

Annual General Meeting of the Institute

The Annual General Meeting of the Institute was held in Kelvin House, Johannesburg, on Wednesday, 26th August, 1970, at 4.15 p.m.

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

There were also present sixty-three Fellows, thirty-five Members, one Graduate, eight Associates, five Students and nineteen Visitors, making a total of one hundred and thirty-two.

The President declared the meeting open at 4.20 p.m.

OBITUARIES

The President: 'It is my sad duty to announce the deaths of the following members of the Institute.

Dr J. A. Papenfus, Fellow, who joined the Institute in 1942 and passed away on the 28th of May, 1970.

Mr D. G. Beadle, Fellow, who joined the Institute in 1946 and passed away on the 17th of June, 1970.

Gentlemen, Derek Beadle was very well known in this Institute. His papers on dust will be remembered and, at the time of his untimely death, he was one of our assistant editors.

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

MINUTES

The President: 'May we confirm the minutes of the General Meeting held on 15th April, 1970, as published in the July, 1970, issue of the *Journal*'.

Agreed.

WELCOME TO VISITORS

The President: 'Ladies and Gentlemen, we are honoured this afternoon by the presence of many distinguished guests and I extend to you all a most cordial welcome. We are happy to have with us Dr A. A. von Maltitz, President of the Chamber of Mines of South Africa, who is also Honorary President of this Institute. We also have one of our Honorary Vice-Presidents, Mr T. L. Gibbs, the Government Mining Engineer; Mr D. E. Hamm, President, Institution of Certificated Mechanical and Electrical Engineers, S.A.; Mr S. C. M. Naude, Director, Witwatersrand Technical College; Mr I. R. G. Stephen, Senior Vice-President, The S.A. Institute of Electrical Engineers; Mr G. M. Tompkins, President, The S.A. Institution of Mechanical Engineers; Professor P. B. Ackermann, President of the Geological Society of S.A.; Mr A. S. Robinson, Vice-President of the S.A. Institute of Civil Engineers; Professor W. Maré, President of the Institute of Land Surveyors of the Transvaal; Mr B. D. Charlton, President of the S.A. Institute of Assayers and Analysts; Mr R. Hemp, The President, The Mine Ventilation Society of S.A.; Mr L. J. Prince, The President, The S.A. Association of Mine Managers; Mr J. Botha, The President, The S.A. Institute of Foundrymen; Mr G. Niterl, The President, The Institute of Welding; Mr M. R. Gericke, President, S.A. Council of Professional Engineers; Mr N. A. Honnet, Chairman, Orange Free State Branch; Mr P. R. C. Cooke, Chairman, The South African Chemical Institute (S. Tvl. Section).

Gentlemen, we are very honoured indeed, to have these distinguished gentlemen with us this afternoon, as our honoured guests.

We are also pleased to have with us, one of our Honorary Fellows, Mr F. G. Hill, and several Past-Presidents.

I also extend a very warm welcome to all our lady guests and to all our other visitors.'

MEMBERSHIP

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

NEW APPLICATIONS

Fellows: Herbert Dalton-Brown, Stephen William Morel.

Members: Clive Lester Workman-Davies, Basil James Russell Botha.

Students: Timothy Nigel Watson, John William Hair-bottle.

I wish to welcome the new members to the Institute and to congratulate those members who have been transferred to a higher grade.'

ANNUAL REPORT OF THE COUNCIL AND ACCOUNTS FOR THE YEAR ENDED 30th JUNE, 1970

The President: 'I now have pleasure in presenting to you, the Annual Report and Statement of Accounts for the year ended June, 1970. These have been handed to you this afternoon and, as is customary, I propose they be taken as read.

Before moving their adoption, however, I would like to refer to some of the salient features, leaving as is usual, the task of dealing with the finances, to our Honorary Treasurer.

It is encouraging that membership has continued to grow, and now stands at 1,613, an increase of 61 over last year's total. Your Council, however, is aware that there are still people in our mining and metallurgical industries, who could qualify for membership, but who have not yet joined the Institute.

A drive to increase membership was accordingly organised, and members of Council were given the responsibility for campaigning in sections of industry, and for publicising the objectives and advantages of belonging to the Institute.

Up to now there has not been much reaction to this campaign, but I hope we will see results in the coming year. At the same time, Council has recognised the need for change in the conduct of the Institute's affairs in order to meet the changing needs of our membership.

Our members, both mining and metallurgical, are in the first place, geographically more widely dispersed than they used to be, and secondly, with the growth of the metallurgical industry, their technical interests are now more diversified.

