

Closing Address

by Dr R.E. ROBINSON, Chairman of the INFACON 74 Organizing Committee

Ladies and gentlemen, this is not by any means the end of the Congress; but we have come to the end of the Technical Sessions, and I have been asked to say a few words to conclude this particular section of INFACON 74. I sincerely hope that you do not expect me to give you a comprehensive summary of all the technical discussions. Although I have attended them with a great deal of interest, I have come to realize just how much I don't know about the production of ferro-alloys; but I am sure that you will all agree with me that these technical sessions have been very worth while. In fact, I have been very surprised at the way in which the attendance has been maintained throughout the week. I think I am right in saying that this, the final day, has been as well attended as any of the previous days.

In the early planning stages, the Organizing Committee were worried by the fact that ferro-alloy production is a very competitive business, and that perhaps delegates would be very reluctant to talk about the technical advances that have resulted in decreased costs and improvement in their companies' competitiveness. In fact, there was a very real fear that we were being a little too optimistic in attempting to arrange five days of technical sessions. We have been very gratified indeed that this has not been the case, and, although we must at all times accept that a company or individual is reluctant to reveal technical details that have a profound commercial implication, it has been illustrated that there are many non-confidential areas of technical interest that justify people from all over the world meeting in a conference hall to discuss common problems.

It is impossible to mention all the technical highlights, but I must mention a few. The first session was on the topic of burden preparation and the utilization of some of the lower-grade ores and the ores of fine particle size. I have the impression that we have not got the final answer to this particular problem. We have heard of major advances in the sintering process and the pelletizing process, and the equipment that might perhaps be used for these two processes; but I am sure you will agree with me that there is still a lot to say on this topic, and I am sure this will be a topic for discussion for many years to come.

I believe it is in the matter of pollution control and the recycling of waste materials from a ferro-alloy plant that we have got most answers from these technical sessions. I have certainly been surprised to learn from the many papers on this topic what can be done and what is being done throughout the world to solve this problem. Here again I do not believe we have reached the end of the discussions — nor do I think the final word on equipment design for dust removal — for example, scrubbers, bag filters, electrostatic precipitators — has been said. In fact, the discussions revealed a very interesting and what I think is a promising new area for work, namely, the question of utilization of waste products. I was very interested indeed in the paper that described the use of manganese—silicide slag as a fertilizer material, and I

wonder what other of our waste materials can, in fact, be put to some useful secondary function.

A topic that did not receive adequate attention was the subject of furnace operation and control. We were surprised that there was really only one paper that dealt with automation and control, so I am quite sure this is going to become a very important topic in future discussions. It is a very interesting matter since, in considering optimization and furnace control, one is faced with two approaches to the problem. One of them is to adopt what one might call an evolutionary optimization procedure, where one establishes certain instruments to measure operating parameters and the effect of certain control actions and then, by a process of trial and error, ultimately achieves optimum performance. This is a limited approach, because one is confined to those parameters that one knows have an influence on the furnace operation; and, if one wants to go further to improve one's process by developing new knowledge, one has to adopt another approach. One must study the fundamental characteristics of the process and begin to understand what actually happens inside a furnace. Some fascinating papers were presented on attempts to freeze a furnace and, by cutting a cross-section through the charge and the burden, to analyse what was occurring during the operation. This brings me to the matter of fundamental work in ferro-alloy processes and the comment (or should I call it the plea?) that Professor Howat made in his paper, where he tried to get a reaction from the audience on whether the fundamental work that is being done at the universities is, in fact, of use to the producing companies. This strikes me as a situation very similar to what we have encountered in many different mineral-processing operations. A typical example is the froth-flotation process, where we have two distinct camps: there are the people who use the froth-flotation process in practice, and there are the physical chemists who look at the fundamentals. Initially there was an enormous gap between them. Over the years, we find, this gap became narrower, and at least they are now talking to each other. I believe the same situation exists to some extent in the ferro-alloy industry. The ferro-alloy producers are concerned with their day-to-day production problems and are often somewhat critical of our universities conducting what seems to them to be academic research work. There does appear to be a gap between them, but I believe it is one of the most important functions of a conference like this to get these two groups to meet and to talk together. If we hold more conferences of this nature, this gap will narrow, and we shall suddenly reach a point where this fundamental work becomes of a very direct and important economic consequence.

