

Annual Report and Accounts

FOR THE YEAR ENDED 30TH JUNE, 1980

Council and Standing Committees, 1979-1980

President: D. A. Viljoen.

Senior Vice-President: Dr P. R. Jochens.

Junior Vice-President: G. Y. Nisbet.

Honorary Treasurer: Dr D. G. Krige.

Immediate Past President: Dr M. G. Atmore.

Members of Council: J. D. Austin, A. N. Brown, J. A. Cruise, C. E. Fivaz, J. S. Freer, P. N. Harris, H. E. James, Dr R. P. King, Prof. F. Q. P. Leiding, Dr B. K. Loveday, D. G. Malan, C. S. Macphail, J. C. Mostert, H. G. M. Rose, G. C. Thompson, R. A. von Maltitz, Dr H. Wagner.

Past Presidents Serving on Council: R. J. Adamson, H. Britten, J. K. E. Douglas, Prof. D. D. Howat, Dr J. P. Hugo, D. G. Maxwell, Prof. R. P. Plewman, Dr R. E. Robinson, Dr M. D. G. Salamon, P. W. J. van Rensburg, P. A. von Wielligh.

Chairman, Witbank-Middelburg Branch: R. B. Smith.

Chairman, Orange Free State-Klerksdorp Branch: W. C. Mather.

Materials Engineering Division, Chairman: Dr J. P. Hugo. *Secretary:* G. Pienaar.

Standing Committee Chairmen: Membership, G. Y. Nisbet; Technical Programme Metallurgy, H. E. James, (Prof. R. P. King); Technical Programme Mining, H. G. M. Rose; Vacation School Metallurgy, J. C. Mostert; Vacation School Mining, J. D. Austin; Awards, Dr M. G. Atmore; Excursions, A. N. Brown; Adjudications, Dr M. G. Atmore; Constitution, Rules, and Policy, Dr M. G. Atmore; Monograph Series, Dr M. G. Atmore; Training and Career Guidance, P. A. von Wielligh (D. G. Malan); National Phoenix Committee, Dr R. E. Robinson; 1982 Council of Mining and Metallurgical Congress, Dr M. G. Atmore; Mines and Works, Dr M. G. Atmore.

Representatives on Other Bodies

Federation of Societies of Professional Engineers:

Representatives: D. A. Viljoen and A. N. Brown.

Alternates: Dr M. G. Atmore and Prof. M. D. G. Salamon.

Federation of Societies of Professional Engineers Executive Committee:

D. A. Viljoen.

Publicity Committee:

J. D. Austin.

Council of Mining and Metallurgical Institutions:

D. J. Rogers, G. J. Mortimer.

The Associated Scientific and Technical Societies of South Africa — Controlling Executive:

Representatives: Dr P. R. Jochens and D. A. Viljoen.

South African Council for Professional Engineers:

Member: P. W. J. van Rensburg.

Alternate: W. T. Ruhmer.

South African Committee of Tunnelling:

Member: D. G. Malan.

Alternate: Prof. R. P. Plewman.

Engineers Liaison Committee — Pretoria:

Member: Prof. F. Q. P. Leiding.

Alternate: Dr J. P. Hugo.

World Mining Congress National Committee:

Members: Prof. M. D. G. Salamon, Prof. R. P. Plewman, Prof. F. Q. P. Leiding.

Obituaries

The Council records with deep regret the death during the year of the following members:

T. C. A. Meyer, Past President 1941-42; E. G. Harding, T. A. Stannard, C. T. Hardy, W. C. Jackson, J. S. Sinton, G. H. Duggan, H. H. A. Müller, Life fellows; W. M. Frames, K. Gebhard, W. M. Walker, S. L. S. Swart, N. W. Stansmore, H. E. Allen, B. W. F. Towne, R. A. Wilson, D. Waterman, Fellows; D. L. Gibbs, Member; R. M. Peterson, Life Member; B. M. Williams, Associate Member; D. B. T. Cresswell, P. G. Guernier, Associates.