The Institute must cope with these changing needs if we are to continue to perform a useful function. The

establishment of branches at Welkom and Witbank was a step in this direction.

After much consideration, your Council has also decided to experiment with a change in the regular monthly meetings held in Johannesburg. It is now proposed to hold meetings on a quarterly basis over a full afternoon or a full day. The meetings will take the form of colloquia or short symposia on some chosen subjects, such as the developments in steel technology, shaft sinking, and so on. Papers will be invited on these subjects, and it is hoped these will provoke active and perhaps less formal discussions.

It is believed that, in the same way as recent symposia have proved very popular and are well attended, colloquia should also prove popular and encourage people to travel distances and to give up a day or an afternoon to participate in discussing the subjects they are vitally interested in.

Council has been aware for some time, that the disbandment of the Base Metal Division has had an adverse effect on the interest taken by our metallurgists in industry. It is our intention now, to form two committees—one mining and one metallurgical—whose responsibility it will be to organise these colloquia, and it is hoped that this will revitalise the interest of our base metal members.

The *Journal* will continue on a monthly basis, for the publication of papers submitted directly to the Institute, and arrangements will be made, whenever necessary, for presentation and discussion of these papers.

During the last year, the Institute participated with other institutes in organising two successful symposia—one on stainless steel and, more recently, the Tunnelling Conference—Tuncon '70.

Both attracted good attendances, including overseas delegates. There is little doubt that these symposia do much to advance technology and education, and they act as a stimulant for new ideas. There is a trend towards making them more international, so that we can benefit from the experience of our technical colleagues in other countries.

We are busy organising two additional symposia, one of which will be held in a few days' time, at the Cranbrook Hotel—"The planning of open pit mines with special reference to Slope Stability"—and there is every indication that this will be a very successful symposium.

The second symposium will be on the techniques for decision-making in the mineral industry, which is planned for 1972.

The latter is the tenth in a series of international symposia, which until now have not been held outside North America. The invitation to hold the next symposium here is a great tribute to our South African workers in this field, who have made important impacts on the previous symposia. Also, the fact that the committee for organising the 1972 Symposium is already active, is perhaps some indication of the amount of back-room work necessary for organising these events.

I would like to thank most sincerely, all those who selflessly gave up so much of their time and energies in the last year, in writing these papers, and editing and refereeing them. Finally, I would thank all those who gave up their spare time for organising these worthwhile functions.

The papers presented this year, both at our general meetings and at the symposia, maintained our usual high standards. It was regrettable that attendances at

the monthly general meetings were not better, but the fault, I feel, did not lie with the fare presented at the meetings. I believe these meetings were all interesting, instructive and enjoyable.

The excursions organised this year again proved popular and were well attended. Our thanks go to all those organisations who provided our members with interesting and enjoyable visits.

Our two branches have been most active, and I would like to thank the two Chairmen—Messrs Honnet and Meintjies—for the efficient way they and their committees have handled the Institute's affairs in their areas.

The Institute was again represented on various bodies, such as the A.S. and T.S., the Federation of Societies of Professional Engineers and the South African Council for Professional Engineers.

A brief summary of their activities is recorded in the report, to which I draw your attention, but I will not now comment on any particular aspect.

I am sure you would all be interested, however, to hear that our immediate Past-President, Mr R. C. J. Goode, has been elected Vice-President of A.S. and T.S., and we congratulate you Jeff and regard it as a great honour for our Institute.

In conclusion I would like to thank most sincerely the retiring Council and, in particular, the two Vice-Presidents, Mr V. C. Robinson and Professor Howat, for their support during my year of office. It has been a most interesting year and there has been a lot of back-room work going on behind the scenes. One of the most arduous duties in the Institute is that of our Honorary Editor, and Mr Peter van Rensburg, as Honorary Editor-in-Chief, has not spared himself in carrying out this duty. This, I can assure you ladies and gentlemen, was more arduous than usual this year with the large number of papers submitted for the symposia.

Our grateful thanks go to him and his assistant honorary editors.

I would also like to thank Mr Dennis Maxwell, our Honorary Treasurer, who has had a difficult year in making ends meet.

Finally, I would like to thank the staff of the Associated Scientific and Technical Societies for the secretarial services rendered, and in particular would mention the work done by the manager, Mr Boden, and the secretary, Mr Visser. Both these gentlemen were ill during the year and have our best wishes for a complete recovery.

I have much pleasure now, in proposing the adoption of the Annual Report, and I will call on Mr Maxwell, our Honorary Treasurer, to second the adoption.'

