

SURELİ YAYINLAR

C'IMBi;i.I.I-.TIN

JUNE 1998

- 93 Casing and linepipe steels for sour service applications
L.E.Collins and R.Kruger
- 98 Behaviour of inclusions during rolling of continuously cast billets
M. Gagné and E. Thibault
- 104 Inclusion measurement by ASTM E 1245
G.F.Vander Voort
- 107 Inclusion engineering of steels for high speed machining
S.V. Subramanian, H.O. Gekonde, X Zhang and J.Gao
- 116 Characterization of inclusions in steel: When not only size matters
C.Blais and G.L'Espérance

JULY 1998

- 63 White Earth Project, Colorado - the largest titanium resource in the United States
K.C. Shaver and R.A. Lunceford
- 66 Simulation as a tool for quantifying design parameters for material handling systems
D. Cieplinski and D.W Ginsberg
- 68 Sampling density and grade control
D. Marcotte, P Groleau and O.Tavchandjian
- 76 A physical and chemical description of the Kivcet lead flash smelting process
Y.I. Sannikov M.A. Liamina, VA. Shumskij, Y.A. Grinin and M.V Radashin
- 82 Diesel exhaust: Control strategy and measurement at INCO mines
J.S. Stachulak and B.R. Conard

INTERNATIONAL JOURNAL OF ROCK MECHANICS
(4M) MINING SCIENCES

JUNE 1998

- 683 Modification of the DDA method for rigid block problems
C. Y. Koo and J. C. Chern
- 695 Fracture toughness of a soft sandstone
G. R. Krishnan, X. L. Zhao, M. Zaman and J.-C. Roegiers
- 711 Rock characterisation using percussive drilling
H. Schunnesson
- 727 The application of neural networks to Rock Engineering

SJSH-IIIIN t I< I Sj
Y. Yang and y. Zhang

- 747 Inversion of drilling-induced tensile fracture data and obtained from a single inclined borehole
T. Okabe, K. Hayashi, N. Shinohara and S. Takasugi
- 759 The mechanical behaviour of synthetic sandstone with varying brittle cement content
C. David, B. Menendez and Y. Bernabe
- 771 Stress influence charts for transversely isotropic rocks
C. D. Wang and J. J. Liao
- 787 Application of precedent type analysis (PTA) in the construction of Ertan hydroelectric station, China L. Shihui, W. Xiangyang and M. Fengshan
- 797 A microstructure-based failure criterion for Aminadav dolomites
Y. H. Hatzor and V. Palchik
- 807 A modified single plane of weakness theory for the failure of highly stratified rocks
G. Duveau and J. F. Shao
- 815 Slake durability vs ultrasonic treatment for rock durability determinations
G. Crosta
- 825 Indentation hardness testing of rock
T. Szwedzicki
- 831 Draft ISRM suggested method for determining the indentation hardness index of rock materials
T. Szwedzicki

AUGUST 1998

- 837 Analysis of compressive fracture in rock using statistical techniques: Part I. A non-linear rule-based model
S. C. Blair and N. G. W. Cook
- 849 Analysis of compressive fracture in rock using statistical techniques: Part II. Effect of microscale heterogeneity on macroscopic deformation
S. C. Blair and N. G. W. Cook
- 863 Fracture coalescence in rock-type materials under uniaxial and biaxial compression A. Bobet and H. H. Einstein
- 889 Fuzzy cluster algorithm for the automatic identification of joint sets
R. E. Hammah and J. H. Curran
- 907 Permeability changes in granite with crack growth during immersion in hot water
K. Suzuki, M. Oda, M. Yamazaki and T. Kuwahara
- 923 Influence of interface roughness on dynamic shear behavior in jointed rock
D. J. Fox, D. D. Kana and S. M. Hsiung

941 Non-linear, stress- and strain-dependent behavior of soft rocks under cyclic triaxial conditions
R. Yoshinaka, T. V. Tran and M. Osada

957 Comparison of seismic and explosive energy in five smooth blasting test rounds
K.-G. Hinzen

969 Infrared radiation features of coal and rocks under loading
L. Wu and J. Wang

977 Stress intensity factors of the ISRM suggested CCNBD specimen used for mode-I fracture toughness determination
Q.-Z. Wang

