

# Annual Report and Accounts

## For the Year Ended 30th June, 1969

Your Council has pleasure in submitting its report for the year ended 30th June, 1969.

### COUNCIL

The following served as Office Bearers during the year under review: Messrs. R. C. J. Goode (President), J. K. E. Douglas and V. C. Robinson (Vice-Presidents), P. Lambooy (Immediate Past President) and D. G. Maxwell (Honorary Treasurer).

*Members of Council:* Messrs R. J. Adamson, M. Barcza, F. P. Bath, Dr J. M. Bereza, Dr W. Bleloch, Messrs H. Britten, H. E. Cross, A. R. C. Fowler, A. E. Gilfillan, G. W. Holl, Prof D. D. Howat, Dr J. P. Hugo, Messrs C. J. Irving, D. M. Jamieson, J. G. Kirchner, Prof J. de V. Lambrechts, Mr C. E. Mavrocordatos, Dr J. T. McIntyre, Mr J. A. Nixon, Prof R. P. Plewman, Messrs J. F. Reid, H. Simon, C. G. Sowry, W. T. Stobart and P. W. J. van Rensburg.

Ten Council meetings were held during the year with an average attendance of eighteen.

### FINANCE

The annual accounts, which are attached to this report, show an excess of expenditure over income of R2,124, compared with an excess of income over expenditure of R4,218 last year. There are a number of reasons for this substantial change. There was a loss on realization of investments compared with a substantial surplus in recent years. The publication of the *Journal* once again resulted in a large loss in spite of a generous subvention of R2,000 from the Department of Cultural Affairs and other assistance amounting to R750. The revenue from sales of publications was down considerably. This is a figure which fluctuates considerably from year to year. The secretarial fee was considerably higher than previously. Due to pressure of work it was necessary for the Secretary to relinquish his duties with the Institute of Land Surveyors and, therefore, for this Institute to assume the additional staff costs involved. Finally there was unusual expenditure on the 75th Anniversary celebrations.

There was a pleasing increase in revenue from subscriptions, due to the steadily increasing membership, but this was quite inadequate to cover the substantial increases in expenditure and losses in revenue mentioned above.

The changes that have been effected in the arrangements for the publication of the *Journal* have been mentioned elsewhere in this report. It is expected that these will bring about substantial financial benefits in the long term.

The MacArthur Forrest Memorial Fund shows an excess of income over expenditure of R100 and the total fund was therefore increased by this amount to R4,206.

The balance sheet indicates that the market value of quoted shares and debentures increased during the year from R8,755 to R13,059, while the Accumulated Funds now amount to R22,567 as against R24,691 last year.

### MEMBERSHIP

Fifty-six Members, fifty-five Associate Members, thirteen Graduates, twenty-two Affiliates and twenty-nine Students were elected during the year.

Twelve Members were admitted to Life Membership; seven Associate Members were transferred to the grade of Member; four Graduates and two Students were transferred to the grade of Associate Member; five Students were transferred to the grade of Graduate; three Affiliates were transferred to the grade of Member; five Affiliates were transferred to the grade of Associate Member. Three Members, seven Associate Members, two Graduates, two Affiliates and six Students were removed from the Membership Roll in terms of By-Law 7.7.1.

Your Council records with deep regret the death during the year of the following members: E. F. J. Bulman (Member), E. F. Chapin (Member), R. A. H. Flugge-de-Smidt (Hon. Life Member), T. S. Haldane (Member), J. M. Massie (Associate Member), S. W. Page (Student), S. R. Rabson (Member), M. Ramsay (Member), F. Wartenweiler (Hon. Life Member).

A comparative statement of the membership as at 30th June, 1969, and the end of the previous year is shown in the following tabulation:

	30th June 1968	30th June 1969
Honorary Life Members .. .. .	12	10
Honorary Members .. .. .	6	6
Life Members .. .. .	176	189
Members .. .. .	488	514
Associate Members .. .. .	409	448
Graduates .. .. .	60	68
Affiliates .. .. .	153	155
Students .. .. .	152	162
	<u>1,456</u>	<u>1,552</u>

### PAPERS AND JOURNAL

The Institute is changing the format of the *Journal* from the present size to the standard international A4 size with effect from August, 1969. In making this change it will conform to more general practice today in regard to publications and this should effect certain economies and facilitate selling of advertising space. It has been arranged that in future the publication of the *Journal*, including advertisement sales, will be handled by Kelvin Publications (Pty.) Ltd. who are already doing this work satisfactorily for the Mechanical and Electrical Engineering Institutes. In making these changes the opportunity was taken of redesigning the outer cover of the *Journal* to incorporate the new coat of arms.

