

**CANMET  
CATALOGUE OF PUBLICATIONS**

**1986/1987**

**CATALOGUE DES PUBLICATIONS  
DE CANMET**



**CANMET Special Publication  
SP 88-21**

**Publication spéciale de CANMET  
SP 88-21**

## FOREWORD

This catalogue contains a comprehensive listing of reports, papers submitted for publication to external journals, texts of oral presentations, by CANMET research and professional staff during 1986/87. A list of contract reports, containing results of research by external contractors sponsored by CANMET, and submitted during the same period, is also included.

An author index, a contractor's index and a bilingual index of subjects is provided. Numbers following index entries refer to the entry number of the report in the body of the catalogue.

Further information about all publications cited in this catalogue may be obtained upon application to the

Publications Sales and Distribution Unit  
Library and Documentation Services Division  
Canada Centre for Mineral and Energy  
Technology (CANMET)  
562 Booth Street

Ottawa, Canada, K1A 0G1  
Telephone: (613) 992-6793  
Telex: 053-3395  
Telefax: (613) 952-2587

## AVANT-PROPOS

Le répertoire comprend une liste complète des rapports et exposés scientifiques soumis aux journaux de l'extérieur à des fins de publication de même que les textes des exposés présentés par les chercheurs scientifiques et le personnel professionnel de CANMET au cours de l'année financière 1986-1987. Il contient également une liste des rapports des résultats des travaux de recherche soumis dans la même période par les entrepreneurs parrainés par CANMET.

Un index des auteurs et des entrepreneurs de même qu'un index bilingue des sujets sont présentés. Les chiffres qui suivent les inscriptions indiquent le numéro de déclaration d'entrée du rapport.

Si vous désirez plus des renseignements au sujet des publications qui figurent sur le répertoire, veuillez vous adresser à

Unité de vente et de distribution des  
publications  
Division des services de bibliothèque et de la  
documentation  
Centre canadien de la technologie minéraux et  
de l'énergie (CANMET)  
562, rue Booth

Ottawa, Canada, K1A 0G1  
Téléphone: (613) 992-6793  
Télécopie: (613) 952-2587

## Contents / Table des matières

<b>Section 1 - CANMET Reports / Rapports de CANMET</b>	<b>1</b>
<b>Section 2 - CANMET Special Reports / Rapports specials du CANMET</b>	<b>2</b>
<b>Section 3 - Contract Research Reports / Rapports de marchés</b>	<b>4</b>
<b>Section 4 - Divisional Reports / Rapports des divisions</b>	<b>12</b>
<b>Coal Research Laboratories / Laboratoires de recherche sur le charbon . . . . .</b>	<b>12</b>
Declassified Report / Rapport déclassifié . . . . .	12
Investigation Reports (IR) / Rapports d'étude (IR) . . . . .	12
Journal Publications / Publications dans des revues . . . . .	12
Monographs / Monographies . . . . .	14
Oral Presentations / Présentations orales . . . . .	14
Technical Reports (TR) / Rapports techniques (TR) . . . . .	21
<b>Energy Research Laboratories / Laboratoires de recherche sur l'énergie . . . . .</b>	<b>34</b>
Investigation Reports (IR) / Rapports d'étude . . . . .	25
Journal Publications / Publications dans des revues . . . . .	25
Literature translations (LT) / Traductions . . . . .	28
Oral Presentations / Présentations orales . . . . .	28
Technical Reports (TR) / Rapports techniques (TR) . . . . .	40
<b>Mining Research Laboratories / Laboratoires de recherche minière . . . . .</b>	<b>40</b>
Investigation Reports (IR) / Rapports d'étude . . . . .	40
Journal Publications / Publications dans des revues . . . . .	40
Oral Presentations / Présentations orales . . . . .	42
Technical Reports (TR) / Rapports techniques (TR) . . . . .	53
<b>Mineral Sciences Laboratory / Laboratoires de recherche en métallurgie     physique . . . . .</b>	<b>58</b>
Declassified Report / Rapport déclassifié . . . . .	58
Journal Publications / Publications dans des revues . . . . .	62
Literature Translations and Literature Surveys (LT) (LS) / Traductions et études documentaires . . . . .	67
Oral Presentations / Présentations orales . . . . .	67
Technical Reports (TR) / Rapports techniques (TR) . . . . .	74
<b>Physical Metallurgy Research Laboratories Laboratoires de recherche en     métallurgie physique . . . . .</b>	<b>75</b>
Journal Publications / Publications dans des revues . . . . .	75
Oral Presentations / Présentations orales . . . . .	75
Technical Reports (TR) / Rapports techniques . . . . .	90

<b>Author Index / Index des auteurs</b>	<b>93</b>
<b>Contractor Index / Index des entrepreneurs</b>	<b>103</b>
<b>Subject Index / Index des sujets</b>	<b>104</b>

## Section 1

### CANMET Reports / Rapports de CANMET

- 0001 *CANMET REPORT 85-12E* **Petruk, W.\* Mainwaring, P.R.** Recent developments in process mineralogy of complex sulphide ores; PAGES: 20 FICHE: 1
- 0002 *CANMET REPORT 86-03E* **Silver, M.\*** Analytical techniques for research on the abatement of bacterial acid generation in pyritic tailings; PAGES: 33 FICHE: 1
- 0003 *CANMET REPORT 86-04E* **Petruk, W.\*** Image analysis: an overview of developments; PAGES: 13 FICHE: 1
- 0004 *CANMET REPORT 86-05* **Romaniuk, A.S.\*** Canadian coal preparation plants; (Eng. Fr. Ger. & Russ.) PAGES: 227 FICHE: 3
- 0005 *CANMET REPORT 86-06E* **Carette, G.G.\* Malhotra, V.M.** Characterization of Canadian fly ashes and their relative performance in concrete; PAGES: 57 FICHE: 1
- 0006 *CANMET REPORT 87-08* CANMET REVIEW 1986-1987; (Available only from DSS and CANMET Publications at no charge) PAGES: 8 FICHE: 1
- 0007 *RAPPORT DE CANMET 85-12F* **Petruk, W.\* Mainwaring, P.R.** Développements récents en matière d'études minéralogiques du traitement des minerais sulfurés complexes; PAGES: 20 FICHE: 1
- 0008 *RAPPORT DE CANMET 87-08* REVUE DE CANMET 1986-1987; (Publication gratuite distribuée par le MAS et CANMET seulement) PAGES: 8 FICHE: 1
- 0009 *RAPPORT DE CANMET 85-0* **McCready, R.G.L.\* Sanmugasunderam, V.** Rapports préparés sous contrat par la Noranda, relatifs à l'étude préliminaire de faisabilité du procédé de lixivation bactérienne in situ; PAGES: 57 FICHE: 1

## Section 2

## CANMET Special Reports / Rapports spéciaux de CANMET

- 0010 *SP 85-06* **McCready, R.G.L.\*** Proceedings of the Second Annual General Meeting of Biominet: October 24-25, 1985, Mississauga, Canada; PAGES: 145 FICHE: 2
- 0011 *SP 85-08E* **Zoldners, N.G.\*** An annotated bibliography on nondestructive testing of concrete: 1975-1984; PAGES: 83 FICHE: 1
- 0012 *SP 86-01E* **Moloughney, P.E.\*** Assay methods used in CANMET for the determination of precious metals; PAGES: 43 FICHE: 1
- 0013 *SP 86-01F* **Moloughney, P.E.\*** Méthodes d'analyse utilisées au CANMET pour la détermination des métaux précieux; PAGES: 45 FICHE: 1
- 0014 *SP 86-03E* **Brehaut, C.H.\*** 1985-1986 annual report of the Canada-Ontario-industry rockburst project; Available only from DSS or CANMET Publications. PAGES: 18 FICHE: 1
- 0015 *SP 86-03F* **Rapport annuel 1985-1986 du projet de recherche conjoint Canada-Ontario-industrie sur les coups de toit; Disponible seulement de: ASC ou CANMET** PAGES: 18 FICHE: 1
- 0016 *SP 86-04* **Grenier, M.\*** Index of underground-environment dust reports: CANMET/Mining Research Laboratories, 1960-1985; PAGES: 20 FICHE: 1
- 0017 *SP 86-05* **Hedley, D.G.F.\*** Index of rock mechanics research reports: CANMET/Mining Research Laboratories: 1964-1984; PAGES: 31 FICHE: 1
- 0018 *SP 86-06* Mining automation; PAGES: 115 FICHE: 2
- 0019 *SP 86-07* **McCready, R.G.L.\*** Workshop on basic microbiology for the mineral industry; PAGES: 94 FICHE: 1
- 0020 *SP 86-09* **McCready, R.G.L.\*** Proceedings of the third annual general meeting of biominet; PAGES: 180 FICHE: 2
- 0021 *SP 86-10E* **Bawden, W.\*** Survey of South African seismic systems; PAGES: 55 FICHE: 1
- 0022 *SP 86-10F* **Bawden, W.\*** Présentation de systèmes sismiques utilisés en Afrique du sud; PAGES: 55 FICHE: 1
- 0023 *SP 86-11E* **Underground metal mining: estimating preproduction and operating costs of small underground deposits; Available only from DSS and CANMET Publications** PAGES: 267 FICHE: 3
- 0024 *SP 86-11F* **Exploitation souterraine de mines de métaux;** PAGES: 213 FICHE: 3
- 0025 *SP 86-12* **Clarke, R.\*** Index of mining technology projects - 1986; PAGES: 165 FICHE: 2

- 0026 *SP 86-14E* **Makuch, A.\*** Design of a new macroseismic monitoring system; PAGES: 28  
FICHE: 1
- 0027 *SP 86-15E* **Niewiadomski, J.\*** Source-location techniques using p-wave arrivals; PAGES:  
20 FICHE: 1
- 0028 *SP 86-16E* **Geller, L.B.\*** Selected theoretical and practical aspects of studies made in  
conjunction with the joint Canada/FRG research project on coarse-slurry, short-distance  
pipelining; PAGES: 144 FICHE: 2
- 0029 *SP 87-01* **Udd, J.E.\*** Mining automation II Proceedings of the second workshop sponsored  
by CANMET/Mining Research Laboratories, Sudbury, Ontario, October 17, 1986 PAGES: 96  
FICHE: 1

### NATIONAL URANIUM TAILINGS PROGRAM REPORTS

- 0030 Radiochemical methods manual; **Chiu, N.W.\* Dean, J.R.** *NUTP 03E* PAGES: 60 FICHE:  
1

## Section 3

## Contract Research Reports / Rapports de marchés

- 0031 Protective coating for components of Fossil Energy Conversion Systems: final report; **Sze, W.\* Shimizu, H. Gibbon, W.M.** *Ontario Research Foundation 1SQ81-00070* progress report nos. 1 & 2: PAGES: 54 FICHE: 1
- 0032 The development of rapidly solidified stainless steel alloys for powder metallurgy applications phase I: final report; **Pruitt, F.\* Fossen, W.F. Sullivan, J.D.** *Sinteris Canada Ltd. 1SQ84-00265* PAGES: 69 FICHE: 1
- 0033 High energy rate compaction of rapidly solidified metal powders: final report; **Lyall, R.W.\* Sullivan, J.D. Shimizu, H.** *Ontario Research Foundation 1SQ84-00303* PAGES: 110 FICHE: 2
- 0034 Evaluation of weld zone corrosion of shipbuilding steel plates for use in the arctic environment: final report; **Donepudi, V.S.\* Santyr, S. Malik, L. Garner, A. McLean, M.** *Algoma Steel 1SQ84-00334* PAGES: 121 FICHE: 2
- 0035 Evaluation of waste crushed rock for use in concrete railroad ties: (UP-L-276): final report; **N.G. Zoldners** *1SQ84-00366* PAGES: 49 FICHE: 1
- 0036 Exploratory investigation on low-pressure rotating dynamic membrane process for treating bitumen/water/mineral emulsions: final report; **SNC Inc.** *1SQ84-00375* PAGES: 60 FICHE: 1
- 0037 Feasibility of using gaspils and other methods of remotely measuring methane in coal mines and preparation of a conceptual design for a suitable instrument (UP-M-513): phase I final report; **Moniteq Ltd.** *1SQ85-00021* PAGES: 136 FICHE: 2
- 0038 Recovery of gold by single-stage deepfluidized bed, ion exchange and carbon technique: final report; **1SQ85-00064** PAGES: 76 FICHE: 1
- 0039 Evaluation of resin-in-pulp technology for Canadian gold ores; **Witteck Development Inc.** *1SQ85-00108* PAGES: 102 FICHE: 2
- 0040 Microbial degradation/alteration of carbonaceous species in a copper/molybdenum concentrate: final report; **Witteck Development Inc.** *1SQ85-00162* PAGES: 110 FICHE: 2
- 0041 Prototyping and testing the retrofit of residential gas fired furnaces with induced draft fans and intermittent spark ignition: final report; **The Conserver Group Inc.** *1SQ85-00200* PAGES: 63 FICHE: 1
- 0042 Evaluation of fracture toughness data with respect to reliability of subarctic and arctic structures; **Tomin, M.J.\* Lantos, S.L.** *Det norske Veritas (Canada) Ltd. 1SQ85-00206* PAGES: 192 FICHE: 2
- 0043 The CFB Summerside project Aspen simulation; **Becker, H.A.\* Douglas, P.L. Young, B.E.** *Univ. Queen's 1ST84-00078* PAGES: 53 FICHE: 1



- 0044 Conversion du méthane en essence automobile par réactions en cathode creuse: rapport final; *Univ. du Québec à Chicoutimi 1ST84-00189* PAGES: 85 FICHE: 1
- 0045 Valorisation des boués biologiques pétrolières par décomposition thermique sous vide: rapport final; **Roy, C.\* Larouche, J.-P. de Caumia, B.** *Univ. de Sherbrooke 1ST84-00455* PAGES: 91 FICHE: 1
- 0046 Petroleum coke gasification in a plasma reactor: final report: June 1st 1983 - May 31st 1985; **Boulos, M.I.\*** *Univ. de Sherbrooke 1SU83-00091* PAGES: 57 FICHE: 1
- 0047 Role of catalysts in heteroatom removal during hydroprocessing of model compounds: final report; *Univ. Alberta 1SV84-00197* PAGES: 139 FICHE: 2
- 0048 Evaluation of the Point Leamington deposit: phase II: final report; **Stowe, K.G.\*** *Noranda Exploration Co. 59210-01-SQ* PAGES: 160 FICHE: 2
- 0049 Process evaluation of selected options for treating New Brunswick manganese mineral deposits: vol. I: results of testwork (project 5211); vol. II: economic analysis (project 5211); *Witteck Development Inc. 59217-01-SQ* PAGES: 387 FICHE: 4
- 0050 Upgrading of feldspar: Manitoba MDA: final report; **Burt, R.O.\* Flemming, J.** *Tantalum Mining Corporation of Canada Ltd. 59246-01-SQ* PAGES: 35 FICHE: 1
- 0051 The assessment, evaluation and validation of a computer based simulation model: final report; *Monenco Consultants Ltd. 59249-01-SQ* PAGES: 188 FICHE: 2
- 0052 Manitoba slags deposits, characterization, modifications potential utilization: appendices; *John Emery Geotechnical Engineering Ltd. 59250-01-SQ* PAGES: 216 FICHE: 3
- 0053 Study of the geochemistry of thorium in uranium mill tailings: final report; *Melis Consulting Engineers Ltd. 61723-01-SQ* PAGES: 104 FICHE: 2
- 0054 Literature review of radionuclide movement through the biosphere; **Trotter, D.M.\* Veska, E. Neame, P.A.** *Monenco Consultants Ltd. 61724-01-SQ* PAGES: 167 FICHE: 2
- 0055 The potential of genetic and adaptive changes to bacteria in uranium mill tailings; *Beak Consultants Ltd. 61725-01-SQ* PAGES: 102 FICHE: 2
- 0056 Investigation of treatment of Pine Brook barite to obtain mud-grade barite concentrate: final report; *Technical University of Nova Scotia 69083-01-ST* PAGES: 114 FICHE: 2
- 0057 Dry magnetic separation of insol from sylvite and halite: final report; *Noranda Minerals Inc. 69119-01-SQ* PAGES: 61 FICHE: 1
- 0058 Dense media separation of potash ore using triflo dense media separation; *Cominco 69123-01-SQ* PAGES: 156 FICHE: 2
- 0059 An evaluation of the visits of the mobile foundry laboratory by ORF and CRIQ; *Kanata Consulting Group 69200-01-GR* PAGES: 32 FICHE: 1
- 0060 Develop and evaluate the gas metal arc welding/submerged arc welding (GMAW/SAW) process for improved weld properties: final report; *Stelco ISQ83-00226* PAGES: 58 FICHE: 1

Section 3

- 0061 An investigation of the corrosion fatigue behaviour of magnetic metallic glasses (UP-M-502): final report; *Manitoba Research Council ISQ84-00248* PAGES: 45 FICHE: 1
- 0062 Development of engineering ceramics having high toughness, thermal shock and erosion resistance; **Kazi, H.A.\*** *Nova Scotia Research Foundation Corp. ISQ85-00183* PAGES: 63 FICHE: 1
- 0063 An evaluation of the mobile foundry laboratory by its clients; *Kanata Consulting Group OGR85-00264* PAGES: 52 FICHE: 1
- 0064 Detailed study of the reaction mechanism of spontaneous combustion of coal with particular emphasis on western Canadian low-rank coals; **Majumdar, A.\* Bachelor, F.W.** *Univ. Calgary OSG83-00109* PAGES: 190 FICHE: 2
- 0065 Feasibility study: analysis of aqueous polymer additives using cylindrical internal reflectance spectroscopy: final report: interim report; *Univ. St. Francis Xavier OSG83-00114* PAGES: 33 FICHE: 1
- 0066 Exhaust particulate filter performance study to CANMET: final report; *Ontario Research Foundation OSQ79-00037* PAGES: 45 FICHE: 1
- 0067 Flocculants: final report; *Raylo Chemicals Ltd. OSQ80-00207* PAGES: 86 FICHE: 1
- 0068 Flocculants: final report; *Raylo Chemicals Ltd. OSQ82-00229* PAGES: 43 FICHE: 1
- 0069 To determine the dynamic toughness properties of cast steels: final report; *Alloy Casting Industries Ltd. OSQ83-00101* PAGES: 64 FICHE: 1
- 0070 A field test program to evaluate the use of waste salt backfill in Saskatchewan potash mines: final report; *Central Canada Potash OSQ83-00323* PAGES: 175 FICHE: 2
- 0071 Evaluation of heat affected zone and weld metal toughness in selected steels: phase 1: volume 1 of 2: final report: **Bala, S.R.\* Santyr, S.** *AMCA International Ltd. OSQ84-00032* phase 1: volume 2 of 2: final report; PAGES: 380 FICHE: 4
- 0072 Evaluation of blast furnace slag from Algoma Steel Corporation's no. 7 blast furnace for possible use as an additive to concrete - sample preparation: final report; *Watts Cement Ltd. OSQ84-00052* PAGES: 66 FICHE: 1
- 0073 The design, construction and commissioning of a wide plate test facility: final report; **Glover, A.G.\* Pick, R.J.** *Welding Institute of Canada OSQ84-00058* PAGES: 41 FICHE: 1
- 0074 Direct conversion of synthesis gas to high octane gasoline over HZKQ-IB zeolite: final report; *CRIQ OSQ84-00081* PAGES: 203 FICHE: 3
- 0075 Impact of nitrogen compounds on the processing of synthetic gas oil: final report; *Gulf Canada Ltd. OSQ84-00095* PAGES: 178 FICHE: 2
- 0076 Hydrogenation and its effects on fluid catalytic cracking unit feedstocks; **Curts, L.E.\* Dymock, K.R.** *Gulf Canada Ltd. OSQ84-00121* PAGES: 92 FICHE: 1