Membership

One hundred and seventy-seven new members were elected during the year as follows: nine Fellows, nineteen Members, six Associate Members, twenty-four Associates, fourteen Graduates, ninety-five Students, and ten Company Affiliates.

Twelve Fellows and one Associate were admitted to retired membership.

The following thirty-three resignations were accepted with regret: fourteen Fellows, five Members, two Associate Members, five Associates, one Graduate, three Students, and three Company Affiliates.

A number of members who were not in good standing were removed from the membership roll: four Fellows, eleven Members, eight Associates, five Graduates, and eight Students.

Corporate members at 30th June, 1980, totalled 1304.

The following is a tabulation of the membership at 30th June, 1980, and at the end of the previous year:

	30th June, 1979	30th June, 1980
Honorary Life Fellows	19	18
Honorary Fellows	9	8
Life Fellows	105	96
Fellows	576	570
Members	587	612
Associate Members	31	35
Associates	220	304
Graduates	116	68
Students	285	272
Company Affiliates	83	90
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	2031	2073

Finance

Without allowing for the R5 100 voted to the Brigadier Stokes Fund and the R10 000 transferred to the Education Fund, revenue for the year exceeded expenditure by R33 021. The net balance of R17 921 is an inflated measure of the Institute's financial progress during the year, resulting from an unexpected delay in the publication of two monographs for which some R20 000 had been budgeted. The transfer of R10 000 to the Education Fund compensates only partly for inflationary effects, and the Institute almost, but not quite, covered all its financial obligations for the past year.

The recorded costs of operating the Institute excluding Vacation Schools, Colloquia, and Monographs increased only marginally from R94 228 (1978/9) to R95 854, and this was due to the higher but more realistic levels of secretarial fees charged to Vacation Schools and Colloquia. The total secretarial fees increased from R60 193 to R65 433, and the costs of providing the *Journal* to members rose from R31 968 to over R43 844. These cost increases were offset mainly by improvements in revenues from *Journal* advertising and sales, and by significant surpluses from two Colloquia and two Vacation Schools, which were very well attended.

In view of the rising costs resulting from inflation and of the increased scope of services now offered to members through the *Journal* and other publications, it became necessary to increase the subscription fees for all classes of members from July 1980. The fees had for several years been held at the previous level.

At the year end, the Education, Brigadier Stokes, and MacArthur Forrest Funds stood at R102 972 (1979-R96 355), R35 050 (1979-nil), and R16 449 (1979-R6 308) respectively. These levels are adequate to meet current requirements but should be built up in the future.

Syffrets Trust continued to provide a valuable advisory service on the Institute's investments.

The Institute reached the end of the year under review with a healthy financial position, and can face the future with confidence.

Awards

Papers published in the *Journal* from March 1979 to February 1980 were considered eligible for an award by Council, and the undernoted authors achieved this distinction:

Gold Medals

Dr. D. G. Krige for his contribution to mining economics and for his papers 'An analysis of potential benefits to the State of realistic adjustments to the mining tax structure' (July 1979) and 'Some novel features and implications of a general risk-analysis model for new mining ventures' (September 1979).

Dr I. J. Corrans and *Mr J. Levin* for their paper 'Wet high-intensity magnetic separation for the concentration of Witwatersrand gold-uranium ores and residues' (March 1979).

Silver Medals

Mr P. G. Henderson for his paper 'Experience in longwall mining at Coalbrook Collieries' (January 1980).

Dr N. A. Barcza for his paper 'Slag-metal equilibrium in the production of low-carbon ferromanganese' (May 1979).

Mr L. N. Stewart for his paper 'Pressure leaching of uranium-bearing Witwatersrand ores' written in conjunction with H. J. Bovey (November 1979).

