

# Annual Report and Accounts

FOR THE YEAR ENDED 30TH JUNE, 1986

## PREFACE

During the past year, the Council of the SAIMM undertook a major strategic-planning exercise to review all its current activities, and to redefine its scope and objectives in the light of changing circumstances.

The following are the four main concerns that prompted Council to take stock of the situation.

- (1) Over the past five years, the SAIMM has become heavily involved in a variety of new activities. (There are many examples, of which the expansion in book publications and the establishment of physical metallurgy as a third major discipline with its own colloquia and schools are perhaps the most important.) While these new activities have considerably broadened the SAIMM's scope, they have resulted in a significant increase in the day-to-day workload of the President, Office Bearers, and Council members, and of the secretarial staff based at Kelvin House.
- (2) For some time now there has been mounting concern about the lack of interest in SAIMM affairs by younger members, and by members who are based in areas distant from the SAIMM headquarters in Johannesburg.
- (3) Another area of concern has been the tendency in recent years for talented and enthusiastic Council members from the mining and metallurgical industry to resign from Council after only two to three years' service. In most cases, promotion to executive positions in their companies has influenced their decision not to continue service on Council or not to stand for election as Office Bearers, their overriding reasons being problems with their personal workloads and not a lack of interest in SAIMM affairs.
- (4) The fixed overheads associated with the SAIMM Secretariat, the fees for membership of AS&TS and FSPE, the overheads associated with the management and other services provided by Kelvin House, and the publication costs of the SAIMM *Journal* have shown a rapidly escalating tendency. Concern in this area has been compounded by the uncertainties brought about by the tendency for certain member societies of AS&TS to withdraw from Kelvin House, resulting in the prospect of a substantial increase in overheads for the institutes that remain.

### Multidisciplinary Nature of SAIMM

During the first strategic-planning workshop at Thabazimbi and in the many subsequent discussions, the conclusion was reached that the SAIMM should emphasize its multidisciplinary nature and develop in the direction of accommodating a wider spectrum of the people who are involved in the minerals and metals sector of the South African economy.

In particular, it was recognized that the SAIMM differs markedly from societies such as those of the civil engineers, mechanical engineers, chemical engineers, and

electrical engineers. The members of those societies have as their primary common denominator the fact that they obtained engineering degrees in the particular discipline concerned. In contrast, the membership of the SAIMM comprises mining engineers, metallurgical engineers, chemical engineers, geologists, chemists, electrical engineers, mechanical engineers, civil engineers, and technikon diplomates in mining, extractive metallurgy, and physical metallurgy.

The common denominator in the case of the SAIMM is that its members work in organizations that have close ties with the mining and metallurgical industry. Included here are operating mines, head offices of mining houses, public- and private-sector research organizations, and appropriate departments at universities and technikons. Many members of the SAIMM work in the industries that supply the range of raw materials, consumables, spares, and services that are essential for the mining and processing of metals and minerals. They include the manufacturers of equipment, producers of special chemicals (such as explosives, flotation reagents, resins, and solvents), and engineering and construction firms.

### Changes in Membership Requirements

In order to give effect to this philosophy, Council recommended that significant changes should be made to the requirements for SAIMM membership to accommodate the legitimate aspirations for membership, in the grades of Member and Fellow, of persons who hold responsible positions in mining and metallurgical undertakings, but who do not qualify at present for corporate membership by virtue of the fact that they do not possess a recognized 4-year university degree.

Council also concluded that provision should be made for Student members to become Associates automatically once they cease to be students. Furthermore, it was decided to eliminate the grade of Graduate Member, so that Associate will be the holding grade until a member qualifies for corporate membership.

Council has therefore recommended that the Constitution of the SAIMM should be changed to make it possible for non-graduates who are not registerable with the South African Council for Professional Engineers (SACPE) to become full members in the grades of Member and Fellow if they meet the criteria laid down by Council.

In order to ensure that the SAIMM continues to be recognized by SACPE as a Professional Engineering Society, Council recommended that a clause be included in the amended Constitution to the effect that only Corporate Members who are registered or registerable with SACPE as Professional Engineers will be entitled to vote on matters deemed by the Council of the SAIMM to relate to the affairs of Professional Engineers.

SACPE has indicated that the proposed changes to the SAIMM Constitution are acceptable to them in principle, but the changes will have to be submitted for formal

ratification by the Council of SACPE later this year.

### Key Objective of the Institute

The key objective of the SAIMM has been reformulated as follows:

'To identify the needs of its members and to initiate and give effect to the means whereby the requirements for technology and scientific knowledge of the minerals and metals sector of the South African economy are satisfied; and to represent and promote the interests of its members'.

### Revised Organizational Structure

The major activities that require to be undertaken by the SAIMM to achieve its key objective have been formulated in the form of 16 key performance areas (KPA's). A critical examination of the workload and responsibilities of the President, the other Office Bearers, Council members and the SAIMM Secretariat indicated the need for a revised organizational structure and delegation of duties.

After an in-depth assessment, Council approved the following recommendations:

- (a) that the Constitution be changed so as to increase the number of Vice Presidents of the Institute from two to three;
- (b) that, at least for the 1986/87 Council year, the Immediate Past President be co-opted to serve as an Office Bearer for another year;
- (c) that SAIMM activities belonging logically together should be grouped into portfolios, the responsibility for overall co-ordination of the activities within each portfolio being delegated to a specific Office Bearer; and
- (d) that the secretarial workload be clearly delegated to four fulltime secretaries, each with a specific major area of responsibility.

In terms of these changes the Office Bearers for 1986/87 will consist of the following:

- (1) President (as before)
- (2) President-Elect (previously Senior Vice President)
- (3) Senior Vice President (previously Junior Vice President)
- (4) Junior Vice President (new post)
- (5) Immediate Past President (as before)
- (6) Past President (co-opted)
- (7) Honorary Treasurer (as before).

The SAIMM Secretariat will consist of the following:

- (i) Institute Secretary
- (ii) Membership Secretary
- (iii) Conference Secretary
- (iv) Publications Secretary.

Table I shows the delegation of duties for the 1986/87 Council.

The format of the 1985/86 Annual Report of the Institute is different from that in previous years to reflect the above changes.

## COUNCIL FOR 1985/86

### President

H E James

### Vice Presidents

#### Senior

Dr H Wagner

#### Junior

B C Alberts

#### Immediate Past President

J D Austin

#### Honorary Treasurer

Professor D G Krige

### Members of Council

R D Beck

Prof S Budavari

Prof R J Dippenaar

C E Fivaz

Prof G G Garrett

J P Hoffman

R W O Kersten

Dr B K Loveday

Dr J Lurie

R B MacGillivray

H G Mosenthal

B E Protheroe

D Rümelin

R A Snodgrass

Dr O K H Steffen

P M T White

### Branch Chairmen

Witbank/Middelburg Branch W C Mather/

B R Rohrmann

Orange Free State Branch

K A van Gessel

### Past Presidents Serving on Council

Dr M G Atmore

Prof A N Brown

Dr P R Jochens

Prof R P King

G Y Nisbet

Prof R P Plewman

Dr R E Robinson

Prof M D G Salamon

P W J van Rensburg

D A Viljoen

P A von Wielligh

## 1. THE INTERESTS OF INDIVIDUAL MEMBERS

### Key Performance Areas

To achieve its objectives regarding 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-curricular 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 interests on bodies such as the South African Council for Professional Engineers (SACPE), the Federation of Professional Engineers (FSPE), the South African Council of Natural Scientists (SACNAS), and the Joint Council of 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.
- the procedure to process and evaluate applications for new membership, transfers, and upgradings were streamlined, thus saving time and assisting in the systematic and uniform evaluation of applications; applications are summarized according to a standard format, which greatly assists in expediting discussions at Committee meetings;
- the format of the minutes of meetings and agendas was systematized, thus simplifying and easing the work of the Committee and the Secretary, and saving time during discussions at meetings;
- the Secretariat, through the Secretary, facilitates and expedites the work of the Committee by, *inter alia*, on her own initiative clearing the status of certain overseas qualifications directly with the SA Council of Professional Engineers and following up late payments of membership fees;
- active measures were taken to increase the number of members by contacting persons who attended Schools organized by the SAIMM but who are not members, and by making formal contact with universities and technikons.

### 1.1. Membership Committee

B C Alberts, Chairman

|                  |                    |
|------------------|--------------------|
| J D Austin       | Prof A N Brown     |
| Prof S Budavari  | CE Fivaz           |
| Prof G G Garrett | HE James           |
| Dr P R Jochens   | Prof D Krige       |
| Dr B K Loveday   | Dr J Lurie         |
| H G Mosenthal    | GY Nisbet          |
| Prof R P Plewman | BE Protheroe       |
| Dr R E Robinson  | Prof M D G Salamon |
| Dr O K H Steffen | P W J van Rensburg |
| D A Viljoen      | P A von Wielligh   |
| Dr H Wagner      | Prof R P King      |

Ten ordinary meetings and two special meetings were held during 1985/86. The Committee started the year by setting itself certain specific objectives, and paid detailed attention to its routine tasks, namely membership and subscription administration. Table II compares membership information with that for the previous year to provide a basis for the assessment of growth and activity, and for the identification of trends.

#### 1.1.1. Objectives

The following objectives were set for the Membership Committee for the year 1985/86:

- to modify administrative procedures so that they are highly effective, simple, and streamlined, and to lessen the time taken up by discussions regarding administrative matters during meetings;
- to utilize the Secretariat optimally in order to facilitate and expedite the work of Committee members;
- to improve procedures so as to encourage members to pay membership fees in time;
- to register the highest possible number of members out of the potential membership.

#### 1.1.2. Results Attained

A great deal of success was attained in achieving the objectives. The following successes can be highlighted:

- the procedure to process and evaluate applications for new membership, transfers, and upgradings were streamlined, thus saving time and assisting in the systematic and uniform evaluation of applications; applications are summarized according to a standard format, which greatly assists in expediting discussions at Committee meetings;
- the format of the minutes of meetings and agendas was systematized, thus simplifying and easing the work of the Committee and the Secretary, and saving time during discussions at meetings;
- the Secretariat, through the Secretary, facilitates and expedites the work of the Committee by, *inter alia*, on her own initiative clearing the status of certain overseas qualifications directly with the SA Council of Professional Engineers and following up late payments of membership fees;
- active measures were taken to increase the number of members by contacting persons who attended Schools organized by the SAIMM but who are not members, and by making formal contact with universities and technikons.

Entrance and subscription fees are shown in Table III. It should be noted that, in regard to the increase in subscription fees for the past 3 years, the percentage increase between 1984/85 and 1985/86 was well below the inflation rate. This was possible only because of the efficient way in which the affairs of the SAIMM were managed by Council and the administrative staff.

For the sake of completeness the names of new members, the names of persons transferred, reinstated, resigned, retired, or struck off (as prescribed in the Constitution), and the names of those whose subscriptions were waived for military reasons are listed below.

