

Annual Report and Accounts

FOR THE YEAR ENDED 30th JUNE, 1974

COUNCIL AND STANDING COMMITTEES — 1973-1974

Office Bearers: P. W. J. van Rensburg (President), Professor R. P. Plewman and Dr R. E. Robinson (Vice Presidents), J. K. E. Douglas (Honorary Treasurer), and Dr J. P. Hugo (Immediate Past President).

Elected Members of Council: Dr M. G. Atmore, G. H. Grange, Dr P. R. Jochens, J. G. Kirchner, Dr D. I. Legge, W. W. Malan, Dr M. D. G. Salamon, L. W. P. van den Bosch, D. A. Viljoen, P. A. von Wielligh.

Branch Chairmen: B. T. Hosking (Witbank-Middelburg Branch), E. T. Wilson (Orange Free State Branch).

Past Presidents Serving on Council: R. J. Adamson, M. Barcza, H. Britten, H. E. Cross, Professor J. de V. Lambrechts, R. C. J. Goode, Professor D. D. Howat, D. M. Jamieson, D. G. Maxwell, Dr J. T. McIntyre, V. C. Robinson.

Ten Council meetings were held during the year, with an average attendance of 19, and the standing committees held 30 meetings.

COMMITTEE CHAIRMEN

Membership, Dr R. E. Robinson; Metallurgical Colloquia, Dr R. E. Robinson; Mining Colloquia, L. W. P. van den Bosch; Awards, P. W. J. van Rensburg; Excursions, P. A. von Wielligh; Dinner, G. H. Grange; Constitution, Rules and Policy, Dr J. P. Hugo; Adjudicating, P. W. J. van Rensburg; Mines and Works, W. W. Malan; Education, Dr J. P. Hugo.

REPRESENTATIVES ON OTHER BODIES

Associated Scientific and Technical Societies:

Members: V. C. Robinson and D. G. Maxwell

Alternates: P. W. J. van Rensburg

and Dr J. P. Hugo.

Federation of Societies of Professional Engineers:

Members: J. K. E. Douglas and P. W. J. van Rensburg

Alternates: Dr J. P. Hugo and G. H. Grange.

South African Council for Professional Engineers:

Members: R. C. J. Goode and J. K. E. Douglas

Alternates: G. H. Grange and Dr R. E. Robinson.

Engineers' Liaison Committee (Pretoria):

Member: Professor J. de V. Lambrechts

Alternate: Dr J. P. Hugo.

MEMBERSHIP

Seventeen Fellows and Members, twenty-three Graduates, ten Associate Members, twenty-two Associates, thirty-four Students, and seven Company Affiliates were elected during the year. Eleven Fellows and four Members were admitted to retired membership. Five Fellows were elected to Honorary Life Membership. Four Members, two Graduates, and one Student were transferred to Fellows; eleven Graduates and Students were transferred to Members; eight Students to Graduates; and four Students to Associates.

A statement of membership as at June 30th 1974 and the end of the previous year is given in the following tabulation:

	30th June, 1973	30th June, 1974
Honorary Life Fellows	4	9
Honorary Fellows	9	8
Life Fellows	177	170
Fellows	536	544
Members	487	512
Associate Members	—	10
Graduates	128	130
Associates	186	194
Students	183	173
Company Affiliates	64	70
	<u>1 774</u>	<u>1 820</u>

OBITUARIES

Your Council records with deep regret the death during the year of the following members: Dr P. N. Lategan and Dr O. A. Jackson, Honorary Life Fellows and Past Presidents; C. Airth, T. L. Blunt, J. B. Dennison, A. E. Frazer, C. L. Lamb, V. O. Reid, K. Richardson and D. G. Roberts, Life Fellows; H. F. Allan, J. T. Beaumont, M. Eisenstein, J. C. Hall, C. F. Louw, H. H. McGregor, R. Murchison, and J. E. Williamson, Fellows; and R. B. Miles, Associate.