Prof. D. D. Howat and *Dr J. van der Colf* for the suite of papers 'Viscosities, electrical resistivities, and liquidus temperatures of slags in the system CaO-MgO-Al₂O₃-TiO₂-SiO₂ under reducing conditions' (June 1979), 'Rates of oxygen removal from titaniferous oxide melts in graphite crucibles' (July 1979), and 'Viscosities, electrical resistivities, and liquidus temperatures of slags in the system CaO-MgO-Al₂O₃-TiO₂-SiO₂ under neutral conditions' (April 1979).

Dr P. A. Laxen, *Mr G. S. M. Becker*, and *Mr R. Rubin* for their paper 'Developments in the application of carbon-in-pulp to the recovery of gold from South African ores' (June 1979).

Student Awards

Prizes for the best student papers written in part fulfilment of the B.Sc Engineering degree and submitted to the Institute for consideration were awarded as follows:

Mining

Mr J. A. van der Westhuizen for his paper 'Die gebruik van die minimum en maksimum stropingskurwes in dagmynboubeplanning'.

Mr J. P. Richter for his paper 'Geïntegreerde bestuurs-inligtingstelsels vir die gemeganiseerde Grootegeluk Dagbousteenkoolmyn'.

Metallurgy

Mr M. B. Ebell for his paper 'Design of a plant to upgrade flotation tailings from the UG2 Reef'.

Career Guidance and Recruitment

The main function of the Career Guidance Committee has been to encourage students to embark on mining and metallurgical careers, and, with this in view, articles were produced for a number of magazines, particularly a series on metallurgy for publication in *Archimedes*, an easy-to-read scientific journal aimed at the youth of South Africa. As previously reported, copies of *Archimedes* are circulated among students undergoing army training.

The Phoenix Programme was devised to encourage interest in the mining industry by:

- enhancing the image of the mining and minerals industry,
- recruiting and giving career guidance to potential entrants to the mining industry, and
- creating, maintaining, and improving contact with educational decision-making bodies.

During the past year, seventeen groups of schoolboys and four groups of university engineering students were taken on visits to mines, and fruitful liaison was maintained with the provincial education departments and schools throughout the Republic.

Under the auspices of the Phoenix Programme, more than 150 physical science, mathematics, and geography teachers, as well as about 200 high school pupils, made at least one contact with some aspect of the minerals

industry. The contact time ranged from 2 hours to 6 days. The programme is under the control of the Chamber of Mines, the other main contributors being Iscor, Samancor, Sentrachem, the Ferro Alloys Producers' Association, Rio Tinto, Shell, and this Institute.

The Career Guidance Committee appreciate the impact that radio and television can exert on the recruitment of mining engineers, and it is planned to pursue this field in the ensuing year.

It is pleasing to learn that enrolments in mineral disciplines for 1980 are as follows:

	Metal- lurgy	Mining	Total
Witwatersrand University	41	58	99
Pretoria University	40	37	77

Total enrolments for the two universities combined show an increase from 35 in 1972 to 176 in 1980.

Prizes were awarded to students from the Universities of Pretoria and Witwatersrand in their third and fourth years of study in mining and metallurgy at a luncheon attended by the prize-winners, lecturers from each university, and members of Council.

Towards the end of the year, Council agreed to the amalgamation of the Career Guidance and the Professional and Technical Training Committees into one Committee, which is now known as the Training and Career Guidance Committee.

Professional and Technical Training Committee

Among other activities, the Committee

- served as a link between the university departments and companies offering bursaries;
- considered the advisability of a television documentary to attract potential candidates to the mining and metallurgical professions; liaison with the Chamber of Mines is of prime importance in this project, and it has been suggested that the recently established Gold Mining Museum could provide a forum for the distribution of suitable pamphlets;
- invited the Chairman of Mynbou-Oudstudente Vereniging van die Universiteit van Pretoria (M.O.V.U.P.) to attend one of its meetings; it was agreed that the Institute and the M.O.V.U.P. have some common objectives, and that this should be recognized in future activities.