#### 1.1.3 New Members

##### Fellows

J J Bodenstein, G R Botha, K L Bright, Dr J H Bulloch, Dr K A Dardis, Dr R J Davidson, Dr D R Davis, Dr R H Eric, L P Hendricks, J Lurie, Dr B Metcalfe, D B Miller, K C Owen, R G B Pickering, C E H Price, Dr H F Ramdohr, J R Rossouw, Dr B V Stewart, P van Leeuwen, E H van Rooy

##### Members

N Adams, A Barletta, L Bellett, I H Clark, S C du Plessis, T Gluck, G Gromberge, Dr R G Gurtanica, P E Hand, R W Hill, C D Jenkins, P M Kennedy, M J Kilbride, P J Ledger, B F Lubbe, D R Manvell, N G G Marvin, A Nieshols, Prof H R Phillips, I I Ross, P J van der Linde, J D Vicker, J E Wegener, Dr C T P Williams, Dr D J Williams

##### Associate Members

A D Germond, F W Kluckow, R A Macaulay, P K Nel

##### Graduates

C R W Blassberg, C P Boy, M J Cook, J Engelbrecht, G E Farmer, R D Gordon, R E Green, K R Hengstmann, D A Henman, D J Hill, C G Hutson, K M Keil, G Kruyswijk, B J Lavin, T G Maier, R J Pilkinton, Dr C R W Seymour, A G Smith, A W Stasikowski, J Steele, W D Symes, R A H M van Niewenhoven, H G van Walsen, A Walker

TABLE I  
DELEGATION OF DUTIES: 1986/87 COUNCIL

| COORDINATION, MANAGEMENT, AND ADMINISTRATION   | TECHNICAL MEETINGS   | PUBLICATIONS   | INTERESTS OF INDIVIDUAL MEMBERS   | REGIONAL DEVELOPMENT   |
|--|--|--|---|--|
| Dr H. WAGNER<br>President  | B.C. ALBERTS<br>President Elect  | J.D. AUSTIN<br>Past President  | C.E. FIVAZ<br>Senior Vice President   | Dr O.K.H. STEFFEN<br>Junior Vice President   |
| <ul style="list-style-type: none"> <li>—Updating and improvement of SAIMM Strategic Plan</li> <li>—Allocation of portfolios to Office Bearers, Council Members, and Secretariat</li> <li>—Coordination, Management and Control (Office Bearers, Council, Secretariat, Kelvin House Management, Honorary Treasurer)</li> <li>—Public relations (opening of SAIMM technical meetings, attendance at technical and social functions of other Societies, visits to Branches, international liaison, EPPIC)</li> <li>—Forward planning (technology transfer, interests of individual members, regional development, liaison with AS&amp;TS, SACPE, FSPE, international liaison)</li> </ul>  | <ul style="list-style-type: none"> <li>—International coordination and control of the organization of technical meetings (schools, colloquia, evening meetings) for all disciplines (mining, extractive metallurgy, physical metallurgy)</li> <li>—Forward planning and coordination of technical meetings of all kinds (SAIMM only, SAIMM Branches, SAIMM in collaboration with other Societies in RSA, SAIMM involvement in international conferences held locally or abroad)</li> <li>—Technical excursions and visits (whether part of technical meetings or separate events)</li> </ul> | <ul style="list-style-type: none"> <li>—SAIMM Journal</li> <li>—Book publications</li> <li>—Setting up a cooperative publishing service (participating with COM, Scientific &amp; Technical Typesetting, Mintek, Geological Society)</li> <li>—Advertising and marketing of SAIMM publications (locally and overseas)</li> <li>—Establishment and development of SAIMM Section of COM library</li> </ul> | <ul style="list-style-type: none"> <li>—Internal coordination and control of the processing of membership applications, grading of members, keeping of membership records</li> <li>—Recruitment of new members (including promotion of benefits of being a member of SAIMM and career-guidance activities)</li> <li>—Forward planning with regard to the professional development of members (including education, training, and professional registration)</li> <li>—Motivation of members (via prizes, awards, medals, social functions)</li> </ul> | <ul style="list-style-type: none"> <li>—Interests of SAIMM members based in regional areas such as Witbank/Middelburg, Welkom, Klerksdorp, Vaal Triangle, Western Cape, N.E. Cape, N. Transvaal, SWA/ Namibia</li> <li>—Cooperation with associations that have strong ties with the mining industry and strong regional support (e.g. Association of Mine Managers, Colliery Managers' Association, Mine Metallurgical Managers Association)</li> <li>—Cooperation with other member societies of AS&amp;TS with close ties to the mining industry (e.g. Geological Society, Mine Ventilation Society, Institute of Assayers and Analysts)</li> </ul> |
| Dr H. Wagner to chair meetings of  | COMMITTEE CHAIRMEN   | COMMITTEE CHAIRMEN   | COMMITTEE CHAIRMEN  | COMMITTEE CHAIRMAN   |
| <ul style="list-style-type: none"> <li>—Office Bearers</li> <li>—Council</li> </ul>  | <ul style="list-style-type: none"> <li>Technical Meetings</li> <li>Mining—B.C. Alberts</li> <li>Extractive Metallurgy—R.D. Beck</li> <li>Physical Metallurgy—Prof. R.J. Dippenaar</li> <li>Mines and Works—H.G. Mosenthal</li> </ul>   | <ul style="list-style-type: none"> <li>Journal—R.A. Snodgrass</li> <li>Book Publications—J.D. Austin</li> </ul>  | <ul style="list-style-type: none"> <li>Membership—C.E. Fivaz</li> <li>Training, Career Guidance and Education—Prof. R.P. King</li> <li>Awards Committees: Mining—Prof. D.G. Krige</li> <li>Extractive Metallurgy—Prof. R.P. King</li> <li>Physical Metallurgy—Dr P.R. Jochens</li> <li>Adjudication Committees: Mining—R.B. MacGillivray</li> <li>Extractive Metallurgy—J.S. Freer</li> <li>Physical Metallurgy—B.E. Protheroe</li> <li>Banquet Committee—H.G. Mosenthal</li> </ul>   | <ul style="list-style-type: none"> <li>Regional Development—Dr O.K.H. Steffen</li> <li>HONORARY TREASURER Prof. D.G. Krige</li> <li>INSTITUTE SECRETARY Doris Gardner</li> </ul>   |
| <p><i>Note</i></p> <p>(1) The portfolios of the Office Bearers have been allocated to individuals and are not tied to a specific position. Thus, for example, the President Elect in 1987/88 will not necessarily hold the portfolio of Technical Meetings. The position regarding the secondment of a Past President to serve on Office Bearers (e.g. J.D. Austin for 1986/87) will also be reviewed on an annual basis. The appointment of Committee Chairmen is provisional and subject to final confirmation.</p> <p>(2) The SAIMM Secretariat will consist of 4 full-time secretaries. The duties and responsibilities attached to the posts of Publications Secretary and Conference Secretary remain substantially the same as before. Those for Institute Secretary and Membership Secretary are currently being reviewed.</p> |  |  |   |  |

TABLE I (continued)

| SPECIAL PROJECTS<br>(Strategic Plan, AS&TS,<br>FSPE, SACPE, Special<br>Interest Groups)  | INTERNATIONAL<br>LIAISON   |
|--|--|
| H.E. JAMES<br>Immediate Past President   | J.D. AUSTIN<br>Past President  |
| <ul style="list-style-type: none"> <li>—Implementation of SAIMM Strategic Plan (organizational structure, position charters, KPA's, standard operating procedures)</li> <li>—Monitoring of developments regarding the future structure of FSPE, EASA, SACPE, AS&amp;TS, and recommendation of SAIMM policy and stance (including proposed new site and building for AS&amp;TS and liaison with individual engineering societies)</li> <li>—Establishment and development of Special Interest Groups (Physical Metallurgy, Surface Mining, Process Control in the Minerals Industry)</li> </ul> | <ul style="list-style-type: none"> <li>—Corresponding members in other countries</li> <li>—CMMI</li> <li>—World Mining Congress</li> <li>—Liaison with sister institutes in other countries</li> </ul> |
| COMMITTEE<br>CHAIRMAN<br>Special Projects—H.E. James   | COMMITTEE<br>CHAIRMAN<br>International Liaison—<br>J.D. Austin   |
| HONORARY EDITOR<br>(JOURNAL)<br>Dr H.W. Glen   | MEMBERSHIP<br>SECRETARY<br>Celeste Mackintosh  |
| PUBLICATIONS<br>SECRETARY<br>Pam Binstead  | CONFERENCE<br>SECRETARY<br>Pat Jacobs  |

*Associates*

C P Brits, B S Hammond, D B Marshall, S Morris, L B Paterson, W H Pretorius

*Students*

R J Anderson, R M Bailey, P J Barnes, S G Becker, M R Beebe, K Bekker, H Bezemer, D J Botha, I B Buchel, P F T Burger, A D Clough, P M Cook, D A Cooke, M G da Costa, A K de Sousa, R G du Toit, P J O Ebell, K C Erasmus, K E Ferguson, C A P Galego, R E Garz, L Germishuys, C K Grassmann, P J Grobler, F P Guilherme, M R Holmes, R D Horne, G P Hynes, G A Jones, G A Kisbey-Green, K H Kruger, M J Lensly, G Louis, T A Majola, B Marais, C Marais, B D Moolman, P G Mooney, B A Muller, P C Mulroney, J A Norton, P L Potgieter, M A Ralephata, G Terblance, J A Terblance, A J Thatcher, B R Tinniswood, S Turner, M A L van der Walt, L A van Rooyen, M M Wellsted, G B Wurr, J M Wyllie, K J Zöller

*Company Affiliates*

Babcock Engineering Contractors (Pty) Limited, Industrial Machinery Supplies (Pty) Limited

*1.1.4. Members Transferred to Higher Grades**Transferred to Fellow*

SS Absolom, J A C Diering, S M Gould, R N Guest, A G C Merson, S P Pienaar, B R Rohrmann, Dr H Wagner

*Transferred to Member*

N A Alexander, Dr P R G Anderson, R J Atkinson, F K Bader, R L Bruger, A C Burrow, Dr P A Carr, M B Cortie, T de Lange, R de Pretto, W M de Villiers, J S de Vos, M Dworzanowski, D J Esterhuizen, E Ford, G L Ganter, P R Gent, P Gericke, T M Hanmer, M P Hay, I Henderson, A W Heugh, G G Jacobs, C D Lear, P M Major, J J Marais, L J Meyer, D B Paterson, L M S Pinel, M J Prinsloo, H R Rood, C M Rule, M E J Rummitt, W H Slaney, A J S Spearing, P Stuiver, J A Theron, C van Baalen, A P van Wyk, M F Varachia, J D S Vieler, T M Yasbek

*Transferred to Associate Member*

T G McCarthy, R H Murray

*Transferred to Graduate*

J A Atkins, K L P Baart, D J Bester, C K Boucher, L M Bredell, D S S Denton, P L de Rooy, A Dippenaar, J du Plessis, G H Feldtmann, J N Kenworthy, M W Kruger, K L Lilje, L Lorenzen, W N Meijer, D M Minnaar, L R Nelson, B O'Hearn, P Rankine, D J Rooker, A M Saayman, C E Stevenson, J C Strydom, J H Truter, J C van den Berg, O J van der Schijff, J H Visser, J H Vorster, B I Walker, M F Wells

