

# Proceedings

## OCTOBER GENERAL MEETING

The October General Meeting of the Institute was held in Kelvin House, Johannesburg, on 15th October, 1969, at 4.30 p.m.

Mr J. K. E. Douglas (President) was in the Chair.

There were also present 17 Members, Messrs: M. Barcza, R. C. J. Goode, J. A. Nixon and V. C. Robinson (Council Members), M. L. Fitzgerald, D. F. H. Graves, C. G. Hinds, S. D. Hill, J. S. Hall, D. F. Malan, T. Meyer, W. Pyne-Mercier, K. S. Rae, S. G. Taussig, L. W. P. van den Bosch, Dr A. Whillier, C. H. Wyndham.

Four Associate Members: Messrs O. Davel, M. J. Martinson, M. P. J. Sandys, T. G. Harington.

One Student: R. P. W. Henrard.

Three Visitors: Messrs A. V. Pike, B. Schmitz, A. P. Raats. Secretaries: D. C. Visser and S. de Gersigny.

Total present: Twenty-eight.

### OBITUARY

**The President:** "It is my said duty to announce the death of Pieter Ulrich Fischer, Member, who joined the Institute in 1961 and passed away on 24th June, 1969.

As a mark of respect to the memory of the deceased and in sympathy with the bereaved I would ask you all to rise and observe a few moments' silence."

### MINUTES

**The President:** "The minutes of the last meeting will only appear in next month's *Journal* and I would request that the confirmation of these minutes be held over."

### MEMBERSHIP

**The President:** "I have much pleasure in announcing that the names of the undermentioned candidates, having been published in accordance with By-Law 5.2.2, Council has elected them to membership of the Institute in the following grades:"

*Members:* Alexander Edward O'Meara, Anton Leopold Melvill, William Harold Wise, Eric John Dunstan, Frank Nel, Lubertus Hendrikus Jakob Poortier.

*Associate Members:* Michael Irvine Britten, Selwyn Wilson Lange, James McCormack, Christiaan Lodewyk de Jongh, William Andrew Hustrulid, Reinhold Johannes Ortlepp, Felix Henry Lancaster.

*Graduates:* Willem Adriaan Gericke, Hamish David Sneddon Miller, David Ian Ossin, Robert Antony Laybourne, Ewart John Shillaber, Colin Hewitt Wiggett.

*Affiliates:* Bernard André Thomas, Walter Arthur Wood, Andrew John George Paschalides, David John Perry, Alex Richardson, Gert Blekker Kotzé.

*Student:* Matthys Jacobus de Beer.

### MEMBERS TRANSFERRED TO A HIGHER GRADE

*From Associate Member to Member:* David Alphonso Viljoen.

*From Student to Associate Member:* Michael Charles Carruthers.

"I welcome the newly elected members to the Institute and congratulate the members who have been transferred to a higher grade."

## PAPERS FOR PRESENTATION

**The President:** "Professor Wyndham, may I call on you to deliver the paper entitled 'Factors affecting the mechanical efficiency of men shovelling rock in stopes', written jointly with J. F. Morrison, J. H. Viljoen, N. B. Strydom and A. Heyns."

After the presentation of the paper the President said:

"Gentlemen, I would like to thank Dr Wyndham and his colleagues for once again reporting through the medium of this Institute the results of the very important work they are carrying out at the Human Science Laboratories. It is most appropriate that this work which is leading to a better understanding of the capabilities and efficiency of the human body under the arduous conditions encountered underground should be reported to this forum. In this way our members, who are actively engaged in the job of mining, can firstly learn something of this research and secondly, can, with their practical knowledge of conditions underground, contribute to what has been learnt and possibly pose new problems for our scientists in the laboratories. The scientist should always have the opportunity of subjecting his research to the scrutiny of people engaged in practical operations. By the very nature of our gold mines we are unfortunately heavily dependent on a large labour force and while mechanization has been introduced wherever feasible, we are likely to continue to be heavily dependent on this labour. In accepting this fact we can be proud in this country of what has been achieved, not only in obtaining the best efficiency from labour but in ensuring that their working conditions are reasonable and that their health and well-being are adequately cared for. When one visits our gold mines, one cannot help being impressed with what is being done to ensure that we have a satisfied, happy and healthy labour force. The Human Sciences Laboratory with its scientific approach has assisted greatly in promoting a better understanding of the problems associated with labour under the conditions experienced on our mines. Thank you."