Journal

The following papers, notes, and feature articles were published in Volume 79, numbers 13 to 17, and in Volume 80, numbers 1 to 7, of the *Journal of the South African Institute of Mining and Metallurgy*:

August 1979

The roasting and leaching of Witwatersrand pyrite concentrates, by N. W. Hanf and C. G. Schmidt.

Iron-smelting furnaces and metallurgical traditions of the South African Iron Age, by H. M. Friede.

Technical English—a dead language, by H. W. Glen.

September 1979

Presidential address: Minerals from the dawn of mankind to the twenty-first century, by D. A. Viljoen.

Some novel features and implications of a general risk-analysis model for new mining ventures, by D. G. Krige.

An early appraisal of exploration projects, by D. G. Millenbruch.

October 1979

Further studies on the elution of gold from activated carbon using water as the eluant, by R. J. Davidson and V. Veronese.

Properties of pumped tailings fill, by G. E. Blight.
Rock-handling techniques at Sishen iron-ore mine, by B. G. Fordyce and W. B. Parker.

November 1979

Stope-face conveyors for gold mines, by N. C. Joughin and R. H. English.

Pressure leaching of uranium-bearing Witwatersrand ores, by H. J. Bovey and L. N. Stewart.

The effect of body motion on convective heat transfer from a nude man, by U. C. Galimidi, J. M. Stewart, and A. J. van Rensburg.

Coal—the No. 1 contender for the energy title, by J. E. Furze.

The importance of coal, by D. A. Viljoen.

December 1979

The adsorption of dissolved gold on activated charcoal in a NIMCIX contactor, by D. I. Nicol.

Horizontal-belt filtration at Randfontein Estates Mine, by K. A. G. Blendulf and D. J. Everett.

The role of the minerologist in the minerals industry, by H. V. R. von Rahden.

January 1980

Improved extraction of coal, by P. King.

The use of continuous miners in South African coal mines, by J. D. Inch, J. D. Stone, I. D. Brumby, and C. J. Beukes.

Experience in longwall mining at Coalbrook Collieries, by P. G. Henderson.

Pillar design in coal mines, by H. Wagner.

Opencast coal mining at Kriel Colliery, by I. F. Buchanan, L. F. Baars, and C. S. Northcote.

Richards Bay Coal Terminal, by M. B. Dunn.

February 1980

The performance, wear characteristics, and failures of austenitic manganese-steel castings used in crushing and rod milling, by D. D. Howat and D. P. Enright.

Strip mining at Arnot Colliery, by J. D. Flint, R. A. Laybourne, and M. H. Marsden.

A comparative study of kinetic models for the extraction of uranium by strong-base anion-exchange resins, by C. A. Fleming and M. J. Nicol.

Spotlight on chemistry of recovery of gold on activated charcoal, by W. A. M. te Riele.

March 1980

Automated sorting on a South African gold mine, by P. J. Barton and N. F. Peverett.

Commodity analysis: its application in the context of the South African mining finance house, by I. C. Robinson and D. G. Keefe.

Inductive reactance, and the operation of large submerged-arc furnaces, by I. J. Barker and A. B. Stewart.

A simple device for the direct shear-strength testing of intact rock, by T. R. Stacey.

Spotlight on ion exchange and solvent extraction in mineral processing, by H. E. James.

April 1980

The development of rock-burst control strategies for South African gold mines, by R. Heunis.

Digital computer control of the milling circuit at Buffelsfontein Gold Mining Company Limited, by K. C. Garner, P. C. van Aswegen, and J. D. Smit.

Iron Age mining in the Transvaal, by H. M. Friede.

Black Mountain Mineral Development Company (Pty) Limited in focus, by the staff of Gold Fields of South Africa.

Spotlight on underground rock boring, by A. N. Brown

May 1980

The hydraulic hoisting of coarse coal from a depth of 850 metres, by D. Jordan and F. W. Dittman.

