

The Norwegian Ferroalloy Research
Organization (FFF)

INFACON 7

Edited by

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The Congress was organized by
The Norwegian Ferroalloy Industry
Elkem a/s
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FOREWORD

The International Ferroalloys Congress to be held in Trondheim between the 11th and 14th of June 1995 represents the first time that this congress has been arranged in Norway. This INFACON will be the seventh in a line held throughout the world stretching back to 1974.

Ever since the initial INFACON in 1974 our customers have demanded alloys of ever increasing quality. Traditional processes have had to be changed and INFACON has served as an important forum for discussions in this area.

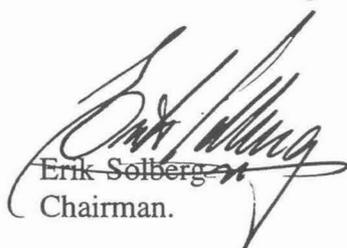
In the past few years there has also been an increased awareness of the importance of environmental issues - both on a local and global basis. It is essential that ferroalloy producers remain at the forefront of developments to avoid any negative effects that their production may have on the global environment.

With the changing global situation and the opening of new markets in the nineties we must learn to adapt rapidly to the new opportunities in order to remain competitive and customer-friendly. This congress will therefore discuss not only the present situation but also the future opportunities for the ferroalloy industry in global terms.

To emphasize the world-wide nature of this congress this publication contains papers from speakers representing 17 different countries and the 7th INFACON will be attended by participants from as many as 32 different nations.

We hope that INFACON 7 will prove to be a success for all its participants as well as for our industry as a whole.

On behalf of the Organizing Committee



Erik Solberg
Chairman.

PREFACE

THE GLOBAL CHALLENGE FACING THE FERROALLOY INDUSTRY

The main aim of INFACON 7 has been to present the challenges facing the ferroalloy industry on the road to the 21st century.

The most important changes facing our industry are the transition into a single global market economy, the new demands with regard to quality arising from changes in our customers' needs, as well as an increased awareness of the global environment. For these reasons the congress has been divided into three sessions. The first session "Ferroalloy Industry - Present Situation and Future Challenges" consists of four invited papers. The first paper will be given by OECD. They will give their view of the ferroalloy industry based on economic criteria. Trends and developments in quality standards will be presented by Nippon Steel Kimitsu Works. RSI will give a view of the market and the final paper, given by a representative from The Norwegian Pollution Control Authority, will cover the development of environmental standards in the ferroalloy industry.

In the concluding plenary session important members of the ferroalloy industry will present "Reflections on the future and on the role of the ferroalloy industry in the development of the regions of the world". The panel of referees has not assessed the invited papers.

In the proceedings the technical papers have not been separated into the various sessions though they have been presented in virtually the same order as in the congress. The technical session consists of papers which have been assessed by the panel of referees. The technical papers reflect the increased knowledge and understanding of the various aspects of the ferroalloy industry.

These proceedings are the result of the efforts of many people. Firstly, I should like to thank all the authors who have written, and some even rewritten, the papers. My special thanks to Rolf Nordheim who used his great experience to organize the various plenary sessions. My thanks are also due to the panel of referees: T. Rosenqvist, M. Bruno, J. Eilertsen, L. Nygaard, T. Magnussen, B. Asphaug and Aa. Valderhaug under the efficient leadership of Professor J.Kr. Tuset. Finally, I should like to thank the congress secretary I.G. Page who has used her great experience and enthusiasm to co-ordinate the technical editing of these proceedings.

I hope that these congress proceedings will contribute to the continued improvement and development of the ferroalloy industry for our mutual benefit.



Halvard Tveit

Chairman of the Technical Committee

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