D. G. Maxwell: 'I am very pleased, Mr President, to have this opportunity to say a few words about the Institute's finances before proceeding to formally second the adoption of the Annual Report.

I told you last year that, in my opinion, the deficit that I had to report then was more than the ordinary swing of the pendulum and that action would have to be taken to set matters right. This opinion was confirmed as soon as we were able to get out a budget for the current year. It then became clear that we were faced with a loss of a size that necessitated action to avoid an even bigger one the following year. After careful consideration of all aspects of revenue and costs, Council decided to raise the subscriptions and the entrance fees.

In the event our loss increased from R2 124 last year to R4 608 this year, which was a little less than our budget had indicated. The most important items con-

tributing to this loss are increased Secretarial Fees and the loss on the *Journal*. I warned you last year that we should not expect quick results from the reorganisation of the *Journal* but we had hoped that by this time it would be showing signs of becoming profitable. I am sorry to have to tell you that this is not the case. The improvement in our advertising revenue has been very disappointing and we are giving serious consideration to what other measures we can take to put the *Journal* on a profitable basis.

With regard to Secretarial Fees, the Associated Societies have been forced to make considerable increases in their salaries in order to maintain their services and we are expecting a further increase of 10 per cent in Secretarial Fees in the coming year. Furthermore, we have just learnt that the assessment levy has been increased from R3.30 to R4.00 per head. All these factors combine to indicate that the increase in subscription will do no more than help us to keep our head above water.

I should like now to express to Mr Visser, our Secretary, and to the Kelvin House staff associated with him my sincere appreciation of all the hard work they have put into looking after our financial affairs during the past year. For example, the simple statement "After careful consideration Council decided to raise subscriptions", conceals a tremendous amount of back-room work as well as lengthy committee deliberations.

Finally, Mr President, I should like to take this opportunity to congratulate you on an extremely successful year of office. It has been an education to see the enthusiastic and determined way that you have tackled all problems and it has been a great pleasure to serve under you.

I now have much pleasure, Mr President, in seconding the motion for the adoption of the Annual Report and Accounts.'

The President: 'Thank you, Mr Maxwell. I can assure you it was a great pleasure working with the Council. I merely tried to steer it on the right path. I can assure you there were many ideas and it was great fun working with you.

Ladies and Gentlemen, may we adopt the Annual Report and Statement of Accounts?'

Agreed.

DECLARATION OF ELECTION OF OFFICE-BEARERS AND MEMBERS OF COUNCIL FOR THE YEAR 1970-1971—INCLUDING THOSE PAST PRESIDENTS WHO HAVE SIGNIFIED THEIR WILLINGNESS TO SERVE ON THE COUNCIL FOR THE ENSUING YEAR

The President: 'I have pleasure in announcing that, in accordance with Clause 3.3 of the Constitution, the retiring Council has elected the following as office bearers for the ensuing year.

As President, Mr V. C. Robinson; Vice-Presidents, Professor Howat and Dr Hugo; Honorary Treasurer, Mr D. G. Maxwell; and Immediate Past Past President, myself (Mr J. K. E. Douglas).

I shall now read a letter from the Scrutineers, declaring the election of Members of Council for 1970-71.

"We have to report that we have inspected the nomination papers for members of Council for the 1970-71 session and found that the ballot papers sent out to corporate members of the Institute were in order.

There was a return of 557 ballot papers, with four spoilt papers, representing a 47 per cent ballot. As a

result of our scrutiny we find that the following members have been elected.

Dr M. G. Atmore, Dr J. M. Bereza, Mr W. W. Malan, Mr C. E. Mavrocordatos, Professor R. P. Plewman, Dr R. E. Robinson, Dr M. D. G. Salamon, Mr P. W. J. van Rensburg, Mr L. W. P. van den Bosch and Mr P. A. von Wielligh."

I congratulate those members who have been re-elected, namely Dr Atmore, Dr Bereza, Prof Plewman, Dr Robinson and Messrs Mavrocordatos and van Rensburg, and I welcome the new members, Mr Malan, Dr Salamon and Messrs van den Bosch and von Wielligh.

In terms of Clause 3.2.9 of the Constitution, Mr Meintjes, in his capacity of Chairman of the Witbank/Middelburg Branch, and Mr Saunders, as Chairman of the Orange Free State Branch, will serve on Council.

I also wish to announce that the following Past Presidents have signified their willingness to serve on Council for the ensuing year:

Messrs Adamson, Barcza, Britten, Goode, Lambooy, Professor Lambrechts, Dr McIntyre, Messrs Reid and Simon. We really value the advice and assistance of these Past Presidents, who make a tremendous contribution to our Council deliberations.