*Transferred to Associate*

J L Botha, R F Bridson, D M Cresswell, S L Currin, A J Edwards, R G Fagen, D Fourie, A P Hamman, R W Heard, J C Lenferna de la Motte, M W Loe, I D Macrae, Q J McLennan, I W Pearce, C M Purdon, R T Steven, J H Vorster

*1.1.5. Members Who Were Reinstated**As Member*

S A McVey, B Roberts, A R Stephens, M G Wishart

*As Associate*

R M Cunningham

**TABLE II**  
SUMMARY AND COMPARATIVE STATEMENT OF MEMBERSHIP MOVEMENTS AND NEW APPLICATIONS  
FOR 1984/85 AND 1985/86

| Membership grade     | Total Members<br>June<br>1985 | 1985/86         |                  |                 |               |                   |          |                | Total<br>Members<br>June<br>1986 | Gain +<br>Loss - |
|----------------------|-------------------------------|-----------------|------------------|-----------------|---------------|-------------------|----------|----------------|----------------------------------|------------------|
|                      |                               | Transfers<br>in | Transfers<br>out | Rein-<br>stated | Struck<br>off | Resig-<br>nations | Deceased | New<br>Members |                                  |                  |
| Honorary Life Fellow | 25                            |                 |                  |                 |               |                   |          |                | 25                               | 0                |
| Honorary Fellow      | 8                             |                 |                  |                 |               |                   |          |                | 8                                | 0                |
| Life Fellow          | 69                            |                 |                  |                 |               |                   | 2        |                | 67                               | -2               |
| Fellow               | 443                           | 6               |                  |                 | 3             | 10                | 5        | 20             | 451                              | +8               |
| Retired Fellow       | 146                           |                 |                  |                 |               |                   |          |                | 146                              | 0                |
| Life Member          | 1                             |                 |                  |                 |               |                   |          |                | 1                                | 0                |
| Member               | 653                           | 42              | 4                | 4               | 12            | 9                 | 1        | 25             | 698                              | +45              |
| Retired Member       | 22                            |                 |                  |                 |               |                   |          |                | 22                               | 0                |
| Associate Member     | 64                            | 1               |                  |                 | 3             | 1                 |          | 4              | 65                               | +1               |
| Graduate             | 156                           | 30              | 39               |                 | 7             | 6                 |          | 24             | 158                              | +2               |
| Associate            | 319                           | 17              | 1                | 1               | 4             | 6                 |          | 6              | 332                              | +13              |
| Retired Associate    | 21                            |                 |                  |                 |               |                   |          |                | 21                               | 0                |
| Student              | 479                           |                 | 52               | 4               | 18            | 6                 |          | 53             | 460                              | -19              |
| Company Affiliate    | 96                            |                 |                  |                 |               | 1                 |          | 2              | 97                               | +1               |
| <b>Total</b>         | <b>2502</b>                   | <b>96</b>       | <b>96</b>        | <b>9</b>        | <b>47</b>     | <b>39</b>         | <b>8</b> | <b>134</b>     | <b>2551</b>                      | <b>+49</b>       |

**TABLE III**  
ENTRANCE AND SUBSCRIPTION FEES

| Description                                   | 1983/84 | 1984/85 | 1985/86 | Increase |
|---|---------|---------|---------|----------|
| <i>Entrance fees, R</i>                       |         |         |         |          |
| Fellow  | 25      | 25      | 25      | 0        |
| Member  | 25      | 25      | 25      | 0        |
| Associate Member                              | 20      | 20      | 20      | 0        |
| Associate                                     | 20      | 20      | 20      | 0        |
| Graduate                                      | 5       | 5       | 5       | 0        |
| Student                                       | 0       | 0       | 0       | 0        |
| Company Affiliate                             | 0       | 0       | 0       | 0        |
| <i>Subscription fees, R</i>                   |         |         |         |          |
| Fellow  | 38      | 46      | 48      | + 2      |
| Member  | 38      | 41      | 43      | + 2      |
| Associate Member                              | 38      | 41      | 43      | + 2      |
| Associate                                     | 38      | 41      | 43      | + 2      |
| Graduate                                      | 25      | 27      | 29      | + 2      |
| Student                                       | 7       | 7       | 8       | + 1      |
| Company Affiliate                             | 275     | 300     | 300     | 0        |
| Retired                                       | 7       | 7       | 8       | + 1      |
| * All subscriptions include a R9 fee to AS&TS |         |         |         |          |

*As Student Member*

J G Allan, R L Burger, P R Gent, J C Jollands

*1.1.6. Members Who Resigned*

*Members*

G F Balderson, J A Betteridge, K A Botha, D D Comley, J J Cullen, Mrs E A DeMarsh, U Drews, A J Echalaz, I M Forsyth, K J Gahan, A J Garetz, P L Gooderham, J B Greenwood, N E Hilner, W Holt, C I House, J P Kotze, P E Kroger, G R Kruger, G S Lawes, Dr A C Lawrence, G M Mansfield, C T McBride, G G Nicholson, A J Nisbet, H R Reid, P M Reid, B R Roberts, P Schwab, R W Sillier, D A Sloan, M H Smith, D A Temple, R J C Ticknell, M C Tonkin, R Turner, R Truman, C F Vermaak, P E White

*Company Affiliate*  
B T R Sarmcol

*1.1.7. Subscription Waived for Military Service*  
P K Schmid

*1.1.8. Retired Members*

T K Adams, W R Atkinson, P C M Bathurst, J W M Bellasis, A F Benson, R L Blandy, R G Boswell, R F Bourne, H L Butlin, C F B Coetzee, J L Curtis, Prof H G Denkhaus, P D Dickson, C J Engelbrecht, D I Field, D J Forder, D F Foster, G H Grange, T Harvey, C G Hodges, A T Hudson, C J Isaac, B J Jackson, R A Lee, Prof F O P Leiding, D Mackenzie, R G Matthews, C G Middup, N Musgrave, P L Nathan, W Pilkington, E T Pinkney, E Popplewell, G F Rautenbach, K L M H Rodel, Prof H S Sichel, M J Slement, E F Statham, V O Steed, D H Stevenson, R C Stoyell, R M Tait, J Uys, I S van Eyssen, G J van Jaarsveld, A D Vos, F J Walker, R I Ward, I M Wolf

*1.1.9. Persons Struck off the Roll as at 30th June, 1986, and Published in Terms of Clause 7.6.1. of the Constitution*

*Fellow*

R R B Lodge, K Smith

*Member*

H M Corbett, J A C Gilroy, D B Goldman, M A Groszek, G B Horsley, M D Lumb, E H N Phillips, C F Smith

*Associate Member*

A MacDonald, C J van der Berg

*Associate*

G Grobbelaar, F E Jones, P L L van den Elshout, J G van der Linde

*Graduate*

R E Bishop, G R W Blassberg, C P Boy, G H Feldtmann, D W J Coombs, P S Gaffney, J M Howlett, J Parry, J A Smith, I P Wilson

*Student*

K Cookson, L Cronje, D A du Plooy, J J du Preez, J P Grewar, N C Hellmann, J C Jollands, S M Jones, J H Jordaan, P P Labuschagne, T A Majola, D Meintjies,

H P Potgieter, M W Roebert, J F Rothmann, M Smith,  
G D Webber, W G Wessels, R A Williams

### 1.2. Training, Career Guidance and Education Committee

Prof R P King, Chairman  
B C Alberts                      Prof D G Krige  
Prof A N Brown                Dr J Lurie  
Prof S Budavari                Prof R P Plewman  
M G Demmer                    BE Protheroe  
H E James                      Dr O K H Steffen  
A Killat                         P M T White

During the past year, the Training, Career Guidance and Education Committee considered a number of avenues to encourage young people at school to become aware of mining and metallurgy as a career. It is clear that the scope of career-guidance activities in South African high schools is not nearly as comprehensive as it should be, and this places a responsibility on the technical institutes to provide the necessary encouragement and information.

The most effective mechanism for the provision of information to school children at the present time is through the 'optional topics' that are now permitted by each of the Education Departments. These provide an opportunity for school children to study various aspects of the basic sciences as they are applied in the mining and metallurgical industries. Mr Marc Demmer has taken the lead in promoting suitable material for use in schools, and this will be produced in a form that can be used directly by school teachers and pupils. An optional topic on coal technology is in the final stages of production, and a topic on copper has been completed in first draft. This material will be sent to a number of SAIMM members in industry, with a view to obtaining their assistance in ensuring the accuracy and validity of the material presented.

It is intended to make further contact with pupils through the medium of Young Engineers' Clubs, such as have been established successfully in the United Kingdom. The SAIMM wishes to contact young members, particularly students and graduates, who would be prepared to assist local schools in the establishment and running of Young Engineers' Clubs. Notices have been sent to all student and graduate members encouraging them to offer their services in this important activity.

The Committee has promoted the establishment of a scheme for the provision of financial assistance that will enable active research workers in universities and technikons to employ school children during vacations on research projects. This scheme is designed to encourage pupils to make contact with research engineers and to learn something of the scientific basis of engineering.

The Committee maintains contact with all the departments of metallurgy at South African universities and technikons, and encourages the staff in these departments to take an active part in promoting mining and metallurgy as a viable career for young people in South Africa.

### 1.3. Awards and Adjudication Committees

#### *Awards Committee*

J D Austin, Chairman  
B C Alberts                      R W O Kersten  
Prof A N Brown                H G Mosenthal

Prof D G Krige                      Dr O K H Steffen  
G Y Nisbet                        Dr J Lurie  
Prof R P Plewman                Dr H Wagner  
Prof M D G Salamon              CE Fivaz  
P W J van Rensburg            Dr B K Loveday  
P A von Wielligh                Dr P R Jochens  
H E James                        BE Protheroe  
Prof S Budavari

#### *Adjudication Committee*

J D Austin, Chairman  
Prof R P Plewman                Dr B K Loveday  
R W O Kersten                  R A Snodgrass  
R B MacGillivray                RD Beck  
Dr O K H Steffen                Dr P R Jochens  
P M T White                      JP Hoffman  
CE Fivaz                         BE Protheroe  
H E James                        D Rümelin

#### *1.3.1. 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 have been as follows:

1980 Mr H F Oppenheimer  
1981 Dr W Bleloch  
1982 Dr F G Hill  
1983 Dr A E Whillier (posthumously)  
1984 Professor D G Krige  
1985 Dr R E Robinson.

The Award for 1986 is to be made to Professor M D G Salamon for his profound and far-reaching contribution to the South African mining industry.

#### *1.3.2. Gold and Silver Medals*

Papers published in the *Journal* from March 1985 to February 1986 by members of the SAIMM are eligible for these medals. The following authors are to receive these awards.

*Gold Medals*                      No gold medals are being presented.  
*Silver Medals*                    RE Collins for his paper entitled 'The extraction of barrier pillars between adjacent longwall panels at the Durban Navigation Collieries (Pty) Limited', which was published in the April 1985 issue of the *Journal*. A Smith, co-author of the paper and not a member of the SAIMM, will receive a certificate.

