

PREFACE

Dear Distinguished Authors,

Nonferrous metal production holds a special role in the propelling global economy vis-à-vis answering to the necessities of chemical, engineering, electrical and electronics, infrastructure, automobile, and automobile components, etc, by its trademark business models. In recent years, companies world over have advanced in the field of exploration and processing of minerals, envisaging projects of future implications. The development of newer technologies to suit the requirements of processing of these raw materials down the earth shall answer to the problems arising in processing, productivity, quality, cost-effectiveness, and newer regimes. This requires comprehensive research efforts towards developing technologically, economically, and environmentally benign processes for harnessing natural minerals.

The 17th edition of International Conference on Nonferrous Metals (ICNFM-2013), was organized by Corporate Monitor in association with Alcircle and MECON at Ranchi, India during 5-6th July 2013, with an aim to purposefully discuss the above issues and projecting the latest developments in the field of nonferrous mineral exploration, metal extraction and processing. The papers received from national and international organizations covered topics from geological understanding, insights on mine reserves, metal extraction, metal purification and productivity enhancement along with long term marketing strategies to environmental issues. This conference offered a platform to the academicians, students, researchers, industry professionals, and plant operators for close interactions and exchange of ideas, and scope of working together to alleviate the bottle necks and promote better industrial output.

After the peer-review process, papers were selected for the special issue on the basis of originality, significance, and clarity for the purpose bringing out an authentic document of the conference.

We thank the support of all the reviewers for their excellent double blind peer review to improvise the quality of the manuscripts. The selected papers are thus compiled in this special volume of "Advanced Materials Research". On behalf of the organizing committee, we express our sincere gratitude to Mr. Thomas Wohlbier and all the editors from Trans Tech Publications for their great support to ICNFM 2013. Without their excellent editorial support, the special issue of selected papers presented in this international event would not have been published successfully.

With our warmest regards,

Abhilash

B.D.Pandey

T.R.Mankhand

(Editors)

ADVISORY COMMITTEE

Chairman: Shri K. K. Mehrotra, MECON
Co-Chairman: Shri S K Banerjee
Members: Shri Dinesh Kohly, HINDALCO
Shri Arun Kumar, HINDALCO
Shri Debabrata Bangabash, HINDALCO
Shri S. S. Mahapatra, NALCO
Shri N. R. Mohanty, NALCO
Shri Avijit Ghosh, Hindustan Copper
Shri Satyabrata Sen, Alstom India
Shri M. N. Sharif, MECON
Shri A. K. Tyagi, MECON
Shri S. Chattopadhyay, MECON
Dr. B. D. Pandey, CSIR-NML, Jamshedpur
Prof H. S. Ray, BESU
Shri R. N. Parbat
Shri B. S. Pani, Alcircle.com
Dr. T. R. P. Singh
Dr. M. Nilmoni

ORGANISING COMMITTEE

Chairman: Shri S. S. Torka, MECON
Co-Chairman: Shri D. Dutta, MECON
Members: Shri H. K. Bhanjdeo, MECON
Shri Sanjeev Kumar, MECON
Shri Rana Chakraborty, MECON
Shri B.N. Satapathy, HINDALCO
Shri B.K. Jha, HINDALCO
Shri Sanjay Agarwal, HINDALCO
Shri P. K. Behera, NALCO
Shri H T Makhijani
Shri Girish Makhijani
Shri A. Surana, Alcircle.com

Convenor: Shri S Majumdar, Corporate Monitor

Co-Convenor(s): Shri A. K. Dayal, MECON
Shri Vinod Misra, MECON