Faure (Member), A.J. Field (Associate), R.G. Gurtunca (Member), T. O'N Hagan (Member), B.T. Hosking (Member), E.W. Legg (Associate), H.E. Lombard (Associate), J.A. van der Westhuizen (Member), P.E. Venter (Associate).

#### *Transfer to Member*

M.G. Demmer (Associate), J.S.J. Dudas (Associate), P.G. Dunn (Associate), N.A. Fortmann (Associate),

M.P. Hallewell (Associate), D.J. Hill (Associate), J.A.G. Jordaan (Associate), A.G. Langley (Associate), P.J. Nofal (Associate), S.A.R. Purkiss (Associate), J. Roodt (Associate), M. Ruppert (Student), G.L. Smith (Associate), A.I. Valenta (Associate), B.I. Walker (Associate), B.P. Wiggill (Associate).

*Transfer to Associate*

W.W. de Graaf, A.J. King, W.W. Stange.

*Automatic Transfer to Associate*

I. Ashmole, C.R. Barnes, M.E. Berger, H.R. Bogenhofer, K.T. Broekman, H.B. Booysen, P.L. Booysen, P.J. Booysens, L.C. Botha, T. Botoulas, G.R. Chamberlain, C.F.C. Coetzee, P.J. Coetzer, S.T. Coetzer, J. de Hill, D.W. de Vos, K.R. Donaldson, A. du Plessis, S.H. du Plooy, R.G. du Toit, J.G.R. Eklund, J. Engelbrecht, J.A. Engels, S.W. Evans, H.J. Faul, A.H. Fleischmann, M.L.A. Fitzgerald, O.W. Fourie, Z.B. Fourie, A.V. Freeman, V.A.G.W.R. Freiherr von Ketelhodt, J.M.A. Geldenhuis, A.S. Gibbons, R. Govender, R. Gover, H. Hafenschner, N.G. Haikney, A.N. Helberg, A.M. Herbst, P.D. Hicks, G.D.H. Hjul, M.R. Holmes, R. Huberts, M.N. Hyland, A.C. Kenyon, G.A. Kisbey-Green, O. Kleynjan, G.D. Kotzee, G.C. Krafft, J.J. Kriek, P. Kristensen, P.S. Landmark, A.C.B. Law, H.E. Lehman, R.E. Lourens, K.G. Ludwick, S.M. MacDougall, D.B. MacGregor, J.F. Mackenzie, N.G. MacPhail, P.G. Merry, T.A. Mokhele, A.F.M. Monteiro, T. Moolman, W.J. Nothnagel, J.G. Oelofse, P.E. Petrie, D.W. Pienaar, I.C. Pienaar, P.G.H. Pistorius, J.H.J. Potgieter, J.S. du P. Potgieter, C. Pretorius, F. Rauschning, G.A. Rehbok, C. Ringas, G.S. Robinson, G.C. Rotes, M.D. Salter, R.K. Schmid, G.J. Schnackenberg, H.J. Scholtz, J.G. Stapelberg, S.W. Stapelberg, A.J. Schutte, G.J. Stenzel, A.D.J. Stewart, B.C. Stotter, G. Terblanche, R.J. Thorburn, L. van Aswegen, A. van den Brink, F.J. van der Bank, M. van Staden, J.W. Venter, A.M. Visser, T.F. Visser, B. Waldron, W.J. Wentzel, G.L. Wishart, D.B. Zihlangu.

**Members who were Reinstated**

*Reinstated as Member*

J.L. Dinsdale, H.H. Gielen, W.A. Hustralid, P.J. Pretorius, A.A. Wagner, D.J. Williams.

*Reinstated as Associate*

I.W. Davidson, J.W.E. Gibbon, R.E. Green, A.D. Pix, M.G.K. Wiggill.

*Reinstated as Student*

M.W. Arthur, P.W. Erasmus, B.C. Gerrell, H. Hafenschner.

**Resignations**

*Fellow*

C.A. Bezuidenhout, J.R. Brierly, J.R. Garbutt, J.D. Goodwin, J.M. Gosnell, C.A. Kitto, C.W. Kof, H.D.R. Krause, W.W. Malan, P.H. Pienaar, V.M. Reinecke, H.G.M. Rose.

*Member*

S.J. Barnard, J.D. Couperthwaite, H.H. Doeg, P.

Kraus, J.E. Furze, J.C. Jansen van Rensburg, J.M.V. le Roux, S.B. McGimpsey, A.N. Morris, R.H. Tourle, D.H. Woolley.

*Associate*

P.H. Anderson, J.M. Boshoff, L.J. fourie, C.D.R. Galpin, H.J. Jager, M.S. Janssen, M.W. Kamstra, R.W. Kloot, W.S. Longstaff, R.P. MacNaughton, R.D. Mortimer, G.R. Niemann, A.C. Pigott, L.O. Raymer, P.B.B. Schutte, A.J.J. van Wyk.

*Student*

F.D.J. Stapelberg

*Company Affiliate*

Havelock Asbestos Mines (Swaziland) Ltd, R.C. Power, T.H. Mining Supplies

**Retired Membership**

R.E. Barnes, C.J. Csatory, A.G. de Beer, M. Harris, B.T. Hosking, F.W.G. Schoning, G.R. Still.

**Deceased**

*Honorary Life Fellow*

P.A. von Weilligh.