I would like to express Council's appreciation of the services of Mr T. C. A. Meyer and Mr H. E. Cross, who served on Council over the last year. Mr Meyer was President in 1941 and we certainly appreciated having him back with us this year.

Mr Cross has served on Council for many years and can no longer continue due to his heavy commitments as President of the Federation of Societies of Professional Engineers. We shall certainly miss his wise counsel and we wish him well in his new post.

Ladies and Gentlemen, at this stage I have a rather pleasant duty to perform. The Institute last year celebrated its 75th year and, as you know, we were privileged to have as our President Mr R. C. J. Goode. His Presidential Address and his subsequent addresses on the history of the Institute, delivered at the various functions held to celebrate this anniversary, were quite outstanding and, I am sure you will agree, did much to enhance this Institute's reputation. They also stimulated new ideas within Council which encouraged us to stand back a moment and examine where we were going.

One could say that this was all part of the duties of a President, and this, of course, is quite true. Nevertheless, your Council considered that, without creating any precedent for the future, a small presentation should be made to Mr Goode as a token of our esteem and our thanks and in recognition of the excellence of the various addresses he made during the year.

All of you who have had to write a presidential address know just how much work is involved. In this case, several addresses, all of comparable excellence, were made and presented to us.

I have here a set of gold cuff links inscribed with the Institute's crest and Jeff's initials, and I would ask him to accept this little gift with our grateful thanks.'

Mr Goode expresses his thanks and appreciation.

INDUCTION OF PRESIDENT

The President: 'I must now do my final duty as President and induct the new President, Mr Victor Charles Robinson. He needs little introduction to mining men as there can be few people, from mine managers to

miners, who have not heard of Victor Robinson. He has been the "smoother-outer" of labour troubles in the mining industry for so long that his fame, and perhaps notoriety, has spread far and wide.

We certainly have to thank him most sincerely for the contribution he personally has made towards happy labour relationships in our mining industry.

Vic is a "Banana Boy", having been born in Pietermaritzburg, where his father was prominent in the Public Service of the Natal Government. This no doubt explains his aptitude for diplomacy.

On his mother's side he is related to the sugar barons but I would hesitate to try and draw any analogies here. Obviously he spurned the sweetness of their lives for the rugged life of a miner when he upped-stakes and trekked to the Witwatersrand.

He was educated at that great school, St Andrew's College, Grahamstown where, incidentally, one of his main claims to fame is that he became a champion shottist and, in fact, gained his colours for shooting.

He tells me that, at one time, he had ambitions to be a metallurgist, but I don't know whether this was just to influence me to say something nice about him. In the end he opted for mining and graduated at the Witwatersrand University, in 1934.

He had continued to take an active interest in that university and, as we know, was President of Convocation from 1966 to 1970, during which time he was very active in raising funds.

In 1937, after a three-year spell on Robinson Deep as a Sampler, Surveyor, Shift Boss and Mine Overseer, he decided to break from active mining and to spend a few years with the Mines' Department, who packed him off back to Natal, to look after the collieries in Dundee.

But the lure of the gold mines was too great and, in 1940, he was back to join the Union Corporation Group. He soon rose to the position of Underground Manager at Van Dyk Consolidated. Just in case any of you imagine our Natal friends are slow-moving, Vic with his team, on his first assignment as a Manager of a shaft-sinking job, broke the then-existing world record for all types of vertical shafts by sinking 461 feet in 31 days.

Over the next ten years he served on several of the mines of the Union Corporation. His duck-shooting episodes at Marievale and his efforts as a Company Commander in controlling recruits, have been the subject of many amusing stories of which Vic appears to have an inexhaustible fund.

In 1950 he was promoted to Assistant Technical Adviser of the Chamber of Mines, and his influence here has been tremendous.

In 1956 he became labour adviser and in 1964 Chief Technical Adviser. He has also been a member of the Prevention of Accidents' Committee since 1951. In fact, I do not think anybody has worked out just how many committees Vic is a member of. It certainly runs to double figures and is indicative of his interest in the training, welfare and safety of our men on the mines.

His abilities as a diplomat, his general popularity and his keen sense of humour have fitted him particularly well for this difficult job at the Chamber of Mines, where he has had to please everybody.

