

— *Conference Report* —

MINERALS ENGINEERING '92 CONFERENCE 14 – 16 APRIL 1992, VANCOUVER

Minerals Engineering '92 was held at the Westin Bayshore Hotel in Vancouver, Canada, on 14–16 April 1992. The conference was organised jointly by *Minerals Engineering* Journal and the Camborne School of Mines, England. Of the 52 delegates, 13 were from Canada but the remainder were from many countries, including South Africa and Nigeria.

The three-day meeting was the second in a series of annual meetings aimed at bringing together academics, researchers and industrialists from around the world to review the current status and future of minerals processing and extractive metallurgy. The technical sessions covered a wide spectrum of topics, including concentration methods, flotation technology, flotation theory and reagents, computer applications, gold metallurgy, hydrometallurgy and biometallurgy. The proceedings have been published in Vol. 5, Nos 10–12 of *Minerals Engineering*.

Of special interest to the readers of this journal were two collaborative papers on vortex magnetic separation (VMS). The first, by Notebaar and Van der Meer (pp 1135–1145) of Biliton Research Arnhem in the Netherlands, showed that high selectivity and high wolframite recovery could be obtained from wolframite–quartz and wolframite–arsenopyrite artificial mixtures by increasing both the field strength and feed velocity in HGMS. This was attributed to the capture of wolframite particles from vortices formed on the downstream side of the magnetic element. Application of the technique to a copper preconcentrate confirmed that the high feed velocity resulted in much improved grades owing to the reduction in mechanical entrainment.

The second paper, by Watson and Li (pp 1147–1165) in the Institute of Cryogenics, University of Southampton, U.K., confirmed the downstream capture and separation of particles in vortices using single matrix wire experiments. A theoretical model of VMS was constructed, which predicts great improvements in the selectivity, especially in cases where mechanical entrainment is a problem. The model also predicts that the separator should be able to distinguish between small strongly magnetic particles and larger, but more weakly magnetic materials (a difficult problem for HGMS). An added advantage is the higher output because of the high slurry velocity.

Minerals Engineering '93 is to be held in Cape Town, South Africa, on August 25–27, 1993.

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