R J Davidson and W D Douglas for their paper entitled 'The recovery of gold from plant solutions by use of a countercurrent moving carbon bed', which was published in the November 1985 issue of the *Journal*. J A Tumilty, co-author of the paper and not a member of the SAIMM, will receive a certificate.

G T van Rooyen for his paper entitled 'The embrittlement of hardened, tempered low-alloy steel by strain aging', which was published in the February 1986 issue of the *Journal*.

### 1.3.3. Student Prizes

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

#### Mining

I M Lombaard 'Dubbelrifafbouing op 'n  
University of Pretoria Platinamyn'

#### Extractive Metallurgy

W W Stange 'The Optimisation of  
University of the Rooiberg Low Grade  
Witwatersrand Tin Circuits'

#### Physical Metallurgy

I Wolff 'Melting Problems in  
University of the High Chromium Ferritic  
Witwatersrand Tin Circuits'

J van Tonder 'The Sensitization  
University of Pretoria Properties of AISI Type  
316 Stainless Steel with  
Titanium Additions'

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     | B C Rip    |
|                | Metallurgy | No award   |
| Book Prize     | Mining     | P Rankin   |
|                | Metallurgy | W W Stange |

#### University of Pretoria

|                |            |              |
|----------------|------------|--------------|
| Prestige Prize | Mining     | No award     |
|                | Metallurgy | J H de Lange |

#### Prestige Prizes for Technikon

The prize for a fifth-year technikon student studying for the National Diploma for Technicians (Metallurgy) is to be presented to Mr A M de Sousa at the Annual General Meeting.

The prizes for a third year student not proceeding to fourth year and for a fourth year student studying for the National Higher Diploma for Technicians are to be awarded to Mr J P Stevens and to Mr A Thatcher respectively at a private function that is to be held at the Hotel School, Braamfontein.

### 1.4. Excursion/Banquet Committee

|                         |                  |
|-------------------------|------------------|
| H G Mosenthal, Chairman |                  |
| R D Beck                | BE Protheroe     |
| J P Hoffman             | R B MacGillivray |

Excursions to Zincor at Springs on 25th April, 1986, and to Duvha Opencast Colliery, Duvha Power Station, and Lesedi Village on 6th June, 1986, were very well supported by members, and proved to be most interesting, instructive, and enjoyable. The SAIMM is grateful to the hosts for their warm hospitality. More details of the visits were given in Spotlight articles in the *Journal*.

The annual SAIMM banquet, with Johannesburg's Centenary as its theme, was held at the Carlton Hotel on Friday, 7th March, 1986, when some 630 members, wives, sponsors, and guests shared a most relaxed and

enjoyable evening. Professor Brown, as Master of Ceremonies, ensured the smooth running of the evening, and Mr Buster Fowler, in delivering the after-dinner address, kept those present spellbound and highly amused for well over half-an-hour with his memories of early mining days in Johannesburg.

The banquet was extremely successful, and thanks are due to the sponsors and guests who made it possible.

## 2. TECHNICAL MEETINGS

### Key Performance Areas

To achieve its objectives regarding the dissemination of technical information via technical meetings, the SAIMM

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

### 2.1. Technical Meetings—Mining

#### 2.1.1. Technical Programme Committee—Mining

|                            |                  |
|----------------------------|------------------|
| Dr O K H Steffen, Chairman |                  |
| Dr A R Atkins              | H G Mosenthal    |
| Prof S Budavari            | Dr J Lurie       |
| J A Cruise                 | Dr H Wagner      |
| Prof H Phillips            | R B MacGillivray |

A very successful Colloquium on Mining in the Vicinity of Geological and Hazardous Structures was held on 4th June, 1986, in collaboration with the Chamber of Mines Research Laboratories. The Colloquium was attended by approximately 240 delegates representing a wide spectrum of mine management. The Committee has also been actively involved in organizing a Symposium on Backfill in Gold Mines jointly with the South African Association of Mine Managers for November of this year.

#### 2.2.2. SAIMM School Committee—Mining

|                                |                  |
|--------------------------------|------------------|
| Professor S Budavari, Chairman |                  |
| B C Alberts                    | R B MacGillivray |
| R W O Kersten                  | H G Mosenthal    |

The Committee organized two successful Schools in 1986, one in Johannesburg on 'Drilling and Blasting in Underground Mining' and the other in Pretoria on 'Drilling and Blasting in Surface Mining'. The detailed organization of the second school was undertaken by the newly established surface-mining interest group of the SAIMM. The Schools were attended by a total of 112 delegates and were very well received.

Arrangements for the 1987 School on the Use of Spread-sheets in the Mining Industry are well advanced. The topic was selected to support the international symposium APCOM 87, which is to be held in October 1987 in Johannesburg. This School is being planned in the nature of a workshop.

## 2.2. Technical Meetings—Extractive Metallurgy

### 2.2.1. Technical Programme Committee—Extractive Metallurgy

C E Fivaz, Chairman  
R D Beck                      J S Freer  
Dr B K Loveday              R A Snodgrass

The Committee was indirectly involved in the Colloquium on Recent Mining and Metallurgical Developments in the Eastern Transvaal, which was organized and hosted by the Witbank/Middelburg Branch of the SAIMM in Witbank on 25th September, 1985.

Because of GOLD 100, which is to be held in September 1986, no colloquium was planned for the first half of 1986. The main business of the Committee therefore centred on the refereeing and selection of papers, and the planning of the six sessions on extractive metallurgy that are included in the technical programme of GOLD 100.

### 2.2.2. SAIMM School Committee—Extractive Metallurgy

Dr B K Loveday, Chairman  
P Bailey                      R A Snodgrass  
R D Beck                      H C Voges  
C E Fivaz

A School on the Design and Operation of Plants for the Recovery of Gold Using Activated Carbon was held in October 1985 and repeated in February 1986. Not all the applicants could be accommodated, and a third school will be held in the week preceding GOLD 100, to facilitate attendance by delegates from other countries. Delegates at the schools held during the period under review included metallurgical consultants, metallurgical superintendents, research personnel, process engineers, and suppliers of activated carbon.

Lecturers and delegates alike benefited from the lively discussion that took place during the school, and the notes have proved to be a valuable source of reference. A monograph is planned.

## 2.3. Technical Meetings—Physical Metallurgy

### 2.3.1. Technical Programme Committee—Physical Metallurgy

J P Hoffman, Chairman  
Dr A Harding                      B E Protheroe  
Prof R J Dippenaar              D Rümelin  
A Mauchen                      C Smallbone  
D Twigg

Six evening meetings were held.

- |                     |  |
|---------------------|--|
| 30th October, 1985  | <i>M Neale.</i> Recent developments in condition monitoring: philosophy and techniques |
| 25th February, 1986 | <i>D Twigg and MD Vowles.</i> Anodized aluminium                                       |
| 15th April, 1986    | <i>Dr WH Bowyer.</i> The use of reinforced plastics in European engineering practice   |

21st April, 1986

*Dr A Bentley.* Hydrogen embrittlement of austenitic stainless steels

27th May 1986

*P Bryant.* Timber as an engineering material

24th June, 1986

*Dr N C Joughin.* Hydro-power.

*GOLD 100.* The responsibility to collect and review the papers for the session on the industrial uses of gold was delegated to Dr G Gafner by the previous Chairman. Dr Gafner handled this very competently, and 10 papers were refereed and accepted.

It was agreed that an international chromium conference should be held in South Africa in about five years' time, and the organizing of such a conference has been set in motion.

### 2.3.2. SAIMM School Committee—Physical Metallurgy

B E Protheroe, Chairman  
Prof R J Dippenaar              A Mauchen  
D Rümelin                      D Twigg  
J P Hoffman

The first SAIMM School in Physical Metallurgy, entitled 'Application of Materials Engineering in the Metallurgical Industry', is planned to be held from 15th to 19th February, 1987. To ensure that the School meets the needs of industry, various members of the industrial sector have been co-opted onto the Committee. The School is intended to be the forerunner of many schools to be held in the field of materials engineering.

## 2.4. International Conferences

### 2.4.1. GOLD 100

The SAIMM has collaborated with the Chamber of Mines of South Africa, the Council for Mineral Technology, and the School of Business Leadership of the University of South Africa in organizing GOLD 100, which will be held from 15th to 18th September, 1986. This Conference is the most ambitious conference ever held relating to all aspects of the mining, extraction, processing, manufacture, industrial uses, marketing, and economics of gold. GOLD 100 has attracted some 175 speakers, many of whom are world leaders in one or other aspect of the production and use of gold.

The SAIMM has been primarily responsible for organizing the technical programme associated with the extraction and mining of gold, and will be responsible for the production of printed Conference proceedings. These volumes will be produced from camera-ready manuscripts prepared by the authors, and will be available as bound proceedings in time for the Conference.

A number of technical excursions, as well as an interesting programme of social events, has been arranged. GOLD 100 will certainly be the technical highlight of the centenary year, 1986.

### 2.4.2. APCOM 87

The SAIMM is collaborating with the Council for Mineral Technology in organizing the 20th International APCOM Symposium, which is to be held in Johannesburg from 19th to 23rd October, 1987. The scheduling for APCOM 87 was confirmed by the APCOM International Council at its meeting held during the 19th APCOM Symposium at Penn State University in April 1986. At that meeting, South Africa, together with Canada and West Germany, became permanent members of the APCOM International Council. Arrangements for the 20th APCOM Symposium are well advanced. A series of workshops that is planned for the week before the Symposium will cover topical aspects in the fields of mining, geostatistics, and metallurgy. Local visits will be arranged for Wednesday, 21st October, 1987, and a post-symposium tour for the week after the Symposium.

## 3. PUBLICATIONS

### Key Performance Areas

To achieve its objectives regarding the transfer of technology by means of publications, 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, physical metallurgy, 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; and enters into reciprocal international agreements for the advertising and marketing of publications to the financial advantage of its members.

This important area of the SAIMM's activities can be subdivided into two: the *Journal*, and book publications. As the *Journal* is sent to each member every month, it remains the most important means of contact between the SAIMM and its members.

Books to be published by the SAIMM have to be selected on a wider basis. Although the subjects are of interest to members and to the South African mining industry, they cannot be completely parochial since the smallness of the South African market makes the publication of technical books an expensive exercise. Therefore, in most instances the books are designed for an international audience.

In the past year, considerable time and effort were spent in improving methods of publication. These efforts have been aimed at reducing time delays and in containing or even reducing costs while maintaining quality. A partnership between the SAIMM, the Chamber of Mines of South Africa, and the *Journal of Science* is aimed at achieving these objectives. New equipment installed at the Chamber will form an important component of this agreement.

The other main area of publications, which did not receive as much attention in 1985/86, is marketing. Although new international agreements have been reached, notably in Australia, there is still much work to be done before the SAIMM can be satisfied with its efforts.

The reports below cover the two areas of journal and book publications.