Beta coefficients and the discount rate in project valuation, by G. Gilbertson.

The influence of changing costs, grades, and market prices on an upgrading operation, by B. K. Loveday.

Spotlight on mining and metallurgical manpower in South Africa, by P. J. D. Lloyd.

June 1980

The automatic determination of trace elements of gold in gold-plant barren solutions, by P. J. Brandt, J. H. van Dalen, and F. W. Wessels.

Petroscopic observations of rock fracturing ahead of stope faces in deep-level gold mines, by G. R. Adams and A. J. Jager.

The reduction in amplitude and change in phase of the diurnal temperature variation of ventilation air, by K. Vost.

Spotlight on chemistry in the utilization of the resources of Southern Africa, by R. E. Robinson.

July 1980

Simulation of mining in non-homogenous ground using the displacement discontinuity method, by J. A. C. Diering.

The resistivity of mixtures of Mamatwan manganese ore and reducing agents, by A. Koursaris and J. B. See.

The kinetics of the reduction of manganese oxide by graphite, by W. J. Rankin and J. S. J. van Deventer.

Spotlight on Pyrometallurgy, by C. W. P. Finn.

During the year, the *Journal* underwent two changes. Firstly, from July 1979 the cover was altered to depict different aspects of relevance to the mining and metallurgical industry. Secondly, from November 1979 feature articles were introduced, often entitled Spotlight on . . . to highlight recent metallurgical and mining events of interest, processes that are novel or of new significance, and developments that cast a new light on old ideas.

Technical Programme Committee — Mining

Following its traditional role of disseminating information in the field of mining, the Committee was responsible for the organization of two colloquia in the year under review.

In conjunction with the Technical Programme Committee — Metallurgy and the South African Coal Processing Society, a colloquium entitled Mining Methods and Economics for improved Coal Extraction, Coal

Processing and Preparation was held in Witbank on 3rd and 4th October, 1979. This colloquium, attended by over 400 members, was highly successful, and full credit must go to the Witbank Branch for their excellent organization and the number of interesting technical visits arranged.

A follow-up colloquium to that on Feasibility Studies and Investment Analysis, held in 1979, was held on 30th May 1980. This colloquium, entitled Mining Projects: Evaluation, Finance, and Management, was held in the auditorium of the National Institute for Metallurgy in Randburg. Over 300 delegates attended, and the colloquium was most successful.

Arrangements are being made to hold a colloquium entitled Mine Fires at the Electra Mining Exhibition at Milner Park on Wednesday, 17th September, 1980.

Technical Programme Committee — Metallurgy

The Committee continued to play an important role in disseminating up-to-date information in the field of metallurgy. The Institute collaborated with the South African Institution of Chemical Engineers and with the National Institute for Metallurgy in organizing a two-day colloquium on Ion Exchange and Solvent Extraction in Mineral Processing, which was held at the National Institute for Metallurgy on 7th and 8th February, 1980. Several overseas papers were read at this colloquium, which was attended by more than 300 delegates.

The Committee is organizing a colloquium to be held on Tuesday, 16th September, 1980, on Project Management in the Metallurgical Industry in conjunction with the Electra Mining Exhibition at Milner Park, which is expected to attract a large number of delegates.

The Institute is to collaborate with the Institution of Metallurgists — South African Region in arranging a colloquium on Wear and Abrasion in Industry, which is to be held on 25th February, 1981.

Vacation School Committee — Mining

A one-week school entitled Economics and Management of Underground Rock Boring was held at the University of the Witwatersrand during the first week of February 1980. This successful School was attended by 69 delegates drawn from the mining industry and equipment companies, and included several delegates from outside South Africa. The success of the School was ensured by the active co-operation of the local equipment companies and contractors, who provided lecturers, as well as facilities for technical visits, and by the presence of experts from the United States: Mr Dick Robbins, President of Robbins Co.; Dr Euclid Worden of Smith Tool Co., and Mr Neal McNabb of Drillco International. The organizer of the technical content of the School is to be congratulated on its success. More details of the School are given in the Spotlight article in the *Journal* for April 1980.

