

SÜRELİ YAYINLAR

CİM BULLETIN

JANUARY 1999

89 Setting up a site selection process for continuous improvement
W. K. Kross

91 Bison and the oil sands industry
R. W. Pauls

95 Closure Plan for the proposed Millennium Project
S. Turtle and R. Sisson

101 Suncor's Steepbank Mine: Realizing the future
R. Doucet

105 Understanding hydrotransport: The key to Syncrude's success
R. B. Paine and B. M. Wright

109 Project Millennium-Cornerstone for growth
D. Hodson

113 Technology visions for mining at Syncrude
A. Fair, J. Oxenford, J. Coward and M. Lipsett

FEBRUARY 1999

55 An experimental approach for estimating évapotranspiration
Y. Tandoğdu and O. Camgöz

61 Industrial minerals in Quebec: Production, major projects, and opportunities
M. Bélanger and H. -L. Jacob

72 Geology Theses, 1995-1997

INTERNATIONAL JOURNAL OF ROCK MECHANICS AND MINING SCIENCES

FEBRUARY 1999

5 Requirements for accurate quantification of self-affine roughness using the roughness-length method
P.H.S.W. Kulatilake and J. Urn

19 Multifractal characterization of rock fracture surfaces
Heping Xie, Jin-An Wang and M.A. Kwasniewski

29 Application of neural networks for the prediction of the unconfined compressive strength (UCS) from Equotip hardness
F. Meulenkamp and M. Alvares Grima

41 Development of an assessment system for the blastability of rock masses
A.-P. Latham and Ping Lu

57 A microstructural analysis of the compaction of claystone aggregates at high temperatures
M. H. H. Hetteema, D. V. Niepce and K. H. A. A. Wolf

69 Tensile strength and abutment relaxation as failure control mechanisms in underground excavations
M. S. Diederichs and P. K. Kaiser

97 Stability of large excavations in laminated hard rock masses: the voussoir analogue revisited
M. S. Diederichs and P. K. Kaiser

119 On the thermal degradation of marble
G.F. Royer-Carfagni

127 Creep behaviour of a weak rock: experimental characterization
E. Maranini and M. Brignoli

INDUSTRIAL MINERALS

JANUARY 1999

7 Comment IM examines the implications of European Monetary Union for the minerals industry

8 World of minerals

20 Industrial Clays Markets Report Georgia on their mines A meeting report from IM's 3rd North American Industrial Minerals Annual Meeting.

25 North American refractories All change at the top The North American refractory industry is experiencing consolidation and rationalisation on a scale previously unseen. IM looks at the industry restructuring and the threats from a slowdown in the steel industry.

37 Rare earths Recent market trends The rare earth industry has always been a world of rapid changes. Jean-Michel Tourre, from Rhodia Rare Earths, examines the latest trends and developments in the market.

45 Processing boron Eti Holding upgrades Bigadiç Eti Holding AS, the world's second largest borates producer, presents the latest developments in grinding technology used at the Bigadiç colemanite and ulexite plant in Turkey.

FEBRUARY 1999

7 Comment IM assesses the implications of Metal's bid for ECC.

25 Chromite in crisis In the eleven months since IM's last review of the chromite sector, the market has been impacted by corporate mergers and a downturn in ferrochrome. The signs are that 1999 could prove to be a tough year.

34 IM profiles - Hemic An expanding independent in South Africa's chrome and andalusite belt, Hemic has rapidly emerged as a force to be reckoned with.

43 It's all tiles up for Italy and Spain Porcelain tiles currently enjoy a massive global boom. Check out this month's review of EU's tile leaders, coupled with an examination of potential threats from Asia.

52 China's phosphate rock export trade Kevin Fountain looks at China's trade in phosphate rock, and in doing so, exposes some of the mysteries of doing mineral business in this huge and often misunderstood country.