983 Block-interfaces model for non-linear numerical simulations of rock structures
X. Zhang and M.-W. Lu

991 A viscoplastic degradation model for rocks
P. A. Nawrocki and Z. Mröz

1001 Numerical simulation of loading inhomogeneous rocks
C. A. Tang, Y. F. Fu, S. Q. Kou and P.-A. Lindqvist

IMH s I KIM \im-KM s

JUNE 1998

7 Comment

Political turmoil intensifies Asian woes

8 World of Minerals

23 US container glass
IM takes a look at the current structure and status of the US industry, and details how the major players have succeeded in halting the decline in traditional markets and captured new contracts.

35 Refractory dolomite
Dolomite has seen its use in refractories decline somewhat in recent years, though it still enjoys steady demand in certain niche markets. This article reviews where dolomite is now being used in refractory applications and examines the major players in the industry.

45 Greek industrial minerals
Many people may underestimate Greece's importance in the world's minerals market, but the country is a leading producer of many important commodities. This contributed article gives a comprehensive review of the Greek minerals industry and looks at the future of its products.

65 Minerals in Compounding
Speakers' biographies and abstracts of papers to be presented at this month's Minerals in Compounding '98 conference in Neuss, Germany.

73 Minerals and polymers
Robert Baker of JM Huber explores the nature of the polymer market and reviews some of the general principles of minerals use.

JULY 1998

7 Comment

8 World of Minerals

20 Comments from KL
A meeting report from the BMI3 Congress in Kuala Lumpur, Malaysia

25 Eco-minerals
Opportunities on the green scene

What and where are the environmental markets for industrial minerals? IM tackles the greener side of mineral supply and discusses what opportunities are available for mineral producers.

37 Barytes-Mexican producers and Gulf markets
This article examines the production and supply of barytes in Mexico. It looks at the changing face of the Mexican industry and the effects of imports from outside the region.

50 Magnetic separation
New developments
The new technology available to help eliminate iron-bound contamination during processing is discussed in this contributed article.

55 Large cell flotation
Improved beneficiation
This feature reports on how large cell flotation can help processors obtain higher quality products.

59 Asia Pacific talc
Under reorganisation
Focussing upon China and Australia, this article reviews the Asia Pacific talc market.

AUGUST 1998

7 Comment

IM examines the role of the antitrust authorities

8 World of Minerals
23 Bentonite production
Unlucky for some

IM reviews the current state of the worldwide bentonite industry- looking at key players and current markets for growth.

41 Minerals-are they just cosmetic?
This contributed article looks at the use of industrial minerals in the manufacture of skin care products.

45 Synthetic minerals
Product and market review
In this, the first of two articles focusing on synthetic mineral products, the authors tackle the main synthetic minerals, methods of manufacture, and examine major areas of consumption.

57 Lithium minerals
In a state of flux
There have been many changes in the lithium minerals supply industry over the past few years. This article looks at today's key players, the markets for lithium minerals and tackles the sensitive issue of pricing within the industry

62 MA - Europe
Standing firm in the frontline
IM reports on the annual meeting of Europe's Industrial Minerals Association.

SEPTEMBER 1998

- 7 Comment
- 8 World of Minerals
- 29 Chinese magnesia for refractories
The technical developments and progress made in the production of Chinese magnesia are discussed.
- 39 Russian refractories
The current state and future outlook for Russian refractories is examined in this article.
- 47 Poland's refractory raw materials
The suitability of Poland's raw materials for use in refractory applications is reviewed, along with the changes needed to enable this industry to grow
- 57 Synthetic minerals
In this, the second of two articles, the author takes a look at advanced ceramics, abrasives and refractories, amongst others.
- 69 Independent inspection in China
This article outlines the importance and potential consequences of independent inspections of global trade, and how this in turn affects China.
- 73 2nd Southern African Minerals conference
Speakers' abstracts and biographies.
- 80 Asbestos production .
The activities of the remaining asbestos producers (excluding the CIS) are examined in context of a still declining global market.
- 88 CIS Asbestos
This paper concerns the status of asbestos production, processing and markets in the CIS.