Planning is well in hand for the next school, which is entitled Increased Underground Extraction of Coal. If the numbers attending warrant it, two one-week schools will be held early in February 1981 at the University of the Witwatersrand.

The possibility of a school on Mine Finance and Taxa-

tion, to be held in August/September 1981, is being examined.

Vacation School Committee — Metallurgy 1979/80

A vacation school on Pyrometallurgy was organized for 14th to 19th May, 1980, at the University of the Witwatersrand. Professor H. Bell of Strathclyde University, Scotland, an internationally recognized expert on the subject, as well as author and co-author of several publications on pyrometallurgy, acted as Course Leader. The School, which was attended by 72 delegates, was a great success. Professor Bell delivered half the lectures, and the remainder, as well as a case study, were given by local lecturers, who provided a good blend of the theoretical and practical aspects of pyrometallurgy.

The Committee has planned a Vacation School on Uranium Ore Processing for June/July 1981, and is to support a refresher course on The Heat Treatment of Steels at the University of Pretoria, which is to be organized by the Materials Engineering Division in Pretoria.

Monograph Series

The first two volumes in the series on geostatistics were well received both overseas and locally, and stocks are now exhausted. The first work, by Dr D. G. Krige, has been revised and is ready for the printing of a second edition, and the second work, by Dr J. M. Rendu, has been updated and is also ready for reprinting.

The volume on rock mechanics is eagerly awaited by many mining engineers since it reflects the advance in this field by leaders in South African industry.

The volume on the Principles of Flotation is in the hands of the printers, and a ready response is expected from buyers, for the material is topical in what is an ever-changing field. The Institute is indebted to Professor King for his untiring efforts in preparing all the chapters.

It is planned to publish a volume on the cooling of mine air by Dr A. Whillier, and another on pyrometallurgy.

Witbank-Middelburg Branch

The highlight of the year was the Coal Colloquium, which was held in Witbank on 3rd and 4th October, 1979, and was attended by 400 delegates. Visits were arranged to local mines and industries, and 235 delegates participated in these.

During the year, committee meetings were held regularly, and a general meeting was held at which Professor Midgley, Director of the Hydrological Research Unit at the University of the Witwatersrand, addressed the meeting.

Visits were made during the year to Duvha Power Station and to Premier Diamond Mine.

Orange Free State-Klerksdorp Branch

Two general meetings were held during the year.

On 7th November, 1979, 47 members and visitors attended a talk by Dr P. Laxen, of the National Institute for Metallurgy, outlining the history and development of carbon-in-pulp for the recovery of gold.

On 20th February, 1980, 47 members and visitors attended a talk given by Dr A. Whillier, Director of

Environmental Engineering of the Chamber of Mines, on the needs for underground cooling and the various methods used.

An interesting and successful visit, attended by 17 members, was paid to Wesselton Mine on 22nd May, 1980.

During the year the membership of the Branch remained substantially the same at 150.

Materials Engineering Division

A meeting was held on 26th September, 1979, at which the Material Engineering Division was established under the Chairmanship of the President, Mr D. A. Viljoen.

Dr J. P. Hugo was chosen as the Chairman of this Division, Professor G. T. van Rooyen as Vice-Chairman, Mr G. Pienaar as Secretary, and Drs S. W. Vorster and R. J. Dippenaar as additional members.

Two colloquia were held on material selection. The first, on 28th November, 1979, was attended by 85 people, and the second, on 28th May, 1980, by 60 people.

As a great number of people attending these meetings are not members of the Institute, active campaigning is being done for membership of the South African Institute of Mining and Metallurgy.