Mr M. Martinson then contributed to the discussion. (This contribution will appear in a later issue of the *Journal*.)

"Professor Wyndham, may I call on you to deliver the paper entitled 'Acclimatizing men to heat in climatic rooms on mines,' written jointly with Prof Strydom."

After Dr Wyndham had presented the paper the President said:

"Thank you Dr Wyndham for so ably describing the work associated with the acclimatization procedures on our gold mines. It has certainly been an eye-opener to those of us not familiar with this work and I believe it is very important that everyone and not only people in the gold mines should know about it. It is fortunate that all industries do not have the same arduous heat conditions experienced on our mines but other industries such as our chemical and metallurgical industries do have other problems relating to the adjustment of labour to the work situation. The scientific approach employed by the gold mines in tackling this problem is an example to these industries of what can be achieved by logical

analysis and testing of the various factors involved. It is certainly interesting that it is estimated that the financial rewards have been very substantial. As a result of a better understanding by all concerned men are not asked to do any more than what can normally be expected under the environmental conditions and they are not thrown into these conditions until physically they are adjusted to it. This, of course, is only common sense and the authors are to be congratulated for drawing everyone's attention to it through the medium of our *Journal*."

Messrs C. G. Hinds, P. G. D. Pretorius (contribution read by Mr Hinds), and D. F. H. Grave then contributed to the discussion. (These contributions will appear in a later issue of the *Journal*.)

#### CONCLUSION

**The President:** "I wish to thank members and visitors for their attendance, and now declare the meeting closed."

The meeting closed at 6.05 p.m.

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## Proceedings

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### NOVEMBER GENERAL MEETING

The November General Meeting of the Institute was held in Kelvin House, Johannesburg, on 25th November, 1969 at 4.30 p.m.

Mr J. K. E. Douglas (President) was in the Chair.

There were also present twenty-six members, including Messrs M. Barcza, R. C. J. Goode, Prof J. de V. Lambrechts, Messrs D. G. Maxwell, V. C. Robinson and P. W. J. van Rensburg (Council Members), Messrs C. A. Border, A. Frost, E. K. Gibson, J. C. Hall, S. D. Hill, D. M. Jamieson, W. R. Lawrie, W. L. le Roux, C. S. MacPhail, M. Mroost, E. Pavitt, W. G. Pyne Mercier, Dr W. S. Rapson, Messrs F. O. Read, L. W. P. van den Bosch, J. E. van Leeuwen, N. B. Vinson and R. A. von Maltitz.

Four Associate Members, including Messrs R. C. Power and R. B. Wiggill.

One Graduate: Mr J. P. Hatfield.

Five Students, Messrs N. A. Barcza, P. C. Cook, C. J. Fauconnier, R. Hatfield and R. P. W. Henrard.

Two visitors, Mrs. L. Barcza and Mr R. A. Weaver. Assistant Secretary, Mrs S. de Gersigny.

Total present: 40.

#### OBITUARY

**The President:** "It is my sad duty to announce the death of the following members of the Institute:

Hubertus Horatius Burger, Associate Member who joined the Institute on 12th March, 1954 and passed away on 9th September, 1969.

Oscar Lazar, Life Member, who joined the Institute on 30th July, 1936 and passed away on 22nd October, 1969.

As a mark of respect to the memory of the deceased and in sympathy with the bereaved I would ask those present to stand and observe a few moments silence."