- 0077 Lacnor field study: Elliot Lake, Ontario: appendix 1: geohydrology and geochemistry: appendix 2: meteorology, air quality and radioactivity: appendix 3: surface water studies: appendix 4: biology: appendix 5: laboratory facilities and chemical methods; Lacnor field study; *Golder Associates OSQ84-00196* PAGES: 451 FICHE: 5
- 0078 Technical and economic assessment of producing liquid fuels from natural gas via an electricity-based acetylene process: phase II; **Cooke, N.E.\* Ashraf, F.A. Dianji, H. Konecny, M. Owerie, P. Quach, Thi-Quy** *SNC Inc. OSQ84-00209* PAGES: 288 FICHE: 3
- 0079 A continuing study of CWF fuels and atomizers with development of numerical analysis of atomization and spray formation and a statement on experimental research work required: final report; vol. II - phase II CLM study; vol. III - phase II CLM study; *Ralph Grossman OSQ84-00233* PAGES: 761 FICHE: 8
- 0080 Comparative study of geostatistical grade control and classical approach - iron ore processing: final report; *Geostat Systems International Inc. OSQ84-00261* PAGES: 271 FICHE: 3
- 0081 Experimental verification of a high velocity projectile impact model for commercial explosives: final report; **Katsabanis, P.\* Moroz, J. Duncan, D.** *Mining Resource Engineering Ltd. OSQ84-00329* PAGES: 255 FICHE: 3
- 0082 Naturally occurring radionuclides on lake sediments in the vicinity of an operating uranium mill in northern Saskatchewan; *Monenco Consultants Ltd. OSQ84-00361* PAGES: 134 FICHE: 2
- 0083 Reverse osmosis separation of model compounds in heptane and toluene solutions: final report; *Zenon Environmental Inc. OSQ84-00371* PAGES: 237 FICHE: 3
- 0084 Operation and maintenance manual for MODEL 4100/4150 particle counter; *Mono Research Laboratories Ltd. OSQ84-00373* PAGES: 129 FICHE: 2
- 0085 Pre-engineering assessment of Enersolve Demonstration Project - dairy processing plant: final report; *SNC Inc. OSQ84-00396* PAGES: 90 FICHE: 1
- 0086 Combustion, sulphur neutralisation and vanadium balance tests with Syncrude coke and Fort Mc Murray limestone in a pilot-scale atmospheric recirculating fluidized-bed reactor: final report; *Polymath Energy Consultants Ltd. OSQ84-00417* PAGES: 78 FICHE: 1
- 0087 Surface pillars - phase II: tome I; surface pillars - phase II: tome II; *Roche Ltd..OSQ85-00003* PAGES: 530 FICHE: 6
- 0088 Piliers de surface - phase II: tome I; piliers de surface - phase II: tome II; *Roche LTée OSQ85-00003* PAGES: 557 FICHE: 6
- 0089 Survey of methane accumulation within coal silos; *Associated Mining Consultants Ltd. OSQ85-00006* PAGES: 194 FICHE: 2
- 0090 Natural pozzolans; *Univ. California OSQ85-00008* PAGES: 41 FICHE: 1
- 0091 Selective separation of coal-pyrite from coal: project report; *B.C. Research Laboratories OSQ85-00020* PAGES: 64 FICHE: 1

- 0092 Relationship between process parameters and wire feed speed for arc welding processes: final report; **Santyr, S.\* Proux, G.** *AMCA International Ltd. OSQ85-00023* PAGES: 49 FICHE: 1
- 0093 Development of a technically and economically acceptable substitute binder for bentonite for use with Carol Lake concentrate: phase IV - final report; **Martinovic, T.I.\*** *Iron Ore Company of Canada OSQ85-00053* PAGES: 325 FICHE: 4
- 0094 Recommended values for bitholite ore OKA-2; *Bondar-Clegg and Company Ltd. OSQ85-00054* PAGES: 6 FICHE: 1
- 0095 Completion of systems development and adaptation phase of CANMET diesel emissions reduction program - part III: final report; **Manicom, B.\* Vergeer, H.C. Lawson, A.** *Ontario Research Foundation OSQ85-00061* PAGES: 78 FICHE: 1
- 0096 In situ stress determinations Prince and Lingan mines, Cape Breton, Nova Scotia; *Golder Associates (Eastern Can.) OSQ85-00063* PAGES: 262 FICHE: 3
- 0097 Evaluation of combustion options for anthracite utilization: final report 1985/86; *Gulf Canada Corp. OSQ85-00076* PAGES: 135 FICHE: 2
- 0098 Stabilization of coal measures strata with water-based chemical agents - part 2; *Jacques, Whitford & Associates Ltd. OSQ85-00088* PAGES: 105 FICHE: 2
- 0099 Hydrogeochemical investigation of reactive tailings at the Waite Amulet tailings site, Noranda, Quebec - 1985 program: final report; *Ontario Research Foundation OSQ85-00101* PAGES: 208 FICHE: 3
- 0100 Modification of integrated oil shale retort system: final report; **Salib, P.\* Barua, S. Robson, R. Ritchie, C.** *Research and Productivity Council OSQ85-00120* PAGES: 74 FICHE: 1
- 0101 Thermally coupled pressure swing adsorption for natural gas conversion to liquid fuels: final report; **Keefer, B.G.\*** *Highquest Engineering Inc. OSQ85-00131* PAGES: 100 FICHE: 2
- 0102 Characterization and determination of surface bound hydrogen and deuterium in 1062, 4037 and 4140 steels by secondary ion mass spectrometry: final report; **Donepudi, V.S.\* McIntyre, N.S.** *AMCA International Ltd. OSQ85-00136* PAGES: 99 FICHE: 1
- 0103 A study on the desulphurization of coal by bacterial leaching; **O'Neil, D.\* Birk, D.** *Atlantic Coal Institute OSQ85-00144* PAGES: 51 FICHE: 1
- 0104 Biological control of thiobacillus ferrooxidans by predatory organisms: report P-4965/FG-final; *Ontario Research Foundation OSQ85-00179* PAGES: 55 FICHE: 1
- 0105 Demonstration of the probabilistic system model for assessment of the long-term effects of arsenic/nickel-rich uranium mill tailings deposits in Canada; *Beak Consultants Ltd. OSQ85-00207* PAGES: 326 FICHE: 4
- 0106 The fate of radium in uranium leaching and its consequent dissolution mechanisms; **LeGeyt, M.\*** *Chemex Labs Ltd. OSQ85-00213* PAGES: 52 FICHE: 1

- 0107 Entrained bed gasification of residues using the Texaco gasification process; *Texaco Inc.* OSQ85-00220 PAGES: 10 FICHE: 1
- 0108 Comparison of biosorption capacity of Denison mine isolates with organisms previously assessed; *Acres, Davy, McKee Eng. Inc.* OSQ85-00223 PAGES: 205 FICHE: 3
- 0109 The technology of uranium tailings covers; memorandum I: Canadian uranium tailings deposits and structures: memorandum II: characteristics relevant to releases of three generic Canadian uranium tailings sites: memorandum III: methodology for stability and release rate evaluation: memorandum IV: assessment of alternative evaluation methods and alternative stabilization practices: memorandum V: evaluation of cover and structure stability on three generic Canadian uranium tailings sites: *Steffen, Robertson & Kirsten (B.C.) Inc.* OSQ85-00226 PAGES: 784 FICHE: 8
- 0110 The stability of control structures for uranium mill tailings; *Steffen, Robertson & Kirsten (B.C.) Inc.* OSQ85-00227 PAGES: 82 FICHE: 1
- 0111 Estimation of the limits of acid generation by bacterially-assisted oxidation in uranium mill tailings: *Senes Consultants Ltd.* OSQ85-00237 PAGES: 398 FICHE: 4
- 0112 Selection of mineral deposits in Newfoundland suitable for research; *Nolan, Davis & Associates Ltd.* OSQ85-00239 PAGES: 83 FICHE: 1
- 0113 Sampling and analysis of New Brunswick manganese deposits; *Atlantic Analytical Services Ltd.* OSQ85-00248 PAGES: 188 FICHE: 2
- 0114 Evaluation of equipment and processes to sample offshore placer deposits from small fishing vessels: volume I: final report; Volume II: survey of existing sampling systems; *Nordco Ltd.* OSQ85-00287 PAGES: 332 FICHE: 2
- 0115 Study of radium-226 co-precipitates in uranium mill tailings by secondary ion mass spectrometry; *Atlantic Nuclear Services Ltd.* OSQ85-00289 PAGES: 66 FICHE: 1
- 0116 Comparison of the probabilistic systems assessment codes, UTAP and SYVAC3, applied to the long-term assessment of uranium mill tailings in Canada: volume I: main report: volume II: appendices; **Goodwin, B.W.\* Andres, T.H.** *Atomic Energy of Canada Research Co.* OSQ85-00293 PAGES: 413 FICHE: 5
- 0117 Instrument loop diagrams: pilot plant electronic instrumentation system: phase 1 task 1: instrument panel drawings: pilot plant electronic instrumentation system: phase 1 task 2; *Monenco Consultants Ltd.* OSQ85-00305 PAGES: 360 FICHE: 4
- 0118 Evaluation of Point Leamington deposit Newfoundland: phase I - sampling; *Nolan, Davis & Associates (N.S.) Ltd.* OSQ85-00311 PAGES: 31 FICHE: 1
- 0119 Effect on the energy efficiency of tunnel kilns manufacturing structural clay products of fluoride emission control systems: phase III: final report; *Pollutech Ltd.* OSQ85-00321 PAGES: 135 FICHE: 2
- 0120 Mineral processing investigations of Bird River chromite ore: *Lakefield Research* OSQ85-00344 PAGES: 205 FICHE: 3

- 0121 Development of a computer control system for a heavy media coal processing pilot plant: final report - February 1986; detailed design document of heavy media cyclone control system for Coal Research Laboratory pilot plant, Devon, Alberta; *Williams Brothers Canada Ltd. OSQ81-00045* PAGES: 120 FICHE: 1
- 0122 A study of the effect of surface modification on alloy oxidation behavior: (1984-86) final report; *Univ. McMaster OST83-00152* PAGES: 181 FICHE: 2
- 0123 Investigation of the semiconductor catalysts for the production of liquid fuels: final report; **Morrison, S.R.\* Funt, L. Colbow, K.** *Univ. Simon Fraser OST83-00155* PAGES: 109 FICHE: 2
- 0124 Numerical simulation of steam injection in bitumen and heavy oil reservoirs: phase I: part 1: phase I: part 2; **DeBuda, P.G.\* Cormack, D.E.** *Univ. Toronto OST83-00195* PAGES: 89 FICHE: 1
- 0125 A study of sulfur solubility and diffusivity in Cr<sub>2</sub>O<sub>3</sub> and its role in materials degradation in coal combustion systems: final report; *Ecole Polytechnique de Montreal OST83-00227* PAGES: 114 FICHE: 2
- 0126 Evaluation of the flash liquefaction pyrolysis process applicable to Canadian coals: final report; *Univ. Waterloo OST84-00007* PAGES: 234 FICHE: 3
- 0127 Kinetic studies of coke formation in hydrocarbon fractions of different bitumens under various conditions: final report; **Laidler, K.J.\* Banerjee, D.K.** *Univ. Ottawa OST84-00118* PAGES: 95 FICHE: 1
- 0128 Design, development and study of the characteristics of transducers for the ultrasonic inspection of offshore structures: final report; **Hutchins, D.A.\* Mair, H.D.** *Univ. Queen's OST84-00139* PAGES: 50 FICHE: 1
- 0129 To determine the influence of friction on the prediction of formability and press shop performance for galvanized low and high strength steel: final report; **Duncan, J.L.\* Embury, J.D. Sowerby, R.** *Univ. McMaster OST84-00187* PAGES: 138 FICHE: 2
- 0130 Direct production of gasoline range hydrocarbons from Syngas in a dual bed reactor system; **Bakhshi, N.N.\*** *Univ. Saskatchewan OST84-00321* PAGES: 160 FICHE: 2
- 0131 Product optimization of the direct conversion process of natural gas to methanol by controlled oxidation: final report; **Yarlagadda, P.S.\* Morton, L.A. Hunter, N.R. Gesser, H.D.** *Univ. Manitoba OST85-00032* PAGES: 162 FICHE: 2
- 0132 A critical review of the light scattering technique in the determination of oil/water interfacial tension; **Craig, T.\*** *Univ. Guelph OST85-00053* PAGES: 83 FICHE: 1
- 0133 Development and characterization of selected synthesis catalysts; **Bakhshi, N.N.\*** *Univ. Saskatchewan OST85-00158* PAGES: 94 FICHE: 1
- 0134 Potassium vapour impregnation of metallurgical coke: final report; *Univ. McMaster OST85-00277* PAGES: 25 FICHE: 1

- 0135 The production of methanol by the controlled oxidation of methane at high pressures: final report; **Morton, L.A.\* Hunter, N.R. Gesser, H.D.** *Univ. Manitoba OSU82-00266*  
PAGES: 57 FICHE: 1
- 0136 Filtration and precipitation characteristics of yellow cake: determination of the critical factors in the precipitation of uranium from sulfonate solutions using experimental design techniques; **Golding, J.A.\* Hopkins, J.** *Univ. Ottawa OSU82-00416* PAGES: 93 FICHE: 1

## Section 4

## Divisional Reports / Rapports des divisions

Coal Research Laboratory / Laboratoires de recherche sur le  
charbon

## Declassified Report / Rapport déclassifié

- 0137 Calculation of the width of barrier pillar required to protect a development drivage against inundation; **Cain, P.\*** *ERP/CRL 84-038(CF)* PAGES: 15 FICHE: 1
- 0138 An evaluation of subsidence criteria for the east and west side panels, Phalen mine, Sydney coalfield, N.S.; **Aston, T.R.C.\*** *ERP/CRL 86-084(CF)* PAGES: 23 FICHE: 1
- 0139 *ERP/CRL 86-090(CF)* **Srajer, V.\*** Description of loading and hauling operations at Gregg River mine; PAGES: 27 FICHE: 1

## Investigation Reports (IR) / Rapports d'étude (IR)

- 0140 *ERP/CRL 85-107(IR)* **Ross, S.D.\* Cain, P.** The effectiveness of new tailgate support methods at Lingan colliery; PAGES: 21 FICHE: 1
- 0141 *ERP/CRL 86-017(IR)* **Haslett, G.A.\* Stewart, D.B.** Some common features of retreat longwall panels in highly productive mines; PAGES: 22 FICHE: 1
- 0142 *ERP/CRL 86-101(IR)* **Klinowski, W.G.\* Haslett, G.A.** Measurement of performance of hollow shaft ventilators on D.E.R.D. shearers at Lingan mine; PAGES: 15 FICHE: 1
- 0143 *ERP/CRL 86-104(IR)* **Cain, P.\* Yuen, C.M.K. LeBel, G. Crawford, A. Lau, D.** Triaxial testing of brittle sandstone using a multiple failure state method; PAGES: 20 FICHE: 1
- 0144 *ERP/CRL 86-106(IR)* **Stokes, A.\* Klinowski, W.G.** Analysis of tracer gas data from a study of airflow movements through a leaching stope in a uranium mine; PAGES: 13 FICHE: 1
- 0145 *ERP/CRL 86-117(IR)* **Cain, P.\*** Carbon/carbonate analysis of rock/gas prone sandstones from the Sydney coalfield; PAGES: 7 FICHE: 1
- 0146 *ERP/CRL 86-118(IR)* **Cain, P.\*** Heat generation of bagged 'ASTRACEM'; PAGES: 10 FICHE: 1