MINIM. I M. IM I KIM.

JULY 1998

- 27 FEATURE ARTICLES
Powder River Basin: Mother lode of the nation's compliance coal
L. Alan Weakly
- 33 Geology of Wyoming's Powder River Basin coalfield
Gary B. Glass and Robert M. Lyman
- 40 Coal quality challenges in the Powder River Basin-
Sharon G. Roness, Richard A. Turpin and Robert A. Young
- 44 Markets for Southern PRB coal
P.J. Best and P.W. Wright
- 49 Evolution of mining equipment in the Powder River
Basin - Kenneth R. Miller and James L. Long
- 53 Hauling coal into the 21st century
Dave Willis and Will Cunningham
- 58 Peruvian culture on display at mining convention
Steve Krai
- 64 Leadville: A look back
Dave Southworth

- 67 Changing face of US technology transfer
R.R. Klimpel

TECHNICAL PAPERS

- 73 Multimetal recoverable reserve estimation and its impact
on the Cove ultimate pit design
S. Zhang
- 80 Computer-based hazard-awareness assessment program
for surface mines
D.A. Poukhovski and C.J. Bise
- 84 TECHNICAL NOTE:
Comprehensive inventory of known abandoned mine lands in the
Black Hills of South Dakota
C.J. Webb, A. Davis and C.J. Paterson
- 87 DISCUSSION: Increased ore grindability and plant
throughput with controlled blasting
M.C. Fuerstenau, G. Chi, R.C. Bradt and A. Ghosh

AUGUST 1998

FEATURE ARTICLES

- 27 New tricks for an old elephant: Revising concepts of
Coeur d'Alène geology
Brian G. White
- 36 Exploration of the Porphyry Mountain copper-
molybdenum deposit
Jeff Hussey and Pierre Bernard
- 45 Geophysical surveys enhance exploration in Alaska
Laurel E. Burns
- 47 Henderson Mine: Preparing for the future
Jennifer Gallagher and John S. Teuscher
- 53 US iron ore industry facing more worldwide competition
William R. Yernberg

TECHNICAL PAPERS

- 57 Is there a "Voisey's Bay"-type Ni-Cu sulfide deposit in
the Midcontinent rift system in the Lake Superior region?
K.J. Schulz, W.F. Cannon, S.W. Nicholson and L.G. Woodruff
- 63 Effects and control of overbreak in underground mining
G.F. Revey
- 68 Promoting Illinois coal utilization through underground
disposal of combustion products
H. Sevim and A. Unal

SEPTEMBER 1998

FEATURE ARTICLES

- 31 Designing the Minera Alumbreira concentrator circuit
V. Paul Keran, Fred Zumwalt and Jorge Palmes
- 38 Process automation improvements at Cleveland-Cliffs
D.W. Hendrickson, J.R. Scott and J.P. Willig
- 43 Gravity separation: a revitalized technology
A.B. Holland-Batt

49 Underground drilling in high-pressure water at Grasberg
Noris Del Bel Belluz, Dave Peters, Rachmat Wirawan, Nigel
Pearson and Chuck Brannon

55 Seven will be inducted into National Mining Hall of
Fame

59 Calcium carbonate use as filler increases

TECHNICAL PAPERS

61 New process to remove fluorine from copper
concentrates

A. Viana Jr., P.M. Andrade, J. Duarte Neto, G.S.P. Pereira and
V.M. Torres

65 Aquatic toxicity and environmental fate of xanthates
D. W. Boening

69 Characterization of polyester grouts for ground control
M.G. Kafarkis, S.W. Kan, R. Wilson and J. Zelanco

75 DISCUSSION: Physical limnology of existing mine pit
lakes
G.A. Doyle and D.D. Runnells

M!Ni K \[s1 \<.IM I !<i\i.