FINANCE

The annual accounts, which follow this report, reflect a healthy position and show that measures taken by Council over the last few years to boost income have been successful. A higher income was needed not only to meet rising costs but also so that the services provided by the Institute for its members could be expanded. This year's income of R55 025 showed a further increase compared with last year's figure of R48 307. Income from subscriptions was higher mainly owing to an increased number of Company Affiliates, and this is indicative of the support given by mining and metallurgical companies to the good work being done by the Institute. Further sales of publications of the symposia held over the last few years again made a useful contribution to income of R4560. The first Winter School held in 1973 yielded a surplus of R7495 after the expenses had been deducted from the income received from registration fees.

The cost of administering the Institute increased by R2212 compared with the previous year. Included in this was a donation of R1000 to the A.S. & T.S. Trust Fund. The cost of publishing and printing the *Journal* increased by R2034, but advertising and extraneous sales of the *Journal* were higher, with the result that the net cost of the

Journal was lower at R2612 (R3433 last year).

The overall result was that there was a surplus of R28 524, and this, together with a profit of R2255 from the sale of shares, was transferred to accumulated funds. The substantial increase in funds over the last few years permitted Council to proceed with the establishment of a fund to be known as the 'Education Fund'. This is to provide the necessary finance for the achievement of the Institute's aims and objectives in respect of several aspects of education. The aim is to build up the capital amount in this fund by transferring money from accumulated funds as the financial position warrants it, so that we can operate on the interest generated from investment of this capital. Initially, R30 000 was transferred to the Fund, which at the year end stood at R32 625 after interest due to it had been added. The balance in accumulated funds at the year end was R58 531 (R57 752 last year). The MacArthur Forrest Memorial Fund showed an excess of income over expenditure of R192, and the amount in this fund is now R4849. The total funds, i.e., accumulated funds plus Education Fund plus MacArthur Forrest Fund, totalled R96 005 at the year end (last year R62 409).

In regard to investment of funds, it was decided to request Syfrets Trust to act as our advisers. On their recommendations, investments were made in quoted debentures, fixed-interest stocks, and loans paying good interest rates and secured by industrial property. Most of the shares in quoted companies were disposed of at a profit. A total of R65 693 has now been invested in this manner, and the balance of the funds is on fixed deposit in building societies and in bank accounts.

JOURNAL

The following papers were published in Volume 73 of the *Journal of the South African Institute of Mining and Metallurgy*.

August, 1973

Trackless mining at the International Nickel Company of Canada, Ltd, by C. F. Hews

Trackless mining at LKAB, Sweden, by L. Hermansson

Trackless mining at Thabazimbi Mine, by M. H. Kirchner

Trackless mining at Prieska Copper Mines (Pty) Ltd, by M. S. Grobler and P. J. Constancon
September, 1973

Raise and shaft drilling, a continuing development, by R. J. Robbins

The control of dust from mine dumps, by G. H. Grange

Die bedryfsfisioloog en lugbesoedeling, deur N. B. Strydom

October, 1973

Presidential address: Our mineral heritage, by P. W. J. van Rensburg

Human factors in stope productivity — a field experiment, by K. F. Mauer and A. C. Lawrence

November, 1973

The gold deposits on the farms Lisbon and Berlyn in the eastern Transvaal, by V. C. H. R. Brereton

Heat losses from ladles during teeming, by R. C. Urquhart, R. I. L. Guthrie, and D. D. Howat

The conversion of a uranium plant to the recovery of zinc, by H. E. Cross

The recovery of zinc from pickle liquors using ion exchange, by A. K. Haines, T. H. Tunley, W. A. M. Te Riele, F. L. D. Cloete, and T. D. Sampson

A review of copper hydrometallurgy, by J. C. Paynter

December, 1973

Theoretical and engineering aspects of slimes-dam construction, by G. W. Donaldson

Ecological aspects of slimes-dam construction, by H. T. Clausen

The tailings dam at Consolidated Murchison Ltd, by H. J. N. Winhoff

The Rhodesian approach to the vegetating of slimes dams, by J. C. R. Hill and W. F. Nothard

January, 1974

Background to the Transvaal Iron Age — new discoveries at Olifantspoort and Broederstroom, by R. J. Mason