### 3.1. Journal Committee

Dr H Wagner, Chairman

|                    |                |
|--------------------|----------------|
| B C Alberts        | H E James      |
| J D Austin         | R W O Kersten  |
| R D Beck           | Prof D G Krige |
| Prof R J Dippenaar | Br B K Loveday |
| C E Fivaz          | R A Snodgrass  |
| Dr A Harding       |                |

### PAB Members

Mining: Professor R P Plewman, H G Mosenthal  
Extractive Metallurgy: Dr P R Jochens, R A Snodgrass  
Physical Metallurgy: Dr P T Wedepohl

The *Journal* is a direct link between the SAIMM and its members. In addition, it is read world-wide and, as such, conveys the scientific, technical, and economic achievements of the South African mineral industry to a wide audience.

The Programme Advisory Board met several times to review the existing refereeing procedures, and to establish an overall editorial policy to ensure that the requirements of the readers are met. A readership survey revealed a need for more papers describing technical developments in the mineral industry that would be of interest to members. The Metal Review Series of papers, which was initiated in 1984, was continued, and metal reviews on tin, chromium, lead, and antimony were published. A decision was taken to extend the scope of the Metal Review Series to cover other minerals of economic importance to South Africa.

In addition, sixteen papers on mining topics, nine papers on various aspects of physical metallurgy, five papers on extractive metallurgy, four papers on general topics, and thirteen Spotlights kept readers informed of general trends in the industry. Monthly local and international diaries were published as regular features, and book reviews made *Journal* subscribers aware of recent publications in the field of mineral engineering.

The critical shortage of papers that was experienced some time ago has been overcome. Colloquia organized by the Technical Programme Committees of the SAIMM proved to be a good source of high-quality papers.

The valuable contributions of the Programme Advisory Board, the panels of referees, the editor, Dr H Glen, the proofreader, Mr F Roberts, and the production secretary, Miss P Binstead, are gratefully acknowledged.

### 3.2. Book Publications

J D Austin, Chairman

|                    |               |
|--------------------|---------------|
| B C Alberts        | H E James     |
| Prof R J Dippenaar | R W O Kersten |
| C E Fivaz          | Dr H Wagner   |

The partnership mentioned earlier resulted in the addition of new titles to the SAIMM's list of publications. The first is 'Assay and Analytical Practice in the South African Mining Industry'. This 650-page publication will be available by the end of August 1986, and has been published in partnership with the Chamber of Mines. Another title from this partnership will be 'Gold Metallurgy'.

In partnership with the Association of Mine Resident Engineers, the proceedings of the Underground Transport Symposium, which was held in 1984, will be published by the end of August. This is the first title in a new series—the Special Publications Series.

Although there were many problems in its production, the proceedings of the International Conference on the Planning and Operation of Open Pit and Strip Mines will be available soon.

On behalf of the Organizing Committee of GOLD 100, the SAIMM took on the responsibility of publishing the papers that will be presented at the Conference. They will be produced in three volumes covering mining, extractive metallurgy, and industrial uses.

Other potential titles are in various stages of preparation, and 'Rock Mechanics in Mining Practice' is being reprinted for the third time.

Sales were lower than last year, but this had been expected since no new titles were published during the year. A new three-tier pricing system is being introduced: a retail price for non-members, a price for members, and a price for student members.

The other important area of the SAIMM's activities as far as books are concerned is the acquisition of new technical titles for the library. Reviews of these books are published in the *Journal*, and the books are placed in the SAIMM's section of the Chamber of Mines Library in Hollard Street. Because of the very high rand prices for overseas books, this library serves a useful purpose in that many of its books are borrowed through the interlibrary loan service. The SAIMM would be very happy to accept donations of books for the library, and is looking in particular for material of historical interest.

#### 4. REGIONAL DEVELOPMENT

##### Key Performance Areas

In order to achieve its objectives with regard to technology transfer and the promotion of the interests of its members based in regional areas, the SAIMM

- supports the establishment of branches to satisfy the local needs of its members for professional association and the exchange of technical information; and
- 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. SAIMM Branches

Its Branches constitute the decentralized power base of the SAIMM. The perception of individual members, particularly younger members, based in areas distant from Johannesburg depends to a large measure on how they see their Branches. It is the Branch that has to pro-

vide most of what the individual member sees as the benefits of belonging to the SAIMM, aside from such things as the *Journal*, professional status and recognition, and a collective voice.

Two of the main responsibilities that are best placed with the Branches are

- assessing the needs and wants of their constituent members on an ongoing basis, and
- keeping an eye open for issues of a local or national nature that deserve the attention of the mining and metallurgical community.

##### 4.1.1. Witbank/Middelburg Branch

###### Branch Committee (1985.08.01–1986.01.31)

|              |                   |
|--------------|-------------------|
| W C Mather   | Chairman          |
| B R Rohrmann | Vice Chairman     |
| H C van Zyl  | Outgoing Chairman |
| A C Botha    | Hon. Secretary    |
| K C Spencer  |                   |
| J P Hoffman  |                   |
| C P Goodale  |                   |
| T E Jones    |                   |
| R B Smith    |                   |

###### Branch Committee (1986.02.01–1986.08.06)

|              |               |
|--------------|---------------|
| B R Rohrmann | Chairman      |
| K Spencer    | Vice Chairman |
| T Schmoll    | Hon Secretary |
| J P Hoffman  |               |
| C P Goodale  |               |
| T E Jones    |               |
| A C Botha    |               |

The Witbank/Middelburg Branch hosted a colloquium entitled 'Recent Mining and Metallurgical Developments in the Eastern Transvaal', at the Witbank Civic Centre on Wednesday, 25th September, 1985. An attendance of close on 300 delegates bears testimony to the popularity of the theme. Two well-attended cocktail parties were held at different venues on the evening prior to the Colloquium. These were hosted at the South African Coal Estates Recreation Club and the Middelburg Country Club. The keynote address was delivered by Mr G C Thompson, Managing Director of Trans Natal Coal Corporation, Gencor. This was followed by parallel sessions of presentations, which were of high and, in many cases, of outstanding technical standard. The Branch hosted a well-attended and most successful banquet in the evening at the magnificent banqueting hall in Witbank's new Cultural Centre. Dignitaries present included the President of the Chamber of Mines, Mr Clive Knobbs, the Government Mining Engineer, Mr G P Badenhorst, the Mayor of Witbank, Mr Paul Broodryk, and the President of SAIMM, Mr Henry James. A ladies' programme was arranged for Wednesday, 25th September, which included a trip to Loskop Dam and the Cheetah Farm.

On Thursday, 26th September, interested delegates were taken on technical visits to Highveld Steel & Vanadium, Tavistock Colliery, Kleinkopje Colliery, Greenside Colliery, Duvha Colliery and Power Station, and Middelburg Steel & Alloys. However, these trips were not as well patronized as had been hoped.

On 19th March, 1986, at a General Meeting held in the recreation hall of Highveld Steel & Vanadium Corporation, Mr J G G Hansman from the Department of Water Affairs presented an excellent address on 'Water Resource Development with Special Reference to the Lesotho Highlands Project'.

The Annual General Meeting of the Branch was held on 6th August, 1986, at the South African Coal Estates Recreation Club. Mr H E James, President of SAIMM, delivered an address entitled 'Maintaining South Africa's Competitive Edge in World Mineral Markets'. Mr B R Rohrmann was elected Chairman of the Branch for the 1986/87 year.

At the Annual General Meeting the following recommendations were made for Council's consideration.

1. The procedures for membership applications should be simplified.
2. The various grades of membership should be reduced, and people of disciplines other than mining and metallurgy, e.g. mechanical and electrical engineers, and senior personnel in administration, finance, etc. employed in the mining and metallurgical industry, should also be eligible as members.
3. Council members should regularly attend and actively participate in committee and general meetings of the Branches.
4. The scope of the *Journal* should be expanded to include papers and articles of interest to a wider circle of members.

The following functions are being planned:

|                     |   |
|---------------------|---|
| 14th August, 1986   | Technical visit to Palabora Mining Company                        |
| 22nd October, 1986  | General Meeting at the Recreation Club of Greenside Colliery      |
| 11th February, 1987 | Colloquium on Equipment Alternatives in Surface Mining in Witbank |

#### 4.1.2. Orange Free State Branch (Formerly the OFS/Klerksdorp Branch)

##### *Branch Committee (1985.08.01-1986.07.30)*

|                  |                         |
|------------------|-------------------------|
| K A van Gessel   | Chairman                |
| P H Radcliffe    | Vice Chairman           |
| Dr M A Orridge   | Immediate Past Chairman |
| F C Harvey       | Honorary Secretary      |
| F Egerton        |                         |
| K W F Eick       |                         |
| H M W Eschenburg |                         |
| B R Fleetwood    |                         |
| J G McCallum     |                         |

Mr Egerton was elected to the Committee during January 1986. He replaced Mr D A Parfitt, who resigned from the Committee following his transfer to Barberton. Mr Parfitt served as Past Chairman of the Branch on two occasions and was a long-standing member of the Branch Committee.

A decision was taken at the meeting of Council on 18th October, 1985, to reconstitute the OFS/Klerksdorp Branch as the Orange Free State Branch. This decision

was taken on a recommendation of the Branch Committee, which had long been experiencing difficulties in getting members from the Klerksdorp area to attend meetings in Welkom. (At the same time, Council endorsed the idea that immediate steps should be taken to establish an independent branch in the Klerksdorp area.)

The first General Meeting of the OFS Branch for 1985/86 was held at the Freddie's Mine Recreational Club, Odendaalsrus, on 19th November, 1985, and was attended by forty-five members and visitors. The guest speaker was Mr A N Clay, Sedimentologist of the Harmony Gold Mining Company Limited. Mr Clay's slide and talk presentation was entitled 'The Origin of Witwatersrand Gold Reefs'.

The second General Meeting was held at the Harmony Country Club, Virginia, on 18th February, 1986, and was attended by fifty-one members and visitors. The guest speaker for the evening was Dr O K H Steffen, Director of Steffen, Robertson & Kirsten Inc. and a member of Council. After the formal part of the proceedings, Dr Steffen addressed the meeting on 'A Perspective of Mining in Some Developing Countries', which was based on his personal experiences and on observations made during visits to mines both in neighbouring and overseas countries.

A very successful technical excursion was undertaken on 22nd and 23rd May, 1986, to the Richards Bay area. Visits were made to Sappi Kraft Limited (Tugela Mill), Richards Bay Coal Terminal, and Richards Bay Minerals Limited. The 20 participants found the visit extremely informative and enjoyable.

The Annual General Meeting of the Branch was held on 30th July, 1986, in the Regional Canteen of Freegold North Region, Welkom. Mr H E James, President of SAIMM, delivered an address entitled 'The Beneficiation of South Africa's Minerals'.

Mr P H Radcliffe was elected Chairman of the Branch for the 1986/87 year.

#### 4.1.3. Establishment of New Branches

##### *Western Transvaal (Klerksdorp/Carletonville Area)*

The investigation into the establishment of an independent Branch of the SAIMM in the Klerksdorp/Carletonville area has reached an advanced stage, and there is every likelihood that the inaugural meeting of the Branch will take place during September/October 1986.