**Journal Publications / Publication dans les revues**

- 0147 CRL/CAT 86/87 004 **Absolom, D.R.\* Eom, K. Vargha-Butler, E.I. Hamza, H.A. Neumann, A.W.** Surface properties of coal particles in aqueous media. II. adhesion of coal particles to polymeric substances; *Colloids and Surfaces*, 17, 143-157, 1986
- 0148 CRL/CAT 86/87 005 **At-Tawell, A.M.\* Delory, B. Wozniczek, J. Stefanski, M. Hamza, H.A.** Influence of the surface characteristics of coal on its floatability; *Colloids and Surfaces*. 18 9-18 1986
- 0149 CRL/CAT 86/87 006 **Axelson, D.E.\*** Solid state carbon-13 nuclear magnetic resonance of heavy oil/bitumen-derived solids; *Fuel*, 66, 40-43, 1987
- 0150 CRL/CAT 86/87 007 **Axelson, D.E.\*** Spinning sideband suppression and quantitative analysis in solid state NMR of fossil fuels; *Fuel*, 66, 195-199, 1987
- 0151 CRL/CAT 86/87 008 **Axelson, D.E.\* Leung, W.M. VanDyke, J.D.** Cross polarization-induced explosive decomposition of certain electrically conducting polymers; *Magn. Reson., Chem.*, 24 5490550, 1986
- 0152 CRL/CAT 86/87 009 **Axelson, D.E.\* Parkash, S.** C-13 solid state NMR of Alberta subbituminous macerals; *Fuel Science Int'l.*, 4(1), 45-85, 1986
- 0153 CRL/CAT 86/87 010 **Bertie, J.E.\* Michaelian, K.H. Eysel, H.H. Hager, D.** The Raman-active O-H and O-D stretching vibrations and Raman spectra of gaseous formic acid -d1 and O-D; *Journal of Chemical Physics* 85, 4779-4789, 1986
- 0154 CRL/CAT 86/87 011 **Chakravorty, R.N.\* Kolada, R.J.** Developments in coal mines fire control; *Journal of Mines Metals & Fuels*, Special Number 1986
- 0155 CRL/CAT 86/87 012 **Das, B.\* Cross, D.B.** Survey on the requirements of computer training for coal industry in Canada; *CIM Bulletin* 79:890:49:52; June, 1986
- 0156 CRL/CAT 86/87 013 **Donini, J.C.\* Michaelian, K.H.** Near infrared photoacoustic FTIR spectroscopy of clay minerals and coal; *Infrared Physics* 26, 135-140, 1986
- 0157 CRL/CAT 86/87 014 **Friesen, W.I.\* Michaelian, K.H.** Fourier deconvolution of photoacoustic FTIR spectra; *Infrared Physics* 26, 235-242, 1986
- 0158 CRL/CAT 86/87 015 **Konda, B.W.\* Kochhar, J.K.** Undersea longwall mining at Cape Breton; *Engineering and Mining Journal*, May 1986
- 0159 CRL/CAT 86/87 016 **Michaelian, K.H.\*** The Raman spectrum of kaolinite #9 at 21 degree C; *Canadian Journal of Chemistry*, 64, 285-289, 1986
- 0160 CRL/CAT 86/87 017 **Neumann, A.W.\* Vargha-Butler, E.I. Hamza, H.A. Absolom, D.R.** Surface properties of coal particles in aqueous media I. solidification front measurements; *Colloids and Surfaces*, 17 pp. 131-142, 1986

- 0161 CRL/CAT 86/87 018 Patching, T.H.\* Mikhail, M.W. Studies of gas sorption and emission on Canadian coals; *CIM Bulletin*, March, 1986
- 0162 CRL/CAT 86/87 019 Singhal, R.K.\* Picking a coal planner; *The Northern Miner Magazine*, May, 1986
- 0163 CRL/CAT 86/87 020 Singhal, R.K.\* Golosinski, T.S. Developments in loading and transportation systems for surface mines; *CIM Reporter*, May 13, 1986
- 0164 CRL/CAT 86/87 021 Singhal, R.K.\* Osborne, D.G. Coal mining developments in Canada; *World Mining Equipment*, July, 1986
- 0165 CRL/CAT 86/87 022 Singhal, R.K.\* Application of bucket wheel excavators; *The Indian Mining and Engineering Journal*, July 1986 Proceedings of the Continuous Mining Symposium, Edmonton, Alberta, September, 1986
- 0166 CRL/CAT 86/87 023 Singhal, R.K.\* Sahay, H. Canadian coal industry: developments in resource conservation and productivity improvement; *Mining Engineering*, September, 1986
- 0167 CRL/CAT 86/87 024 Suh, J.S.\* Michaelian, K.H. Surface-enhanced Raman scattering as a probe of surface geometry effects on the polymerization of acrylic acid on silver; *Journal of Physical Chemistry* 91, 598-600, 1987
- 0168 CRL/CAT 86/87 025 Szymanski, J.\* Mansour, N.A. Rheological transient model of dense coal/water suspensions; *J. Fuel Sci. & Tech. Int.*; 4-5, 1986
- 0169 CRL/CAT 86/87 026 Szymanski, J.\* Mintz, K.J. Small-scale flame tests on fire retardant conveyor belting; *Journal of Fire Science*, vol. 4, no. 4, 1986
- 0170 CRL/CAT 86/87 027 Vargha-Butler, E.I.\* Kashi, M. Hamza, H.A. Neumann, A.W. Direct contact measurements on polished sections of coal; *Coal preparation*, vol. 3, pp 53-75, 1986

### Monographs and Sections of Monographs / Monographies et sections de monographies

- 0171 CRL/CAT 86/87 001 Singhal, R.K.\* Geotechnical stability in surface mining; *Proceedings of the International Symposium on Geotechnical Stability in Surface Mining*, Calgary, Canada, November 6-7, 1986, Balkema, Amsterdam, 1986
- 0172 CRL/CAT 86/87 002 Axelson, D.E.\* Conformational analysis in solid state NMR; *Chapter 6 in Carbon-13 NMR of Synthetic Polymers in Bulk*, R.A. Komoroski (ed), Verlag Chemie International, Deerfield Beach, Florida, pp 227-245 1986
- 0173 Axelson, D.E.\* Carbon-13 solid state NMR of semicrystalline polymers; *CRL/CAT 86/87 003 Chapter 5 in Carbon-13 NMR of Synthetic Polymers in Bulk*, R.A. Komoroski (ed), Verlag Chemie International, Deerfield Beach, Florida

**Oral Presentations / Présentations orales**

- 0174 **Angle, C.W.\*** Role of electrokinetics in crude emulsions study; *CRL/CAT 86/87 072*  
*Presentation to a joint CRL/Oil Industry Meeting; Alberta, Apr. 1986*
- 0175 **Axelson, D.E.\*** NMR applications to heavy oil recovery processes; *CRL/CAT 86/87 073*  
*Presented at Syncrude, Alberta, 1986*
- 0176 **Axelson, D.E.\*** Applications of NMR to industry; *CRL/CAT 86/87 074* *Presented at the*  
*CIC, University of Alberta; June, 1986*
- 0177 **Bonnell, G.W.\* Corbett, G.R. Hwang, J. Kennedy, D. Young, D.A.** Equipment and  
techniques for the correct measurement of airborne dust; *CRL/CAT 86/87 075* *Presented*  
*to Lingan Colliery Safety Committee; November, 1986*
- 0178 **Das, B.\*** Methane desorption characteristics in coal handling; *CRL/CAT 86/87 076*  
*Presented to the Annual Meeting of the Calgary Branch of CIM; Calgary, Dec., 1986*
- 0179 **Das, B.\*** Geotechnical considerations in surface mining; *CRL/CAT 86/87 077* *Presented*  
*to the Mining Engineering Students, University of Alberta, Edmonton, Oct., 1986*
- 0180 **Das, B.\*** Natural and artificial support of open pit slopes; *CRL/CAT 86/87 078* *Presented*  
*to the Mining Engineering Students, University of Alberta, Edmonton, Alta., Oct., 1986*
- 0181 **Friesen, W.I.\*** Emulsion stability; *CRL/CAT 86/87 079* *Presented to a joint CRL/Oil*  
*Industry Meeting, Devon, Alberta, April, 1986*
- 0182 **Hashmi, K.A.\*** Results of field testing of Obed Mountain coal washery; *CRL/CAT 86/87 080*  
*Presented to the Obed Washery Staff, Hinton, Alberta; Sept. 1986*
- 0183 **Hashmi, K.A.\*** CANMET mobile plants field testing units; *CRL/CAT 86/87 081*  
*Presented to the Staff of Cassiar Asbestos Corp., Cassiar, B.C.; Feb., 1987*
- 0184 **Hashmi, K.A.\*** Bench scale and mobile pilot scale dewatering facilities; *CRL/CAT 86/87*  
*082* *Presented to the staff, Total Erickson Gold Mine Corporation; Feb., 1987*
- 0185 **Haslett, G.A.\* Kennedy, D. Klinowski, W.G. Stokes, A.** The construction, interpretation  
and use of flammability triangles as aids to the evaluation of mine fires; *CRL/CAT 86/87 083*  
*Presented to Senior Production and Engineering Staff Members of the Cape Breton*  
*Development Corporation; Dec., 1986*
- 0186 **Hassani, F.P.\* Afrouz, A. Cain, P.** A comparative study of monolithic packs as artificial  
pillars; *CRL/CAT 86/87 084* *Presented at Morgantown Energy Laboratory, West Virginia,*  
*Jan., 1986*
- 0187 **Mansour, N.A.\*** Sensor developments; *CRL/CAT 86/87 085* *Presented at Morgantown*  
*Energy Laboratory, West Virginia; Jan., 1986*

- 0188 **Mansour, N.A.\*** Microwaves; *CRL/CAT 86/87 086* Lecture presented to *Electrical Engineering Department, University of West Virginia, Jan., 1986*
- 0189 **Mikhail, M.W.\*** CRL coal preparation research facilities at Devon; *CRL/CAT 86/87 087* Presented at the *CIMM Meeting in Rocky Mountain Branch, Alberta; May, 1986*
- 0190 **Potoczny, Z.M.\*** Heavy oil mini-plant; *CRL/CAT 86/87 088* Presented at the *Oil Industry-CANMET Meeting, Coal Research Laboratory, Devon, Alberta, Apr., 1986*
- 0191 **Romaniuk, A.S.\*** Coal reserve assessment in Energy, Mines and Resources Canada; *CRL/CAT 86/87 089* Presented to the *Reserves and Resources Reporting Seminar; Calgary, Alberta, Nov., 1986*
- 0192 **Singhal, R.K.\*** Innovative developments in loading and hauling equipment for surface mines; *CRL/CAT 86/87 090* Presented at *CIM Rocky Mountain Branch, Edson, Alberta, Mar., 1987*
- 0193 **Singhal, R.K.\* Golosinski, T.S.** Equipment selection in surface mining; *CRL/CAT 86/87 091* Presented as a mini-course in association with the *1986 National Symposium on Surface Mining, Hydrology, Sedimentology and Reclamation; Lexington, Kentucky, Dec., 1986*
- 0194 **Aston, T.R.C.\* Tammemagi, H.Y. Poon, A.W.** A review and evaluation of empirical and analytical subsidence prediction techniques; *ERP/CRL 86-042(OP)* *88th Annual General Meeting of CIMM; May, 1986, Montreal*
- 0195 **Singhal, R.K.\*** Surface mining equipment selection developments in loading and hauling; *ERP/CRL 86-051(OP)* This report is the text of a presentation to *Calgary Branch of the Canadian Institute of Mining and Metallurgy, Apr. 9, 1986*
- 0196 **Haslett, G.A.\* Corbett, G.R. Young, D.A.** An investigation into the effect of varying water pressure and flow rates upon the release of airborne respirable dust by a *Dosco MKIIB roadheader equipped with a water jet assisted cutting head; ERP/CRL 86-058(OP)* *8th International Symposium on Jet Cutting Technology Durham, England, Sept., 9-11, 1986*
- 0197 **Chakravorty, R.N.\* Sahay, H.** Problems associated with the storage of thermal coal and their potential solutions; *ERP/CRL 86-108(OP)* *Second International Symposium on Occupational Health & Safety on Mining and Tunnelling, Prague, Czechoslovakia, September 1986*
- 0198 **Majdi, A.\* Hassani, F.P. Cain, P.** The influence of design parameters on tunnel closure in the Sydney coalfield; *ERP/CRL 86-116(OP)* *88th Annual General Meeting of CIMM; May 1986, Montreal*
- 0199 **Chakravorty, R.N.\* Lanteigne, R. Forrester, P.I.** Methane control during shipments of coal; *ERP/CRL 86-134(OP)* *Ninth International Symposium on the Transport and Handling of Dangerous Goods by Sea and Inland Waterways; Rotterdam. The Netherlands, April 1987*
- 0200 **Szymanski, J.\*** Velocity of wave propagation in a dense coal water suspensions; *ERP/CRL 86-156(OP)* *Proceedings of the 10th International Technical Conference on Slurry Technology; Lake Tahoe, Nevada; march 26-28, 1985*

- 0201 **Romaniuk, A.S.\*** Coal reserve assessment in CANMET: some issues; *M&ET/CRL 86-076(OP)* presented to the Reserves and Resources Reporting Seminar; Calgary, Alberta, November 1986
- 0202 **Angle, C.W.\* Hamza, H.A.** The effect of selected polymers on the electrokinetic properties of fine coal particles and silica in washery water, synthetic electrolytes and humic acids; *CRL/CAT 86/87 028* International Symposium on Flocculation and Biotech. & Separation Systems, San Francisco; July 1986
- 0203 **Angle, C.W.\* Leung, W.M. Mikula, R.J. Hamza, H.A.** Sulfur characterization of an eastern Canadian coal for optimization of beneficiation; *CRL/CAT 86/87 029* Processing and Utilization of High Sulfur Coals Y.A. Attia Ed. Elsevier Science 1985 pp 67-68
- 0204 **Ansari, R.R.\* Hallett, F.R.** The particle-polymer interactions in a bridging flocculation mechanism; *CRL/CAT 86/87 030* Proc. International Symposium on flocculation in Biotechnology and Separation Systems, San Francisco; July, 1986
- 0205 **Aston, T.R.C.\*** Undersea coal mining research in Canada; *CRL/CAT 86/87 031* 13th Congress of the Council of Mining and Metallurgical Institutions; May 1986, Singapore
- 0206 **Aston, T.R.C.\*** A review and evaluation of empirical and analytical subsidence prediction techniques; *CRL/CAT 86/87 032* 88th Annual General Meeting of CIMM: May 1986 Montreal
- 0207 **Axelson, D.E.\*** Quantitative analyses of fossil fuels and related materials; *CRL/CAT 86/87 033* 8th Annual Rocky Mountain Regional Meeting of the American Chemical Society, Denver, Colorado June 1986
- 0208 **Chakravorty, R.N.\* Shay, H.** Problems associated with the storage of thermal coals and their potential solutions; *CRL/CAT 86/87 034* 2nd International Symposium on Occupational Health and Safety on Mining and Tunnelling, Prague, Czechoslovakia, September 1986
- 0209 **Cavers, D.S.\* Baldwin, G.J. Hannah, T. Singhal, R.K.** Design methods for open pit coal mine footwalls; *CRL/CAT 86/87 035* International Symposium on Geotechnical Stability, Calgary, Canada, November 1986
- 0210 **Das, B.\* Simpson, B.** Rock bolting and the influence of confining stress induced in the rock mass; *CRL/CAT 86/87 036* 88th AGM of CIM; Montreal; May 1986
- 0211 **Hucka, V.J.\* Tu, H.J. Das, B.** Computer analysis of the effects of mine subsidence on pipelines; *CRL/CAT 86/87 037* 88th AGM of CIM; Montreal; May 1986
- 0212 **Das, B.\*** Rock characterization through microhardness techniques; *CRL/CAT 86/87 038* Proc 27th U.S. Symposium on Rock Mechanics; University of Alabama; 121-129; June 1986
- 0213 **Das, B.\* Barron, K.** Empirically derived formulae for coal pillar strength; *CRL/CAT 86/87 039* Presented to the Workshop - The Role of Pillars in Soft Rock Mining: Saskatoon, Nov., 1986
- 0214 **Friesen, W.I.\* Mikula, R.J.** Fractal dimensions of coal particles; *CRL/CAT 86/87 040* 17th Annual Meeting of the Fine Particle Society, San Francisco; July 1986

- 0215 **Haslett, G.A.\* Corbett, G.R. Young, D.A.** An investigation into the effect of varying water pressure and flow rate upon the release of airborne respirable dust by a dosco MKIIB roadheader equipped with a water jet assisted cutting head; *CRL/CAT 86/87 041* 8th International Symposium on Jet Cutting Technology; Sept., 1986, Durham, England
- 0216 **Leung, W.M.\* Axelson, D.E. Syme, D.** Flocculation behaviour of partially imidized and hydrolyzed polyacrylamides; *CRL/CAT 86/87 042* Presented at International Symposium on Flocculation in Biotechnology and Separation Systems, San Francisco; July 1986
- 0217 **Levine, S.\* Friesen, W.I.** Flocculation of colloid particles by watersoluble polymers; *CRL/CAT 86/87 043* Proc. Symp. on Flocculation in Biotechnology and Separation Systems, San Francisco; 1986, pp 3-20
- 0218 **Majdi, A.\* Hassani, F.P. Cain, P.** The influence of design parameters on tunnel closure in the Sydney coalfield; *CRL/CAT 86/87 044* 88th Annual General Meeting of CIMM; May 1986, Montreal
- 0219 **Mansour, N.A.\*** A novel oil-in-water concentration sensor; *CRL/CAT 86/87 045* 4th International Symposium on Multi-Phase Transport & Particulate Phenomena, Miami Beach; Dec., 1986
- 0220 **Mansour, N.A.\*** Measurement of solids concentration in coal slurries using non-radioactive E.M. waves; *CRL/CAT 86/87 046* 21st Microwave Power Symposium, Memphis, Tennessee; July 1986
- 0221 **Mikula, R.J.\*** Application of scanning electron microscopy to tar sands emulsions; *CRL/CAT 86/87 047* Proceedings of the 13th Annual Meeting of the Microscopical Society of Canada, Hamilton, Ontario, Canada; 1986
- 0222 **Naidu, H.G.\* Singhal, R.K.** The potential for cast blasting in Canadian surface mines; *CRL/CAT 86/87 048* International Symposium on Geotechnical Stability in Surface Mining; Calgary, November 1986
- 0223 **Potoczny, Z.P.\* Vargha-Butler, E.I. Zubovitz, T.K. Neumann, A.W.** Surface tension of bitumen extracted from oil sands; *CRL/CAT 86/87 049* 57th Colloid and Surface Science Symposium, ACS University of Toronto, Ont. Paper no. 18; June 1986
- 0224 **Salama, A.I.A.\* Mikhail, M.W.** Analysis of coal and mineral processing circuits: signal flowgraph approach; *CRL/CAT 86/87 050* Proceedings of the 88th Annual General Meeting, The Canadian Institute of Mining and Metallurgy (CIM), Montreal, Quebec, May 11-15, 1986
- 0225 **Salama, A.I.A.\*** Yield maximization in coal blending; *CRL/CAT 86/87 051* Proceedings of the 10th International Coal Preparation Congress, Edmonton, September 1986
- 0226 **Salama, A.I.A.\* Mikhail, M.W.** Optimization of coal or mineral circuits; *CRL/CAT 86/87 052* Proceedings of the 3rd Conference on the Use of Computers in the Coal Industry, Morgantown, West Virginia, U.S.A., pp. 169-176; July 1986
- 0227 **Singhal, R.K.\* Sahay, H.** Developments in resource conservation and productivity improvement; *CRL/CAT 86/87 053* Society of Mining Engineers of AIME, Annual Meeting, New Orleans, U.S.A. pre-print no 86-19 March 1986