Ancient mining in Southern Africa, with reference to a copper mine in the Harmony Block, north-eastern Transvaal, by T. M. Evers and R. P. van den Berg

Some observations on ancient mining at Phalaborwa, by C. E. More

Ancient mining near Great Zimbabwe, by I. R. Phimister

Ancient mining and Zimbabwe, by T. N. Huffman

Extractive metallurgy in Iron Age South Africa, by U. S. Küsel

Copper working in the Messina district, by E. O. M. Hanisch

Research into the ferrous metallurgy of Rhodesian Iron Age societies, by M. D. Prendergast

February, 1974

Slimes-dam construction in the gold mines of the Anglo American Group, by W. T. Ruhmer

Slimes disposal at South African gold mines, by M. Mrost

March, 1974

The application of oxygen in a copper smelter, by N. Gibson

Estimating the strength of rock materials, by Z. T. Bieniawski

April, 1974

A study of the end effects in specimen cores under compression tests, with a view to the elimination of these effects, by A. L. Painting

The improved densification of sludge from neutralized acid mine drainage, by D. J. Bosman

The behaviour of minerals in sulphide flotation processes, with reference to simulation and control, by A. J. Lynch, N. W. Johnson, D. J. McKay, and G. C. Thorne
May, 1974

Prehistoric metal-working in South West Africa, by B. H. Sandelowsky

The analysis of angular atypicality of lineaments as an aid to mineral exploration, by J. P. G. Pretorius and T. C. Partridge

The value of incentive payments in the mining industry, by K. Smith

June, 1974

Developments in centrifugal milling, by A. A. Bradley, A. J. Freemantle, and P. J. D. Lloyd

The control of milling circuits, by A. R. Atkins, A. L. Hind, P. J. D. Lloyd, and J. G. Mackay

July, 1974

The role of training in increasing productivity, by W. S. Nel

Importance of human factors in mining productivity, by A. C. Lawrence

The Institute wishes to record its sincere thanks to Dr Helen Glen, editor of the *Journal*, for her valuable contribution during the past year.

GOLD MEDAL AWARDS

The following have been awarded gold medals by the Council of the Institute:

Professor D. D. Howat and Dr P. R. Jochens, for their significant contributions in the field of pyrometallurgy, as manifested by several papers over a number of years, and, in addition, for the following papers presented during the year under review:

'The effect of the reactivity of lime on desulphurization efficiency in the basic oxygen furnace' (with A. A. Hejja, visitor), and 'The effects of chromium oxide, iron oxide, and calcium oxide on the liquidus temperatures, viscosities, and electrical conductivities of slags in the system MgO-AL₂O₃-SiO₂' (with M. S. Rennie, visitor).

The above papers were published in the August 1972 and March 1973 issues of the *Journal of the South African Institute of Mining and Metallurgy*.

STUDENT PRIZES

Prizes for the best student papers were awarded as follows:

Metallurgy:

'A comparative study of the bonding mechanism in pellets of iron ore and pellets of chromite ore that have been indurated by heat treatment', by P. Smith.

'The measurement of electrical conduction in a slag under electrical

conditions similar to those experienced in practice', by W. P. Channon.

'Die opsparing van defekte in sweise en ondersoek na die invloed van die defekte op die meganiese eienskappe van die sweislas', deur L. du Plessis.

Mining:

'The swing-hammer miner', by C. J. Davies.

'The need for refrigeration in deep level mines incorporating a chilled water reticulation system with emphasis on optimum pipe sizes and insulation thickness', by E. Boshoff.

'The commissioning of a test for the calibration of anemometers', by J. J. van Rensburg.

HONORARY LIFE FELLOWS

In recognition of their many years service to the Institute, your Council unanimously elected the following to Honorary Life Fellowship:

R. J. Adamson, Wm. Bleloch, H. Britten, C. J. Irving, J. F. Reid.

EXCURSIONS

The following excursions took place during the year, with an average attendance of 70 members:

August 8th, 1973: Prieska Copper Mine.

November 21st, 1973: Rustenburg Platinum Mines Ltd, Rustenburg Section.

Both these visits proved highly enjoyable and informative, and the Institute wishes to record its gratitude to those concerned for the opportunity given to members to visit these mines.