##### *Vaal Triangle*

Council approved, in principle, the formation of a Branch in the Vaal Triangle. The inaugural meeting of the new Branch will take place during August/September 1986, when a Chairman and a Committee will be elected. The Branch will serve the interests of members in the Vereeniging, Vanderbijl Park, and Sasolburg areas, and will specialize in physical metallurgy.

##### *Western Cape Area*

A decision, in principle, was taken on 8th August, 1986, to establish a Branch of the SAIMM in the Western Cape. The SAIMM had previously agreed to provide sponsorship, for a period of 3 years for the annual mineral-processing symposium held jointly by the Department of Chemical Engineering of the University of Cape Town and the Department of Chemical and Metallurgical

Engineering of the University of Stellenbosch.

Subject to Council's approval of the formation of the Western Cape Branch, its inaugural meeting will be held early in October 1986, when a Chairman and a Branch Committee will be elected. It is likely that the Annual General Meeting of the Western Cape Branch will be held to coincide with the annual research symposium, the venue for which alternates between the Universities of Cape Town and Stellenbosch.

#### **4.2. Co-operation with Other Societies and Associations Having Close Ties with Operating Mines and Metallurgical Plants**

There is general agreement that the SAIMM should promote much closer co-operation with societies and associations that have a strong regional base within the mining and metallurgical industry. Examples of such societies and associations are the Institute of Assayers and Analysts, the Mine Ventilation Society, the Institute of Mine Surveyors, the Association of Mine Managers, the Mine Metallurgical Managers' Association, the Colliery Managers' Association, and the Association of Mine Resident Engineers. Quite clearly, the SAIMM Branches have an important role to play in promoting closer ties between the SAIMM and these societies to the overall benefit of individual members, and of the mining and metallurgical profession as a whole.

##### **4.2.1. Mine Metallurgical Managers' Association**

The President of the SAIMM, Mr H E James, attended the second Annual General Meeting of the Mine Metallurgical Managers' Association of South Africa, which was held at the Gold Fields West Recreation Club, Carletonville, on 25th October, 1985.

Avenues of co-operation between the SAIMM and the MMMA are joint colloquia and co-operation on the publication of technical papers.

##### **4.2.2. Association of Mine Managers**

Discussions aimed at promoting closer co-operation between the SAIMM and the Association of Mine Managers of South Africa resulted in a decision to hold a joint Colloquium on Backfilling in Gold Mines during November 1986.

### **5. ESTABLISHMENT AND DEVELOPMENT OF SPECIAL INTEREST GROUPS**

#### **Key Performance Area**

In pursuing its objectives, the SAIMM

- supports the establishment of interest groups on topics that require special attention so that they can be developed to fully fledged disciplines within the SAIMM (e.g. physical metallurgy and surface mining).

#### **5.1. Working Group: Physical Metallurgy**

Professor G G Garrett, Chairman  
Prof R J Dippenaar      BE Protheroe  
Dr A Harding              D Rümelin  
J P Hoffman                D Twigg  
Dr P R Jochens

Having achieved its major tasks of the past two to three years, and with the formation of the SAIMM School Committee (Physical Metallurgy), the Working Group: Physical Metallurgy met only on an *ad hoc* basis to deal with outstanding items.

The situation in regard to professional engineering status for physical metallurgists was fully clarified, and a detailed submission was submitted to SACPE. A number of potential successful individual applications are now in the pipeline.

Preliminary plans for an international chromium conference in 1988 or 1989 have advanced to the stage at which a committee specifically constituted to deal with detailed planning aspects can be formed.

The Working Group: Physical Metallurgy will continue to meet on an *ad hoc* basis to deal with specific items that may arise from time to time.

#### **5.2. Special Interest Group on Surface Mining**

At its meeting on 20th September, 1986, Council approved the formation of a Special Interest Group on Surface Mining. The inaugural meeting of the Group took place on 4th February, 1986, at the University of Pretoria. The meeting was opened by the President of the SAIMM, Mr H E James, who outlined the events leading to the formation of the Group and enunciated its objectives. These can be summarized as follows:

- to provide a forum for the debate and exchange of ideas,
- to encourage the professional association of members, and
- to arrange for the dissemination of technical information within the field of surface mining.

The following Committee was elected:

Prof A N Brown, Chairman  
P A Rossouw, Secretary  
J P Deetlefs, Vice-Chairman  
D J C Taylor  
A D Ochse.

The Chairman gave a talk on various aspects of surface mining, which was illustrated by slides.

The first major task of the Group was to take responsibility for the SAIMM School on Drilling and Blasting in Surface Mining, which was held at the University of Pretoria from 9th to 13th June, 1986. (See report under Technical Meetings—Mining.)

An evening meeting of the Group was held on 26th May, 1986, at the University of Pretoria. Two informal presentations were made by Mr H L Graham of Iscor and Dr I J Brackley of SRK Mining Inc. The talks were on the subject of the stability of spoil piles in open-pit and strip mines. The Committee is working on the problems of attendance and the right form of meetings for members, who are spread throughout the country.

### **6. SAIMM CONTRIBUTION TO THE GENERAL ADVANCEMENT OF SCIENCE AND TECHNOLOGY IN SOUTH AFRICA**

#### **Key Performance Area**

In order to achieve its objectives, 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.

#### SAIMM Representatives on AS&TS

| Committee             | Representative | Alternate   |
|-----------------------|----------------|-------------|
| Controlling Executive | H E James      | B C Alberts |
|                       | J D Austin     | Dr H Wagner |

Committee for Science and Technology Prof A N Brown Dr H Wagner

(In addition to the above, Mr J D Austin was elected to serve on the Kelvin House Management Committee.)

During the year under review, the SAIMM stressed the importance of co-operation among the entire scientific and engineering community as a prerequisite for the meaningful advancement of science and technology in South Africa. It also emphasized the increasing threat to the South African scientific and technological community through politically inspired actions that restrict the free exchange of scientists and scientific information between South Africa and other countries.

The decision early in the year to separate the functions of AS&TS into the Advancement of Science and Technology and the Management of Kelvin House Services was welcomed. The SAIMM participated in the first strategic-planning exercise conducted by AS&TS on 5th August, 1986, and fully supports AS&TS in its endeavours to promote and co-ordinate the development and application of science and technology in South Africa for the benefit of all its people while continuing to provide a point of focus and to serve the interests of its members.

### 7. SAIMM CONTRIBUTION TO THE GENERAL ADVANCEMENT OF THE ENGINEERING PROFESSION IN SOUTH AFRICA

#### Key Performance Area

In order to achieve its objectives, the SAIMM

- participates in the work of SACPE (the South African Council for Professional Engineers), FSPE (the Federation of Societies of Professional Engineers), and ASRET (Affiliation of Societies Representing Engineering Technicians) in order to play its part in making a meaningful contribution to the general advancement of the engineering profession in South Africa.

#### 7.1. SAIMM Contribution to the Work of SACPE

*Persons Nominated by SAIMM to serve on SACPE Committees*

##### SACPE Council

|                | Metallurgy     | Mining       |
|----------------|----------------|--------------|
| Representative | H E James      | G C Thompson |
| Alternate      | Dr B K Loveday | P N Harris   |

##### Professional Advisory Committees

##### PAC Metallurgy

| Members              | Alternates |
|----------------------|------------|
| H E James (Chairman) | R D Beck   |

Dr P R Jochens  
Prof G T van Rooyen  
Dr J P Hugo  
Dr B K Loveday

C E Fivaz  
Dr R F Sandenbergh  
Dr A K Haines  
N Sutherland

#### PAC Mining

##### Members

G C Thompson  
G P Badenhorst  
Prof M D Salamon\*  
Prof R P Plewman  
J A Cruise

##### Alternates

Prof D G Krige  
P N Harris  
J J Geldenhuys  
Prof A N Brown  
Dr O K H Steffen

\*Up to April 1986

Over the years, the SAIMM has supported the work of SACPE in safeguarding public safety, public health, and the public interest by requiring engineering work of an advanced and sophisticated nature to be performed by persons registered as professional engineers. The SAIMM and the mining and metallurgical industry have for many years supported the concept of an integrated engineering profession, with full recognition of the vital role of engineering technologists, engineering technicians, and certificated engineers. Council therefore welcomed the draft Engineering Professions of South Africa Bill, which strongly supports an integrated profession.

During the year under review, the PAC Metallurgy and PAC Mining Committees of SACPE continued their important work in screening the qualifications and experience of applicants for registration as professional engineers. Assistance was also provided by SAIMM nominees in the accreditation of courses offered by the Department of Metallurgical Engineering at the Vaal Triangle campus of Potchefstroom University.

#### 7.2. SAIMM Contribution to the Work of FSPE

##### SAIMM Representatives on FSPE Committees

##### Executive Committee

|                |                  |
|----------------|------------------|
| Representative | Prof R P Plewman |
| Alternate      | C E Fivaz        |

##### FSPE Board

|                | Mining           | Metallurgy    |
|----------------|------------------|---------------|
| Representative | Prof R P Plewman | C E Fivaz     |
| Alternate      | H G Mosenthal    | H G Mosenthal |

##### Other Committees

|                                  |                  |
|----------------------------------|------------------|
| Publicity Committee              | M G Demmer       |
| Education Committee              | M G Demmer       |
| National Congress on Engineering | Dr O K H Steffen |

The SAIMM supported attempts at the formulation of a new constitution that would enable FSPE (or its successor) to promote the general interests of the entire engineering community (professional engineers, engineering technologists, engineering technicians, and certificated engineers).

SAIMM representatives on FSPE committees made a contribution to activities such as promoting the engineering profession at school level and among national servicemen, and organizing the National Congress, which was held in May 1986 with the theme 'Engineering—

Keystone to the Development and Prosperity of South Africa'.

### 7.3. SAIMM Representation on ASRET and SAARET

Regular reports were made to Council by the SAIMM representative on both ASRET and SAARET, Dr J Lurie. The difficulties of student engineering technicians in finding sponsors for the mandatory practical-training components of their courses (survey conducted by ASRET) were fortunately not experienced to any significant extent by mining and metallurgy students.

### 7.4. SAIMM Support of PROTEC

The SAIMM continued its support of PROTEC, the Programme for Technological and Engineering Careers.

|                |                  |
|----------------|------------------|
| Representative | Prof R P Plewman |
| Alternate      | Prof R P King    |

There was considerable expansion in the activities of PROTEC, and centres are now operating, or planned, in Soweto, East Rand, Alexandria, Coronationville, the Eastern Cape, and Natal. Assistance and some financial support to branches are being provided by the central organization. PROTEC has therefore taken the first steps to expand from the pilot project in Soweto to become a nationwide, multiracial organization.

### 8. SAIMM SUPPORT OF THE PHOENIX PROGRAMME

#### Phoenix National Committee

Mr W W Malan took over as Chairman of the Phoenix National Committee following the retirement of Dr M G Atmore, who was Chairman from 1983 to 1986. Mr M G Demmer, of the Chamber of Mines Careers Unit, is responsible for the Phoenix Courses and related activities aimed at raising the general level of awareness of scholars and teachers regarding technical careers in the minerals industry.