- 0228 **Singhal, R.K.\*** Evaluation for the acquisition and use of computers in resource evaluation and mine planning of surface mines in oil sands and coal; *CRL/CAT 86/87 054 Proceedings 19th International Symposium on the Application of Computer Methods in Mineral Industries, Pennsylvania State University, April, 1986*
- 0229 **Singhal, R.K.\* Vladut, T.** Design of solid waste dumps and waste disposal in western Canadian surface mines; *CRL/CAT 86/87 055 9th Annual Symposium on Geo-Aspects of Waste Management, Colorado State University, U.S.A. February 1987*
- 0230 **Singhal, R.K.\* Golosinski, T.S.** Basic considerations in selection of bucket wheel excavators; *CRL/CAT 86/87 056 88th Annual General Meeting, Canadian Institute of Mining and Metallurgy, Montreal, May, 1986*
- 0231 **Singhal, R.K.\* Fytas, K.** Optimization of hauling and loading operations in surface mining; *CRL/CAT 86/87 057 3rd Conference on the Use of Computers in the Coal Industry, West Virginia University, July, 1986*
- 0232 **Singhal, R.K.\*** Equipment selection and mining methods; *CRL/CAT 86/87 058 International Symposium on Modern Coal Mining Technology, Fuxin Mining Institute, Fuxin, Liaoning, China, September 1986*
- 0233 **Singhal, R.K.\* Fytas, K. Wilson, E.G.** Comparison of Fortran and GPSS languages in the simulation of shovel truck open pit operations; *CRL/CAT 86/87 059 Society of Mining Engineers Fall Meeting, St. Louis, U.S.A., September, 1986*
- 0234 **Singhal, R.K.\* Fytas, K. Collins, J.L.** Optimizing loading and hauling productivity in surface mining; *CRL/CAT 86/87 060 Society of Mining Engineers Fall Meeting, St. Louis, U.S.A., September, 1986*
- 0235 **Singhal, R.K.\* Golosinski, T.S.** Automation and remote control of continuous mining systems for surface mining of oil sands; *CRL/CAT 86/87 061 2nd International Conference on Innovative Mining Systems, Pennsylvania State University, U.S.A., October, 1986*
- 0236 **Singhal, R.K.\* Krzanowsky, R.M. Wade, N.H.** Numerical modelling of material diggability; *CRL/CAT 86/87 062 International Symposium on Continuous Surface Mining, Edmonton, Canada, October, 1986*
- 0237 **Singhal, R.K.\* Fytas, K. Collins, J.L.** Design, construction and maintenance of surface mine haul roads; *CRL/CAT 86/87 063 International Symposium on Geotechnical Stability, Calgary, Canada, November, 1986*
- 0238 **Srajer, V.\*** The development and validation of a truck and shovel computer model; *CRL/CAT 86/87 064 Proceedings of 19th APCOM Conference, Penn. State University, University Park, Penn. U.S.A. 1986*
- 0239 **Srajer, V.\*** A review of on-board truck management systems; *CRL/CAT 86/87 065 Proceedings of the Third Conference on the Use of Computers in the Coal Industry, Morgantown, W. Virginia, U.S.A., July, 1986*
- 0240 **Srajer, V.\* Sedlacek, J.** Application of bucket wheel technology to Canadian coal mines; *CRL/CAT 86/87 066 Proceedings of the Continuous Mining Symposium, Edmonton, Alberta, September, 1986 The Indian Mining and Engineering Journal, July 1986*

- 0241 **Szymanski, J.\* Mansour, N.A.** Time dependent rheology of a western Canadian coal water fuel; *CRL/CAT 86/87 067* *Proceeding of the Eighth International Symposium on Coal Slurry Fuels Preparation and Utilization*, May, 1986, Orlando
- 0242 **Szymanski, J.\* Mansour, N.A.** A novel coal water fuel instability sensor; *CRL/CAT 86/87 068* *Proceedings of the Eighth International Symposium on Coal Slurry Fuels Preparation and Utilization*, 1986, Orlando
- 0243 **Szymanski, J.\*** Rheological properties of a western Canadian coal water fuel; *CRL/CAT 86/87 069* *Proceedings of the Sixth International Workshop on Coal-Liquid and Alternate Fuels Technology*, Halifax, Nova Scotia, October, 1986
- 0244 **Szymanski, J.\* Gladysiewicz, L.** Modelling of long conveyor transients; *CRL/CAT 86/87 070* *International Symposium on Continuous Surface Mining*, Edmonton, Canada, October, 1986
- 0245 **Szymanski, J.\* Mansour, N.A.** Shear and concentration dependent rheology of a western Canadian coal/water fuel; *CRL/CAT 86/87 071* *Proceedings of 11th International Conference on Slurry Technology*, Hilton, Head; March 1986
- 0246 **Singhal, R.K.\* Fytas, K.** Off-highway truck selection in surface coal mining; *ERP/CRL 86-013(OP&J)* *Proceedings 1985 Symposium on Surface Mining, Hydrology, Sedimentology and Reclamation*, Lexington, Kentucky, U.S.A., Dec. 9-13, 1985
- 0247 **Singhal, R.K.\* Zahary, G. Stewart, D.B. Bacharach, J.P.L.** Alternative face cutting systems for longwall mining; *ERP/CRL 86-014(OP&J)* *Society of Mining Engineers of AIME Fall Meeting*, Albuquerque, New Mexico, U.S.A., Pre-print no. 85-308, October 16-18, 1985
- 0248 **Singhal, R.K.\* Kolada, R.J. Vladut, T.** Productivity and equipment selection in surface mining of oil sands; *ERP/CRL 86-015(OP&J)* *Society of Mining Engineers of AIME*, Fall Meeting, Albuquerque, New Mexico: Paper no. 85-384; October 1985
- 0249 **Singhal, R.K.\* Osborne, D.G. Kilborn Engineering (B.C.) Ltd., Vancouver** Selective mining, homogenization and blending of Canada's high sulphur thermal coals; *ERP/CRL 86-029(OP&J)* *Proceedings First International Conference on Processing and Utilization of High Sulphur Coals: Columbus, Ohio, U.S.A.*; October 13-17, 1985
- 0250 **Das, B.\*** Rock characterization through microhardness technique; *ERP/CRL 86-031(OP&J)* *Proc. 27th U.S. Symposium on Rock Mechanics*; University of Alabama; 121-129; June 1986
- 0251 **Srajer, V.\*** A review of an on-board truck management systems; *ERP/CRL 86-033(OP&J)* *Proceedings of the Third Conference on the Use of Computers in the Coal Industry*, Morgantown, W. Virginia, U.S.A., July 1986
- 0252 **Das, B.\* Stimpson, B.** Rock bolting and the influence of confining stress induced in the rock mass; *ERP/CRL 86-036(OP&J)* *88th AGM of CIM*; Montreal/ May 1986
- 0253 **Hucka, V.J.\* Tu, H.J. Das, B.** Computer analysis of the effects of mine subsidence on pipelines; *ERP/CRL 86-039(OP&J)* *88th AGM of CIM*; Montreal; May 1986



- 0254 **Muirhead, I.R.\* Kolada, R.J.** Less conventional methods for mining underground coal; *ERP/CRL 86-046(OP&J)* 88th Annual General Meeting of the C.I.M. Montreal, May 11-15, 1986
- 0255 **Mikula, R.J.\* Mikhail, M.W.** A delta P technique for the prediction and monitoring of coal oxidation; *ERP/CRL 86-050(OP&J)* *Coal Preparation*, A Multinational Journal, vol 5, pp. 57-69; 1987
- 0256 **Srajer, V.\* Sedlacek, J.** Application of bucket wheel technology to Canadian coal mines; *ERP/CRL 86-073(OP&J)* *The Indian Mining and Engineering Journal*, July 1986  
Proceedings of the Continuous Mining Symposium, Edmonton, Alberta, September, 1986
- 0257 **Singhal, R.K.\* Golosinski, T.S.** Basic consideration in selection of bucket wheel excavators; *ERP/CRL 86-074(OP&J)* Presented to the 88th Ann. Gen. Meeting of the Canadian Institute of Mining & Metallurgy, Montreal, May 11-14, 1986. Format dictated by the Conference Organizing Committee
- 0258 **Singhal, R.K.\* Fytas, K.** Optimizing loading and hauling productivity in surface mining; *ERP/CRL 86-075(OP&J)* Presented at the SME-AIME Fall meeting in St.Louis, Missouri, Sept. 7-10, 1986. Format dictated by the Conference Organizing Committee
- 0259 **Mikhail, M.W.\* Mikula, R.J. Humeniuk, O.E.** The effect of different crushers on fines generation from western Canadian friable coals; *ERP/CRL 86-082(OP&J)* Presented to the Engineering Foundation Conference on Science and Technology of Processing Fine Coal, Henniker, New Hampshire, Aug. 11-16, 1985
- 0260 **Szymanski, J.\* Mansour, N.A.** Time dependent rheology of a western Canadian coal water fuel; *ERP/CRL 86-098(OP&J)* *Proc. Eighth International Symposium on Coal Slurry Fuels Preparation and Utilization*, May 1986, Orlando
- 0261 **Szymanski, J.\* Gladysiewicz, L.** Modelling of long conveyor transients; *ERP/CRL 86-100(OP&J)* *International Symposium on Continuous Surface Mining*, Edmonton, Canada, Oct. 1986
- 0262 **Szymanski, J.\*** Rheological properties of a western Canadian coal water fuel; *ERP/CRL 86-109(OP&J)* *Proceedings of the Sixth International Workshop on Coal-Liquid and Alternate Fuels Technology*, Halifax, Nova Scotia., Oct. 1986
- 0263 **Singhal, R.K.\* Golosinski, T.S.** Continuous mining systems for surface mining of coal; *ERP/CRL 86-154(OP&J)* 13th World Mining Congress, Stockholm Sweden, June, 1987
- 0264 *ERP/CRL 87-001(OP&J)* **Fytas, K.\* Wilson, E.B. Singhal, R.K.** Comparison of FORTRAN and GPSS languages in the simulation of a shovel-truck open pit operation; *Society of Mining Engineers Fall Meeting*, St. Louis, U.S.A., September 1986

**Technical Reports (TR) / Rapports techniques (TR)**

- 0265 *ERP/CRL 85-028(TR)* **Stokes, A.\*** GOB leakage in 8 east at Lingan colliery; PAGES: 21  
FICHE: 1
- 0266 *ERP/CRL 85-053(TR)* **Naidu, H.G.\*** Evolution of the coal reserve concept in Canada;  
PAGES: 21 FICHE: 1
- 0267 *ERP/CRL 86-003(TR)* **Young, D.A.\* Aston, T.R.C.** 'SUB #4' USERS GUIDE: computer  
calculation of longwall subsidence profiles using the NCB subsidence engineers handbook;  
PAGES: 52 FICHE: 1
- 0268 *ERP/CRL 86-004(TR)* **Salama, A.I.A.\*** Design techniques of digital  
proportional-plus-integral and proportional-plus-integral-plus-derivative controllers for linear  
discrete-time multivariable systems; PAGES: 30 FICHE: 1
- 0269 *ERP/CRL 86-005(TR)* **Salama, A.I.A.\*** Design of linear continuous multivariable  
proportional-plus-integral-plus-derivative controller; PAGES: 23 FICHE: 1
- 0270 *ERP/CRL 86-006(TR)* **Vargha-Butler, E.I.\* Absolom, D.R. Hamza, H.A. Neumann,  
A.W.** Interfacial phenomena in coal technology: part I. surface characterization of coal;  
PAGES: 88 FICHE: 1
- 0271 *ERP/CRL 86-007(TR)* **Mansour, N.A.\*** Computer realization of spatial filters; PAGES:  
23 FICHE: 1
- 0272 *ERP/CRL 86-008(TR)* **Szymanski, J.\* Mansour, N.A.** Density sensor for solids  
component in two phase flow; PAGES: 10 FICHE: 1
- 0273 *ERP/CRL 86-012(TR)* **Chakrovorty, R.N.\*** Developments in coal mine fire control;  
PAGES: 28 FICHE: 1
- 0274 *ERP/CRL 86-024(TR)* **Bonnell, G.W.\*** Nova Scotia coal resources evaluation project:  
progress and status of coal chemistry file January 1, 1985 to December 31, 1985; PAGES: 23  
FICHE: 1
- 0275 *ERP/CRL 86-044(TR)* **Zinck, D.\* Aston, T.R.C.** 'DUROV PLOT' users guide: computer  
calculation plotting of Durov diagrams for water chemistry analysis using the IBM-AT;  
PAGES: 28 FICHE: 1
- 0276 *ERP/CRL 86-045(TR)* **Gallant, W.D.\* Hamilton, D.M. Aston, T.R.C.** In situ gas  
permeability testing in the no. 2 and no. 3 tunnels, Donkin-Morien Project, Nova Scotia;  
PAGES: 32 FICHE: 1
- 0277 *ERP/CRL 86-052(TR)* **Gallant, W.D.\*** Pull strength testing of resin rebar rock bolts in  
the harbour seam drivage of Donkin mine; PAGES: 11 FICHE: 1

- 0278 *ERP/CRL 86-055(TR)* **Stokes, A.\* Cain, P.** The effect of monolithic pumped packing on ventilation and strata control at Lingan colliery, Nova Scotia; PAGES: 27 FICHE: 1
- 0279 *ERP/CRL 86-056(TR)* **Haslett, G.A.\* Naidu, H.G. Michaelian, K.H.** Coal Research Laboratories: annual progress report 1985-1986; PAGES: 90 FICHE: 1
- 0280 *ERP/CRL 86-059(TR)* **Das, B.\* Fisekci, M.Y. Stuart, N.** Geotechnical engineering discussion document; PAGES: 15 FICHE: 1
- 0281 *ERP/CRL 86-061(TR)* **Stokes, A.\* Hardcastle, S.** Field trials of a rapid sequential tracer gas analyzer; PAGES: 37 FICHE: 1
- 0282 *ERP/CRL 86-065(TR)* **Singhal, R.K.\* Naidu, H.G.** Advanced technology discussion document; PAGES: 48 FICHE: 1
- 0283 *ERP/CRL 86-066(TR)* **Singhal, R.K.\*** Equipment selection and utilization in surface mining; PAGES: 35 FICHE: 1
- 0284 *ERP/CRL 86-067(TR)* **Chakravorty, R.N.\* Kolada, R.J.** Environmental control discussion document; PAGES: 14 FICHE: 1
- 0285 *ERP/CRL 86-068(TR)* **Srajer, V.\* Kolada, R.J. Stuart, N. Szymanski, J.** Operations research discussion document; PAGES: 34 FICHE: 1
- 0286 *ERP/CRL 86-069(TR)* **Twa, S.P.\*** Further characterization and demulsification studies on oil-in-water emulsions; PAGES: 72 FICHE: 1
- 0287 *ERP/CRL 86-070(TR)* **Kennedy, D.J.\*** A rapid sequential tracer gas analyzer suitable for use in the underground environment; PAGES: 18 FICHE: 1
- 0288 *ERP/CRL 86-071(TR)* **Hwang, C.Y.\*** Mineralogical composition of respirable coal mine dust; PAGES: 8 FICHE: 1
- 0289 *ERP/CRL 86-072(TR)* **Munoz, V.A.\* McAuley, K.C. Silbernagel, W.S.** An improved coal preparation procedure for coking tests; PAGES: 12 FICHE: 1
- 0290 *ERP/CRL 86-079(TR)* **Zinck, D.\* Aston, T.R.C.** 'Sub #4' users guide: IBM-PC/AT computer calculation of longwall subsidence profiles using the NCB subsidence engineers handbook; PAGES: 78 FICHE: 1
- 0291 *ERP/CRL 86-080(TR)* **Aston, T.R.C.\*** Prediction of longitudinal and subsidence profiles with width/depth ratios in excess of 3.0 using National Coal Board methods; PAGES: 18 FICHE: 1
- 0292 *ERP/CRL 86-083(TR)* **Issard, M.\* Aston, T.R.C.** 'Point load index' users guide: computer calculation of point load indices and rock strengths using an IBM-PC/AT; PAGES: 20 FICHE: 1
- 0293 *ERP/CRL 86-094(TR)* **Chiasson, L.A.\* Stokes, A.** Determination of the methane make on 9 east longwall face using SF6 derived airflows; PAGES: 21 FICHE: 1