Stokes Memorial Award

As reported to members at the last General Meeting, it was decided to commemorate the contribution made to the South African mining industry by Brigadier Stokes, the longest-serving Corporate Member of the Institute by many years and a past President. This award is in the form of a platinum medal and a cash award, and is the premier award of the Institute. It is made for outstanding achievement and contribution to the mining industry in its broadest sense, and is not confined to members of the Institute. All Corporate Members of the Institute are invited to submit nominations.

This procedure was followed during the year, and a number of nominations were received. These were assessed, and the first award will be made at this Annual General Meeting.

Very generous contributions towards the cost of the award were made by a number of organizations with whom Brigadier Stokes was associated. These include Anglo American Corporation, De Beers, Charter Consolidated, Rand Mines, Gold Fields of South Africa, and Johannesburg Consolidated Investment Company Ltd. The Institute also contributed towards the fund.

Congress of the Council of Mining and Metallurgical Institutions

Good progress has been made with the preliminary planning and organization of the Congress. Approximately 60 000 copies of the first circular were distributed during March 1980 to members of the constituent institutions of the Council of Mining and Metallurgical Institutions. To date, some 750 replies have been received, and, as far as can be ascertained at this stage, it appears that a reasonably representative number of overseas delegates will attend.

Offers of more than 120 papers have been received for presentation at the Congress. This is considerably more than the number required. A publications sub-committee

has been formed, and one of their first tasks will be to decide which papers can be accepted and to invite papers on subjects that have not been covered adequately.

Preliminary planning of the pre-Congress and post-Congress tours is well in hand, and will be completed by the end of the year.

Interaction and Collaboration with the Institution of Metallurgists — S.A. Region

It is pleasing to report that the interaction and collaboration with the Institution of Metallurgists — S.A. Region increased to a significant degree during the year as a result of meetings between the President and certain members of the Council of this Institute on the one hand, and the Chairman and certain members of the Committee of the Institution on the other.

The Institution has made arrangements to utilize the secretarial facilities of this Institute for administrative services. This Institute supported the successful application by the Institution for membership of the Associated Scientific and Technical Societies of South Africa as an associate society. Arrangements have been made between the two organizations to ensure that the members of each are informed of events of interest organized by the other.

The Technical Programme Committee — Metallurgy has appointed a sub-committee to collaborate with its Materials Engineering Division and the Institution of Metallurgists — S.A. Region in organizing a joint colloquium in 1981 on the topic of Wear and Abrasion.

The Federation of Societies of Professional Engineers

During the past year, FSPE once again concerned itself with several activities, such as an examination of the effectiveness of the Professional Engineers Amendment Act (1979) and continued seeking support in the subvention of the salaries of engineering teaching staff at universities.

Some years ago FSPE launched an appeal for funds to facilitate the teaching of Engineering Analysis and Design at Black universities and so enable Black students wishing to study engineering to join the second-year engineering course at White universities. However, there was a problem of accommodation for these students once they joined White universities. At the suggestion of the University of the Witwatersrand and in collaboration with Anglo American Corporation, a Salvation Army hostel in Mofolo was set aside for this purpose. The South African Institute of Mining and Metallurgy contributed R5 000 to this project, and in November of last year the hostel was officially opened.

Continued negotiations with the Minister of Education to subvent the salaries of engineering teaching staff has now resulted in the setting of a meeting between the FSPE Executive and the Minister of Education to discuss the problem.

Members of the FSPE Executive Committee again visited the Kroonstad Military Base to discuss the possibilities of engineers-in-training being given meaningful work while undergoing their military training. Discussions were held with other representatives of the Army on the same subject.

An FSPE newsletter was published, and the Publicity Committee decided after several months of discussion, to use a column in the official AS & TS newsletter — Kelvin News.