The Phoenix Programme is administered and funded jointly by the Chamber of Mines of South Africa and the SAIMM. Financial support and assistance are received from a number of organizations in the minerals industry, each of which is represented on the Phoenix National Committee.

The Phoenix Programme continued to broaden its activities during 1986, and a number of mineral-industry courses were offered to teachers of all population groups. To date, there have been 51 mineral-industry courses for approximately 860 teachers and student teachers, and some 820 scholars have participated in 42 scholar projects.

The continued support of Phoenix by its founder members and sponsors has allowed Phoenix staff to increase the number and variety of activities that can be offered to schools. Continued communication and liaison are maintained with other organizations operating in similar fields in other parts of the world, and close contact is maintained with the Minerals Industry Manpower Careers Unit in London.

The recent introduction of two- to four-week optional topics in the science syllabus for standard nine has created an opening for Phoenix staff to develop teaching material that relates science to the minerals industry. At present, no detailed material of this nature exists, and preliminary

discussions with some of the Education Departments have yielded very positive results. Subject to the approval of the Education Departments, optional topics on coal, gold, and copper will be introduced into some schools during 1987/88. This is the mineral industry's first formal opportunity to introduce minerals into school science curricula.

### 9. SAIMM SUPPORT OF SANCOT

#### South African National Committee on Tunnelling

|                |                  |
|----------------|------------------|
| Representative | Dr H Wagner      |
| Alternate      | Dr O K H Steffen |

The aims and objectives of SANCOT, which is a co-operate body representing government departments, municipalities, professional institutes, and industry, are to promote tunnelling in South Africa and to represent South African tunnelling interests at the International Tunnelling Association. These aims are achieved by the publication of a tunnelling journal, the organization of an annual seminar, and the activities of working groups on specific problems.

The SAIMM participated in the activities of SANCOT by being represented at quarterly meetings, by contributing to the work of the working group on tunnelling legislation, and by distributing SANCOT information to members of the SAIMM.

### 10. SAIMM SUPPORT OF EPPIC

#### Key Performance Area

In order to achieve its objectives the SAIMM,

- through representation on bodies such as the Environmental Planning Professional Interdisciplinary Committee (EPPIC), and by organizing colloquia, encourages all those who practise in the minerals and metals sector to be fully aware of the social and environmental implications of their work and to take steps to avoid the need for restrictive legislation.

#### SAIMM Representation on EPPIC

|                |           |
|----------------|-----------|
| Representative | J S Freer |
| Alternate      | C Roper   |

EPPIC's mission is to promote a better understanding and awareness among professional planners of their responsibility in regard to the country's natural resources and environment.

EPPIC emphasizes the urgency for professional planners to adopt a holistic approach to the planning process by the consideration of environmental factors as well as the accepted technological and economic factors. This holistic approach must cover all phases of the project including policy decision-making, planning, implementation, commissioning, operation, and de-commissioning.

After twelve years, EPPIC is not satisfied that its rate of progress is adequate when viewed against the escalating deterioration of the environment and natural resources of the country.

A meeting was held between EPPIC and the Presidents of its constituent bodies, the outcome of which was very positive. The meeting will result in a change in EPPIC's approach from an inward-looking body seeking to in-

fluence the members of its constituent institutes to an outgoing, anticipatory catalyst to promote respect for the environment by interaction with industry, the State, the public, and the professions.

**11. PROVISION OF CONSULTING SERVICES BY SAIMM REGARDING THE IMPLEMENTATION OF THE MINES AND WORKS ACT**

**SAIMM Committee on Mines and Works Act**

H G Mosenthal, Chairman  
 Prof A N Brown, Vice-Chairman  
 Prof D G Krige P W J van Rensburg  
 G Y Nisbet R B MacGillivray

During the past year, several matters were referred to the SAIMM by the Office of the Government Mining Engineer. Comment and advice were provided by members of the Committee.

**12. CO-OPERATION BETWEEN THE SAIMM AND THE SWA/NAMIBIA SECTION OF THE IMM**

During the year under review, members of the Institution of Mining and Metallurgy (UK) who are resident in Namibia formed a local section of the IMM. The SAIMM was represented by Mr J D Austin at the inaugural dinner of the IMM Section in Namibia, which was held in Windhoek on 13th September, 1985. Close liaison is maintained with the IMM Section, and SAIMM members resident in SWA/Namibia have been encouraged to attend the technical meetings arranged by the IMM Section. The SAIMM receives the quarterly newsletter of the IMM Section, and in exchange each month provides a complimentary copy of the *Journal*.

**13. INTERNATIONAL LIAISON**

**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, 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.

In February 1986, Mr J D Austin, acting as the joint representative of the SAIMM and the Geological Society of South Africa, attended the annual general meeting of the CMMI Council, which was held in London.

During the past year, a great deal of effort was put into the 13th CMMI Congress, which was held in Singapore in May 1986. The SAIMM co-ordinated the arrangements for most of the South African delegates. In addition, it liaised with the Organizing Committee and the Australasian Institute of Mining and Metallurgy on many matters, including the arrangements for a plenary speaker (Mr G Y Nisbet), for a speaker in the education forum (Dr C J Fauconnier), and for session chairmen (several South African delegates). Mr J D Austin was asked to give the vote of thanks to the after-dinner speaker at the banquet.

At the Congress and later in Australia, discussions were held on matters of mutual interest with representatives of institutes and organizations involved in the mineral industry.

Professor D G Krige attended the 1986 APCOM meeting as the official representative of the SAIMM. He was responsible for finalizing the arrangements with the international committee for the 1987 APCOM meeting, which is to be held in Johannesburg.

No representative of the SAIMM attended any meetings of the Organizing Committee of the World Mining Congress, but the South African Committee contributed to the work on international mining statistics.

**Corresponding Members of Council**

|                |   |
|----------------|---|
| United Kingdom | Dr M G Atmore, Prof C T Shaw                          |
| Australasia    | G A Mackay  |
| Canada         | Prof B W Mackenzie                                    |
| USA            | Prof H M Wells, Dr J-M M Rendu,<br>Prof M D G Salamon |
| Japan          | Dr G Rossi  |
| Chile          | Dr E J Magri  |

The SAIMM Corresponding Members in other countries were asked to propose ideas for promoting the international exchange of scientific and technical information. Several worth-while suggestions were made, and these will be followed up during the course of the next twelve months.

**14. CONSTITUTION, RULES, AND POLICY**

**Constitution, Rules, and Policy Committee**

|                          |                    |
|--------------------------|--------------------|
| J D Austin, Chairman     |                    |
| H E James, Vice Chairman |                    |
| Dr H Wagner              | Prof A N Brown     |
| B C Alberts              | Dr P R Jochens     |
| Prof D G Krige           | G Y Nisbet         |
| C E Fivaz                | Prof R P Plewman   |
| Dr O K H Steffen         | Prof M D G Salamon |
| Dr R E Robinson          | P W J van Rensburg |
| D A Viljoen              | P A Von Wielligh   |
| Prof R P King            |                    |

Although the full Committee did not meet during the year, several of its members were involved in the preparation of changes to the SAIMM Constitution, which were referred to in the preface to this report.

**15. SAIMM SECRETARIAT**

At the time of writing, the SAIMM Secretariat is as follows:

|                    |                        |
|--------------------|------------------------|
| Doris Gardner      | Institute Secretary    |
| Pam Binstead       | Publications Secretary |
| Pat Jacobs         | Conference Secretary   |
| Celeste Mackintosh | Membership Secretary.  |

Other secretaries who contributed to the administrative work of the SAIMM during the year under review were Judith Money (Membership Committee) and Anita Serrao (Typist).

In addition to their many routine duties, the Secretaries were involved in formulating improved procedures for the conduct of the SAIMM's affairs. In particular, a start

was made on the preparation of revised job descriptions incorporating key performance areas and standard operating procedures, as an outflow of the strategic-planning workshops conducted by Council during the year.

#### 16. FINANCE

Honorary Treasurer, Professor D G Krige

The financial aspects of the SAIMM's activities and of the services rendered to members are reflected in the year-end statements, which are given on pages 000 to 000 of this issue.

The net cost of running the *Journal* was R63 000, which again shows a substantial increase over last year. This was mainly due to increased printing costs. No new book publication was funded during the year, and sales of existing publications showed a surplus of R18 000.

As usual, the series of Schools and Colloquia were very successful, and yielded a surplus of R83 000. This is due, as in the past, to conservative estimates of attendances being well exceeded as a result of the popularity of the

topics and the quality of the presentations.

The overall costs of running the SAIMM increased substantially, and resulted in a net deficit for the year of R66 000. Increases in subscription rates were kept to nominal levels but, in view of the financial position, this policy will have to be reconsidered next year.

A substantial part of the funds was held as cash. Rates of interest decreased during the year and resulted in a decrease of R9000 earned on investments. This was more than covered by a profit of R10 000 on the sale of certain investments. During the year, Messrs Martin & Co. were appointed as the SAIMM's investment advisors, and were assisting in an ongoing process of rationalizing the overall investment portfolio. The market value of the listed shares and debentures exceeded the costs by some R60 000. The Education, Brigadier Stokes, and MacArthur-Forrest Funds stand at a satisfactory total of R326 000.

Thanks are due to the secretarial staff, the accountant, and the auditors for the excellent services rendered.

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## Materials engineering

The First International Congress: From Materials Science to Construction Materials Engineering (RILEM) is to be held in Paris and Versailles from 7th to 11th September, 1987.

The aim of the Congress is to explore the new prospects for improved mastery of construction materials that only a thorough understanding of the links between their properties and their structure can bring, offering the possibility of designing a specific material for a specific use. The intention is

- (1) to progress from fundamental science to practice, from the structure of materials to their use and placing, thereby dealing simultaneously with subjects of interests to research scientists, industrialists, and practising engineers;
- (2) to follow a dynamic approach more towards the full use of already acquired knowledge, with a view to optimizing existing materials or designing new ones, rather than accumulating learning on existing products.

Invited lectures will be presented on the following three topics:

- Microstructure and properties of materials
- Design, use, and saving of materials

- Influence of manufacturing processes on materials microstructure and properties.

In the three following topics of the Congress, the reference to the functions to be fulfilled by materials implies those which result from their use in practical construction. Consequently, the greatest importance is to be given to dependence links between the materials and the structures built with them, or into which they are or will be integrated.

- Structure of materials and control of porosity— influence of processes on the microstructure of materials
- Designing and producing materials by combination
- Action of time and environment—prediction and mastery of their long-term effects on materials.

In addition, panel sessions will be held on the need to introduce new tools and new technology into the construction industry.

The address of the Congress Secretariat is as follows:

A.F.R.E.M.  
12 rue Brancion  
75737 Paris Cedex 15  
France.  
Telephone: (1) 45.39.22.33.  
Telex: FEDEBAT 695 527 F.