- 0294 *ERP/CRL 86-097(TR)* **Issard, M.\* Aston, T.R.C.** 'Schmidt hammer rebound' users guide: IBM-PC/AT computer calculation of uniaxial compressive strength using the Schmidt hammer; PAGES: 20 FICHE: 1
- 0295 *ERP/CRL 86-102(TR)* **Srajer, V.\*** The vehicle monitoring system at Widco mine; PAGES: 21 FICHE: 1
- 0296 *ERP/CRL 86-108(TR)* **Chakravorty, R.N.\* Sahay, H.** Problems associated with the storage of thermal coal and their potential solutions; PAGES: 20 FICHE: 1
- 0297 *ERP/CRL 86-110(TR)* **Naidu, H.G.\* Singhal, R.K. Clausen, G. Currie, J.A.** The potential for cast blasting in Canadian surface mines; PAGES: 21 FICHE: 1
- 0298 *ERP/CRL 86-111(TR)* **Szymanski, J.\*** A numerical method for the calculation of belt conveyor lengths as a function of the installed power; PAGES: 16 FICHE: 1
- 0299 *ERP/CRL 86-113(TR)* **Srajer, V.\* Acott, G.** The development of computer model of continuous digging machine easi-miner at OBED mountain mine; PAGES: 21 FICHE: 1
- 0300 *ERP/CRL 86-114(TR)* **Srajer, V.\* Heximer, M. Veldhuis, W.** Notes on stripping machinery mass estimates; PAGES: 19 FICHE: 1
- 0301 *ERP/CRL 86-115(TR)* **Corbett, G.R.\* Bonnell, G.W.** A computer program to calculate the rank of a coal; PAGES: 15 FICHE: 1
- 0302 *ERP/CRL 86-120(TR)* **Naidu, H.G.\*** Preliminary study and site selection for blast casting at Fording river mine; PAGES: 23 FICHE: 1
- 0303 *ERP/CRL 86-122(TR)* **Szymanski, J.\*** Sensitivity analysis of production and power consumption to various constructional and operating factors using a computer based simulation conveyor - Bin/Hopper model; PAGES: 92 FICHE: 1
- 0304 *ERP/CRL 86-123(TR)* **Kolada, R.J.\*** A simplistic classification of western Canadian coal seams with respect to their potential for development as underground mines; PAGES: 16 FICHE: 1
- 0305 *ERP/CRL 86-129(TR)* **Neumiller, C.\* Stuart, N. Heximer, M. Veldhuis, W.** Digitizing programs to generate input data for a haulage simulation model by using fitting cubic curves; PAGES: 84 FICHE: 1
- 0306 *ERP/CRL 86-134(OP,TR)* **Chakravorty, R.N.\* Lanteigne, R. Forrester, P.I.** Methane control during shipments of coal; PAGES: 20 FICHE: 1
- 0307 *ERP/CRL 86-140(TR)* **Stuart, N.\*** An update of the use of the CANMET telemetry system at the Syncrude mine;
- 0308 *ERP/CRL 86-144(TR)* **Szymanski, J.\* Heximer, M. Veldhuis, W. LaRocque, G.H.** An analysis of easi-miner time study data at Obed Mountain mine; PAGES: 59 FICHE: 1
- 0309 *ERP/CRL 86-145(TR)* **Srajer, V.\*** Rheinland's mine hambach in West Germany;

- 0310 *ERP/CRL 86-146(TR)* **Srajer, V.\*** Surface coal mining in Yugoslavia; PAGES: 18  
FICHE: 1
- 0311 *ERP/CRL 86-151(TR)* **Chakravorty, R.N.\* Kar, K.** Characterization of western  
Canadian coals with respect to their susceptibility to spontaneous combustion; PAGES: 31  
FICHE: 1
- 0312 *M&ERP/CRL 86-110(TR)* **Naidu, H.G.\* Singhal, R.K. Clausen, G. Currie, J.A.** The  
potential for cast blasting in Canadian surface mines; PAGES: 21 FICHE: 1
- 0313 *M&ERP/CRL 86-111(TR)* **Szymanski, J.\*** A numerical method for the calculation of belt  
conveyor lengths as a function of the installed power; PAGES: 16 FICHE: 1
- 0314 *M&ERP/CRL 86-122(TR)* **Szymanski, J.\*** Sensitivity analysis of production and power  
consumption to various constructional and operating factors using a computer based simulation  
conveyor - BIN/HOPPER model; PAGES: 92 FICHE: 1
- 0315 *M&ERP/CRL 86-140(TR)* **Stuart, N.\*** An update on the use of the CANMET telemetry  
system at the Syncrude mine; PAGES: 12 FICHE: 1
- 0316 *M&ERP/CRL 86-144(TR)* **Szymanski, J.\* Heximer, M. Veldhuis, W. LaRocque, G.H.**  
An analysis of easi-miner time study data at Obed mountain mine; PAGES: 59 FICHE: 1
- 0317 *M&ERP/CRL 86-145(TR)* **Srajer, V.\*** Rheinland's mine Hambach in West Germany;  
PAGES: 17 FICHE: 1
- 0318 *M&ERP/CRL 86-146(TR)* **Srajer, V.\*** Surface coal mining in Yugoslavia; PAGES: 18  
FICHE: 1

## **Energy Research Laboratories / Laboratoires de recherche sur l'énergie**

### **Investigation Reports (IR) / Rapports d'étude (IR)**

- 0319 *ERP/ERL 86-030(IR)* **Banks, G.N.\* Wong, J.K. Whaley, H.** Preliminary report on the  
comparative combustion properties of raw and washed Prince Mine coal; PAGES: 42 FICHE:  
1

### **Journal Publications / Publication dans les revues**

- 0320 *ERL/CAT 86/87 001* **Allenger, V.M.\* McLean, D.D. Ternan, M.** Direct condensable  
vapour analysis by capillary gas chromatography; *J Chrom Sci* 24:98-101, 1986

- 0321 *ERL/CAT 86/87 002* Allenger, V.M.\* McLean, V.M. Ternan, M. The influence of infrared radiation on acetylene conversion; *Fuel* 66:435, 1987
- 0322 *ERL/CAT 86/87 003* Anthony, E.J.\* Friedrich, F.D. Increasing the energy recovery; *Can Min J* 107:6:29-30, 1986
- 0323 *ERL/CAT 86/87 004* Banerjee, D.K.\* Laidler, K.J. Nandi, B.N. Patmore, D.J. Kinetic studies of coke formation in hydrocarbon fractions of heavy crudes; *Fuel* 65:480-484, 1986
- 0324 *ERL/CAT 86/87 005* Brown, J.R.\* Fyfe, W.S. Kronberg, B.I. Long, D.G.F. Murray, F.H. Powell, M. Try, C.F. Van der Flier, E. Winder, C.G. Geochemistry and petrography of the Mattagami formation lignites (Northern Ontario), Ontario; *Ontario Geological Survey Open File Report 5617*, 40 p., 1986
- 0325 *ERL/CAT 86/87 006* Brown, J.R.\* McIntyre, N.S. Johnston, D. Coatsworth, L.L. Reactions on thin films of molybdenum and cobalt oxides: II. reduction, sulphidation and hydrodesulphurization activities; *Surface Interface Analysis* 9:255-257, 1986
- 0326 *ERL/CAT 86/87 007* Coulombe, S.\* Sawatzky, H. HPLC separation and GC characterization of polynuclear aromatic fractions of bitumen, heavy oils and their synthetic crude products; *Fuel* 65:552, 1986
- 0327 *ERL/CAT 86/87 008* Coury, J.R.\* Thambimuthu, K.V. Clift, R. Capture and rebound of dust in granular bed gas filters; *Powder Tech* 50:3:253-265, 1987
- 0328 *ERL/CAT 86/87 009* Fairbridge, C.\* Kriz, J.F. Hydroprocessing of coal-derived middle distillate; *Fuel Sci Technol Int* 4:171-89, 1986
- 0329 *ERL/CAT 86/87 010* Fairbridge, C.\* Ng, S.H. Palmer, A.D. Fractal analysis of gas adsorption on syncrude coke; *Fuel* 65:1759-1762, 1986
- 0330 *ERL/CAT 86/87 011* Furimsky, E.\* Palmer, A. Surface structure and oxidation reactivity of oil sand coke particles; *Fuel* 66, 1987
- 0331 *ERL/CAT 86/87 012* Furimsky, E.\* Palmer, A. Catalytic effect of lignite ash on gasification of oil sand coke; *Applied Catalysis* 23:355, 1986
- 0332 *ERL/CAT 86/87 013* Furimsky, E.\* Mikhlin, J. Jones, D.E.G. Adler, T. Baikowitz, H. Hydrodeoxygenation of ortho substituted phenols; *Can J Chem Eng* 64:6, 1986
- 0333 *ERL/CAT 86/87 014* Furimsky, E.\* Yoshimura, Y. Mechanism of regeneration of molybdate catalysts; *Ind Eng Chem Res* 26:4, 1987
- 0334 *ERL/CAT 86/87 015* Glavincevski, B.\* Gardner, L. Lee, S.W. Structural characterization of middle distillate fuels; *Soc Auto Eng Paper No. 861522*, Oct. 1986
- 0335 *ERL/CAT 86/87 016* Jean, G.\* Bancroft, G.M. The adsorption of heavy metals on sulphide surfaces; *Geochem Cosmochim Acta* 50:1455-1463, 1986
- 0336 *ERL/CAT 86/87 017* Kronberg, B.I.\* Murray, F.H. Fyfe, W.S. Winder, C.G. Brown, J.R. Powell, M. Geochemistry and petrography of the Mattagami formation lignites

- (northern Ontario); *Coal Science and Chemistry* 10:245-263 (Ed. A. Volborth). Elsevier, Amsterdam, 1987
- 0337 *ERL/CAT 86/87 019* Lee, S.W.\* Hayden, A.C.S. Effects of middle distillate fuel properties on residential oil combustion characteristics; *Trans Am Soc Heating, Refrigeration and Air Conditioning Eng* 92:2, 1986
- 0338 *ERL/CAT 86/87 020* Lee, S.W.\* Preto, F. Hayden, A.C.S. Determination of fuel aromatic content and its effects on residential oil combustion; *Am Chem Soc, Div Fuel Chem Preprints* 31:2, 1986
- 0339 *ERL/CAT 86/87 021* Lemay, G.\* Kaliaguine, S. Adnot, A. Nahar, S. Cozak, D. Monnier, J. Synthesis of some ring-substituted ruthenenes and their use in the preparation of Ru/ZSM-5 catalysts; *Can J Chem* 64:1943-1948, 1986
- 0340 *ERL/CAT 86/87 022* Lipsett, J.J.\* Noble, R.D. Liu, D.D.S. Time series analysis of gamma densitometry signals; *Nuclear Instruments and Methods in Physics Research A* 242-582-587, North-Holland, Amsterdam, 1986
- 0341 *ERL/CAT 86/87 023* Martin, R.R.\* McIntyre, N.S. Winder, C.G. Sanders, D.C. Johnson, D.D. MacPhee, J.A. Detection of low-temperature oxidation of coal on a microscopic scale using secondary ion mass spectrometry; *Fuel* 65:1313-1314, 1986
- 0342 *ERL/CAT 86/87 024* Martin, R.R.\* Wiens, B. McIntyre, N.S. Kronberg, B.I. MacPhee, J.A. SIMS imaging in the study of coal surfaces; *Fuel* 65:1024, 1986
- 0343 *ERL/CAT 86/87 025* McIntyre, N.S.\* Johnston, D. Coatsworth, L.L. Brown, J.R. Reactions on thin films of molybdenum and cobalt oxides: I. characterization by high resolution XPS; *Surface Interface Analysis* 9:253-254, 1986
- 0344 *ERL/CAT 86/87 026* Monnier, J.\* Kriz, J.F. Catalysts for hydroprocessing mixtures of heavy oil and coal; *Ind Eng Chem Prod Res* 25:537-41, 1986
- 0345 *ERL/CAT 86/87 027* Monnier, J.\* Quilliam, M.A. Anderson, R.B. Hydrogenolysis of n-hexadecane on iron and its inhibition by carbon monoxide; *Can J Chem Eng* 64:469-472, 1986
- 0346 *ERL/CAT 86/87 028* Nandi, B.N.\* MacPhee, J.A. Ciavaglia, L.A. Chornet, E. Arsenault, R. Enhancement of plastic properties of inert-rich oxidized coal via the water-gas shift reaction; *Fuel* 66:473-478, 1987
- 0347 *ERL/CAT 86/87 029* Palmer, A.\* Furimsky, E. Catalytic effect of lignite ash on steam gasification of Balmer coal; *Fuel Sci Tech Int* 4:4:433, 1986
- 0348 *ERL/CAT 86/87 030* Poirier, M.A.\* Sawatzky, H. Effect of adding process residues on the physical properties and composition of asphalt cements; *Energy Sources* 8:217, 1986
- 0349 *ERL/CAT 86/87 031* Poirier, M.A.\* Sawatzky, H. Utilization of visbreaking distillation residues for the production of road asphalts; *AOSTRA J Res* 2:185, 1986
- 0350 *ERL/CAT 86/87 032* Potter, J.\* Kybett, B.D. MacDougall, W.J. Vasu Nambudiri, E.M. Rahimi, P.M. Price, J.T. Petrographic characterization of the solid products of coal-pitch coprocessing; *Can Mineral* 24:219-228, 1986

- 0351 ERL/CAT 86/87 033 Reilly, I.G.\* Scott, D. de Bruijn, T.J.W. Jain, A.K. Piskorz, J. Correlation for gas holdup in turbulent coalescing bubble columns; *Can J Chem Eng* 64:705, 1986
- 0352 ERL/CAT 86/87 034 Ripmeester, J.A.\* Hawkins, R.E. MacPhee, J.A. Nandi, B.N. On the interaction between pyridine and coal as studied by CP/MAS (sup)15N NMR; *Fuel* 65:740-742, 1986
- 0353 ERL/CAT 86/87 035 Salib, P.\* Barua, S. Furimsky, E. Retorting of oil shales from New Brunswick; *Can J Chem Eng* 65:6, 1986
- 0354 ERL/CAT 86/87 036 Scott, D.\* Piskorz, J. Fouda, S.A. Pyrolysis of low-rank Canadian coals; *Fuel Proc Tech* 13:10:157-186, 1986
- 0355 ERL/CAT 86/87 037 Ternan, M.\* Packwood, R.H. Catalyst technology for reactors used to hydrocrack petroleum residua; *Chemical Reactor Design and Technology*, (Ed. H.I. deLasa), Martinus Nijhoff, Dordrecht, pp. 53-68, 1986
- 0356 ERL/CAT 86/87 038 Thambimuthu, K.V.\* Whaley, H. Capes, C.E. Pilot scale combustion studies of coal-water fuels - the Canadian R and D Program; *I Chem E Symp Ser* 95:231, 1985
- 0357 ERL/CAT 86/87 039 Varma, R.L.\* Bakhshi, N.N. Mathews, J.F. Ng, S.H. Induction periods for conversion of synthesis gas to aromatics-containing hydrocarbons using a dual reactor system; *Ind Eng Chem, Res* 26:183-188, 1987
- 0358 ERL/CAT 86/87 040 Wilson, M.F.\* Fisher, I.P. Kriz, J.F. Cetane improvement of middle distillates from Athabasca syncrudes by catalytic hydroprocessing; *Ind Eng Chem Prod Res Dev* 25:505, 1986
- 0359 ERL/CAT 86/87 041 Yoshimura, Y.\* Furimsky, E. Removal of carbonaceous deposits from the surface of cobalt-molybdate catalysts via oxidative regeneration; *Fuel* 10:1388, 1986
- 0360 ERP/ERL 83-061(J) Wilson, M.F.\* Kriz, J.F. Fisher, I.P. Selected aspects of catalytic refining of middle distillates from Athabasca syncrudes; *Symposium on Processing of Tar Sands and Oil Sands Presented before the Division of Petroleum Chemistry, Inc. American Chemical Society, St. Louis Meeting Apr. 8-13, 1984*
- 0361 ERP/ERL 86-079(J) Liu, D.D.S.\* Noble, R.D. Lipsett, J.J. Time series analysis of gamma densitometry signals; *Nuclear Instruments and Methods in Physics Research A242(1986) 582-587 North-Holland, Amsterdam*

**Literature Translations and Literature Surveys (LT) (LS) / Traductions et études documentaires**

- 0362 de Bruijn, T.J.W.\* Gas holdup in bubble columns - a literature review; ERP/ERL 85-048(LS) PAGES: 23 FICHE: 1



**Oral Presentations / Présentations orales**

- 0363 **Allenger, V.M.\*** Reaction of acetylene over fluorinated alumina; *ERL/CAT 86/87 091* presented at 36th Canadian Chemical Engineering Conference, Sarnia, Ont., Oct. 5-8, 1986
- 0364 **Allenger, V.M.\*** The influence of catalyst acidity in the polymerization of acetylene; *ERL/CAT 86/87 092* presented at Catalysis Discussion Group, Ottawa Sept. 26, 1986
- 0365 **Allenger, V.M.\*** Statistical experimental design; *ERL/CAT 86/87 093* presented to Catalysis Group, ERL, BCC, Oct. 21, 1986
- 0366 **Allenger, V.M.\*** Natural gas to liquid fuels via acetylene; *ERL/CAT 86/87 094* presented to Catalysis Group, ERL, Nov. 14, 1986
- 0367 **Allenger, V.M.\* Brown, J.R. McLean, D.D. Ternan, M.** Deactivation of fluorinated alumina catalysts in acetylene polymerization; *ERL/CAT 86/87 095* presented at 36th Canadian Chemical Engineering Conference, Sarnia, Ont., Oct. 5, 1986
- 0368 **Anthony, E.J.\*** CANMET-sponsored university contract research on FBC; *ERL/CAT 86/87 096* presented to Chinese Thermal Power Study Group, ERL, BCC, Sept. 17-19, 1986
- 0369 **Anthony, E.J.\*** Fluidized bed combustion of petroleum coke; *ERL/CAT 86/87 097* presented at MSL Seminar Series, CANMET, Ottawa April 14, 1986
- 0370 **Anthony, E.J.\*** The CANMET R&D program on fluidized bed combustion; *ERL/CAT 86/87 098* presented at University of British Columbia, April 16, 1986
- 0371 **Anthony, E.J.\*** Fluidized bed combustion in Canada; *ERL/CAT 86/87 099* presented at CANMET seminar for the ASEAN Energy Study Team, ERL, BCC, Sept. 19, 1986
- 0372 **Anthony, E.J.\*** The combustion of heavy liquid fuels in the pilot-scale AFBC rig at ERL/CANMET; *ERL/CAT 86/87 100* presented at ERL Seminar Series, March 5, 1987
- 0373 **Brown, J.R.\*** A semi-quantitative XPS study of model Co/Moalumina hydrotreating refinery catalysts; *ERL/CAT 86/87 101* presented at 11th International Conference on X-ray Optics and Microanalysis, London, Ont., Aug. 4, 1986
- 0374 **Brown, J.R.\*** Catalytic hydrodesulphurization and surface spectroscopy research activities at ERL/CANMET; *ERL/CAT 86/87 102* presented at Kentucky Centre for Energy Research Laboratory, Lexington, Kentucky, May 1, 1986
- 0375 **Brown, J.R.\*** Surface chemistry and hydrodesulphurization (HDS) activity of thin film Co/Mo/alumina catalysts studied by X-ray photoelectron, Auger microscopy and gas chromatography; *ERL/CAT 86/87 103* presented at 10th Canadian Symposium on Catalysis, Kingston, Ont., June 15, 1986

