

—Conference Reports—

'94 BAOTOU ISREST

The first Baotou International Meeting on Rare Earth Science, Technology, Trade and Cooperation was held in August 1994 in Baotou, Inner Mongolia, China. more than 10 thousand delegates attended the grand opening ceremony, including 300 representatives from all over the world. All thirty presentations were given by invited speakers. Prof. Gschneider (RIC, USA) presented a paper on the applications of the rare earth elements for the end of the twentieth and beginning of the twenty-first century. he predicted that the consumption of rare earth materials would grow by about 10 per cent per year.

J.D. Matthews and J.P. Vanderstricht (Rhone-Poulenc, France) evaluated the world rare earth market, rare earth price structure and trend and new business opportunities. W. G. Hart (Gorham/Intertech, USA) discussed the current world situation of Nd-Fe-B production, applications and patents. Lian Fazeng (Northeast University, China) and Sun Guangfei (Beijing University of Science and Technology, China) presented papers on rare earth permanent magnets while three papers were devoted to REBaCuO superconductors. Hao Zenqiang (Baotou Hospital, China) reported on his clinical results of the application of NdFeB magnets to dentures. Prof. Kosynkin (Russia) summarised the Russian rare earth industry and outlined new techniques and equipment for recovering rare earths.

All contributions are included in the proceedings of the symposium available from the China Rare Earth Information Centre, Baotou, Inner Mongolia, China. The cost of the 270-page proceedings is US\$280.00.

NdFeB 95 CONFERENCE

Ten years after its introduction, NdFeB has emerged as the leading magnetic material, with global sales in 1994 of US\$625M and growth forecast to continue at 12 to 15 per cent per annum. The Western World NdFeB industry could face a major shake-up as Chinese suppliers increase exports of NdFeB alloys, finished magnets and assemblies. Another unsettling development is the US Navy challenge of the GM and Sumitomo patents, which await resolution, and which could disrupt the strong licencing agreements which have characterised the NdFeB industry since its inception.

The purpose of the ninth international conference on NdFeB, held on 26 to 27 February 1995 in San Diego, USA, was to bring together NdFeB magnetic material producers, molders, users and raw material suppliers, to discuss the issues affecting future growth. The following contributions were presented at the conference:

Yang Luo: NdFeB magnet industry in China today (keynote address)
P. Wheeler et al: Permanent magnets 2005: a fresh look ahead

- E. Haaijer: Meeting the future demands for NdFeB
N. Komada et al.: NdFeB magnets based on HDDR anisotropic powders.
- M. Sagawa: Improvements in manufacturing process for NdFeB sintered magnets.
J.M.D. Coey: Rare earth magnets with interstitial nitrogen or carbon.
G.C. Hadjipanayis: Recent developments in noncomposite NdFeB magnets.
F.G. Jones: A brief overview of new approaches in NdFeB magnet manufacturing.
- F.G. Jones: Addressing the problems of corrosion and temperature limits of NdFeB
G.J. Cunningham: NdFeB magnetizing.
S.Gaiffi: Improved corrosion resistance and temperature behaviour with a new family of Crumax ($\text{Nd}_2\text{Fe}_{14}\text{B}$) materials from Crucible.
- J. Daughton: GMR and permanent magnets.
G.A. Warnaka and P. Tsangaris: Permanent magnets in noise and vibration cancellation.
- N. Ishigaki and H. Yamamoto: NdFeB in Japan.
J.J. Croat: Present and future: rapidly solidified NdFeB magnets and their applications.
W. Benecki: Could it be that NdFeB is a niche product?
- J. Schneider: Hot pressed and bonded NdFeB magnets in Europe.
Y. Kasai: Noequench series magnets: technological update—1995
K. Akioka: Production and use of bonded NdFeB permanent magnets.
M. Wada: NdFeB bonded magnet applications for appliance and automobile motors
- D.L. Williams: Bonded neo opportunities in the auto industry—1994 and beyond
T.R. Davis: Future of voice coil motors.
G.P. Gogue: Motor design advancements using NdFeB magnets.
J.G.W. West: Automotive and aerospace applications of NdFeB
I. Kasuga: Applications for NdFeB in Cd-ROM
C. Gardner: The economics of NdFeB in low field MRI magnet design.
R. Merwin: Application of NdFeB magnets for materials separation
D. Woodhead: The role of the distributor/fabricator.
- A comprehensive set of conference handouts prepared by the speakers is available from Gorham/Intertech, Gorham, Maine, USA, for US\$895.00.