It was with regret that your Council, in view of the fuel shortage, was forced to curtail the excursions planned for the remainder of the year.

INFACON

The Institute collaborated with the Ferro Alloy Producers' Association and the National Institute for Metallurgy in arranging the first-ever international congress on ferro-alloys—INFACON 74. Although the topic of the congress represented a highly specialized technical subject, there was a remarkably high registration, with close on 350 delegates attending, of whom 150 were from

21 overseas countries. The Congress was held at the Carlton Hotel from 20th of April to the 3rd of May, and was acclaimed by all attending as an outstanding success.

During the Congress, a meeting was held of the representatives of ferro-alloy producers' associations throughout the world, and it was decided that INFACON congresses should be continued on an international basis and that every third congress should be held in South Africa.

EDUCATION FUND

The Council has for some time given attention to additional ways and means whereby the objectives of the Institute could be positively promoted and better and broader services rendered to all members, including Company Affiliates.

To this end an Education Fund of R30 000 was established from existing assets and an Education Committee constituted to both administer the fund and to co-ordinate the activities of five sub-committees, to which the task of detailed investigation and planning was assigned. These sub-committees, each with an independent but interacting function, cover the following fields: career guidance and recruitment; university training and SACPE examinations; graduate engineers-in-training; continuing education; and technician training.

Positive progress has been recorded, and it has been decided, *inter alia*, to subsidize overseas study tours of deserving members. Other activities are in the planning stage, and it is expected that, in line with SACPE's proposed intentions, the Education Committee and its appropriate sub-committees will become progressively involved in giving advice to employers and engineers-in-training regarding acceptable post-graduate training programmes.

METALLURGICAL COLLOQUIA

Two metallurgical colloquia were held during the year, both of which were extremely well attended. The first, held in September 1973, was on the topic of 'Processing of Base

Metals', where the following papers, were presented:

The conversion of a uranium plant into a zinc plant, by H. E. Cross

Recovery of zinc from pickle liquors using ion exchange, by A. K. Haines

Application of oxygen in copper smelting, by N. Gibson

Electric smelting at Rustenburg Platinum Mines Ltd of nickel-copper concentrates containing platinum group metals, by J. C. Mostert and P. N. Roberts

A review of hydrometallurgical processes for copper, by J. C. Paynter

The second colloquium was held in March 1974 and dealt with 'Comminution'. The following papers were presented:

A study of discharge arrangements on pebble mills and their influence on mill performance, by A. H. Mokken, G. K. I. Blendulf, and G. J. C. Young

Structure design of large ball mills and rod mills with reference to shell-mounted bearing journals, by D. Fenton

A study of factors influencing run-of-mine mill performance by means of continuous monitoring of particle size in cyclones overflow, by A. H. Mokken, G. K. I. Blendulf, K. A. G. Blendulf, and N. R. Cowin

Developments in centrifugal milling, by A. A. Bradley, A. J. Freemantle, and P. J. D. Lloyd

The control of milling circuits, by A. R. Atkins, A. L. Hinde, P. J. D. Lloyd, and J. G. Mackay

In addition, the Metallurgical and Mining Colloquia Committees joined forces in November 1973 to present a two-day colloquium on the 'Construction of Slimes Dams', at which the following papers were presented:

A review of slimes disposal practice on South African Gold Mines, by M. Most

Theoretical and engineering aspects of slimes-dam construction, by G. W. Donaldson

Legal aspects of slimes-dam construction, by N. Orsmond

Modifications necessary in slimes-dam construction if bacterial leaching is employed, by P. J. D. Lloyd

Tailings dam—Consolidated Murchison Ltd, by H. J. N. Winhoff

Economics and practice of slimes-dam construction, by H. T. Clausen

The Rhodesian approach to slimes-dam vegetation, by J. R. C. Hill and W. F. Nothard

The impact of slimes-dam formation on water resources and water pollution, by R. T. Rudd

In September, a colloquium will be held on 'Heavy-medium separation and ore sorting'.