I understand he officially retires from the Chamber in a few days' time, but is carrying on in a consulting capacity. This, of course, is very well timed from our point of view, as it means that he will be able to devote

more time to our affairs than he could have done otherwise. At the same time I hope he will be able to enjoy a rest from his more arduous duties and have some time to do the things he wants to do. As we know, one of his main interests is sketching and, of course, he is very adept at this. He also likes the occasional game of golf and is fond of shooting and fishing. He has a very charming wife, who is here with us this afternoon, two grown-up children and four grandchildren.

Ladies and Gentlemen, I have very great pleasure in handing over the task of leading this Institute to Victor Robinson in the full knowledge that it will be in very capable hands.

Mr Robinson: 'Mr Douglas, Ladies and Gentlemen, may I, first of all, Mr Douglas, say how very conscious I am of the honour which this Institute has done me in electing me as your President. I know that the responsibilities of this job are heavy. I know also that the duties are manifold and I hope that your faith in me won't be misplaced.

If an ability to remember a large number of questionable stories fits you for the duties of the post, then perhaps you have chosen very wisely. If not, then perhaps you will realise later what a mistake you have made.

Be that as it may, however, I know just how important the duties are, and the responsibilities on any scientific learned institute, and I assure you that I shall certainly do the very best I can for you.

You, Mr Douglas, have had a most successful year of office. It has been a pleasure for us, on the Council, to work with you. I think that, under your guidance, we have been lucky in that the Institute has been able to choose for itself some quite new roads along which we will be wise to travel.

I know perfectly well also, how terribly busy you have been in your own Group, and I do appreciate how much time it must have taken to do another job. That is to say, to guide this Institute quietly and well and to carry out the other many commitments, most of which entailed absence from Johannesburg while you were President. This must have meant an awful lot of back-room work somewhere, especially for you.

We do, Mr Douglas, most deeply appreciate what you have done, and I would be remiss if the very first thing I said, as President, wasn't "Thank you".

I would like then to congratulate David Howat on his job as Senior Vice-President. David, of course, has been a tower of strength on the Council. He's a metallurgist, which means that he probably has more time to do these things. But at the same time he has been a busy little beaver in the background and, what I appreciate more than anything, as Chairman of the Programmes' Committee, is that it was never ever difficult to find a referee for a metallurgical paper when David was around. One didn't have to say "Will you?" He would always start the ball rolling by saying, "I'll do it". This makes an enormous amount of difference in this job.

Not only that, he has contributed to many papers and has written a great many himself. We appreciate that very much and I am looking forward to having David on my right-hand side.

Then I should like to congratulate Dr Hugo, who is the new Junior Vice-President. He has given years of valuable assistance and advice to this Council. This is particularly praiseworthy and worthy of thanks when you realise that, as the Deputy Director General of the Atomic

Energy Board, he has to come an awfully long way, from very heavy duties, to be here in Johannesburg with us at meetings. This is not an easy thing, and it says a lot for his enthusiasm and keenness. It makes me realise that he is going to be a very valuable Vice-President, and with these two standing alongside of me, I feel that my retirement can be one long, glorious loaf.

Although these gentlemen—both of them—are metallurgists, they will just have to bear with a miner—an ordinary miner—and I am sure they will, because metallurgists have this sort of outlook.

I am more than grateful to Dennis Maxwell who is staying on as Treasurer. Dennis is, again, a metallurgist, but he has this something special about money and I know that this year things will go, under his guidance, so well that next year we'll be able—I hope—to give you a rosier picture of our finances.

There is one job in this Institute, Ladies and Gentlemen, about which everyone talks and which no-one has ever been known to rush forward and accept. This is the Honorary Editor of our magazine—our *Journal*.

Peter sits there—he has a smile on his face now, but I've seen on that face an expression of bitter woe when he doesn't get the papers he wants, and when he does get them they practically have to be re-written. But Mr Carlisle is going to step forward and help him over a difficult patch and take over the editorship from Peter, who is going to have a well-earned rest from onerous, and I think—except for some of us—a very thankless job from the general membership.

I'm glad to see that a lot of last year's Council are still serving. Without their combined experience and help this Institute could not go along so easily. I would particularly like to welcome the new members Mr van den Bosch, Mr von Wielligh, Mr Malan and Dr Salamon. We look forward to our association with them. We assure them that there'll be a lot of work to do. We assure them also, however, that the new direction in which we hope to take our monthly meetings should make this part of the work a great deal easier.

Then we have those stalwarts—the Past-Presidents—who want to serve on Council. This is such an encouragement to everyone on Council to know that the helmsmen of the past are going to continue to steer this ship in the direction we all want it to go.

Last, but not least, I want to say how much we all thank the staff of the Associated Scientific and Technical Societies. We want to thank Don Visser, particularly, for his help over these many years.