## Balance Sheet at 30 June 1986

|   | 1986            | 1985            |
|---|-----------------|-----------------|
| <b>ACCUMULATED FUNDS</b>  |                 |                 |
| Balance at 30 June 1985. . . . .  | 208 858         | 208 701         |
| Excess of expenditure over income for the year ended 30 June 1985. . . . .      | <u>(67 598)</u> | <u>11 157</u>   |
|   | 141 260         | 219 858         |
| Transfer to Education Fund . . . . .  | <u>—</u>        | <u>7 000</u>    |
| Transfer to Brigadier Stokes Memorial Fund . . . . .                            | <u>—</u>        | <u>2 000</u>    |
| Transfer to MacArthur-Forrest Memorial Fund . . . . .                           | <u>—</u>        | <u>2 000</u>    |
|   | —               | 11 000          |
|   | 141 260         | 208 858         |
| <b>CURRENT LIABILITIES</b>  |                 |                 |
| Creditors . . . . .   | 153 654         | 200 317         |
| Subscriptions received in advance . . . . .                                     | 4 748           | 3 260           |
| Registration fees for forthcoming vacation school . . . . .                     | <u>28 278</u>   | <u>—</u>        |
|   | 186 680         | 203 577         |
| <b>AMOUNTS DUE TO:</b>  |                 |                 |
| Education Fund. . . . .   | 222 623         | 211 027         |
| MacArthur-Forrest Memorial Fund . . . . .                                       | 44 624          | 40 510          |
| Brigadier Stokes Memorial Fund . . . . .  | 59 048          | 53 156          |
|   | <u>R654 235</u> | <u>R717 128</u> |
| <b>CURRENT ASSETS</b>   |                 |                 |
| <b>Cash</b>   |                 |                 |
| —at bank . . . . .  | 6 780           | 61 844          |
| —at call . . . . .  | <u>303 495</u>  | <u>400 548</u>  |
|   | 310 275         | 462 392         |
| <b>Debtors—</b>   |                 |                 |
| <b>Debtors for sales of journals and publications, less provision . . . . .</b> |                 |                 |
| Advertisers in journal . . . . .  | 11 423          | 4 332           |
| Witbank/Middelburg Branch . . . . .   | 2 972           | 7 645           |
| Sundry . . . . .  | 139             | 139             |
|   | <u>23 438</u>   | <u>25 040</u>   |
|   | 37 972          | 37 156          |
| <b>Stock—</b>   |                 |                 |
| Cufflinks at nominal value . . . . .  | 1               | 1               |
| Ties at nominal value . . . . .   | 1               | 1               |
| Journals at nominal value . . . . .   | 1               | 1               |
| Publications at nominal value (see Note 1). . . . .                             | <u>1</u>        | <u>1</u>        |
|   | 4               | 4               |
| Deposits . . . . .  | 550             | 550             |
| Subscriptions in arrear, less provision . . . . .                               | <u>—</u>        | <u>1 254</u>    |
|   | 348 801         | 501 356         |
| <b>INVESTMENTS</b>  |                 |                 |
| Listed shares and debentures (market value R347 144, 1985—R149 432). . . . .    | 287 076         | 126 762         |
| Unlisted shares . . . . .   | 3               | 3               |
| Participation bonds . . . . .   | —               | 66 000          |
| Loans and unlisted debentures . . . . .   | <u>18 350</u>   | <u>18 350</u>   |
|   | 305 429         | 211 115         |
| <b>MEDALS AND PLAQUES</b>   |                 |                 |
| At nominal value (1985—at cost) . . . . .                                       | 2               | 4 654           |
| <b>FURNITURE AND EQUIPMENT</b>  |                 |                 |
| At nominal value . . . . .  | 1               | 1               |
| <b>DIES</b>   |                 |                 |
| At nominal value . . . . .  | 1               | 1               |
| <b>BANNER</b>   |                 |                 |
| At nominal value . . . . .  | <u>1</u>        | <u>1</u>        |
|   | <u>R654 235</u> | <u>R717 128</u> |

**NOTES:**

Note 1—Stock—Publications. Monograph publications have a replacement value of approximately R46 000 (1985—R43 000).

Note 2—Listed preference shares and debentures are held for the medium and long term, and are reflected at cost and are not written down to market value.

## Balance Sheet at 30 June 1986 (continued)

|  | 1986     | 1985     |
|--|----------|----------|
| <b>EDUCATION FUND</b>                                      |          |          |
| Fund Account—  |          |          |
| Balance at 30 June 1985 . . . . .                          | 211 027  | 188 272  |
| Reversal of donation . . . . .                             | —        | (1 000)  |
| Transfer from accumulated funds of the Institute. . . . .  | —        | 7 000    |
| Income—  |          |          |
| Interest and dividends received. . . . .                   | 28 643   | 33 729   |
|  | 239 670  | 228 001  |
| Expenses—  |          |          |
| Donations to Phoenix Fund . . . . .                        | 9 047    | 12 974   |
|  | 8 000    | 4 000    |
|  | 17 047   | 16 974   |
| Amount due from general fund . . . . .                     | R222 623 | R211 027 |
| <b>MACARTHUR-FORREST MEMORIAL FUND</b>                     |          |          |
| Fund account—  |          |          |
| Balance at 30 June 1985 . . . . .                          | 40 510   | 34 833   |
| Transfer from accumulated funds of the Institute . . . . . | —        | 2 000    |
| Interest received . . . . .                                | 5 494    | 6 240    |
|  | 46 004   | 43 073   |
| Awards and expenses . . . . .                              | 1 380    | 2 563    |
| Amount due from general fund . . . . .                     | R44 624  | R40 510  |
| <b>BRIGADIER STOKES MEMORIAL FUND</b>                      |          |          |
| Fund account—  |          |          |
| Balance at 30 June 1985 . . . . .                          | 53 156   | 46 205   |
| Transfer from accumulated funds of the Institute . . . . . | —        | 2 000    |
| Interest received . . . . .                                | 7 218    | 8 277    |
|  | 60 374   | 56 482   |
| Awards . . . . .   | 1 326    | 3 326    |
| Amount due from the general fund . . . . .                 | R59 048  | R53 156  |

## Graduate prizewinners



**Mr J.H. de Lange, winner of the 1986 SAIMM Prestige Prize for Metallurgical Engineering—University of Pretoria, and Mr J. van Tonder, winner of the SAIMM Prize for a B.Sc (Eng.) Project Report in Physical Metallurgy—University of Pretoria**



**Mr J.G. Oelofse (left), winner of the 1985 SAIMM Book Prize for Mining Engineering—University of Pretoria, with Professor A.N. Brown, Head of the Department of Mining at the University of Pretoria**

# Income and Expenditure Account for the year ended 30 June 1986

|   | 1986                    | 1985                   |
|---|-------------------------|------------------------|
| <b>INCOME</b>   |                         |                        |
| Subscriptions . . . . .   | 71 409                  | 69 793                 |
| Vacation School . . . . .   | 68 657                  | 65 643                 |
| Company affiliates' subscriptions . . . . .   | 28 975                  | 28 500                 |
| Interest and dividends received . . . . .   | 28 318                  | 37 389                 |
| Symposia and colloquia . . . . .  | 14 729                  | 18 689                 |
| Profit on sale of investments . . . . .   | 10 480                  | —                      |
| Entrance fees . . . . .   | 2 813                   | 2 419                  |
| <b>Total income . . . . .</b>   | <b><u>R225 381</u></b>  | <b><u>R222 433</u></b> |
| <b>EXPENDITURE</b>  |                         |                        |
| Secretarial fee and overhead charge   |                         |                        |
| —Associated Scientific and Technical Societies of South Africa . . . . .            | 145 577                 | 85 331                 |
| Institute journal   |                         |                        |
| —Expenses . . . . .   | 96 484                  | 90 905                 |
| —Secretarial fee . . . . .  | 12 580                  | 10 048                 |
|   | <u>109 064</u>          | <u>100 953</u>         |
| <b>Deduct</b>   |                         |                        |
| —Advertising . . . . .  | 18 110                  | 19 569                 |
| —Sales . . . . .  | 23 168                  | 19 855                 |
| —Subvention—Department of National Education . . . . .                              | 4 853                   | 5 151                  |
|   | <u>46 131</u>           | <u>44 575</u>          |
|   | 62 933                  | 56 378                 |
| General expenses . . . . .  | 45 486                  | 38 303                 |
| Stationery and printing . . . . .   | 23 649                  | 16 579                 |
| Postages, telex, and telephone . . . . .  | 17 141                  | 11 351                 |
| Contributions   |                         |                        |
| —Federation of Societies of Professional Engineers . . . . .                        | 9 933                   | 5 805                  |
| —Environmental Planning Professions Inter-disciplinary Committee . . . . .          | 808                     | 788                    |
| —South African National Committee on Tunnelling . . . . .                           | 250                     | 250                    |
| —Affiliation of Societies Representing Engineering Technicians . . . . .            | 300                     | 500                    |
|   | <u>11 291</u>           | <u>7 343</u>           |
| Bad debts written off . . . . .   | 2 382                   | 800                    |
| Audit fee . . . . .   | 1 150                   | 645                    |
| Donations   |                         |                        |
| —South African Federation of University Engineering Students . . . . .              | 1 000                   | 600                    |
| Medals . . . . .  | —                       | —                      |
| Provision for doubtful debts . . . . .  | —                       | 1 700                  |
| Loss on sale of investments . . . . .   | —                       | 1 745                  |
| Special Publication Series  |                         |                        |
| —Expenses . . . . .   | 5 596                   | 46 599                 |
| —Cost of production . . . . .   | 6 342                   | 10 567                 |
| —Refund of underwriting contributions to Chamber of Mines . . . . .                 | 1 324                   | 12 490                 |
|   | <u>13 262</u>           | <u>69 656</u>          |
| <b>Deduct</b>   |                         |                        |
| —Sales . . . . .  | 29 829                  | 37 655                 |
| —Department of National Education . . . . .   | 1 063                   | —                      |
| —Funding from Symposium Organising Committee for publication S:6                    |                         |                        |
| —Contribution to costs . . . . .  | —                       | 18 899                 |
| —Repayable underwriting contribution . . . . .                                      | —                       | 22 601                 |
|   | <u>30 892</u>           | <u>79 155</u>          |
|   | (17 630)                | (9 499)                |
| <b>Total expenditure . . . . .</b>  | <b><u>292 979</u></b>   | <b><u>211 276</u></b>  |
| <b>Total income . . . . .</b>   | <b><u>225 381</u></b>   | <b><u>222 433</u></b>  |
| <b>EXCESS OF EXPENDITURE OVER INCOME transferred to accumulated funds . . . . .</b> | <b><u>R(67 598)</u></b> | <b><u>R11 157</u></b>  |

**NOTES:**

**Note 3—Income and Expenditure Account**

- 3.1 Underwriting contributions are taken to income in the year in which they are received.
- 3.2 Voluntary contributions by members amounting to R1 054 (1985—R1 385) were collected and paid over by the Institute to the AS&TS Trust, and are not included in the income statement.

*To the members*

**THE SOUTH AFRICAN INSTITUTE OF MINING AND METALLURGY**

*We have examined the financial statements set out on pages 374 to 376. In our opinion, they fairly present the financial position of the Institute at 30 June 1986 and its income and expenditure for the year ended on that date.*

**AIKEN & CARTER**  
*Chartered Accountants (S.A.), Auditors*