MINING COLLOQUIA

In October 1973, a two-day symposium was held in conjunction with the Witwatersrand Centre of the South African Archaeological Society on the subject of 'Ancient Mining and Metallurgy in Southern

Africa'. Attended by members of the two societies and the public, this Symposium proved most valuable in providing an opportunity for the latest archaeological discoveries relating to this topic to be presented and discussed. A selection of ancient mining and metallurgical artifacts, which created great interest, was on display during the Symposium, and tours to sites of archaeological interest were arranged to Melville Koppies, Broederstroom, Olifantspoort, Rooiberg, and Thabazimbi. The Institute wishes to record its thanks for the help and co-operation given by the University of the Witwatersrand, especially Professor Revil Mason of the Archaeological Department, and members of the Archaeological Society.

The following papers were presented:

Background to the Transvaal Iron Age — new discoveries at Olifantspoort and Broederstroom, by R. J. Mason

Ancient mining in Southern Africa, with reference to a copper mine in the Harmony Block, north-eastern Transvaal, by T. M. Evers and R. P. van den Berg

Some observations on ancient mining at Phalaborwa, by C. E. More

Ancient mining and Zimbabwe, by T. N. Huffman

Ancient mining near Great Zimbabwe, by I. R. Phimister

Extractive metallurgy in Iron Age South Africa, by U. Küsel

Copper working in the Messina district, by E. O. M. Hanisch

Research into the ferrous metallurgy of Rhodesian Iron Age societies, by M. D. Prendergast

A colloquium was held on May 22nd on the subject of 'Motivation and Productivity in the Mining Industry', at which the following papers were presented:

The value of incentive payments in the mining industry, by K. Smith

Job evaluation and wage patterns, by D. L. van Coller

The role of training in increasing productivity, by W. S. Nel

The migrant labour system and the personnel function, by P. L. Dempster

Importance of human factors in mining productivity, by A. C. Lawrence

A further colloquium is to be held in November 1974, entitled 'Drilling, Blasting, and Ore Winning'.

WINTER SCHOOL

In response to many requests, the Institute decided to repeat the course on Mineral Processes, Their Analysis, Optimization, and Control, in the form of a Winter School held during June and July 1974. Because

of the large number of applications to attend this course, it was necessary to offer two consecutive schools on the same topic, each with a registration of forty delegates.

Once again, the course was presented by Professor Rex Bull, of the Colorado School of Mines, and Professor Andy Mular, of the University of British Columbia. There is little doubt that these Winter Schools are a very popular feature of the activities of the South African Institute of Mining and Metallurgy, and plans are being made to hold further schools on other topics. It is likely that a Winter School will be held in 1975 on solvent extraction.

PYROMETALLURGICAL DISCUSSION GROUP

As a result of several requests to establish informal discussion groups on various topics, such as pyrometallurgy and allied subjects, your Council established the Pyrometallurgical Discussion Group, which serves as a platform for the discussion of pyrometallurgical and related aspects of the iron and steel industry, the ferro-alloy industry, and the non-ferrous industry.

In an attempt to provide a broad and interesting interchange of ideas, each programme dealt with topics introduced by two speakers. The first half of the programme was devoted to a talk and discussion on a topic of general interest, and the second half included a talk and discussion on a specific aspect of the research and development sphere.

It is not intended that formal papers should be presented but that the group should provide an opportunity for discussion on both general and specific topics, within the pyrometallurgical sphere of interest, introduced by speakers known to be closely associated with their particular topic.

Meetings are normally held every two months on a Thursday afternoon, starting at 16.30 hours, and attendance generally has been very stable at between 20 and 40 members. The convener for the Discussion Group for 1972, 1973, and 1974 has been Dr P. R. Jochens, from the National Institute for Metallurgy.

The Pyrometallurgy Group has now been in existence for a period of 2½ years, and it appears to have become one of the permanent facets of the activities of the Institute. It is perhaps fitting to list the speakers and their topics since the inception of the Pyrometallurgical Discussion Group, both as a mark of gratitude to the speakers and to give members of the Institute an opportunity of identifying people engaged in specific areas of pyrometallurgy.