Lastly, I would like to say thank you to Keith for the very kind words he used when he introduced me. Of course, they're not all true. I should have liked to have been able to vet his remarks and say which are true and which aren't, but it's very kind of him. Thank you very much, Keith, and thank you for the help and encouragement you've given us all in the past year.

I'd like to ask Professor Howat to take his place on my right, and I would ask Dr Hugo if he would take his place on the rostrum.'

Dr Hugo: 'Mr President, Ladies and Gentlemen, as the newly-elected Junior Vice-President, it is my great pleasure and privilege to record the thanks and appreciation of your Senior Vice-President, Professor Howat, and myself, for the very great honour you have done us. We are fully conscious of the matchless standards set by our predecessors and we will do our utmost to measure up to the trust you have placed in us.

Professor Howat has served this Institute worthily for many years and I feel sure that his innate energy, his resourcefulness and his good judgement will be actively applied, to the benefit of the Institute.

May we also express a special word of thanks and gratitude to the immediate Past President, Mr Douglas. As mentioned earlier this afternoon, this Institute has, in the last year, done some very serious soul-searching, with the objectives of modernising its image and activities.

Mr Douglas was the prime inspirer—the Project Engineer, if you like—of these activities and the achievements which are made will, I feel sure, go on record to his credit as an important milestone in the history of this Institute.

Finally, Mr President, may we express our sincere congratulations to you, on your election to your high office. I am sure Professor Howat and I will do all in our capacity to support you in this arduous and very exacting office, and together with the members of Council, will enjoy working under your active guidance. Thank you.

Dr M. D. G. Salamon: 'Mr President, as one of the new boys on the Council, I would like to pledge our loyalty to yourself and the Council in the coming year.'

APPOINTMENT OF AUDITORS AND HONORARY LEGAL ADVISERS FOR THE YEAR 1970-1971

The President: I propose that Messrs Alex Aiken and Carter be appointed auditors and Messrs van Hulsteyn, Feltham and Ford be appointed honorary legal advisers to the Institute for the coming year. Is this agreed?'

Agreed.

GENERAL BUSINESS

The President: 'Is there anything that members wish to raise under this heading?'

If there is nothing under that heading, then I would like to ask Professor Howat to take the Chair while I deliver my Presidential Address.'

PRESIDENTIAL ADDRESS

Mr Robinson delivered his Presidential Address, entitled 'Four decades in the mining industry'.

Professor Howat: 'Ladies and Gentlemen, we've listened this afternoon to a masterly address by a man who is a master of his subject. The core of the address, as one would expect from our President, was the humanities—the problem of human beings in the industry, and this very important section of his address, dealing with the history of industrial relations, is an impartial, balanced and sane record of a troubled and difficult time in the industry, and it's an account written from the inside, and I think few men were in a better position to write this account than our President.

Our new President is a man of many and very varied qualities—some of them very endearing qualities—but I think, in his address today, he manifested in very real measure, the quality that I can only describe as "restraint". I am perfectly sure that, somewhere among his very private papers, there must be a document which I am going to call "the unexpurgated version" of this section of his Presidential Address. This must be a gem of very real beauty, in which, I am sure, he exercised his literary talent in framing scathing indictments and blistering denunciations of the folly and the greed and the stupidity which he has so often seen manifested in

industrial disputes, together with prophecies of the indescribable fate which was to befall those who proved recalcitrant or who failed to honour the obligations they had assumed.

I am quite sure these denunciations are done in terms which would make even the Old Testament Prophets sit up in a mixture of wonder and envy.

It's very sad to think that this document will never see the light of publication, but that is a price you have to pay, Mr President, for having been so long a prominent man in this industry—a man in the middle and, therefore, a very vulnerable man. Yet, I think we'll all agree, a man burdened with a deep sense of responsibility and with a great sense of restraint.

I am now going to ask Mr A. R. C. Fowler to propose the vote of thanks for the Presidential Address.'

A. R. C. Fowler: 'Mr Chairman, Ladies and Gentlemen, I consider it a great honour indeed, to be called upon to propose the vote of thanks to Mr Robinson for his inspiring and straight-talking address that we've heard this afternoon. I'm sure that we are all going to look back on this address in years to come, and find great assistance in our dealings with industrial problems that arise from day to day. It is most helpful to have the history of negotiations within the mining industry in such a concise form.

We have listened with great interest to the developments of the industry and there is no-one better than Victor Charles Robinson who could have recorded this. He has had the opportunity of seeing developments both from the mining aspect, having spent half his career on the mines, and from the Chamber point of view. The Institute will benefit from this vast experience.