- 0376 **Brown, J.R.\*** Surface structure and hydrodesulphurization (HDS) activity of thin film Co/Mo/alumina catalysts; *ERL/CAT 86/87 104* presented at *Tri-State Catalyst Club Symposium*, Lexington, Kentucky, April 30, 1986
- 0377 **Chantal, P.D.\* Ahmed, S.M. Jean, G. Desbiens, M. Guard, S. Sawatzky, H.** Adsorption des composés azote des distillats moyens sur la zéolithe 13X: étude de l'interaction des composés modèles; *ERL/CAT 86/87 105* presented at *54th ACFAS Congress*, Montréal, Que., May 12-15, 1986
- 0378 **Coatsworth, L.L.\* Johnston, D. McIntyre, N.S. Spevak, P. Vanderhulst, L. Brown, J.R.** Hydrodesulphurization reactions on thin film Co-Mo catalysts; *ERL/CAT 86/87 106* presented at *12th Canadian Symposium on Surfaces*, London, Ont., June 8, 1986
- 0379 **Coatsworth, L.L.\* Brown, J.R.** Catalyst transfers between analytical UHV chambers: the CANMET approach; *ERL/CAT 86/87 107* presented at *10th Canadian Symposium on Catalysis*, Kingston, Ont., June 15, 1986
- 0380 **Coulombe, S.\*** Evaluation des détecteurs de chromatographie liquide pour la chromatographie d'exclusion des bitumes, huiles lourdes et asphaltènes; *ERL/CAT 86/87 108* presented at *15th ACFAS Congress*, Montréal, Que., May 12-15, 1986
- 0381 **Desai, D.L.\*** Fluidized bed combustion of a high-sulphur eastern Canadian coal; *ERL/CAT 86/87 109* presented at *ERL Seminar Series*, Feb. 5, 1987
- 0382 **Fairbridge, C.\*** Fractal surfaces - application to catalysis; *ERL/CAT 86/87 110* presented at *University of Calgary*, Dec. 1986
- 0383 **Fairbridge, C.\*** Fractal surfaces; *ERL/CAT 86/87 111* presented at *CRL*, Dec. 1986
- 0384 **Friedrich, F.D.\*** Update on the erosion history of the fluidized bed boilers at CFB Summerside; *ERL/CAT 86/87 112* presented at *12th Technical Session*, IEA Agreement on Atmospheric Fluidized Bed Combustion, Vienna, Austria, May 6, 1986
- 0385 **Friedrich, F.D.\*** Fluidized bed combustion and sorbent research and The Chatham 22 MWe Circulating FBC demonstration; *ERL/CAT 86/87 113* presented to *Chinese Thermal Power Study Group*, ERL, BCC, Sept. 17-19, 1986
- 0386 **Friedrich, F.D.\*** Combustion of Syncrude coke with Fort McMurray limestone in a pilot-scale circulating FBC; *ERL/CAT 86/87 114* presented to *Management Committee AOSTRA/Industry Upgrading Residue Utilization Project*, Calgary, Sept. 11, 1986
- 0387 **Friedrich, F.D.\*** The 22 MWe circulating FBC program at Chatham, N.B. *ERL/CAT 86/87 115* presented at *Ottawa Chapter*, Canadian Institute of Energy, Ottawa, Ont., Apr. 3, 1986
- 0388 **Galuszka, J.\*** Scope of research in the natural gas conversion program in HPRL; *ERL/CAT 86/87 116* presented at *University of Waterloo*, Feb. 1986
- 0389 **Galuszka, J.\*** Fischer-Tropsch research facilities at ERL some aspects of carbon monoxide hydrogenation reaction; *ERL/CAT 86/87 117* presented at *British Petroleum Ltd.*, London, England, Sept. 1986

- 0390 **George, A.E.\*** Activities in the bitumen, oil recovery section of the Energy Research Laboratories, CANMET; *ERL/CAT 86/87 118* presented at Alberta Research Council, Jan. 21, 1987
- 0391 **Hayden, A.C.S.\*** Retrofitting of wood stoves to improve efficiency and reduce emissions; *ERL/CAT 86/87 119* presented at 11th Annual Joint ASME/EPA/APCA Information Exchange on Stationary Source Combustion, Raleigh, North Carolina, Dec. 1986
- 0392 **Hayden, A.C.S.\*** La combustion domestique; *ERL/CAT 86/87 120* presented at 14th Annual Congress, APCA-Québec, Québec, May 1986
- 0393 **Hayden, A.C.S.\*** Energy conservation programs at CCRL; *ERL/CAT 86/87 121* presented at NACMMR Oil and Gas Subcommittee, Ottawa, Ontario, June, 1986
- 0394 **Hayden, A.C.S.\*** Implications of research and development activities for new standards or changes to existing standards for oil burning appliances; *ERL/CAT 86/87 122* presented at Canadian Standards Association and Ontario Petroleum Association, Toronto, May 1986
- 0395 **Hayden, A.C.S.\*** New techniques and technologies to improve woodstove performance; *ERL/CAT 86/87 123* presented at Coalition of North-East Governors, Boston, Aug. 1986
- 0396 **Hayden, A.C.S.\*** Techniques and probabilities of success for RCDP Whitehorse wood stove field demonstration program; *ERL/CAT 86/87 124* presented at Whitehorse City Council, Nov. 1986
- 0397 **Hayden, A.C.S.\*** Efficient residential heating systems and potential problems; *ERL/CAT 86/87 125* presented at Home Energy Program, Oct. 1986
- 0398 **Hughes, P.M.J.\*** The development of a CARS technique for the measurement of combustion gas temperatures some practical considerations; *ERL/CAT 86/87 126* presented at ERL Seminar Series, Jan. 30, 1986
- 0399 **Hughes, P.M.J.\*** Coherent anti-Stokes Raman spectroscopy - la technique pour mesurer la température dans une flamme; *ERL/CAT 86/87 127* presented at University of Quebec, Chicoutimi, Aug. 1986
- 0400 **Hughes, P.M.J.\*** Laser diagnostic techniques for fossil fuel flames; *ERL/CAT 86/87 128* presented at Annex I Meeting, International Energy Agency, Ottawa, Ont., June, 1986
- 0401 **Hughes, P.M.J.\*** Computer modelling in the CCRL tunnel furnace for powdered coal firing; *ERL/CAT 86/87 129* presented at Annex I Meeting, International Energy Agency, Ottawa, Ont., June, 1986
- 0402 **Hughes, P.M.J.\*** Industrial combustion processes - an overview; *ERL/CAT 86/87 130* presented at Association of South East Asian Nations, June, 1986
- 0403 **Hughes, P.M.J.\*** The development of optical diagnostics and coal combustion simulation technology at Combustion and Carbonization Research Laboratory; *ERL/CAT 86/87 131* presented to delegation from China Electrical Power Research Institute, June, 1986
- 0404 **Ikura, M.\*** Coal-oil coprocessing; *ERL/CAT 86/87 132* presented at joint technical meeting for Canada-Japan Coal Liquefaction Cooperation, Tokyo, Japan, Sept. 29-Oct. 3, 1986

- 0405 **Ikura, M.\*** CANMET coal-oil coprocessing (in Japanese); *ERL/CAT 86/87 133* presented to the Coal Utilization Committee, Japanese Society of Promotion of Science (Ministry of Education, Japan), Sept. 25, 1986
- 0406 **Ikura, M.\*** Basics of coal-oil coprocessing (in Japanese); *ERL/CAT 86/87 134* presented at Himeji Institute of Technology, Japan, Oct. 6, 1986
- 0407 **Kelly, J.F.\*** The CANMET R&D program in coprocessing; *ERL/CAT 86/87 135* presented at 1st International Forum for Enhanced Collaboration in the Clean Use of Coal by Coal Liquefaction, Atlanta, GA., April 7-11, 1986
- 0408 **Kriz, J.F.\* Fairbridge, C. Wilson, M.F.** Catalytic hydroprocessing of Syncrude distillates; *ERL/CAT 86/87 136* presented at 69th Canadian Chemical Conference, Saskatoon, Sask., June 2, 1986
- 0409 **Lafleur, R.J.\*** Les carburants oxygènes - ou en somme-nous; *ERL/CAT 86/87 137* presented at 54th ACFAS Congress, Montréal, Que., May 12-15, 1986
- 0410 **Lambert, J.M.\* Wilson, M.F.** Development of an automated microreactor system for upgrading synthetic crude middle distillates; *ERL/CAT 86/87 138* presented at 36th Canadian Chemical Engineering Conference, Sarnia, Ont., Oct. 7, 1986
- 0411 **Lau, I.T.\*** Development of reactivity parameters for characterization of coal in fluidized bed combustion; *ERL/CAT 86/87 139* presented at Am Inst Chem Eng Annual Meeting, Miami Beach, FA., Nov. 2-7, 1986
- 0412 **Lee, S.W.\*** An experimental program for evaluation of fuel quality effects on oil burner performance; *ERL/CAT 86/87 140* presented at American Society of Heating, Refrigeration and Air Conditioning Engineers Annual Winter Meeting, San Francisco, CA., Jan. 21, 1986
- 0413 **Lee, S.W.\*** Chemical properties of fuels as related to combustion performance evaluation of middle distillate fuels at CCRL; *ERL/CAT 86/87 141* presented at Oil Sands Research Department, Alberta Research Council, Edmonton, Alta., Jan. 29, 1986
- 0414 **Lee, S.W.\*** Progress report on the middle distillate fuels evaluation program at CCRL; *ERL/CAT 86/87 142* presented at Canadian General Standards Board, Ottawa, Ont., Apr. 7, 1986
- 0415 **Lee, S.W.\*** Discussion of fuel quality effects on oil burner performance and prediction of combustion characteristics for fuels with properties beyond current specification limits; *ERL/CAT 86/87 143* presented at Ontario Petroleum Association, Toronto, Ont., May 21, 1986
- 0416 **Lee, S.W.\*** Effects of middle distillate fuel properties on residential oil combustion characteristics; *ERL/CAT 86/87 144* presented at American Society of Heating Refrigeration and Air Conditioning Engineers Annual Summer Meeting, Portland, Oregon, June 21, 1986
- 0417 **Lee, S.W.\*** Determination of fuel aromatic content and its effects on residential oil combustion; *ERL/CAT 86/87 145* presented at American Chemical Society, Division of

- Fuel Chemistry and Division of Petroleum Chemistry Annual Meeting, Anaheim, CA., Sept. 9, 1986
- 0418 **Leen, K.\* Chang, J.R. Locas, P. Jean, G.** Conversion directe des gazes de synthèse en essence synthétique; *ERL/CAT 86/87 146* 54th ACFAS Congress, Montréal, Que., May 12-16, 1986
- 0419 **Lesarge, K.\* Kronberg, B.I. Brown, J.R. McIntyre, N.S.** Iodide adsorption on ferric hydroxide surfaces; *ERL/CAT 86/87 147* presented at 12th Canadian Symposium on Surface London, Ont., June, 1986
- 0420 **MacPhee, J.A.\* Nandi, B.N. Chornet, E. Ripmeester, J.A.** Valorisation des charbons oxydés a l'aide de la réaction avec le monoxyde de carbon et de l'eau; *ERL/CAT 86/87 148* presented at 54th ACFAS Congress, Montréal, Que., May 12-16, 1986
- 0421 **McIntyre, N.S.\* Coatsworth, L.L. Johnston, D. Spevak, P.** Hydrodesulphurization reactions on thin film Co-Mo catalysts;: a preliminary report; *ERL/CAT 86/87 149* presented at ERL, BCC, March 20, 1986
- 0422 **Monnier, J.\* Kriz, J.F.** Metal hydrous titanates for hydroprocessing mixtures of heavy oil and coal; *ERL/CAT 86/87 150* presented at 10th Canadian Symposium on Catalysis, Kingston, Ont., June 15-18, 1986
- 0423 **Monnier, J.\*** Metal hydrous titanate catalysts; *ERL/CAT 86/87 151* presented at National Chemical Laboratory for Industry, Tsukuba Science City, Japan, Nov. 10, 1986
- 0424 **Monnier, J.\* Kriz, J.F. Fairbridge, C.** Ion-exchange hydrous titanates; *ERL/CAT 86/87 152* presented at 60th ACS Colloid and Surface Science Symposium, Atlanta, GA, June, 1986
- 0425 **Nandi, B.N.\* Vleeskens, J.M.** Comparative studies of coal properties on pulverized fuel and fluidized bed combustion; *ERL/CAT 86/87 153* presented at 1st Rolduc International Coal Conference, Rolduc, Holland, April 28-May 2, 1986
- 0426 **Ng, S.H.\* Palmer, A.D. Fairbridge, C.** Fractal analysis of gas adsorption on coke; *ERL/CAT 86/87 154* presented at 60th ACS Colloid and Surface Science Symposium, Atlanta, GA., June, 1986
- 0427 **Pegg, M.J.\* Thambimuthu, K.V.** Influence of burner nozzle parameters on the combustion characteristics of coal-water fuel flames; *ERL/CAT 86/87 155* 5th (Int.) Workshop on Coal-Liquid Fuels Technology, Halifax, Oct., 1985
- 0428 **Price, J.T.\*** Variations of coke properties in an industrial oven; *ERL/CAT 86/87 156* presented at 45th Ironmaking Conference, AIME, Atlanta, Georgia, April, 1986
- 0429 **Price, J.T.\*** Methods for determining pellet volumes and effect on free swelling indices; *ERL/CAT 86/87 157* presented at 11th Meeting, International Organization for Standardization Technical Committee 3, Tokyo, Japan, Nov. 1986
- 0430 **Rahimi, P.M.\*** Coprocessing using H<sub>2</sub>S as a promoter; *ERL/CAT 86/87 158* presented at 192nd National Meeting of ACS, Anaheim, CA., Sept. 1986

- 0431 **Razbin, V.V.\*** The Summerside FBC demonstration project; *ERL/CAT 86/87 159* presented to Chinese Thermal Power Study Group, ERL, BCC, Sept. 17-19, 1986
- 0432 **Razbin, V.V.\*** The AFBC boiler demonstration program at CFB Summerside, P.E.I.; *ERL/CAT 86/87 160* presented at *ERL Seminar Series*, BCC, March, 1986
- 0433 **Sastri, V.S.\* Packwood, R.H. Brown, J.R.** Surface analysis in the study of corrosion inhibition mechanisms; *ERL/CAT 86/87 161* presented at *12th Canadian Symposium on Surfaces*, London, Ont., June, 1986
- 0434 **Sekhar, M.V.C.\*** Large pore catalysts for viscosity reduction of heavy feeds; *ERL/CAT 86/87 162* presented at *10th Canadian Symposium on Catalysis*, Kingston, Ont., June, 1986
- 0435 **Ternan, M.\* Sekhar, M.V.C.** La gazéification catalytique de différentes sortes de charbon par K<sub>2</sub>CO<sub>3</sub>; *ERL/CAT 86/87 163* presented at *15th ACFAS Congress*, Montréal, Que., May 12-16, 1986
- 0436 **Ternan, M.\*** The effective diffusivity of residuum molecules in hydrocracking catalysts; *ERL/CAT 86/87 164* presented at *10th Canadian Symposium on Catalysis*, Kingston, Ont., June, 1986
- 0437 **Thambimuthu, K.V.\*** Coal-liquid mixtures; *ERL/CAT 86/87 165* *British Flame Research Committee Flame Days Conference*, University of Sheffield, U.K., Sept. 1985
- 0438 **Whaley, H.\* Thambimuthu, K.V. Lee, G.K.** Coal-water fuel development for two small utility boilers in eastern Canada; *ERL/CAT 86/87 166* *CPPA Energy Committee Meeting*, Ottawa, Ont., May, 1985
- 0439 **Wiggin, M.\*** The role of district heating in Canadian communities; *ERL/CAT 86/87 167* presented at *Canadian Institute of Energy*, Oct. 1986
- 0440 **Wiggin, M.\*** Advances and rationale for district heating technology; *ERL/CAT 86/87 168* presented at *ERL Seminar Series*, BCC, Feb. 1986
- 0441 **Wiggin, M.\*** District heating - a future in Canada? *ERL/CAT 86/87 169* presented at *Municipal Energy Efficiency Seminar sponsored by the Swedish Trade Council*, Winnipeg, Man.; Apr., 1986
- 0442 **Wilson, M.F.\* Kriz, J.F.** Production of diesel fuel from synthetic distillates by hydrogenation over nickel on porous supports; *ERL/CAT 86/87 170* presented at *Symposium on Alternate Routes to Diesel Fuels*, American Chemical Society, New York, April 17, 1986
- 0443 **Wilson, M.F.\* Mainwaring, P.R. Brown, J.R. Kriz, J.F.** Hydroprocessing of distillates from oil sands over nickel metal supported catalysts; *ERL/CAT 86/87 171* *10th Canadian Symposium on Catalysis*, Kingston, Ontario, June 16, 1986
- 0444 **Wilson, M.F.\*** Advances in refining of synthetic crudes; *ERL/CAT 86/87 172* *ERL Seminar Series*, BCC, Dec. 4, 1986
- 0445 **Rankin, D.M.\* Nicholson, R.P. Whaley, H. Covill, I.D.** The development of coal-water mixture technology for utility boilers in eastern Canada; *ERP/ERL 83-004(OP)* Presented

*at the 5th International Symposium on Coal Slurry Combustion and Technology, Tampa, Florida, April 25-27, 1983*