The Presidential Address by Mr R. C. J. Goode and twelve papers which were published in the *Journal* during the year are listed below:

August, 1968: Presidential Address:

"The Institute—In retrospect and prospect."

September, 1968:

"Rotary mill liner practice in the South African gold mining industry," by J. H. French and O. E. Lissner.

October, 1968:

"Photoelectric readings, their significance for dust control on collieries," by G. H. J. Kitson and Y. J. F. Haven.

November, 1968:

"The theoretical strength of mine pillars Part 1—The cube strength of pillar material," by C. Grobbelaar.

December, 1968:

"Utilization of slags for the manufacture of cement," by P. R. Jochens, C. W. Wolhuter and D. D. Howat.

January, 1969:

"The computer mapping and assessment of borehole and sampling data for stable minerals, particularly as applied in coal mining," by R. B. MacGillivray, D. M. Hawkins and M. Berjak.

February, 1969:

"The 'Doorstopper' and triaxial rock stress measuring instruments developed by the C.S.I.R.," by E. R. Leeman.

March, 1969:

"Mining and treatment practice at the Finsch mine, De Beers Consolidated Mines, Limited," by W. K. B. Loftus, H. J. Stucke and D. Rankin.

April, 1969:

"The flooding at the West Driefontein Mine," by R. R. M. Cousens and W. S. Garrett.

May, 1969:

"Proceedings of the Seventy-Fifth Anniversary celebrations."

June, 1969:

"Physico-Chemical properties of titaniferous slags," by L. B. McRae, E. Pothas, P. R. Jochens and D. D. Howat.

July, 1969:

1. "Research in pressure leaching," by Franz E. Pawlek.
2. "Steels with improved properties," by T. L. F. Muller.

#### SYMPOSIUM ON THE RECOVERY OF PYRITE

A successful two day symposium was held on 12th-13th June, 1969, which was attended by 125 delegates. The following papers were presented and will be published as part two of the October, 1969 *Journal*.

1. "The world sulphur position," by W. C. J. van Rensburg.
2. "The South African sulphur position," by D. L. Taylor.
3. "The recovery of pyrite at Government Gold Mining Areas Limited," by R. J. Westwood, G. S. Stander and H. P. Carlisle.
4. "Recovery of pyrite concentrates from colliery-waste discards—A preliminary assessment," by W. A. Gilbert and E. A. Nugent.
5. "The role of pyrite in upgrading the uranium content of Witwatersrand conglomerate ores by means of the heavy-medium-separation process," by D. J. Tutt.
6. "Pyrite recovery by jigs at Durban Roodepoort Deep, Limited," by E. J. Dominy, F. Diamond and A. D. Graham.
7. "The storage of pyrite concentrates," by C. Campkin and P. J. Lloyd.
8. "The flotation plants of the Anglo-Transvaal Group," by L. A. Bushell.
9. "Pyrite flotation with amines and cyanidation of the products," by E. H. D. Carman.
10. "Gold recovery by cyanidation from mill products obtained after pyrite flotation," by P. G. Mrkusic, M. Sciarone and H. E. Simonsen.
11. "The influence of sulphhydryl and cationic flotation reagents on the cyanidation of native gold," by K. G. Ashurst.
12. "Laboratory tests on the flotation of pyrite from Witwatersrand gold ores by a cationic collector," by J. Levin and M. L. Veitch.

#### COCKTAIL PARTY

An enjoyable Cocktail Party was held after the Annual General Meeting and there were many distinguished guests present in the Main Hall of Kelvin House on 28th August, 1968. Kelvin House is to be congratulated on the excellent catering provided for guests and members.

#### 75th ANNIVERSARY

The seventy-fifth anniversary of the Institute was marked by a commemorative meeting held in Kelvin House, Johannesburg, on 24th March, 1969 which was attended by 180 members and guests. Addresses were delivered by the President, Mr. R. C. J. Goode, The Honorary President, Dr T. F. Muller and the Chairman of Iscor and the Industrial Development Corporation, Dr H. J. van Eck.

A number of excursions took place in the afternoon and these are detailed under the heading of excursions.

The anniversary was further marked in the following way:

The President broadcast a talk on the programme "Top Level" at 7.30 p.m. on Sunday, 16th March, 1969.