This leads me now to an event that took place on Wednesday of this week, which, I think you will agree, is perhaps the most significant event of the week. On that day the organizers arranged a meeting of the representatives of the various ferro-alloy producers' associations throughout the world to discuss the possibility of continu-

ing the Infacon concept. At the meeting, the unanimous opinion was expressed that these Infacon congresses should continue. It was recommended, too, that the name 'Infacon' should be retained, and it was suggested that an Infacon congress should be held in different parts of the world every three years. The South African representatives indicated that they would be happy to arrange every third congress, and a valuable discussion was held about where the next and future conferences should be held. However, I don't think I should give you any more information on this question. It would be unfair to the delegates, who have first to obtain the reactions of their parent associations; but one thing I can assure you of is that the enthusiasm of these representatives was such that I am very confident that Infacon will continue.

I should like to add one further point that was unanimously agreed to by this meeting of representatives. That is that Infacon should always remain a conference on technical subjects. The organizers should always be prepared to accept registration from anybody, but it was felt that the emphasis should always be on technical matters and the exchange of technical ideas, the results of research work, and the results of plant operations. I personally believe that this is the correct approach.

Gentlemen, the hour is getting late, and, while I have quite a few other comments to make on the technical proceedings, I think I shall leave them out – they have been very adequately dealt with by the various chairmen of sessions, and you will see them all in the Proceedings with the reports of the rapporteurs.

I think I must use the remaining time to say a few words of thanks to many people who have been concerned with this Congress. It is very necessary for me to do this because so many people have congratulated me personally on the organization of this Congress – this is very embarrassing because I did the least work of all; it was a committee effort.

Before we go too far in the congratulations, I believe I owe all delegates an apology for the absence of simultaneous-translation service at this Congress. We debated this matter at an early stage of our committee meetings. I am sure you will appreciate that, in any country, and in South Africa particularly, it is necessary to book these simultaneous-translation services many months in advance. When we considered this question, we did not know what reaction would be forthcoming to this first international congress. The costs for simultaneous translation are very high indeed. We had no idea of the number of delegates who would be coming from overseas, and we originally thought we should be lucky if we got a total attendance of 100 to 150. At that level, simultaneous translation was a totally uneconomic proposition. Had we known in advance of the strong support from overseas countries, then we should certainly have arranged a translation service. May I please indicate, on behalf of the committee, our very sincere appreciation to all those non-English-speaking people who have battled their way through the sessions under very difficult and trying circumstances. I should like to congratulate them on the way that they have handled the situation – so much so that I don't think anybody missed much in the way of technical information because of the language barrier.

As I say, the organization of this Congress has been a team effort, and nowhere in any of the papers that you have before you are the names of the INFACON 74 Organizing Committee. I should like to repair this omission and give them to you. There is no specific order. The

committee consisted of:

Myself, obviously, as Chairman
Mr Les Haughton
Mr Piet Streicher
Professor David Howat
Mr Dave McKenzie
Mr Keith Douglas
Dr Peter Jochens
Mr Harvey Reid
Mr Hennie Botha
Mr Les Williams,

and I must mention the work of Mr Selmer-Olsen on the Programme Committee. I am sure that no members of this Committee will take it amiss if I make special reference to Mr Les Haughton, the Congress Manager. This is the first international congress that Leslie Haughton and the Liaison and Information Division of NIM have arranged, and we really did throw them into the deep end; but they swam very strongly and efficiently, and I am sure the rest of the Committee will agree with me that they, in fact, undertook 90 per cent of the really hard work that is involved in a congress of this nature. I should like to congratulate them and thank them for their efforts. There always has to be, of course, a woman Friday, and I think Mr Haughton's secretary, Mrs Steynberg, has had far more Infacon letterheads through her typewriter, than she cares to remember. She has done a tremendous amount of work and a lot of overtime, and I think a special vote of thanks must go to her.

Also, I should express our appreciation to the other members of that Division, and their helpers, who have provided, if I may say so, such an attractive feature of the registry office during the days of these technical sessions. I am going to name them by their christian names because I find it is always best to get on christian-name terms with these lovely young girls, but I am sure you will easily identify them:

Louise
Jean
Elna
Susan
Beth
Jane.