- 0446 **Whaley, H.\* Anthony, E.J. Hughes, P.M.J.** Coal combustion research at the Canadian Combustion Research Laboratory; *ERP/ERL 83-006(OP)* *Presented International Energy Agency Coal Combustion Sciences Workshop, March 8-10, 1983, Sandia National Laboratories, Livermore, CA.*
- 0447 **Lee, G.K.\*** Overview of combustion research at CANMET; *ERP/ERL 83-032(OP)* *China Commiss Sci Tech. Beijing, China; June, 1983*
- 0448 **Whaley, H.\*** Summary report of the status of Canadian CLM projects: IEA coal-liquid mixtures implementing agreement annex II base technology; *ERP/ERL 83-034(TR&OP)* *presented at the 2nd Technical Committee Meeting IEA/CLM Implementing Agreement, Annex II CLM Base Technology "Cooperation in the Exchange of Base Technology Information for Coal Liquid Mixtures", Clearwater Beach, Florida, April 29, 1983*
- 0449 **Whaley, H.\*** Second summary report of the status of Canadian CLM projects: IEA coal-liquid mixtures implementing agreement annex II base technology; *ERP/ERL 83-066(OP)* *Presented at the 3rd Technical Committee Meeting IEA/CLM Implementing Agreement, Annex II CLM Base Technology "Co-operation in the Exchange of Base Technology Information for coal Liquid Mixtures", Fukuoka, Japan, October 25, 1983*
- 0450 **Ikura, M.\*** Coal-oil coprocessing; *ERP/ERL 86-083(OP)* *presented at joint technical meeting for Canada-Japan Coal Liquefaction Cooperation, Tokyo, Japan, Sept. 29-Oct. 3, 1986*
- 0451 **Monnier, J.\* Wilson, M.F. Fairbridge, C. Kriz, J.F.** Valorisation des distillats de sources d'hydrocarbures non-conventionnelles; *ERP/ERL 87-002(OP)* *55th Congress ACFAS, Ottawa, Ont.; May, 1987*
- 0452 **Anthony, E.J.\* Becker, H.A. Code, R.K. McCleave, R.W. Stephenson, J.R.** Fluidized bed combustion of Syncrude coke; *ERL/CAT 86/87 042* *36th Canadian Chemical Engineering Conference, Sarnia, Ontario, Oct. 5-8, 1986* *Proc Combustion Institute Canadian and Western State Section Spring Technical Meeting, Banff, Alberta, April 27-30, 1986*
- 0453 **Bennett, A.\* Capes, C.E. Jonasson, K.A. Thayer, W.L. Burill, K.F. Burnett, D. Thambimuthu, K.V.** Experience with the NRC burner assembly; *ERL/CAT 86/87 043* *Proc 7th (Int.) Symp Coal Slurry Fuels Preparation and Utilization, 624, Pittsburgh Energy Technology Centre, U.S. Dept. of Energy, 1985*
- 0454 **Berry, E.E.\* Anthony, E.J.** Evaluation of the potential uses for solid wastes from the AFB combustion of coal; *ERL/CAT 86/87 044* *Material Research Society Fall Meeting, Boston, Mass., Dec. 1-5, 1986*
- 0455 **Berry, E.E.\* Anthony, E.J.** The nature and disposal of AFBC wastes; *ERL/CAT 86/87 045* *Material Research Society Fall Meeting, Boston, Mass., Dec. 1-5, 1986*
- 0456 **Berry, E.E.\* Anthony, E.J. Kalmanovitch, D.** The uses and morphology of atmospheric fluidized bed combustion waste from Canada's first industrial AFBC boilers; *ERL/CAT 86/87 046* *10th Annual ASME Energy-Sources Technology Conference and Exhibition, Dallas, Texas, Feb. 15-18, 1987*

- 0457 **Brown, J.R.\*** A semi-quantitative XPS study of model Co/Mo-alumina hydrotreating refinery catalysts; *ERL/CAT 86/87 047* *Proc 11th Int Conf on X-ray Optics an Microanalysis*, London, Ont., Aug. 4-8, 1986
- 0458 **Chantal, P.D.\* Ahmed, S.M. Jean, G. Sawatzky, H.** Adsorption of nitrogenous-type compounds from synthetic crude fractions on various sorbents; *ERL/CAT 86/87 048* *Proc 35th Can Soc Chem Eng Conf.*, Sarnia, Ont., Oct. 1986
- 0459 **Coatsworth, L.L.\* Brown, J.R.** Catalyst transfers between analytical UHV chambers: the CANMET approach; *ERL/CAT 86/87 049* *Proc 10th Canadian Symposium on Catalysis*, 93-95, Kingston, Ont., June 15-18, 1986
- 0460 **Desai, E.L.\* Anthony, E.J. Friedrich, F.D. Razbin, V.V.** Fluidized bed combustion of a high sulphur eastern Canadian coal; *ERL/CAT 86/87 050* *Joint ASME/IEEE Power Generation Conference*, Portland, Oregon, Oct. 19-23, 1986
- 0461 **Farnand, B.A.\* Sawatzky, H.** Reverse osmosis and the selective permeation and rejection of methanol from hydrocarbon mixtures; *ERL/CAT 86/87 051* *Proc Int Membrane Conf*, p. 225, 25th Anniversary of Membrane Research in Canada (Ed. M. Malaiyandi, O. Kutoway and F. Talbot), Ottawa, Ontario, Sept. 24-26, 1986
- 0462 **Farnand, B.A.\* Sawatzky, H.** Reverse osmosis fractionation of etherification reactor product streams during production of octane boosting gasoline additives; *ERL/CAT 86/87 052* *Proc 35th Can Soc Chem Eng Conf*, Sarnia, Ont., Oct. 1986
- 0463 **George, A.E.\* Proctor, M.L. Faroug Ali, S.M.** Steam injection experiments in a scaled model for a marginal reservoir; *ERL/CAT 86/87 053* *Proc 2nd International Symposium on Enhanced Oil Recovery*, Maracaibo, Venezuela, paper no. 112, p. 739; Feb. 24-27, 1987
- 0464 **Hayden, A.C.S.\*** Residential gas-fired combustion systems and indoor air quality; *ERL/CAT 86/87 054* *Proc Annual Technical Meeting*, Ontario Natural Gas Association, London, Ont., Sept. 1986
- 0465 **Hayden, A.C.S.\* Braaten, R.W.** Emissions and efficiency of wood-fired central heating appliances; *ERL/CAT 86/87 055* *Proc Combustion Emissions from Residential Space Heating and APCA paper 86-12-7*, Minneapolis, June 1986
- 0466 **Jean, G.\* Chantal, P.D. Ahmed, S.M. Sawatzky, H.** The competitive adsorption of fuel-type compounds on zeolite 13-X; *ERL/CAT 86/87 056* *Am Chem Soc Div of Fuel Chem 31:3-4:262-265*, Anaheim, Ca., 1986
- 0467 **Kalmanovitch, D.\* Lee, G.K. Whaley, H.** Microstructure and mineralogy of superheater deposits from combustion trials with SO<sub>x</sub> sorbents; *ERL/CAT 86/87 057* *ASME Joint Power Conference*, paper no 85JPGC PWR-43, Wisconsin, Oct. 1985
- 0468 **Khan, M.A.\* Gransden, J.F. Price, J.T.** Variations of coke properties in an industrial oven; *ERL/CAT 86/87 058* *Proc 45th Ironmaking Conf*, ISS-AIME, 45-251254, 1986
- 0469 **Lambert, J.M.\* Wilson, M.F.** Development of an automated microreactor system for upgrading synthetic crude middle distillates; *ERL/CAT 86/87 059* *36th Can Chem Eng Conf*, Sarnia, Ont., Oct. 7, 1986



- 0470 **Lee, S.W.\* Hayden, A.C.S.** Experimental program for the evaluation of fuel quality effects on burner performance; *ERL/CAT 86/87 060* Paper SF-86-14 and Proc ASHRAE Annual Meeting, San Francisco, CA., Jan. 1986
- 0471 **Lee, S.W.\* Hayden, A.C.S.** Effects of middle distillate fuel properties on residential oil combustion characteristics; *ERL/CAT 86/87 061* Paper PO-86-06 and Proc ASHRAE Annual Meeting, Portland, Oregon, June 1986
- 0472 **Lee, C.W.\* Preto, F. Hayden, A.C.S.** Determination of fuel aromatic content and its effect on residential oil combustion; *ERL/CAT 86/87 062* Proc Am Chem Soc Annual Meeting, Anaheim, CA., Sept. 1986
- 0473 **Monnier, J.\* Kriz, J.F.** Metal hydrous titanates for hydroprocessing mixtures of heavy oil and coal; *ERL/CAT 86/87 063* Preprints, 10th Canadian Symposium on Catalysis Kingston, Ont., 1986
- 0474 **Ng, S.H.\* Palmer, A.D. Fairbridge, C.** Analysis of gas adsorption on coke; *ERL/CAT 86/87 064* 60th Colloid and Surface Science Symposium, Atlanta, GA., June 15-18, 1986
- 0475 **Preto, F.\* Hayden, A.C.S.** Improved fuel utilization efficiency through combined space and water heating; *ERL/CAT 86/87 065* Proc Combustion Institute, Canadian and Western States Section Spring Technical Meeting, Banff, Alberta, April, 1986
- 0476 **Preto, F.\* Becker, H.R. Code, R.K.** A mathematical model for fluidized bed coal combustion; *ERL/CAT 86/87 066* Proc Combustion Institute, Canadian and Western States Section Spring Technical Meeting, Banff, Alberta, April 1986
- 0477 **Preto, F.\* Becker, H.R.** Derivation of a comprehensive mathematical model for fluidized bed coal combustion; *ERL/CAT 86/87 067* International Energy Agency, 1986
- 0478 **Rahimi, P.M.\* Fouda, S.A. Kelly, J.F.** Coprocessing using H<sub>2</sub>S as a promoter; *ERL/CAT 86/87 068* Am Chem Soc, Div Fuel Chem 31:4:192; 1986
- 0479 **Rankin, J.M.\* Read, P.J. Whaley, H.** Coal-water fuels for utility boilers in eastern Canada; *ERL/CAT 86/87 069* Proc 20th Intersociety Energy Conversion Conference, Miami Beach, April 1985
- 0480 **Rankin, D.M.\* Read, P.J. Whaley, H.** A summary of the Chatham utility demonstration and future in eastern Canada; *ERL/CAT 86/87 070* ASME Joint Power Conference, paper no 85 JPGCFu-4, Wisconsin, Oct. 1985
- 0481 **Rankin, D.M.\* Whaley, H. Read, P.J.** Coal-water fuel testing at Maritime Electric Company's Charlottetown plant; *ERL/CAT 86/87 071* Proc 13th Energy Technology Conf, Washington, March 1986
- 0482 **Rankin, D.M.\* Whaley, H. Read, P.J.** The Charlottetown coal-water fuel demonstration; *ERL/CAT 86/87 072* Proc Intersociety Energy Conversion Conf, Tampa, Florida, Feb. 1986
- 0483 **Rankin, D.M.\* Covill, I.D. Whaley, H. Read, P.J.** Progress in the use of coal-water fuel for electrical power generation in eastern Canada; *ERL/CAT 86/87 073* Proc American Power Conf, 48:242-247, 1986

- 0484 **Razbin, V.V.\*** Improving the performance of fluidized bed boilers at Canadian Forces Base Summerside; *ERL/CAT 86/87 074* *EPRI Seminar on Atmospheric Fluidized Bed Technology for Utility Application*, Palo Alta, CA., April 8-20, 1986
- 0485 **Read, P.J.\* Whaley, H. Rankin, D.M.** Developments in Canada's coal-liquid fuel program; *ERL/CAT 86/87 075* *Proc 2nd European Symposium on Coal-Liquid Mixtures*, London, U.K., Sept. 1985
- 0486 **Reilly, I.G.\* Scott, D. de Bruijn, T.J.W.** Prediction of gas hold-up in pressurized bubble column reactors; *ERL/CAT 86/87 076* *Proc World Congress III of Chemical Engineering*, 9b-307, 271-274, Tokyo, Sept. 21-25, 1986
- 0487 **Sawatzky, H.\* Poirier, M.A.** Utilization of synthetic crude processing residues in asphalt blends; *ERL/CAT 86/87 077* *Proc U.S. Dept of Energy Tar Sand Symposium*, 491-501, Jackson, Wyoming, July 1986
- 0488 **Sekhar, M.V.C.\*** Large pore catalysts for viscosity reduction of heavy feeds; *ERL/CAT 86/87 078* *Preprints 10th Canadian Symposium on Catalysis*, June 15-18, 1986
- 0489 **Stover, N.S.H.\* Thambimuthu, K.V.** Correlation of coal slurry fuel droplet size with atomizer and coal slurry fuel data: equipment description and preliminary results; *ERL/CAT 86/87 079* *Proc 6th (Int.) Coal and Alternate Fuels Technology Workshop*, Sept. 1986
- 0490 **Ternan, M.\*** The effective diffusivity of residuum molecules in hydrocracking catalysts; *ERL/CAT 86/87 080* *Preprints 10th Canadian Symposium on Catalysis*, 60-69, Kingston, Ont., 1986
- 0491 **Thambimuthu, K.V.\*** Status report on the Canadian coal-water fuel program; *ERL/CAT 86/87 081* *keynote address to the Plenary session of the 6th (Int.) Coal-Liquid and Alternate Fuel Technology Workshop*, Halifax, N.S., Oct. 1986
- 0492 **Thambimuthu, K.V.\*** Rapporteur's summary on the status of ceramic and barrier filters for combined cycle gas cleaning applications; *ERL/CAT 86/87 082* *Proc Institution of Chemical Engineers Conference on Gas Cleaning at High Temperatures*, Guildford, U.K., Sept. 1986
- 0493 **Thambimuthu, K.V.\*** Factors critical to the design of coal-water fuel burners and the CANMET/NRC burner development; *ERL/CAT 86/87 083* *Meeting Charlottetown CWF Technical Steering Committee*, Charlottetown, P.E.I. Nov. 1986
- 0494 **Varma, R.L.\* Bakhshi, N.N. Mathews, J.F. Ng, S.H.** Performance of dual reactor system for conversion of syngas to gasoline range hydrocarbons; *ERL/CAT 86/87 084* *7th International Zeolite Conference*, Tokyo, Japan, Aug. 17-22, 1986
- 0495 **Varma, R.L.\* Bakhshi, N.N. Mathews, J.F. Ng, S.H.** Induction periods for conversion of synthesis gas to aromatics-containing hydrocarbons using a dual reactor system; *ERL/CAT 86/87 085* *10th Canadian Symposium on Catalysis*, Kingston, Ont., June 15-18, 1986
- 0496 **Ward, M.-C.\* Skubnik, M.** An evaluation of processing options for the oil shales of Ontario; *ERL/CAT 86/87 086* *1986 Eastern Oil Shale Symposium*, Lexington, Kentucky, Nov. 1986

- 0497 **Whaley, H.\* Read, P.J. Rankin, D.M. Neale, A.J.** Progress in CWF technology development for utility boilers in eastern Canada; *ERL/CAT 86/87 087 Proc 8th (Int.) Symp Coal Slurry Fuels Preparation and Utilization*, Pittsburgh Energy Technology Centre, U.S. Dept. of Energy, 1986
- 0498 **Whaley, H.\* Rankin, D.M.** Coal-water fuel combustion in boilers; *ERL/CAT 86/87 088 Proc 72nd Annual Meeting Canadian Pulp and Paper Association*, Montreal, Jan. 1986
- 0499 **Whaley, H.\* Rankin, D.M. Read, P.J. Covill, I.D.** Coal-water fuels development in eastern Canada: the Chatham and Charlottetown demonstrations and beyond; *ERL/CAT 86/87 089 Proc 7th (Int.) Symp Coal Slurry Fuels Preparation and Utilization*, 789-797, Pittsburgh Energy Technology Centre, U.S. Dept. of Energy, 1986
- 0500 **Wilson, M.F.\* Mainwaring, P.R. Brown, J.R. Kriz, J.F.** Hydroprocessing of distillates from oil sands over nickel metal supported catalysts; *ERL/CAT 86/87 090 10th Canadian Symposium on Catalysis*, Kingston, Ont., pp 10-19, June 16, 1986
- 0501 **Poirier, M.A.\* Smiley, G.T.** Comparison of non-volatile bituminous residues and coal materials by pyrolysis gas chromatography; *ERP/ERL 83-001(OP&J) Presented at the 164th CIC Congress in Calgary, Alberta, June 1983*
- 0502 **Poirier, M.A.\* Rahimi, P.M. Ahmed, S.M.** Quantitative analysis of coal-derived liquids residues by TLC with flame ionization detection; *ERP/ERL 83-013(OP&J) presented at the "Chemical characterization of coal-derived liquids" Meeting in Pittsburgh, PA, May 1983 J. Chromatogr. Sci. 22 (3), 116 (1984)*
- 0503 **Chantal, P.D.\* Ahmed, S.M. Jean, G. Sawatzky, H.** Adsorption of nitrogenous-type compounds from synthetic crude fractions on various sorbents; *ERP/ERL 86-012(OP&J) Proc 35th Can Soc Chem Eng Conf., Sarnia, Ont., Oct. 1986*
- 0504 **Brown, J.R.\*** A semi-quantitative XPS study of model Co/Moalumina hydrotreating refinery catalysts; *ERP/ERL 86-046(OP&J) Presented at the 11th International Conference on X-ray Optics and Microanalysis, London, Canada, August 4-8, 1986 and for publication in proceedings*
- 0505 **Allenger, V.M.\* Brown, J.R. McLean, D.D. Ternan, M.** Deactivation of fluorinated alumina catalysts in acetylene polymerization; *ERP/ERL 86-049(OP&J) presented at the 36th Canadian Chemical Engineering Conference, Sarnia, Ont., Oct. 5, 1986*
- 0506 *ERP/ERL 87-009(OP&J)* **Berry, E.E.\* Anthony, E.J. Kalmanovitch, D.** The uses and morphology of atmospheric fluidized bed combustion wastes from Canada's first industrial AFBC boilers; *10th Ann ASME Energy-Sources Technology Conf and Exhibition, Dallas, Texas; Feb. 15-18, 1987*

**Technical Reports (TR) / Rapports techniques (TR)**

- 0507 *ERP/ERL 85-058(TR)* **Price, J.T.\* Gransden, J.F.** Carbonization of conventional and partially briquetted charges of a Canadian Steel Company blend containing western Canadian coals; PAGES: 17 FICHE: 1
- 0508 *ERP/ERL 85-072(TR)* **Coulombe, S.\* Jean, G. Chantal, P.D. Kaliaquine, S.** Characterization of products from the upgrading of sorbitol using gas chromatography/mass spectrometry and gas chromatography/fourier transform infrared spectrometry; PAGES: 14 FICHE: 1
- 0509 *ERP/ERL 85-073(TR)* **Coulombe, S.\* Jean, G. Chantal, P.D. Kaliaquine, S.** Characterization of products from the conversion of furanic compounds to hydrocarbons on zeolite using gas chromatography/mass spectrometry and gas chromatography/fourier transform infrared spectrometry; PAGES: 14 FICHE: 1