Recent trends in the consumption of ferroalloys and their effect on production processes, by H. Reid (Middelburg Steel and Alloys (Pty) Ltd)

Metallurgical factors affecting the recovery of vanadium from pig-iron in the shaking-ladle process, by B. Rohrmann (Highveld Steel and Vanadium Corporation Limited, Vantra Division)

The application of direct reduction processes in South Africa, by Dr T. Beeton (Process Development Division, ISCOR)

Experimental studies on direct reduction of South African iron ores, by P. J. Geldenhuis (Process Development Division, ISCOR)

Smelting of copper-nickel concentrates at Rustenburg Platinum Mines Ltd, by R. Wallace (Johannesburg Consolidated Investment Company, Ltd)

Slag-structure and importance in smelting technology, by G. Johnston (NIM Pyrometallurgical Research Group)

Introduction of argon-oxygen refining for the production of stainless steel at the Southern Cross Steel Company, by W. Winship (Middelburg Steel and Alloys (Pty) Ltd)

The Thermit Process, by F. Shaw (Metal Sales Group (Pty) Ltd)

Recovery of precious metals from gold-mining by-products, Staff of Rand Refinery Limited

Theoretical evaluation of electric conduction in the burden of an electric smelting furnace, by R. Urquhart (NIM Pyrometallurgical Research Group)

Some aspects of the extractive metallurgy of copper, by G. Pugh (The Messina (Transvaal) Development Company Limited)

The pre-reduction of Transvaal chromite ore prior to smelting, by Dr A. Edwards (Johannesburg Consolidated Investment Company Limited)

Cost Engineering, by H. W. McCulloch (Economics Division, National Institute for Metallurgy)

Dust control in the metallurgical industry, by D. A. Tuek (Mikropul (South African) (Pty) Ltd)

The Segregation Process, Part 1 Copper. The Segregation Process, Part 2 Nickel, by Dr M. J. Sole (Anglo American Research Laboratories)

Direct reduction of iron ores — are we moving in the right direction? by Dr K. Gebhard (Metallurgical Consultant)

Electrical aspects of smelting furnaces, by K. Myburgh (Amcor Management Services)

Design and construction of the plant for silicon metal production, by R. Lowe (Silicon Smelters (Pty) Ltd)

Process details with reference to South African conditions, by C. Schulze (Silicon Smelters (Pty) Ltd)

Large electric smelting furnaces — should computer control be applied? by I. Bencze (National Institute for Metallurgy)

Alkalis in the blast furnace, by D. Vrettakos (ISCOR).

Forecast of ISCOR's refractory requirements, by F. Nyikos (ISCOR)

As can be seen from the above list, the range of topics has been very wide indeed, and, with the expected very rapid development of the metallurgical industry in South Africa, it is anticipated that both the scope of and interest in the Pyrometallurgical Discussion Group will increase.

BASE METALS DISCUSSION GROUP

Resulting from requests by industry, and in view of the obvious popularity of the Pyrometallurgical Discussion Group, Council decided to establish a similar discussion group on base metals. The following meetings were arranged during the year under review.

26th February, 1974

Process control at Rustenburg Platinum Mine, by M. Sadler (Johannesburg Consolidated Investment Company Ltd)

Metallurgical components to the electrolytic zinc plant, by C. van Niekerk (Zinc Corporation of S.A. Ltd)

31st July, 1974

Recovery of nickel and copper from high-grade matte at Impala Platinum by the Sherritt Process, by R. Plasket (Impala Platinum Limited)

Aspects of the chemistry of the platinum-group metals, by R. Edwards (National Institute for Metallurgy)

SKEMERPARTY

Die jaarlikse skemerparty is op 22 Augustus 1973 na afloop van die Algemene Jaarvergadering in Kelvingebou gehou, waartydens die Instituut vereer is met die teenwoordigheid van verskeie vooraanstaande gaste.

Die personeel van die Geassosieerde Wetenskaplike en Tegniese Verenigings word geluk gewens met die uitstekende verversings wat vir gaste en lede aangebied is.