In the last case I must mention her surname: Jane Theron; she is the Secretary of the Institute of Mining and Metallurgy, who has helped us so much during this past week.

Also thanks to the other members of the NIM Liaison and Information Division – the printing staff who had the job of running off copies of papers, in many cases at extremely late notice, and also our accounting staff, who are handling all the financial affairs.

I must also make reference to the sterling work of the Programme Committee in selecting the papers and arranging them in the particular sessions. I think you will agree with me that the arrangements have been excellent, the papers have been well grouped, and the selection of chairmen, rapporteurs, and all these other people have been first class.

There are two members of the committee whose efforts, in full measure, are really still to come. These are:

Mr Hennie Botha (and I must mention with him Tricia Mynhardt and the girls of the South African Airways office), who is responsible for all the travel arrangements. You will enjoy the full fruits of his efforts on the forthcoming tours.

Also Les Williams. He is, in fact, the Tours Manager,

and I am sure you are going to find that the arrangements for these tours to the ferro-alloy plants are going to be very efficient indeed.

I should also like to mention our Ladies' Committee, with my wife as chairman, together with Ruth Haughton, Malfred Selmer-Olsen, and Eileen Jochens. It has been a labour of love as far as they are concerned, and they have asked me to indicate the tremendous pleasure they have had in entertaining the wives of the delegates to this Congress.

I should also like to make mention of the public-relations work of Mr and Mrs Le Roux. They really did have a difficult job. We held this Congress in the midst of an election period. I think the amount of publicity we got through the South African Broadcasting Corporation and the Press under these circumstances has been really quite remarkable.

I am sure you will agree with my intention to express the thanks of all of us to the Carlton Hotel and all the people who have provided such an efficient service in housing this Congress, and particularly to Charlie Cable, who has been the man-of-all-work in this regard. I am sure you will agree with me that all the finer touches, such as the little packets of peppermints on the tables, the iced water being changed at every tea and lunch session, the friendly service of all the waiters who served us drinks, the service at lunchtime, the standard of the menus, the quality of the decor at our banquet last night – all these things make up what I regard to be among the finest standards of congress organization that I have encountered anywhere. My most sincere congratulations to the Carlton Hotel for these efforts.

I must also thank Mr Peter Harris and Mr and Mrs Kruger for their valiant efforts up in the sound-recording box and in the projection box. They have not had an easy job. It seems that we technical people have a habit of breaking microphones, of turning our heads, and doing everything that makes a sound-recording engineer's hair stand on end; but I think you will agree with me that, on the whole, they have coped very well. They blotted their copy-book this afternoon when we were all sitting waiting for them to appear, but I am sure you will join me in forgiving them for this one slip-up.

Ladies and gentlemen, all these things helped to make the Congress a success; but the real success of a Congress comes from the delegates themselves, and here I must make mention of the tremendous contribution that our invited guest speakers have made:

Mr Björklund

Mr Franke

Mr Hooper

Mr Magruder

Dr Nasu.

Their contributions have been not only in the form of their plenary lectures, which really have been some of the most authoritative and interesting presentations at this Congress, but also their many contributions during the discussions. I can think of no better indication of the value of the contributions that they have made than to mention the panel discussion this afternoon, when we were treated to some of the most authoritative and interesting replies to what were, after all, some very difficult questions.

Our thanks also must go, of course, to all the authors of papers and the people who presented them. There is always a great deal of work involved in preparing a paper, and in some cases we had to press-gang people into it; but, all in all, I think you will agree that the standard of papers at this Congress has been very high.

My thanks also to all the chairmen of sessions, who, I think, have done an admirable job. Their summaries have always been excellent, and their introductions likewise. They have certainly made the job of the rapporteurs very much easier, but, even so, this group of rapporteurs are people that I don't envy. They now have the job of trying to collect all the discussions and comments and questions, and welding them into a coherent report to go into the Proceedings of the Congress. The Organizing Committee is quite determined that Proceedings should come out as soon as possible, so they have many more midnight hours of work before they can finally say farewell to INFACON 74. Let us thank them in advance.

To all the other delegates, let me express my thanks. Your participation in the proceedings has made this Infacon the success that it has been.

I can only end up by saying 'Long live Infacon – and to all those who are returning home – bon voyage, thank you for your participation, and au revoir.'