I am also exceedingly happy to have been able to propose the vote this afternoon, because Victor and I have been friends of many years' standing. We met through the fence that divided our houses in Pretoria before 1920 and we have been friends since then. May I say that it has been a privilege to have been associated with Victor—with Rabs as some of our old friends call him—through these five decades of friendship. Five decades of friendship would make interesting reading but could not be printed.

I will not elaborate on our association, suffice it to say that after four years or so at university together we were handed documents which said that we had passed. Well, he and I were quite surprised, and I think the people who handed the documents to us were quite surprised as well. However, Victor returned to the university in later years and, as you heard this afternoon, he was made Chairman of Convocation, further evidence of the benefits he obtained from university.

As far as the review this afternoon is concerned, I would just like to touch on one or two of the more interesting points which particularly struck me, because as I say, it is most helpful if we look back on some of the past history when viewing our present problems. He reminded us that the mining industry, after all, was the forerunner of what has now become a vast industrial complex. This is sometimes overlooked—the cart has now come in front of the horse.

As far as mining techniques are concerned, Mr. Robinson has quite rightly pointed out the tremendous advance that's been made in shaft sinking and Mr Robinson has played his part in these developments.

Great strides have also been made in rock mechanics and in strata control, but one of the main points made

was the advances in training techniques on the mines. You will see from the graph he showed us on the screen this evening, what tremendous strides have been made in productivity per European underground. I think that primarily can be placed at the improvements that have been made in the techniques of training.

Mr Robinson did mention the planning of mines, he could have stressed a little more perhaps the planning of surface layouts of mines. I think we all agree that the mine layouts today do not compare with those of the past. There is little resemblance between the old single quarters where we associated and the modern variety.

He is quite correct in pointing a finger at us mining engineers for not solving one of the main problems underground—stope cleaning. This is a point which must receive more attention.

As Professor Howat said, Mr Robinson has devoted a large portion of his address to humanities, and it is most fortunate that he has done so as he is so ably equipped after his long and close association with humanities.

He has dealt in great detail with the history of the development of consultation and communication in the industry and he did stress, and rightly so, the importance of the unclogging of the lines of communication between people.

I am in full agreement with the view so eloquently expressed by Professor Howat—Victor must have used tremendous restraint when he penned those remarks.

It is very important that we have this full review of the pensions' scheme. It is important that we have this ready reference to past history when talks on pension schemes take place today.

I was somewhat taken aback by his candid comments on the colour bar. I presume that he checked up on his pension scheme before he compiled his report. He spoke very candidly on the subject and we must take what he said to heart if we are going to be able to man fully our mines.

I would like to stress particularly the point he made on the accident rate. I do feel that when he talks about the arrogance and self-sufficiency of some South Africans, he is hitting the nail pretty well on the head. I was recently in America, and one of the things that really impressed me most in my whole stay in North America was the extreme courtesy and carefulness shown by people driving on the roads. I was astounded, driving as we did on the Trans-Canada Highway and down the West Coast of America, which has probably the highest intensity of traffic, at the tremendous courtesy, politeness and good driving shown throughout and it is because of the enforcement of the rules and the laws. Patrols are at hand and I can assure you, if you transgress two or three times, your licence is gone for a year. We are probably too lax, and I agree with Mr Robinson, we have tremendous strides to make in tightening up controls.

The final point of his address was his plea for the prevention of pollution. I must say that when one travels through North America, one is staggered by the pollution of the rivers and of the countryside, Europe is much the same. Our country is still such a beautiful country, if we can start right away, we will be doing something very helpful towards our future.

Ladies and Gentlemen, I think that is about all I would like to say as far as the contents of Mr Robinson's address this afternoon is concerned. He has mentioned

he is retiring next month but, while the Chamber will be losing his full time direction and advice, he will be retained as a consultant and we hope he will be able to have many years in this capacity.

As far as the Institute is concerned, we are the gainers, at the industry's loss. We will be able to draw the benefit from his sound advice, his tremendous wit and his wonderful flow of language, if he ever lets it go. We, in the industry, have been able to draw tremendous benefits from his vast experience in the mining industry and, therefore, it gives me great pleasure, Ladies and Gentlemen, to propose a hearty vote of thanks to Mr Robinson for his very fine and inspiring address this evening.'

Professor Howat: 'Thank you, Mr Fowler. I now call on Professor Lambrechts to second the vote of thanks.'

Professor Lambrechts: 'Mr Chairman, Mr Robinson, Ladies and Gentlemen.