A banquet was held at the Wanderers' Club, Johannesburg, on Friday, 21st March, 1969 and was attended by 467 ladies, members and guests. The Institute was honoured by the presence of its Honorary President, Dr T. F. Muller, President, Chamber of Mines of South Africa, and all its Honorary Vice-Presidents, The Honourable Dr C. de Wet, Minister of Mines, Planning and of Health, The Honourable S. G. J. van Niekerk, Administrator, Transvaal Province, The Honourable J. W. J. C. du Plessis, Administrator, Orange Free State Province and Mr T. L. Gibbs, Government Mining Engineer. The after dinner speeches were made by The Hon Dr C. de Wet, Mr R. C. J. Goode, Mr D. G. Maxwell and Dr H. J. Nel.

A report of the speeches made at the commemorative meeting, on the radio and at the banquet were published in the commemorative *Journal* issued in May, 1969.

In addition the Institute assisted the S.A. Mining and Engineering Journal in producing a review of mining and metallurgical operations in Southern Africa.

There is no doubt that the celebration of the Institute's 75th Anniversary was a great success and this augurs well for the future progress and prestige of the Institute.

#### ORANGE FREE STATE BRANCH

The undermentioned served on the Committee of the Branch during the year under review:

Messrs J. G. Kirchner (Chairman), A. R. Louw (Vice-Chairman), T. Zadkin (Immediate Past Chairman), N. A. Honnet, A. F. Leger, L. O. W. Leimer, C. R. Netscher, J. N. Saunders and D. D. Waterman.

*Committee Members co-opted during the year:*

At a special Committee Meeting held on the 19th February, 1969 it was agreed that:

- (a) A new Member be elected to the Committee to fill the vacancy caused by Mr A. R. Louw leaving the area.
- (b) A further Member be co-opted to the Committee in view of the fact that several Committee Members were to be away from the Welkom area for much of the Committee's remaining term of office.

Messrs W. R. Lawrie and A. L. A. Forder were therefore accordingly voted on to the Committee.

*General Meetings:*

Four General Meetings were held during the year as follows:

	<i>Present</i>
Annual General Meeting (14th August, 1968)	.. 43
General Meeting (15th November, 1968)	.. 64

General Meeting (19th February, 1969) ..	53
General Meeting (18th June, 1969) .. ..	24

*Papers and Addresses:*

1. "A general discussion on the implications of the State Assistance scheme to marginal mines," by Dr D. G. Krige.
2. "The construction of the Hendrik Verwoerd Dam," by Mr J. D. McNamara.
3. "The practical applications of rock mechanics to mining," by Mr T. W. Wilson.
4. "Heavy media separation," by Mr D. E. Couperthwaite.
5. "Engineering plastics," by Mr A. F. Leger.

*Visits:*

The following visits took place:

26th October, 1968—Midland Factory of African Explosives and Chemical Industries Limited. Members 11.

16th April, 1969—Dudfield Works of Anglo Alpha Cement Limited. Members 20.

*Membership:*

As at 15th June, 1969, the records show a total membership of the O.F.S. Branch of 129 which is a gain of 3 over last year's figures. Present membership in the various grades is as follows:

Members .. .. .	38
Associate Members .. .. .	46
Affiliates .. .. .	19
Graduates .. .. .	10
Students .. .. .	16
	129

*Honorary Secretary:*

The Branch records its appreciation of all the hard work performed during the year by the Honorary Secretaries, Messrs R. C. Espley-Jones and M. G. Cullen. Mr Cullen kindly agreed to accept the post of Honorary Secretary after the transfer of Mr Espley-Jones to Johannesburg.

**WITBANK-MIDDELBURG BRANCH**

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

Messrs C. G. Sowry (Chairman), J. Meintjies (Vice-Chairman), A. Bain, I. Botha, A. W. L. Brereton, G. Carlyon, B. T. Hosking, E. J. Jackson, J. H. Moore and Dr G. Raper (who was co-opted during the year).

*General Meetings:*

Four General Meetings were held during the year as follows:

	<i>Present</i>
Annual General Meeting (22nd August, 1968) ..	25
General Meeting (18th September, 1968) ..	28
General Meeting (30th January, 1969) ..	31
General Meeting (26th June, 1969) ..	14

*Papers:*

"The use of plastics in coal mining," by A. Bain (Member).

"Photo-electric readings—their significance for dust control on collieries," by G. H. J. Kitson (Member) and Y. J. F. Haven (Visitor).

"The electric smelting of ferro-alloys," by S. Selmer-Olsen (Visitor).

*Talk:*

"Power supply and problems associated with it," by J. van Velden (Visitor).

*Honorary Secretary:*

The Branch records its appreciation of the services rendered by Mr P. J. Muller who again filled the position of Honorary Secretary.

**INSTITUTE'S AWARDS**

(a) *Mining:*

A Gold Medal was awarded to Dr C. H. Wyndham for his great contribution to physiological research as applied to mining industry.