Of great importance was the publication of the Manpower Report, and the subsequent representation of FSPE on the Manpower Commission, where such activities are to be discussed as the attempts by FSPE to get support for the subvention of the salaries of engineering teaching staff salaries and the meaningful utilization of engineers-in-training undergoing military training. FSPE has agreed to invite representatives of the Education and Training Sub-committee, as well as the Productivity Sub-committee of the Manpower Commission, to attend the conference on 'Engineering Manpower Development in the Republic of South Africa for the Twenty-first Century', which is to be held in November 1980.

S.A. National Committee on Tunnelling

SANCOT enjoyed the active support of its members from both the mining and civil engineering sectors. The membership now amounts to sixteen and is on a corporate basis, comprising practically all the important organizations and institutions involved in the tunnelling industry in South Africa.

SANCOT continued to provide a forum for the exchange of opinion and information among all the organizations involved in and concerned with tunnelling in South Africa. The main activities of the committee concerned the following.

Safety. Good progress was achieved by the International Tunnel Association (I.T.A.) Working Group on Tunnel Safety, in which SANCOT plays the lead, and the Group met for the third time during June 1979 in the United States of America, when nine countries were represented. The Group is working in three directions: safety signs, accident statistics, and an index of safety codes and standards.

Research. Apart from the research into tunnelling and mining carried out by the Chamber of Mines and work in the field of rock mechanics at the National Mechanical Engineering Research Institute of the C S I R, no active research work into tunnelling was done during the year.

Contracting Practices. There was a dearth of contracts during the year for underground work in South Africa, and the Working Group consequently gained very little additional input. However, contact was maintained with the international group on this subject.

Review of Existing Legal Requirements in Tunnelling. Work on the revision of the existing legal requirements continued, and steady progress was maintained. New regulations will be introduced, not only for civil engineering tunnelling, but also, on a separate basis, for sea mining and opencast work. This will facilitate reference on regulations by the specialists concerned.

Collection of Demand Data. The collection of data for both mining and civil engineering continued as an ongoing task, and the preparation of a catalogue proceeded well.

Working Groups. South Africa will be represented on the I.T.A. Working Groups in the following sectors for

the ensuing year: Research, Contractual Sharing of Risks, Safety in Work, Structural Design Models, Seismic Effects.

South African Council for Professional Engineers

When the Professional Engineers' amendment Act 1979 (Act 77 of 1979) was promulgated on 22nd June, 1979, Council set up committees to give effect to the more important dispensations contained in the amended legislation.

A draft notice setting out the conditions of the exemptions relating to companies and other juristic persons required by Section 21 (1A) of the Act was submitted to the Minister, and was subsequently published in the Government Gazette. Representations of interested parties concerning the proposed conditions of exemption are now being studied.

A revised Code of Professional Conduct was considered by the Council and will be published in the near future.

A sub-committee of the Council drafted a tariff of fees according to which a professional engineer may calculate the amount chargeable in respect of professional services. This will be submitted to the Minister for publication in the Government Gazette, calling for comments and representations.

The Council is currently giving attention to an application from certificated engineers for the establishment of

a board of control in terms of Section 30A of the Act. Some members of this Institute will probably become eligible for registration under this section, and appropriate organizations are watching their interests.

The amended Act makes provision for the appointment to the Council of an additional member and alternate member to represent the metallurgical engineering profession. Previously there was combined representation for the mining and metallurgical professions. The Minister has not yet made the additional appointments.

The Council dealt with a number of alleged contraventions of the Code of Conduct, and took appropriate steps where necessary. Transgressions of one or more of the provisions of the Code of Conduct were found to have been made in four cases. Reprimands and/or cautions were handed out in three cases. In the fourth case, a Professional Engineer was suspended from practice for a period of one year.

The Council conducted a number of examinations for persons who had applied for exemption from certain parts of the requirements for registration. Seven candidates fulfilled all the requirements of Part III and will become eligible for registration when they have completed the necessary training periods.

The number of registered Professional Engineers and Engineers-in-Training at 30th June, 1980, was 9417 and 3458 respectively. These compare with 9091 and 2770 at the end of the previous year.