

CONTENTS

"Phase Inversion Method" for Flotation Study T. TAKAKUWA and T. TAKAMORI	
A Low-Capacity Pilot Workshop for Flotation, using Automatic Settings P. RAFFINOT and V. FORMANEK	
Comminution Kinetics D. W. FUERSTENAU and P. SOMASUNDARAN	25
Distribution of Energy in Centrifugal Crushers Turning on No Load R. PLANIOL	35
Comparative Tests of Grinding a Banded Haematite-Quartz Iron Ore in a Rod Mill and in a Cascade Mill of Large Dimensions W. JACOBS and J. FEIK	45
Study of Auto-Comminution of Lorrainian Ores with the Aim of Enriching them by Magnetic Separation M. PASQUET and G. JOCO	69
Studies of the Hydrocyclone as a Classifier P. H. FAHLSTROM	87
Clear Water Output of Hydrocyclones J. MASSON	115
Study of Kinetics and Mechanism of Certain Hydrometallurgical Processes I. A. KAKOVSKY	125
Undeveloped Potential Use of Ion-Exchange in Hydrometallurgy D. A. EVEREST and R. A. WELLS	145
The Formation of Insoluble Iron Oxide Coatings during the Alkali Pressure Leaching of Pyrite A. R. BURKIN and A. M. EDWARDS	159
Dressing and Purification of Ores by Alkaline Attack E. HERZOG and L. BACKER	171
Ethylene Glycol Leach Process for Producing High Purity Tungstic Acid from Tungsten Ores F. A. FORWARD and A. VIZSOLYI	187
Elution of Uranium by Ammonium Carbonate and Sodium Bicarbonate—Application to Ion Exchange in an Alkaline Medium E. G. MACCHIAVERNA	195
Economic Evaluation of Hydrometallurgical Processes R. E. MUSGROVE	205
Application of Capillarity Lixiviation to the Extraction of Uranium in Minerals J. J. LECOQ, P. MOURET, P. POTTIER, and P. SUGIER	217
The Extraction of Beryllium from Beryl Flotation Concentrates D. A. EVEREST and MISS E. NAPIER	231
A New Apparatus for Pneumatic Separation M. CARTA, C. DEL FA, and G. F. FERRARA	245
Two Hydraulic Machines for Gravity Concentration of Ore E. CONDOLIOS, G. HOFFNUNG and C. MOREAU	261
A Study of Jigging as Applied to the Concentration of Alluvial Material—with Particular Reference to the Possibility of Automatic Control of Dilation F. B. MICHELL and PRASIT SUVARNAPRADIP	283

CONTENTS

Advances in Hydrocyclone Heavy Media Separation Technology for Fine Ores	
D. S. DAVIES, H. H. DREISSEN and R. H. OLIVER	
Beneficiation Tests of a Low-Grade Serpentinic Iron-Nickel-Chromium-Cobalt Ore in a Dense Liquid	
D. LESIC	
Beneficiation of Cobalt Arsenides of Bou-Azzer (Morocco) by Gravity Concentration and Flotation	
V. FORMANEK and J. LAUVERNIER	
Occurrence and Properties of Haematite Slimes	
A. S. JOY and D. WATSON	
Reagents for Iron Ore Flotation	
V. A. GLEMBOTSKY	
Beneficiation of Certain Lorraine Iron Ores by Flotation of the Siliceous Gangue	
M. DURAND, F. GAUTHIER and R. GUYOT	
Contribution to the Mechanism of Action of Flotation Reagents. (Concentration of Collectors at the Contact Perimeter and Activation of Hematite Flotation by Sodium Silicate)	
W. I. KLASSEN and S. I. KROKHIN	
Hematite-Magnetite Grain Growth in a Reducing Roast	
D. H. DAHLEM and C. L. SOLLENBERGER	
Study of the Beneficiation of Certain Lorraine Iron Ores by Magnetizing Roasting	
M. BOUCRAUT, R. KOSKAS and J. MICHARD	
Comminution of Hematite-Quartzites by Combined Reduction and Autogenous Grinding	
J. B. LEAN and H. K. WORNER	
The Lurgi Process of Magnetizing Roasting, a Possible Method of Processing Iron Ore	
K. MEYER	
The Treatment of Siderites in Hungary and the Recovery of their Barite and Copper Content	
A. GAGYI-PALFY and A. HAALASZ	
Complex Treatment of Slovakian Siderites. (Based on the Example of the Ore Deposit of Rudnany)	
V. HENCL	
Adsorption Measurements by Membrane Electrodes	
G. RINELLI	
Inorganic Electrolytes and Colloids in Elementary Flotation	
M. A. EIGELES and V. S. VOLVENKOVA	
Hysteresis of Contact Angles	
A. M. GAUDIN, A. WITT, A. K. BISWAS and T. G. DECKER	
Iron Exchanger Flotation. (Separation of Ion Exchanger Mixtures and Selective Removal from Liquids by Means of Froth Flotation of Ions of Ion Exchange Resins)	
A. SINGEWALD	
Flotation Rate Studies	
H. S. TOMLINSON and M. G. FLEMING	
Kinetic Consideration of Froth Flotation	52
T. IMAIZUMI and T. INOUE	
Hydrodynamics of Flotation Machines	
N. ABIRTER and J. STEININGER	
Oxalate Activation in the Flotation of Monazite Sands by Heavy Sulphonate Collections	609
M. Y. FARAH and L. A. FAYED	
Flotation and Cyclone Treatment of the Barite Contained in the Tailings of the Rammelsberg Sulphide Flotation	
M. CLEMENT and E. KLÖSSEL	

CONTENTS

vii

Developments and Results Obtained in the Treatment of Zinc Oxide Ores at the Ammi Mines M. BILLI and V. QUAI	631
The Concentration of Beryl from Pegmatite Ores D. N. MOIR, D. N. COLLINS, H. C. CURWEN and R. M. MANSER	651
Development of a Process for the Concentration of Oka Pyrochlore H. L. NOBLITT	669
Copper Analysis of Pulp Streams in the Anaconda Copper Concentrator by X-ray Fluorescence W. LUCY, T. G. FULMOR and F. L. HOLDERREED	679
Determining the Tenor of Certain Metals in Products of Enrichments by Means of Radioactive Isotopes A. A. KALMAKOV, S. I. POL'KIN, G. A. KHAN and V. V. SMIRNOV	
Applied Instrumentation and Control in the Ore Preparation Field A. J. LYFIELD	701
Some Aspects of Beneficiation Plant Automation G. V. BLYUMKIN, YE. L. KRITSKII, M. F. LOKONOV, N. K. NIKOL'SKII, and K. V. ROZHKOV	715
Centralized Control of a New Hydrometallurgical Plant in Katanga C. PIEDBOEUF and F. SUYS	