JUNE 1998

489 A real time visual sensor for supervision of flotation R.
Vidal, A. Soto, cells
C. Sepiilveda, D. Mery and H. Briseno A. Cipriano, M. Guarini

501 Experimental investigation into the application of a
magnetic cyclone for dense medium separation
J. Svoboda, C. Coetzee and Q. P. Campbell

511 Modelling of particle stratification in jigs by the discrete
element method
B. K. Mishra and S. P. Mehrotra

523 The behaviour of gold bearing minerals during froth
flotation as determined by diagnostic leaching
A.J. Teague, C. Swaminathan and J. S. J. Van Deventer

535 Removal of Hg, As and Se ions from gold cyanide leach
solutions by dissolved air flotation
F. Tessele, M. Misra and J. Rubio

545 Infrared spectroscopic analysis of the sorption products
of gold di-cyanide onto activated carbon
N. M. Vegter, R. F. Sandenbergh, L. C. Prinsloo and A. M. Heyns

551 The quantification of shifting adsorption equilibria of
gold and base metals in CIP plants
S. P. Liebenberg and J. S. J. Van Deventer

563 Reductive-oxidative pretreatment of a stibnite a flotation
concentrate: thermodynamic and kinetic and D. J. Simbi
considerations
F. P. Gudyanga, T. Mahlangu, J. Chifamb

581 Calendar of International Conferences, Symposia,
Courses and Meetings of Interest

585 Minerals Engineering Conferences

587 Book Reviews

589 Recent Mineral Processing Publications

595 Call for Abstracts:

International Biohydrometallurgy Symposium 1999

JULY 1998

597 An adaptive fuzzy model to evaluate technological
evolution

J. A. Meech and M. M. Veiga

605 An agglomeration study of sulphide minerals using zeta
potential and settling rate. Part II: pyrite and sphalerite/galena.
J. M. Vergouw; A. Difeo, and Finch

615 Studies on impeller type, impeller speed and air flow
rate in an industrial scale flotation cell Part 5: and validation of k-
Sb relationship and effect of froth depth

B.K. Gorain, T. J. Napier-Munn, J.-P. Franzidis E. V. Manlapig

627 . The effect of roth residence time on the kinetics of
fotation

B.K. Gorain, M. C. Harris, J.-P. Franzidis and E. V. Manlapig

639 Effect of diethylenetriamine on xanthate interaction with
Pb-contaminated pyrite

C.Sui, J. A. Finch and Z. Xu

Technical Notes

651 The solvent extraction behaviour of platinum(II) with P-
50 oxime in aqueous chloride solutions

E. Jackson

657 Limits of the use of industrial talc-the carbonate, effect
P. E. Sarquis and M. Gonzalez

661 Calendar of International Conferences, Symposia,
Courses and Meetings of Interest

667 Minerals Engineering Conferences

677 Recent Mineral Processing Publications

683 Patents Alert

Volume 11, Number 8

AUGUST 1998

689 Contact modelling for discrete element modelling of ball
mills

D. Zhang and W. J. Whiten

699 Development of a size-frequency based model of the
impact size reduction of coarse material

G. J. Brown

707 Two stereological correction methods: allocation method
and kernel transformation method

R. G. Fandrich, C. L. Schneider and S. L. Gay

717 Biological removal of some flotation collector reagents
from aqueous solutions and mineral surfaces

N. Deo and K. A. Natarajan

739 Fuzzy supervisory control of flotation columns

L. G. Bergh, J. B. Yianatos and C. A. Leiva

749 A method for measuring HCN emission from CIP/CIL tanks

A. R. Heath, J. A. Rumball and R. E. Browner

763 Alternative processes for treatment of chalcopyrite a review

S. Prasad and B. D. Pandey

Technical Note

783 Electrobiolaching of sphalerite flotation concentrate

S. C. Selvi, J. M. Modak and K. A. Natarajan

789 Book Review

791 Calendar of International Conferences, Symposia.

Courses and Meetings of Interest

797 Minerals Engineering Conferences

799 Patents Alert

SEPTEMBER 1998

803 Use of coal-oil agglomerates for particulate gold recovery.

J.P. S. Calvez, M. J. Kim, P. L. M. Wong and T. Tran

813 Effect of pyrrhotite reactivity on cyanidation of pyrrhotite produced by pyrolysis of sulphide ore

R. E. Browner and K. H. Lee

821 Solvent extraction equilibria in the $\text{CuSO}_4\text{-H}_2\text{SO}_4\text{-H}_2\text{O-LIX 860-kerosene}$ system