THE ASSOCIATED SCIENTIFIC AND TECHNICAL SOCIETIES OF SOUTH AFRICA

Professor D. C. Midgley was inducted as President of the Associated Societies in November 1973. Messrs V. C. Robinson and D. G.

Maxwell represented the Institute on the Controlling Executive, with Mr P. W. J. van Rensburg and Dr J. P. Hugo as their respective alternates.

A full account of the activities of the Associated Societies is given in their Annual Proceedings, a copy of which is sent to all members. However, it seems appropriate to highlight certain items.

The A.S. & T.S. Trust is now in business and is actively trying to raise funds. Your Council contributed an initial R1000 on behalf of members and has encouraged members to make personal contributions.

Progress has been made with the extension of A.S. & T.S. presence to other centres, and facilities are now available in Cape Town, Durban, and Pretoria.

Verdere verbeterings is aan die luidspreekstelsel in Kelvingebou aangebring. Toenemende gebruik word van al die fasiliteite in Kelvingebou vir vergaderings en sosiale funksies gemaak.

DIE FEDERASIE VAN VERENIGINGS VIR PROFESSIONELE INGENIEURS

Die Instituut is weer deur mnr. J. K. E. Douglas en P. W. J. van Rensburg in die FVPI-bestuursraad verteenwoordig met dr J. P. Hugo en mnr. G. H. Grange as sekundi.

FVPI het steeds 'n belangrike rol gespeel in die voorsiening van beroepsvoorligting aan diegene wat belang stel in 'n beroep in die ingenieurswese. Nog 'n belangrike aktiwiteit was die reëling van die Sesde Konferensie oor Ingenieursopleiding, waarvan die tema die Opleiding van Ingenieurstechnici was.

Dit is goed bygewoon deur verteenwoordigers van die Staat, werkgewers en opvoedkundiges en etlike belangrike aanbevelings is geformuleer.

Een gevolg van die Konferensie was die stigting van 'n komitee onder voorsitterskap van mnr. R. C. J. Goode om ondersoek in te stel na die opleiding, gebruik en status van ingenieurstechnici. 'n Ander Komitee is in samewerking met Staatsmyningenieur, die Departement van Arbeid en die De-

partement van Nasionale Opvoeding gestig om te poog om die eksamenvereistes vir die onderskeie staatsertifikate van bevoegdheid ooreen te bring, insluitende die wat die mynbedryf raak.

The revision of the F.S.P.E. Constitution was finally approved by all member societies.

Generally, the Federation continued to collaborate with the South African Council of Professional Engineers and government authorities in all matters relating to the profession of engineering.

SOUTH AFRICAN COUNCIL FOR PROFESSIONAL ENGINEERS

Good progress continues to be made in dealing with the applications for registration, though some delay is still occurring in the applications from persons not in possession of recognized examination qualifications. In the course of five years of operation, the Council has considered almost 14 000 applications. Of these, just over 9000 have been accepted, and this now means that almost two-thirds of all professionally qualified engineers in the Republic have been registered. This proportion continues to increase.

In order to cater for those persons not in possession of recognized qualifications, the Council has instituted a three-part examination. Part I is considered to be at the level of the second year of a four-year engineering course as established at present in our larger universities, whilst Parts II and III are at the third- and fourth-year levels respectively. The Council will not normally examine for Part I or II, as it prefers to recognize examinations at other institutions; but it will arrange the Part III examination. Several advanced candidates have already been examined at Part III level, and, in addition, in November last year (1973), a special examination at Part II level was offered as a once-only interim measure. Full details of the possible alternative routes to registration are given in Information Document No. 1 recently issued by SACPE. Also in this document is a copy of Statement of Policy No. 1/1, which

describes the engineering work that has to be completed by an engineer-in-training prior to registration.

Several employers have already submitted training programmes to the Council for consideration, and it is gratifying to note the close collaboration developing between the employer and the Council in order to ensure that the training programmes will be mutually acceptable. This training must also be carried out under the supervision of professional engineers, or their overseas equivalents, who must act as advisors to the engineers-in-training.

Die posisie van ingenieurs in privaat praktyk, en in besonder die posisie van maatskappye wat raadgewende dienste van 'n ingenieurs-aard aanbied en van venootskappe tussen professionele ingenieurs, is ander sake wat die dringende aandag van die huidige Raad geniet.

