

— *Conference Reports* —

MINERALS ENGINEERING '96 CONFERENCE

BRISBANE, AUSTRALIA
26-28 AUGUST 1996

The *Minerals Engineering Conference* has been an annual event for the past few years. Conferences have been held in Singapore, Canada, South Africa, the United States, England and most recently in Brisbane, Australia. It is organised by Dr Barry Will, principal lecturer at the Camborne School of Mines. Papers presented at these conferences are published in the *Minerals Engineering* journal, also under the editorship of Dr Wills. This conference series has developed into one of the more important annual events on the mineral processing calendar, offering a forum for both researchers and industrial metallurgists to share views, developments and improvements to existing processes through high quality papers and poster presentations.

The conference in Brisbane ran from 26 to 28 August 1996 in the Sheratron Hotel. Some 150 delegates from 15 countries attended. A wide range of topics was presented and discussed.

Papers that were presented covered a wide range of minerals processing topics. The emphasis was again on froth flotation and comminution, but papers on process control and optimisation were also prevalent. A total of 65 papers and 32 posters were presented over three days.

Papers and posters on magnetic and electrical separation were:

T. Kojovic, M. Wilmont, P.N. Holtham and E. Isokangas: *Optimisation and control of HTR separation in mineral sands dry plants*

R. Smolkin and D.N. Misgav: *New equipment for magnetic and gravity separation of minerals*

P.N. Holtham, T.J. Napier-Munn and A. Thornton: *The on-line monitoring of medium loss in dense medium plants*

Z. Li and J.H.P. Watson: *The upgrading of molybdenite flotation concentrates with vortex magnetic separation.*

B.R. Arvidson and D. Henderson: *Rare-earth magnetic separation equipment and applications*

J.H.P. Watson: *Selectivity in high gradient magnetic separation effects due to particle competition for space on the collector*

These papers will be, after peer reviews, published in *Minerals Engineering* journal (Elsevier Science) during 1997.

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**HIDDEN WEALTH CONFERENCE
JOHANNESBURG, SOUTH AFRICA
OCTOBER 1 – 3, 1996**

"Unlocking values from low grade and refractory ores and wastes"

The vast high-grade, easily accessible and exploitable ore deposits are rapidly becoming things of the past. These days, the metal values tend to be deeper or of lower grade, and often of complex mineralogy and in remote areas. All in all, this scenario offers a somewhat daunting challenge to those who work in the industry. However, demand for metals and minerals is not diminishing and the development of alternative, cost-effective production processes becomes imperative.

Against this background, the South African Institute of Mining and Metallurgy (SAIMM) organised the *Hidden Wealth* conference to provide a forum where innovative technology could be presented and discussed. The conference was held at the National Exhibition Centre in Johannesburg, South Africa and approximately 150 delegates from Namibia, Botswana, Zimbabwe, Ghana, Australia, USA, England and South Africa had an opportunity to be exposed to presentations covering mineral beneficiation, hydrometallurgy, pyrometallurgy and treatment of waste products.

In his keynote address, president of SAIMM Nick Barcza outlined numerous hidden sources of minerals and metals, among other wood chips and fine granules in CIP plants as sources of gold, spent catalysts as a source of PGMs, and slags as a source of a variety of metals. In fact, it is estimated that in South Africa alone there are some 53 Mt of ferroalloy slag containing entrained metals worth about US\$1 billion. These dumps, as well as current slag arisings have been recognised as a potential source of ferroalloys for many years. However, most of the recovery plants that were built in the past have struggled to achieve the required product specifications.

Several papers out of total of 27 contributions presented at the conference, reported on developments of more efficient techniques of recovery of metals from slag. A number of papers covered the subject of improved gold and PGMs recovery from various plants using a variety of unit operations. In the area of base metal technology, papers on recovery of lead, zinc, vanadium, copper and cobalt were presented. A common feature of all presentations were excellent visuals and first rate professional approach to the subjects.

The conference coincided with *Electra Mining Exhibition*, one of the world's largest exhibitions of mining and mineral processing technology. Delegates to *Hidden Wealth* enjoyed exposure to the interchange of developments in innovative metallurgical process routes and the synergistic effect that span off from the concurrence of these two events.

Contributions to the conference have been published in the Conference Proceedings, SAIMM, *Symposium Series S16* (edited by H.W. Glen) which are available from SAIMM, P.O. Box 61127, Marshalltown 2107, South Africa.

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