Like Mr Robinson, I have also lived with the mining industry in this country for the past four decades and have seen it from various angles. Starting as a mining student over 40 years ago, I seem now to have completed the circle and have found myself, during the past six years, in the role of a "madala", as a teacher of mining students.

I have, by and large, enjoyed the forty-odd years and I have enjoyed listening to our President's excellent account of *his* impressions of this period, seeing the same thing through another man's glasses, as it were.

In thinking of something useful to say on this important occasion it is only natural that I should try to find a point of contact between Mr Robinson's philosophy and my own and under the circumstances I think that training and education provide the common link that I have been looking for.

If higher education at university means anything, as most people believe it does, this must surely also apply to mining engineering with its increasing complexities. But, alas, the number of new mining engineering graduates produced in this country averages less than 20 per year in a one-and-a-half thousand million rand per year industry. One sometimes wonders whether it is still worth running mining departments at two universities for such a small number of students.

Mr Robinson concludes with the sobering thought: "What will the next three decades be like, to bring us to the end of the century?" In the context of university education for mining engineers, my own answer to this question tends to be of the "either-or" type. Either the industry should plan for a substantial increase in student numbers or it might as well call it a day and close the universities' mining doors.

The latter, I believe, will be a sad and retrograde step; the former I believe to be possible. This is not the time and place to indulge in a discussion of the *modus operandi* of increasing student numbers. I can but bemoan the fact that, during the past few years, I have in various ways tried to seek contact with the industry to discuss the whole question of university education for mining engineers, but I have not really succeeded in finding any satisfactory reaction. I seem to have been bumping my head against a stone wall. Or is it possible, as somebody suggested to me recently, that I have in fact been bumping my head against a soft pillow, and hence the lack of reaction? I sincerely hope that the opportunity will be created fairly soon, whereby leaders of the mining industry and representatives of the uni-

versities can sit around the same conference table for frank discussion and with no dogmatism on either side.

Mr Robinson was perhaps a little less than fair when he said that "Universities turn out many round-headed, long-haired boffins . . . who all want to get to the top before they know where the bottom is". I hope Mr Robinson will also be sitting round the conference table to which I alluded a moment ago! Perhaps we can then discuss important matters such as the selection of the right men for university education; the inducements to be offered to these men; and we can discuss that critically important two to three years training period in industry after graduation. And make no mistake, this training period, after graduation, is industry's responsibility; it is part and parcel of the whole concept of "education and training" and the one element cannot be divorced from the other. If the two are divorced, you simply have the situation where the pot calls the kettle black.

In conclusion, it is difficult to imagine that Vic Robinson, after four decades of a brilliant career, will be retiring soon. Of course, this is in fact not going to happen as he had planned, because for yet another year, as President of this Institute, he will be anything but in retirement! I also have much pleasure in wishing him a successful year in office, a happy ultimate retirement, and seconding the vote of thanks already so ably proposed by Mr Fowler.'

The President: 'Dr Howat, Ladies and Gentlemen, first of all, I'm not going to take a lot of time over my reply, but I would be less than gracious if I did not say how very much I appreciate what was said by Mr Fowler and Dr Lambrechts.

I don't think really, there is much criticism in their talks to which I have to reply now. Mr Fowler is quite right, I didn't have much to say about surface layout. He's also right in pointing out the difference that exists in the single quarters that he and I inhabited and the single quarters which exist today. In our day they were referred to, rather loosely, as "Stallions' Palace". They were of the back-to-back type and there were other amenities not very far from them, which made them reasonably comfortable and attractive to us at those times.

There is an unfortunate impression getting round, that my stock-in-trade is four-letter words. This is quite wrong. I do, occasionally, express annoyance and/or concern by the use of language which I picked up largely in my childhood, in Pretoria, from people who lived fairly close to me. I still pick up things in Pretoria, because I go over reasonably often to see Professor Lambrechts.

I enjoyed what he had to say. We have had many contacts together and I have appreciated, over the years, many of his very sound ideas on mining education. I know his fears for the future. I know that he is right when he says that we musn't look on the future as something so dim and dusty, we have to plan ahead. I think it can be done. I don't believe that I am the person to sit on a round-table conference on this thing, because I would be old and decrepit by that time, but there's a huge area here which needs looking at.

Thank you very much, Mr Fowler, thank you very much, Dr Lambrechts.

Ladies and Gentlemen, that brings us to the conclusion of this meeting. I want to thank all members of the Institute, and visitors, for attending. It's been very nice to have you. This meeting is now closed.'

The meeting closed at 6.10 p.m.