63 New trends in kaolin for paper The benefits of kaolin-based synthetic pigments in paper are discussed here.

69 Paper for the population Changes in the North American paper industry are currently challenging paper makers and mineral suppliers. This article highlights these trends and developments influencing this important consumer market of industrial minerals.

MARCH 1999

cover story

42 Building on sand TiO₂ feedstock reviewed Late last year, the titanium minerals business was subject to a major corporate reshuffle in the shape of a merger between leading players WSL and RGC. IM assesses the state of the TiO₂ pigment feedstock industry, its movers and shakers and what's bubbling under the surface (see also IM Profile). The cover picture, courtesy of RBM, shows the company's dredge mining plant in South Africa, with the dredger in the foreground and the concentrator behind.

Features

23 Bauxite in bother Refractory bauxite reviewed Alison Russell reviews the refractory bauxite market which is currently feeling the impact of a depressed refractories market. The main sources of supply and their grades are highlighted, and China's export licence system and its impact on bauxite chronicled.

33 Bauxite Alumina Seminar Abstracts 22-23 March 1999, Miami, USA Abstracts of papers and speakers biographies

from the nonmetallurgical session of the biennial IMIL/MB International Bauxite Alumina Seminar.

37 In the line of fire Flame retardants reviewed The flame retardants market notetial for minerals is looking favourable for the short and immediate term, according to Dr Schmidt. Testing procedures, alumina trihydrate, and magnesium hydroxide are examined in their role as flame retardants in wire and cable compounds.

61 Challenges for talc producers PP compound markets An overview of European talc sources and market trends with reference to tomorrow's challenges for talc in the polypropylene plastics market sector.

MINING ENGINEERING

JANUARY 1999

37 Ekati diamond mine - background and development
M.G. Rylatt and G.M. Popplewell

44 Trailing cable-getting your money's worth
Cliff Holloway

48 Liebherr introduces 327-t (360-st) haul truck

50 Improving the estimates of recoverable reserves
M.E. Rossi

55 Selecting and installing conveyor-belt scales
Sheldon Shepherd and Ron Slauson

59 Technology news: Using mobile satellites for exploration work

IS SME Annual Meeting and Exhibit showguide

65 Patterns of methane emission and their effects on mining costs in underground mining operations
J.M. Mutmansky and Aiping Wang

71 Study of weathering action on coal pillars and its effects on long-term stability
K. Biswas and S. S. Peng

78 Seismic tomography as a tool for measuring stress in mines ~\
D.F. Scott, T.J. Williams, D.K. Denton and M.J. Friedel

FEBRUARY 1999

19 Diamond processing at Ekati in Canada
M.G. Rylatt and G.M. Popplewell

26 Developments in Canadian open-pit mining
Raj K. Singhal and Kostas Fytas

31 Reclamation at the Santa Fe/Calvada Mine breaks new ground

Leslie Burnside, Roy Cellan and Chris Eastin

35 Mining in China: an update
James P. Dorian

45 Triennial Conexpo-Con / Agg show upcoming in Las Vegas

49 Computer-aided earthmoving systems
D. Greene

53 Variation in dust levels with continuous miner position
G.V.R. Goodman and J.M. Listak

59 Artificial neural network application for a predictive task in mining
B.R. Yama and G.T. Lineberry

MINERALS ENGINEERING

JANUARY 1999

1 A comparative evaluation the leading advanced flotation technologies
M.K. Mohanty and R.Q. Honaker

15 On the synthesis of inorganic chemical and metallurgical processes. Review and extension.
L.A. Cisternas

43 Energy absorbed in breakage of single particles in drop weight testing
L.M. Tavares

51 Control of the mill charge behavior in dry tumbling mills
J.Kolacz

65 Anode effects in electrowinning
R.R. Moskalyk, A. Alfantazi, A.S. Tombalakian and D. Valic

75 The potential use of geopolymeric materials to immobilise toxic materials; part II. Material and leaching characteristics
J.G.S van Jaarsveld, J.S.J van Deventer and A. Schwartzman