'n Baie noue skakeling bestaan tussen die Raad en die onderskeie professionele institute. Die registrasie van ingenieurs het reeds baie gedoen om die aansien van die ingenieur en die status van sy instituut verder te verhoog. Hierdie erkenning moet steeds in die toekoms verbeter.

WITBANK/MIDDELBURG BRANCH

Committee

The following members served on the Branch Committee during the year under review:

B. T. Hosking (Chairman), G. E. Carlyon (Vice-Chairman), A. Bain (Immediate Past Chairman), and Messrs J. Meintjies, I. Botha, E. J. Jackson, A. W. L. Brereton, D. Morris, N. N. Crowder, and A. L. Melvill.

Meetings

Owing to illness and business commitments, only three committee meetings were held during the year, with an average attendance of six members.

The attendance at general meetings during the year, whilst much the same as in previous years, was disappointing, and the restriction of fuel caused the cancellation of proposed excursions. Four general

meetings were held during the year, two of which were open to both men and women, and had an average attendance of twenty-seven. The following talks and film were presented:

'Screening and pumping', by R. Lange.

'Using rubber to control wet abrasion', by S. Spargo.

'Ordeal at Mufulira' — film.

Office Bearers, 1974-1975

The following members have been elected as office bearers for the ensuing year: B. T. Hosking (Chairman) and G. Carlyon (Vice-Chairman).

ORANGE FREE STATE BRANCH

Committee

E. T. Wilson (Chairman), D. A. Smith (Vice-Chairman), C. J. Isaac (Immediate Past Chairman), and Messrs E. Dunstan, W. B. Evans, C. Mostert, A. N. Shand, R. G. Williams, and C. J. C. Young.

Owing to the transfer during the year of Messrs C. J. Isaac and E. Dunstan from the Orange Free State, Messrs H. G. Mosenthal and H. M. W. Eschenburg were invited to fill the vacancies on the Committee. Both gentlemen kindly accepted.

Meetings

Three committee meetings were held during the year. The Chairman wishes to place on record his appreciation of the assistance given him by members of the outgoing committee and a special note of thanks for all the work put in by the Honorary Secretary.

The Annual General Meeting and three general meetings were held during the year, with an average attendance of fifty-eight. The good level of attendance set up during the previous year was maintained during the year under review, and thanks are due to all members for their interest in and support of the Institute's affairs. The following addresses and films were presented: 'Atomic Energy', by Dr J. P. Hugo.

'Antarctic Expedition' — slide presentation by Dr M. Kruger.

'Ordeal at Mufulira' — film.

'Techniques in the gravity concentration of gold', by D. McLeod.

'TORCO' breakthrough' — film.

'Diamond — King of Gems' — film.

Visits

A visit to the Atomic Energy Board at Pelindaba was arranged for 13th February, 1974, but owing to fuel restrictions and the resultant poor response from members, had to be cancelled. Because of fuel-saving measures, no subsequent visits could be undertaken, but it is hoped that the proposed visit to the 'Tugela Scheme' will be made at some future date as this will be of great interest to members.

Membership

The total membership of the Orange Free State Branch on June 20th, 1974, was 124, made up as follows:

Fellows	19
Members	39
Associate Members	1
Associates	40
Graduates	12
Students	13

This figure shows an increase of 14 members over the previous year. A recruiting drive has been launched, but it is a little early to assess the results. The lack of visits of interest to members further militates against the recruitment of new members.

HONORARY SERVICES

Appreciation is recorded of the services of the Honorary Legal Advisers, Messrs Van Hulsteyn-Douglas, and your Council is most grateful for the valuable services rendered by Mr J. K. E. Douglas as Honorary Treasurer.

SECRETARIAT

The Institute records its appreciation to the Associated Scientific and Technical Societies for the services provided during the past year. In particular, thanks are due to the Manager, Mr E. Boden, the Deputy Manager, Mr D. S. Trueman, Miss J. Theron, the Secretary, and her assistant, Miss B. Miller.

