

Preface

The papers included in this volume originate from the Symposium on Metal Matrix Composites (MMC) which was one of two parallel symposia held at "Cairo Marriott Hotel", Cairo, Egypt, from April 13-15, 1992 under the title of

"International meeting in Cairo:

Symposium (1): Continuous Casting

Symposium (2): Metal Matrix Composites"

The objective of the symposium was to present the latest scientific and technological developments in the field of MMC's to enhance their industrial applications. Fortunately a composite producer from Denmark attended the conference and presented a paper on steel-aluminium billets manufactured by spray forming while several authors talked about promising developments in the production of near net shape semi-finished composite products.

Approximately one hundred persons attended the symposium, representing producers, universities, research institutes, from different countries, mainly USA, Japan, Germany, India, France, Denmark, Sweden, UK, Italy, Canada and Egypt. Thirty two papers were orally presented covering different topics within the field. The papers, were refereed during the conference by an international scientific committee. The final versions are included in this book.

The sections in this book cover: Design and Fabrication, Interfacial Phenomena, Cast MMC's, Powder Metallurgy MMC's, In-Situ MMC's and Mechanical Behaviour. The alloys considered are mainly aluminium followed by other non-ferrous alloys and steel.

During the conference, the importance of the preparation of MMC by casting was discussed, as it is one of the most economical methods of composite production. An International Committee for Cast MMC was nominated, including J. Cornie, N. El-Mahallawy, H. Fredriksson, B.C. Pai, D.M. Stefanescu. M. Suery, and M.A. Taha, who were present at the conference. This committee will invite members from other countries to join them and will organize the next symposia. It was decided that the next international conference on Cast MMC will be organized by D.M. Stefanescu and J. Cornie to be held in Alabama, USA in 1993.

As the symposium was held in parallel with another one on continuous casting, several industrial exhibitions on continuous casting took place in front of the lecture rooms, which allowed the interested participants frequent visits and discussions. At the end of the conference a round table discussion took place, as a closing session, which was attended by the egyptian minister of industry. The meeting received sponsorship from local and international organizations and firms to the extent of more than 70 % of the operating costs.

The editors would like to express their deepest gratitude to all the participants, the session chairmen and the sponsors for their contribution as well as the scientific referees for their speed and accuracy in reviewing the manuscripts. Organizational help from members of the department of design and production engineering is also gratefully acknowledged. Particularly, Dr. Hala Hafez is acknowledged for reviewing the papers language. Thanks are also due to all who helped in making this meeting successful.

M.A. Taha
N.A. El-Mahallawy
editors