93 Bioleaching of a Spanish complex sulphide ore bulk concentrate
A. Gómez, M. L. Blázquez, and A. Ballester

107 Normalisation of the efficiency curves of hydrocyclone classifiers
K. Nageswararao

FEBRUARY 1999

129 Development and application of new technology for the treatment of complex massive sulphide ores case study-Faro lead/zinc concentrator-Yukon

S.M. Bulatovic and D.M. Wyslouzil

147 Investigating fine galena recovery problems in the lead circuit of Mount Isa Mines Lead/Zinc Concentrator-Part 1: grinding media effects
V.J. Cullinan, S.R. Grano, C.J. Greet, N.W. Johnson and J. Ralston

165 Investigation of the kinetics of pyrite oxidation by hydrogen peroxide in hydrochloric acid solutions
M. Dimitrijevic, M.M. Antonijevic and V. Dimitrijevic

175 Application of a vegetative cover on phosphogypsum stacks
K. Komnitsas, I. Lazer and I.G. Petrisor

187 Some benefits of using studded surfaces in high pressure grinding rolls
W.I.L. Lim and K.R. Weller

205 The Svedala (ECC International) detritor and the metals industry
C.H. Lofthouse and F.E. Johns

219 Liberation modelling using a dispersion equation
X. Wei and S. Gay

229 Flotation of resinite from high ash coal
A.A. Atia

MARCH 1999

245 Process design for gold ores: a diagnostic approach
V. M. Torres, A. P. Chaves and J. A. Meech

255 Effect of mining chemicals on biosorption of Cu(II) by the non-living biomass of the macrophyte *Potamogeton lucens*
I.A.H. Schneider, R.W. Smith and K. Komnitsas

261 Treatment of waters polluted with radioactive elements and heavy metals by means of a laboratory passive system
Ş.N. Groudev, S.G. Bratcova and K. Komnitsas

271 Mechanics of coal spirals
H.J. Glass, N.J. Minekus and W. L. Dalmijn

281 High temperature superconducting permanently magnetised discs and rings: prospects for use in magnetic separation
J.H.P. Watson

291 Automatic control of a laboratory flotation column
R. Del Villar, M. Grégoire and A. Pomerleau

309 The empirical prediction of bubble surface area flux in mechanical flotation cells from cell design and operating data
B.K. Gorain, J.P. Franzidis and E.V. Manlapig

323 Extraction of copper from sulphate solutions by LIX
864 in Escâid 100
P.Navarro and F.J.Alguacil

329 Entrainment of particles with density between 1.01 and
1.10 g/cm³ in a monobubble Hallimond flotation tube
J.Drzymala

APRIL 1999

341 Use of organic polymers in the flotation of polymetallic
ores;a review
S.M. Bulatovic

355 Comparison of Pb-Zn selective collectors using
statistical methods
M. Barbaro and L. Piga

367 Performance optimization of Jameson flotation
technology for fine coal cleaning
M. K. Mohanty and R.Q. Honaker

383 Studies on the mechanism and kinetics of bioleaching
A.W. Breed and G.S. Hansford

393 Reduction of copper with cellulose in an autoclave; an
alternative to electrolysis?
J.L.T Hage, M.A.Reuter, R.D.Schuiling and
I.S.Remahalsing

405 Process for refining copper in solid state
D.Villaroel

415 Counter-current vs co-current flow in carbon-inpulp
adsorption circuits
J.W.Coetzee and D.E.Gray

423 Investigation of the importance of particle shape and
surface wettability on the separation of plastics in
LARCODEMS separator
R.D.Pascoe and Y.Y.Hou

433 Processing a spodumene ore to obtain lithium
concentrates for addition to glass and ceramic bodies
M.M.Amarante, A.Betolho de Sousa and
M.Machado Leite

437 Ultrasonically assisted rapid solid-liquid separation of
fine clean coal
B.P.Singh