(b) *Metallurgy:*

Silver Medals were awarded to Professor D. D. Howat and E. F. Statham for their joint paper with T. J. Coyle (Visitor), entitled: "Some aspects of electrolytic gold refining as applied to South African mine bullion".

(c) *Prizes for Student Papers:*

Student prizes were awarded for the following papers: "Investigation on bearing properties of bronzes", by J. C. M. Wethmar.

"Acceleration of the de-zincification mechanism," by R. P. Klein.

"Viscosity of slags," by K. F. Doig.

"Development of a micro-climate system for deep level mining", by V. Bosman.

**EXCURSIONS**

The following visits took place during the year:

7-8th November, 1968—Consolidated Diamond Mines of S.W.A. Ltd.: 28 members.

23rd January, 1969—Scaw Metals Limited: 60 members.

20th June, 1969—Highveld Steel and Vanadium Corp. Ltd.: 100 members.

These excursions were most enjoyable and Council wishes to thank the organisations concerned for the hospitality shown to the members of the Institute.

Eight excursions were made to various research and industrial establishments on the afternoon of 24th March, 1969 in the course of the 75th Anniversary Celebrations. In all, 114 members attended and the Institute records its gratitude to the following:

The University of The Witwatersrand—Department of Mining and Metallurgy, Workshops and Laboratories, National Institute for Metallurgy,

African Wire Ropes Limited,

African Explosives & Chemical Industries, Research Department, Northrand,

The Corner House Laboratories,

Chamber of Mines of South Africa—Research Laboratories, Cottesloe,

Diamond Research Laboratories,  
Anglo American Research Laboratories.

### GENERAL MEETINGS

The average attendance for the year was 74. In addition to the Annual General Meeting, nine General Meetings were held.

### ASSOCIATED SCIENTIFIC AND TECHNICAL SOCIETIES OF SOUTH AFRICA

Messrs R. C. J. Goode and D. G. Maxwell represented the Institute on the Controlling Executive with Messrs J. K. E. Douglas and V. C. Robinson 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.

### PROFESSIONAL ENGINEERS' JOINT COUNCIL— now THE FEDERATION OF SOCIETIES OF PROFESSIONAL ENGINEERS

Messrs P. Lambooy and R. C. J. Goode served on the Professional Engineers' Joint Council Board of Management as representatives of this Institute with Messrs. J. K. E. Douglas and V. C. Robinson as alternates.

The promulgation of the Professional Engineers' Act took place on 14th February, 1969. The professional Engineers' Joint Council was mainly responsible for the realisation of this ideal so long held by engineers in South Africa.

At its meeting on 23rd June, 1969 the P.E.J.C. agreed that with effect from 1st July, 1969 its name be changed to the "Federation of Societies of Professional Engineers". A brief summary of the Federation's future objectives as stated by its President, Mr F. Jackson, is given below:

1. The investigation of the position of prospective engineers who were already in training when the Bill was drafted.
2. To try to prepare a way whereby the able technician could achieve professional status.

3. To make a complete investigation into the position of the technician.
4. Arising out of the Salaries Survey and the Straszacker Commission's recommendation the Federation will strive to make Government service more attractive to the Professional Engineer.
5. The resolutions taken at the Stellenbosch Conference on the Education of Engineers are to be followed up.

### SOUTH AFRICAN COUNCIL FOR PROFESSIONAL ENGINEERS

The Institute is pleased to record that it has been recognised as a Professional Engineers' Institute for the purposes of the Act. The provisions relating to this recognition appear in the regulations published in Government Gazette No. 2298 issued on 14th March, 1969.

Since its inception the S.A.C.P.E. has received a large number of applications for registration. As an indication of the progress to date, 800 applications have already been dealt with of which 60 per cent have been registered as Professional Engineers.

### HONORARY SERVICES

Appreciation is recorded of the services of the Honorary Legal Advisers, Messrs van Hulsteyn, Feltham and Ford and your Council is most grateful for the valued services rendered by Mr D. G. Maxwell as Honorary Treasurer.

Appreciation is recorded of the services of the Honorary Editors, Messrs P. W. J. van Rensburg and A. E. Gilfillan and the Honorary Assistant Editors, Prof R. P. Plewman and Mr R. E. Leyman.

### SECRETARIAT

The Council records its thanks to the Associated Scientific and Technical Societies of South Africa for the efficient secretarial services rendered during the year. The willing assistance and expert service provided by the Manager, Mr E. Boden, the Secretary, Mr D. C. Visser and Mrs J. Vosloo, are very much appreciated.



