

# Spotlight

## The 13th Annual Mineral Processing Symposium Gordon's Bay, 3-5 August, 1994

by F.W. Petersen\*

For the past thirteen years, the Universities of Cape Town and Stellenbosch have hosted an annual symposium to discuss topics relevant to mineral processing. Since 1987, this Symposium has been held under the auspices of the Western Cape Branch of the South African Institute of Mining and Metallurgy, and has become one of the main events on the national conference calendar. In 1989 and 1993, the symposia took the shape of international conferences.

This year the 13th Annual Mineral Processing Symposium was organized by the two universities, the Cape Technikon, and the local branch of the South African Institute of Mining and Metallurgy, and was held at the Van Riebeeck Hotel in Gordon's Bay.

The Symposium was attended by 130 delegates representing the fields of mineral processing and chemical and materials engineering. Twenty-seven papers and twenty posters were presented. The programme and associated exhibition were well organized, and each of the delegates received a booklet containing the abstracts of the papers and posters presented at the Symposium.

### Annual dinner

The Annual Dinner of the Western Cape Branch was held at the same venue on the second evening of the Symposium. The 8th Annual General Meeting of the Branch preceded the dinner, and the office bearers for the 1994/1995 term were elected, with R.D. Knutsen as Chairman, F.W. Petersen as Vice-Chairman, and C.T. O'Connor as Secretary. The guest speaker at the Dinner was Mr Michael Spicer of the Anglo American Corporation. His talk, entitled 'The importance of the mineral industry in the New South Africa' highlighted the need for young metallurgists to enter the mineral industry with fresh ideas. The quest for niche markets and the concept of adding value to raw minerals are potential challenges awaiting the young metallurgist. The President of the SAIMM, Dr Hugh Scott-Russell, awarded student prizes to the best final-year students in mineral processing at the Universities of Stellenbosch and Cape Town and the Cape Technikon, as well as to the best materials-engineering student at the University of Cape Town. These were respectively Mr D. Annandale, Mr P. Amm, Ms S. Kruger, and Ms S. Vismer.

### Conference programme

The keynote address was delivered by Mr Rob Dunne, Consulting Metallurgist at Newcrest Mining in Western Australia, entitled 'Two decades of mineral processing in Australia: achievements and future objectives'. He referred to

major advances in mineral-processing operations in Australia, with specific emphasis on the importance of the Australian mining industry to the overall production of commodities in the world. The ever-decreasing mineral contents of new ore deposits, and in some cases lower commodity prices, require mining operations to become more efficient. In Australia, this led to changes in the design of process flowsheets, and to the development of new analytical equipment and alternative mining chemicals. He also explained the funding of mineral-processing research in Australia, and stressed the importance of industrial involvement in research projects.

The papers presented on the first day were dedicated mainly to comminution, bio-leaching, environmental engineering, and flotation. Brett Cohen from the University of Cape Town gave an excellent presentation on the solidification and stabilization of hazardous wastes.

The second day started with hydrometallurgy, followed by process control in mineral processing. These topics included research papers featuring the recovery of metal cyanides using ion-exchange resins and acetylene black, the selective extraction of species from insoluble solids with ion-exchange resins, and the adsorption of gold iodide onto activated carbon. Kurt Petersen from the University of Stellenbosch delivered a very interesting paper on the control of a hydrocyclone using videographic image analysis. Other papers presented on the second day included subjects such as the control of repulp sections on plants, the review of evaluation models for the sampling of platinum-containing ores, the application of intelligent control to an industrial run-of-mine milling circuit, and the conversion of the Palabora anode furnace from log poling to hydrocarbon poling.

The poster presentations covered a wide variety of topics, such as a comparison of different adsorbents in gold extraction, the physical characteristics of acetylene black, and the flotation of silicate minerals. A poster on the Western Cape mineral-processing facility, highlighting a proposed mineral-processing pilot plant in the Western Cape, received a great deal of attention.

### Closure

The Symposium closed with a cocktail party that allowed further discussion between delegates. All in all, it was a most successful symposium.

Abstracts of the papers are available from Mrs Meg Winter, Conference Secretary, Department of Chemical Engineering, University of Cape Town, Rondebosch, 7700.

The 14th Annual Mineral Processing Symposium will be held on 3rd and 4th August 1995. ♦

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