#### MINUTES

**The President:** "The minutes of the last meeting will appear in next month's *Journal* and I would request that the confirmation of these minutes be held over."

#### MEMBERSHIP

**The President:** "I have pleasure in announcing that the names of the under-mentioned candidates, having been published in accordance with By-Law 5.2.2, Council has elected them to membership of the Institute in the following grades:

*Members:* Charles Vivian Hickson, Nicolaas Petrus Jacobus Coetzee, Cecil Gerald Philip Sack, William Robert Judd.

*Associate Members:* Kenneth Lawrence Michael Howard Rodel, Brian Lew Wallace, Donovan De Lacy Slater, Arnold Granville.

*Graduates:* Diederik Johannes Theron, Christopher Roderick Stewart Needes.

*Affiliates:* John Denman Dean, Cecil John Moore.

*Students:* David James Hammond, Gert André Fourie, Arie Willem Basch.

#### MEMBER TRANSFERRED TO A HIGHER GRADE

*From Student to Graduate:* Dirk Jacobus van Niekerk.

"May I extend a welcome to the newly-elected members of the Institute and congratulate the member who has been transferred to a higher grade." (*Applause*).

#### PRESENTATION OF 1969 AWARDS

**The President:** "Ladies and Gentlemen, the Awards Committee's decision on awards for papers published during the year has not yet been finalised, and will be announced at a later stage.

We now come to the student prizes. Both the students and the departments of the Universities that took part in the student prize competition are once again congratulated on the high standard of the papers submitted, and it gives me great pleasure to announce that the following students have been awarded prizes and to make the presentations:

Mr N. A. Barcza for his paper entitled 'The reactions occurring when serpentine is heated from 0°C to 1000°C.'

Mr P. J. Cook for his paper entitled, 'The physical and structural geological features affecting the method of mining and stoping an ore-body.'

Mr C. J. Fauconnier for his paper entitled, 'Refrigeration in mines.'

Mr G. P. J. van den Berg for his paper entitled, 'An investigation into the effects of cathodic overprotection of coal-tar extract pipe coatings and on the underlying metal.'

#### THE NINTH COMMONWEALTH MINING AND METALLURGICAL CONGRESS

**The President:** "We now come to the main item on the agenda, the reports on the Ninth Commonwealth Mining and Metallurgical Congress which was held in London from the 3rd to 24th May, 1969. A number of our members were lucky enough to attend this Congress and four of them will report on their visit."

Reports were then given by W. R. Lawrie (Member), L. W. P. van den Bosch (Member), Dr W. S. Rapson (Member) and R. C. J. Goode (Member). (see this issue of the *Journal*.)

**The President:** "I am certain I speak on behalf of all of you when I say how immensely we have enjoyed the reports. They were very well presented and most interesting. Those of us who were not fortunate enough to attend the Congress have this afternoon shared in a little of the interest and enjoyment that the members on this Congress must have experienced.

They have provided convincing proof of the value of these Congresses. A marvellous opportunity is provided

for people to see new developments and to exchange information with others in the same fields of endeavour.

The technological developments occurring overseas are of great interest to our industry but the opportunity provided for senior people to see how the mining industry operates in other countries is also important. Dr. Rapson's views on the need for establishing a greater awareness of the industry in this country are interesting. The Irish Government's approach to mining taxation is also of interest. These Congresses are, of course, of immense educational value to our younger engineers and every assistance should be given to enable them to attend.

Ladies and gentlemen, the hour is now late and I would like you to express appreciation to Messrs Goode, Lawrie, van den Bosch and Dr Rapson for their very excellent reports on the Congress.

#### PAPERS OPEN FOR DISCUSSION

**The President:** "We have the usual 'Papers for Discussion' but in view of the lateness of the hour, may I ask any contributors to submit these in writing to the secretary.

I would like to thank members and visitors for their attendance and I declare the meeting closed."

The meeting closed at 6.15 p.m.