*Fellow*

G.P. Badenhorst, A.J. Bellasis, J. Bigham, G.S. de Villiers, C.G. Hodges, S.C. Newman, E.R.A. Plumstead, A. Siff, Thorburn, B.F. van der Merwe, J.E. van Leeuwen, A.D. Vos.

*Member*

P.C.H. Cloete, J.J. Rosslee.

*Associate*

G.J.J. Klein, W.M. Todd.

*Student*

A.R. Goddard.

**Subscriptions Waived for Military Service**

G.P. Hynes, A.J. King, F. Rauschning, C.M. Rossel, H. van Dyk.

**Persons Struck off the Register as at 30th June, 1990 and Published in Terms of Clause 7.6.1 of the Constitution**

*Retired Fellows*

D.W. Dixon, J.C. Ferguson, Dr J.P. Kearney.

*Fellows*

D.R. Bell, Dr J.H. Bulloch, Dr K.A. Dardis, Dr D.M.I. Dobrovic, R. Lardner, R.A. Lathioor, S.P. Pienaar, W.L. van Heerden.

*Retired Member*

N. Musgrave.

*Member*

P.G. Albert, S.C. du Plessis, A.M. Jones, J.D. Krige, W.N.P. Luke, G.S. Lyndon, C.D. Patterson, T.K. Rumpelt, R. Scalabrin, H.H. Schaum, B.C. Spratley, D.J. Tutt, M.F. Varachia, A.A. Wagner, Dr C.T.P. Williams.

### Associates

N.J. Bell, G.A. Blaylock, S. Darby, I.W. Davidson, P. Dempsey, G.E. Farmer, M. Ford, C. Franken, R.E. Green, K.R. Hengstmann, W.M. Herbert, R.D. Holmes, G.D.J. Jacobs, J.A. James, J.A. Janse van Rensburg, P.J.A. Lever, A. Maass, R. Monohgaran, J.B. McGrath, P.G. Merry, M.P. O'Hare, G.S. Potgieter, P. Pretorius, G.P. Prinsloo, L.O. Ramirez Grados, T.M. Seleke, J.J.A.C. Smit, M.H. Solomon, J.C. Strydom, W.D. Symes, R.J. Thorburn, H. van den Berg, C.V. van Heerden, L.T. van Ieperen, A.J. van Jaarsveld, G. Vergeer, J.E.M. Voges.

### Students

K.T. Bladwell, K. de Wit, I.B. Edwards, P.W.

Erasmus, Miss K.E. Ferguson, G.L. Hendriksz, D.J. MacDougall, U.M. Molatudi, S.D. Roos, N.L. Smith, G.I. Strong.

**Applications Declared Null and Void as at 30th June, 1990 and Published in terms of Clause 7.3.1 of the Constitution**

### Member

G.T. Lewis.

### Associate

P.M. Morkel.

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## Retirement of Mr Jack Ferguson\*

After ten years as the Chairman of Eimco, Mr Jack Ferguson has decided to retire. 'The fact that I am 80 years old has influenced my decision. I have spent 60 years in the mining industry, and it is time I stood back and let the youngsters get on with it', says Jack with a grin. Those who have worked with Jack over the past decade at Eimco, have not noticed his age.

In 1931 Jack Ferguson joined Van Ryn Estates Gold Mines in Benoni as a learner mine official. As General Mining had only two mines at that time, Jack saw limited future prospects with the company, which prompted him to join Gold Fields in 1953, where he remained until 1972. From 1946 onwards, he progressed steadily through the Gold Fields ranks with periods at Simmer and Jack, Vogels, Venterspost, and Gold Fields head office until



\* Released by Richmond Public Relations Group (Pty) Ltd, P.O. Box 212, Melville, 2109 Transvaal.

being appointed manager of Doornfontein in 1959. This was followed by seven years back at Vogels as manager before being appointed manager of East Driefontein.

'When I arrived at East Driefontein there was not even a hole in the ground. The pre-sink was started shortly afterwards, and I stayed with this project until production commenced in 1972. At that point I decided to take my first retirement.'

At that stage of his career, Jack joined Hunslet Taylor as a technical consultant and established himself as a respected member in the supply sector of the mining industry. In 1979 he joined Eimco as chairman of the board of directors.

Those who have worked for and with Jack Ferguson know that modesty is one of his characteristics. Not many people know that he holds the Order of the British Empire (OBE) in recognition of a very distinguished war career. He joined the Auxiliary Citizen Force (ACF) at an early stage, and by 1936 he had reached the rank of Captain. After volunteering in 1939, he spent some time at the East African headquarters in Nairobi before making arrangements for the South African First Division to move to Egypt. In 1942 he took over as Officer Commanding the Transvaal Scottish, and stayed with them during Montgomery's campaign. After the return of the Division to South Africa in 1943, he was transferred to Force 133 operating with Tito in Yugoslavia.

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## International Gold Expo

Engineering & Mining Journal is proud to announce the addition of the American Mining Congress as a sponsor of the International Gold Expo, which is scheduled for 15th to 17th November, 1990, at the Reno/Sparks Convention Center, Reno, Nevada.

The American Mining Congress and Engineering & Mining Journal are 'Bringing the Best Together' in the gold-mining industry.

If you wish to exhibit at this industry event, call (303) 696-6100 or fax (303) 751-1880.

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