D. Doungeethaveeratana and H. Y. Sohn

827 Mechanical enhancement of the dissolution of ilmenite

N. J. Welham and D.J. Llewellyn

843 On-line ore characterisation and sorting

N. G. Cutmore, Y. Liu and A. G. Middleton

849 The active use of crushers to control product requirements

R.A. Bearman and C.A. Briggs

861 The CSIRO Hopkinson Bar Facility for large diameter particle breakage

R.G.Fandrich, J.M.F.Cloat and F.S.Bourgeois

871 A comparison of particle bed breakage and rod mill grinding with regard to mineral liberation and particle shape effects

Ç. Hoşten and C. Özbay

875 Calendar of International Conferences, Symposia,

Courses and Meetings of Interest

879 Minerals Engineering Conferences

881 Recent Mineral Processing Publications

Patlayıcı Sektöründe Kalite Patlaması

AOAP-120

ISO 9002

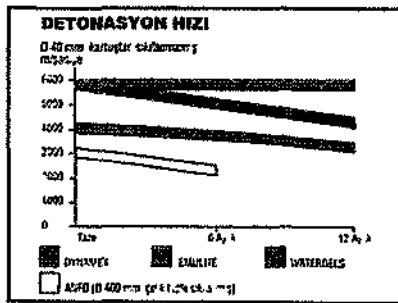
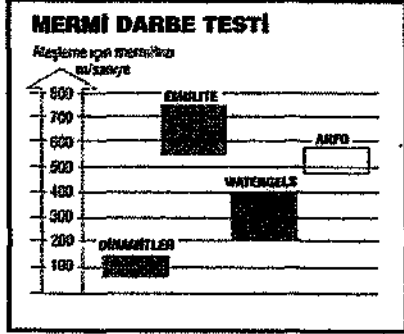
BARUTSAN

patlayıcı ve patlatma uzmanı

Genel Müdürlük: Elmadağ 06780 ANKARA Tel: (0312) 863 30 20 - 863 42 16 Faks: (0312) 863 28 61
Ankara Bürosu: Tandoğan 06330 ANKARA Tel: (0312) 213 69 61 - 213 33 42 Faks: (0312) 212 83 34
BARUTSAN A.Ş. BİR MKEK KURULUŞUDUR.

Nitro Mak

MAKİNA KİMYA-NİTRO NOBEL KİMYA SANAYİİ A.Ş.



FAALİYETLERİMİZ

KAPSÜLE PATLAYAN EMULİTE ÜRETİMİ

YEMLEMEYLE PATLAYAN EMULİTE ÜRETİMİ

KAMYON ŞARJİ (EMULİTE - ANFO)

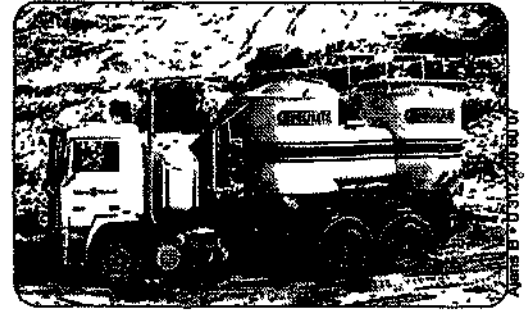
ANFO VE EMULİTE-500 ÜRETİMİ

P.P.T.A. NİTRAT SATIŞI

ELEKTRİKSİZ NONEL KAPSÜLLER

MÜHENDİSLİK HİZMETLERİ

TEMSİLCİLİKLER



Nitro Mak
MAKİNA KİMYA-NİTRO NOBEL KİMYA SANAYİİ A.Ş.

Fabrika : Çakmakçaya/ARTVİN • Tel: 0.466. 721 21 80 • Fax: 721 21 93
Bölge Md. : Soma/MANİSA • Tel: 0.236. 612 16 83 • Fax: 613 94 33
Depo : Danca - GEBZE / İSTANBUL • Tel: (0.262) 726 29 90/1419
Depo : Hasanoğlu/ANKARA

Cinnah Cad. No: 72/14 • 06690 Çankaya - ANKARA
Tel: (0.312) 440 53 17 (Pbx) • Fax: 440 61 59