**Mining Research Laboratories / Laboratoires de recherche minière****Journal Publications / Publication dans les revues**

- 0512 *ACEA/MRL 86-023(J)* **Lee, P.\* Back, M.H.** Kinetic studies of thermal decomposition of tetryl using accelerating rate calorimetry part I: derivation of the activation energy for decomposition; *Published in Thermochimica Acta: vol. 107; 1986 pps 1-16*
- 0513 *ACEA/MRL 86-024(J)* **Lee, P.\* Back, M.H.** Kinetic studies of the thermal decomposition of tetryl using accelerating rate calorimetry part II: products and mechanism of the reaction; *Published in Thermochimica Acta; vol. 107; 1986 pps 17-26*
- 0514 *ERP/MRL 83-100(J)* **Feng, K.K.\*** Spontaneous combustion of Canadian coals; *CIM Bulletin; 78:877:71-75; May 1985*
- 0515 *M&ET/MRL 86-016(J)* **Mogan, J.P.\* Dainty, E.D.** Diesel emission control catalysts: friend or foe? *CIM Special Volume 36; paper no. 20: Heavy duty diesel emission control; A review of technology; May 1986; pps. 251-260.*
- 0516 *M&ET/MRL 86-022(J)* **Udd, J.E.\*** Some examples of instrumentation for stability monitoring in Canadian underground hard rock mining; *Published in the proceedings of the International Symposium on Large Rock Caverns, Helsinki, Finland, 25-28 August 1986; vol. 1, section C2.17, pps 433-446*

- 0517 *M&ET/MRL 86-107(J)* **Szymanski, J.\* Mintz, K.J.** Small-scale flame tests on fire-retardant conveyor belting; *Journal of Fire Sciences*; vol. 4, no. 4; Jul/Aug 1986; pps. 231-236
- 0518 *M&ET/MRL 86-143(J)* **Gangal, M.K.\* Mogan, J.P. Dainty, E.D.** Monitoring and assessment of air quality in dieselized mines; *presented at the District no. 1 meeting of the CIM, Halifax, Nova Scotia, Nov. 20-22, 1986*
- 0519 *MRL/CAT 86/87 065* **Bigu, J.\*** On the plate-out of radon and thoron progeny on large surfaces; *Radon and its decay products: Occurrence, properties, and health effects*; ACS symposium series; American Chemical Society, P.K. Hopke, editor; Washington, D.C.; 1987; chapter 21; pps 272-284
- 0520 *MRL/CAT 86/87 066* **Dainty, E.D.\* Mitchell, E. Schnakenberg, G.W.Jr.** Organization, objectives and achievements of a three government collaborative program on diesel emissions reduction research and development; *CIM Special Volume 36*; paper no. 1; Oct. 1986; pps. 3-20
- 0521 *MRL/CAT 86/87 067* **Dainty, E.D.\* Gangal, M.K. Carlson, D.H.** A summary of underground mine investigations of ceramic diesel particulate filters and catalytic purifiers; *CIM Special Volume 36*; paper no. 4; May 1986; pps 54-77
- 0522 *MRL/CAT 86/87 068* **Dainty, E.D.\* Lawson, A. Vergeer, H.C. Manicom, B. Kreuzer, T.P. Engler, B.H.** Diesel emissions reduction by ceramic filters employing catalysts or a fuel additive; *published in Diesel particulates: an update SP-702*; Special volume of the Society of Automotive Engineers; Feb. 1987; pages 57-65 SAE Paper No. 870014
- 0523 *MRL/CAT 86/87 069* **Feng, K.K.\* Vandebeek, R.R. Bauer, A.** Evaluation of the propagation sensitivity of small diameter blasting slurries, water gels and emulsions; *CIM Report*; May 1987; pps. 9-10 and 22-23
- 0524 *MRL/CAT 86/87 070* **Knight, G.\* Moore, E.** Comparison of respirable dust samplers for use in hard rock mines; *Am. Ind. Hyg. Assoc. J. 48(4)*; 354-363 (1987).
- 0525 *MRL/CAT 86/87 071* **Knight, G.\* Moore, E.** Comparison of dust samplers: statistical analysis techniques *Am. Ind. Hyg. Assoc. J. 48(4)*: 344-353 (1987)
- 0526 *MRL/CAT 86/87 072* **Knight, G.\* Moore, E. Smith, C.W.** Size distribution of airborne dust in Labrador iron mines; *Am. Ind. Hyg. Assoc. J. 48(2)*: 150-154 (1987)
- 0527 *MRL/CAT 86/87 073* **Lee, P.\* Back, M.H.** Kinetic studies of thermal decomposition of tetryl using accelerating rate calorimetry part I. derivation of the activation energy for decomposition *Thermochimica Acta*; vol. 107; 1986; pps.1-16
- 0528 *MRL/CAT 86/87 074* **Lee, P.\* Back, M.H.** Kinetic studies of thermal decomposition of tetryl using accelerating rate calorimetry part II. products and mechanism of the reaction; *Thermochimica Acta*; vol. 107; 1986; pps. 17-26
- 0529 *MRL/CAT 86/87 075* **Mogan, J.P.\* Horton, A.J. Vergeer, H.C. Westaway, K.C.** A comparison of laboratory and underground mutagen levels for treated and untreated diesel exhaust; *CIM Special Volume 36*; paper no. 5; May 1986; pps. 78-91

- 0530 *MRL/CAT 86/87 076* **Mogan, J.P.\* Lawson, A. Dainty, E.D.** Performance of conventional and advanced water scrubbers for controlling underground diesel exhaust emissions; *CIM Special Volume 36*; paper no. 2; May 1986; pps 21-28
- 0531 *MRL/CAT 86/87 077* **Mogan, J.P.\* Dainty, E.D.** Diesel emission control catalysts: friend or foe? *CIM Special Volume 36*; paper no. 20; heavy duty diesel emission control; a review of technology May 1986; pps 251-260
- 0532 *MRL/CAT 86/87 078* **Savich, M.U.\* Weglo, J.K.** Attenuation measurements of ear muffs at Falconbridge Ltd., Canadian Nickel Division, Sudbury Operation, 1984; *CIM Bull. 79:894: 36-49*; 1986
- 0533 *MRL/CAT 86/87 079* **Szymanski, J.\* Mintz, K.J.** Small-scale flame tests on fire-retardant conveyor belting; *Journal of Fire Sciences*; vol. 4, no. 4; Jul/ Aug 1986; pps. 231-236
- 0534 **Knight, G.\*** Proposal for particle size fraction definitions for health related sampling; *MRP/MRL 84-067(J)* *Published as letter to the Editor, Annals of Occupational Hygiene 29* no. 4, 526-528 1985

#### Oral Presentations / Présentations orales

- 0535 **Lee, P.\* Vandebek, R.R. Feng, K.K.** Evaluation of thermal runaway of high explosives using accelerating rate calorimetry; *ACEA/MRL 86-091(OP)* *41st Annual Calorimetry Conference Aug 17-22, 1986 at Somerset, New Jersey, U.S.A.*
- 0536 **Feng, K.K.\* Jones, D.E.G.** Theoretical calculation of thermal decomposition of explosives from hot spot initiation; *ACEA/MRL 86-137(OP)* *presented at the Combustion Institute (Canadian Sections) 1987 Spring Technical Meeting, Vancouver, B.C. May 28 and 29, 1987*
- 0537 **Contestabile, E.\* Vandebek, R.R.** Relating explosives sensitivity laboratory results to field tests; *ACEA/MRL 86-141(OP)* *presented to the Society of Explosives Engineers at the "1987 Conference on Explosives and Blasting Technique"; Feb. 1-6, 1987, Miami, Florida, U.S.A.*
- 0538 **Bossert, J.A.\* Mintz, K.J.** Electrical instruments for use in underground coal mines and preparation plants; *ERP/MRL 84-023(OP)* *presented by K.J. Mintz at the 12th Annual International Symposium of Mining & Metallurgy Division of the Instrument Society of America, Vancouver, B.C., May 2-4, 1984*
- 0539 **Bigu, J.\*** Progress during the second half of 1985 in the environment projects of the CANMET minerals program; *M&ET/MRL 86-001(OP)* *presented to the joint panel on Occupational and Environmental Research for Uranium Production in Canada, Toronto, Ontario, Dec. 3-4, 1985*
- 0540 **Geller, L.B.\* Shook, J.A.** Experiments with slurries of coarse particles in a 250mm pipeline; *M&ET/MRL 86-007(OP)* *presented at the 10th International Conference on the Hydraulic Transport of Solids in Pipes, Hydrotransport 10, Innsbruck, Austria, 29-31 Oct. 1986*

- 0541 **Mogan, J.P.\* Horton, A.J. Vergeer, H.C. Westaway, K.C.** A comparison of laboratory and underground mutagen levels for treated and untreated diesel exhaust; *M&ET/MRL 86-010(OP)* presented to the *CIM/AGM*, Montreal, Quebec, May 14, 1986
- 0542 **Bossert, J.A.\*** Oral presentation to the London section of the Institute of Electrical and Electronic Engineers on hazardous locations February 7, 1986; *M&ET/MRL 86-015(OP)* Presented at and sponsored by the *Institute of Electrical and Electronic Engineers, (IEEE)*, London Chapter, at Fanshaw College, London, Ontario, February 7, 1986;
- 0543 **Hardcastle, S.\* Grenier, M. Bigu, J.** Determination of environmental variable underground: measurement techniques and instrumentation; *M&ET/MRL 86-030(OP)* Presented to *Canadian Institute of Mining and Metallurgy (Algoma Branch)*, Elliot Lake, Jan.20/86
- 0544 **Udd, J.E.\*** Some thoughts on minerals industry education for the 21st century; *M&ET/MRL 86-031(OP)* prepared (as *Chairman of the CIM Committee on Education*); presented by the CIM to the 13th Congress of the Council of Mining and Metallurgical Institutions, Singapore, May 11-16, 1986
- 0545 **Udd, J.E.\*** Speech to Laurentian University students March 12, 1986; *M&ET/MRL 86-036(OP)* presented to *Laurentian University students*, Mar. 12, 1986
- 0546 **Vongpaisal, S.\* Su, Y.L. Gregg, L.C. Fuchs, J.L. St. Pierre, J.A.** Communications systems for isolated areas in mines; *M&ET/MRL 86-038(OP)* Presented at the *88th Annual General Meeting of the Canadian Institute of Mining and Metallurgy*, Montreal, Quebec, May 11-15, 1986
- 0547 **Grenier, M.\* Hardcastle, S. Bigu, J.** Characterization of respirable dust in a belt conveyor drift; *M&ET/MRL 86-051(OP)* Presented at the *88th Annual General Meeting of the Institute of Mining and Metallurgy*, Montreal, Quebec, 11-15 May, 1986
- 0548 **Burtnyk, N.\* Scrimgeour, J. Udd, J.E. Pathak, J.** Recent developments in remote mining systems; *M&ET/MRL 86-056(OP)* Presented at the *Annual General Meeting*, Canadian Institute of Mining and Metallurgy, Montreal, Quebec, May 11-15, 1986
- 0549 **Betournay, M.C.\*** A design process for surface crown pillars of hard rock mines; *M&ET/MRL 86-062(OP)* *88th Annual General Meeting of the CIM*, Montreal, Quebec, May 11-15, 1986
- 0550 **Bigu, J.\*** Status of personal alpha-particle dosimetry in the uranium industry: a brief overview; *M&ET/MRL 86-071(OP)* Presented to the *Joint Panel on Occupational and Environmental Research for Uranium Production in Canada (Personal Dosimetry Working Group)* held in Sask, Sask, May 27-28, 1986
- 0551 **Bigu, J.\*** Progress during the first half of 1986 in the environment projects of the CANMET Minerals Program; *M&ET/MRL 86-072(OP)* Presented to the *Joint Panel on Occupational and Environmental Research for Uranium Production in Canada*, May 27-28, 1986; held in Saskatoon, Saskatchewan.
- 0552 **Gangal, M.K.\* Mogan, J.P. Dainty, E.D.** Monitoring and assessment of air quality in dieselized mines; *M&ET/MRL 86-081(OP)* Presented at the *District No. 1 meeting of the CIM*, Halifax, Nova Scotia, November 20-22, 1986

- 0553 **Mogan, J.P.\*** CANMET contribution to: diesel emission control: a success story; *M&ET/MRL 86-087(OP)* presented at *International Mining Show*, Las Vegas, Oct. 9, 1986
- 0554 **Betournay, M.C.\* Thivierge, S.** The Niobec mine: a case study of surface crown pillars; *M&ET/MRL 86-095(OP)* presented at the *Surface Crown Pillar Colloquim*, Val d'Or, Quebec, Nov. 10, 1986
- 0555 **Bigu, J.\*** Radiation control systems for the reduction of radon daughter concentrations; *M&ET/MRL 86-098(OP)* Presented at the *31st Annual Meeting of the Health Physics Society (June 29-July 3, 1986)* at Pittsburgh, Pennsylvania, U.S.A.
- 0556 **Thomson, I.\* Nielsen, T.K. Bigu, J.** A portable radon/thoron dosimeter for personal and environmental monitoring; *M&ET/MRL 86-102(OP)* Presented at the *31st Annual Meeting of the Health Physics Society (June 29-July 3, 1986)* at Pittsburgh, Pennsylvania, U.S.A.
- 0557 **Pakalnis, R.C.T.\* Miller, H.D.S. Vongpaisal, S. Madill, T.** An empirical approach to open stope design; *M&ET/MRL 86-136(OP)* Presented at the *sixth International Congress on Rock Mechanics August 30th - September 3rd, 1987*, Montreal, Quebec, Canada
- 0558 **Annor, A.\* Jackson, R.** Mechanical and thermomechanical behaviour of Lac Du Bonnet granite: some laboratory observations; *MRL/CAT 86/87 001* *Canadian Nuclear Society*, 2nd International Conference on Radioactive Waste Management; Sept; 7-11, 1986
- 0559 **Betournay, M.C.\*** A design process for surface crown pillars of hard rock mines; *MRL/CAT 86/87 002* presented at the *88th Annual General Meeting of the CIM*, Montreal, Quebec, May 11-15, 1986
- 0560 **Betournay, M.C.\*** Guide d'ingénierie des piliers de surface: objectifs et sujets traités; *MRL/CAT 86/87 003* *Présentation*, Colloque sur l'ingénierie des Piliers de Surface, Val d'Or, Quebec, le 10 novembre 1986
- 0561 **Betournay, M.C.\* Thivierge, S.** The Niobec mine: a case study of surface crown pillars; *MRL/CAT 86/87 004* *Surface Crown Pillar Colloquium*, Val d'Or, Québec, November 10, 1986
- 0562 **Betournay, M.C.\*** Sommaire des histoires de cas de piliers de surface; *MRL/CAT 86/87 005* *Colloque sur l'Ingénierie des Piliers de Surface*, Val d'Or, le 10 novembre 1986
- 0563 **Bigu, J.\*** Progress during the second half of 1985 in the environment projects of the CANMET Minerals Program; *MRL/CAT 86/87 006* Presented to the *joint panel on Occupational and Environmental Research for Uranium Production in Canada*, Toronto, Ontario, Dec.3-4, 1985
- 0564 **Bigu, J.\*** Status of personal alpha-particle dosimetry in the uranium industry: a brief overview; *MRL/CAT 86/87 007* *Joint panel on Occupational and Environmental Research for Uranium Production in Canada (Personal Dosimetry Working Group)* Saskatoon, Saskatchewan, May 27-28, 1986
- 0565 **Bigu, J.\*** Progress during the first half of 1986 in the environment projects of the CANMET Minerals Program; *MRL/CAT 86/87 008* *Joint Panel on Occupational and Environmental Research for Uranium Production in Canada*, May 27-28, 1986, Saskatoon, Saskatchewan



- 0566 **Bigu, J.\*** On the plate-out of radon and thoron progeny on large surfaces; *MRL/CAT 86/87 009* 191st National Meeting of the American Chemical Society (section: radon and its decay products: occurrence, properties, and health effects), Apr. 13-18, 1986, New York, U.S.A.
- 0567 **Bigu, J.\*** Radiation control systems for the reduction of radon daughter concentrations; *MRL/CAT 86/87 010* 31st Annual Meeting of the Health Physics Society, June 29-July 3, 1986, Pittsburgh, Pennsylvania, U.S.A.
- 0568 **Billette, N.R.\* Pathak, J.** Automates et robots en exploitation minière: évolution prévisible à court terme; *MRL/CAT 86/87 011* présenté au colloque sur la recherche minière, son impact sur la rentabilité, Québec, Que. 18-19 février 1986
- 0569 **Billette, N.R.\* Laflamme, M.** Impact du boni sur les accidents des mines souterraines: analyse multidimensionnelle; *MRL/CAT 86/87 012* présenté au colloque sur "l'analyse des données appliquée à la santé et à la sécurité du travail", 8 octobre 1986, IRSST, Montréal
- 0570 **Billette, N.R.\*** Automatisation et systèmes experts dans les mines métalliques: quand, comment, pourquoi, jusqu'à quel point? *MRL/CAT 86/87 013* présenté au colloque "Le virage technologique c'est les temps d'agir" CAO/FAO 86, Montréal, 18 septembre 1986
- 0571 **Billette, N.R.\*** Mining equipment developments - recent involvement of CANMET; *MRL/CAT 86/87 014* presented at the meeting "Underground Mining Equipment ... Evolution to come", CRM/AMMQ/CANMET, Val d'Or, Quebec, Nov. 12, 1986
- 0572 Oral presentation to the London section of the Institute of Electrical and Electronic Engineers on hazardous locations - February 7, 1986; *MRL/CAT 86/87 015* presented at and sponsored by the Institute of Electrical and Electronic Engineers (IEEE), London Chapter, Fanshaw College, London, (Ontario); février 1986
- 0573 Recent developments in remote mining systems; *MRL/CAT 86/87 016* presented at the Annual General Meeting, Canadian Institute of Mining and Metallurgy, Montreal, Quebec, May 11-15, 1986
- 0574 **Breu, F.\* Topp, R. Enga, B.E. Dainty, E.D.** Application engineering of particulate control systems for underground use; *MRL/CAT 86/87 017* presented to the 1987 SAE International Congress and Exposition, Detroit, Mich., U.S.A. February, 1987 SAE Paper No. 870255
- 0575 **Contestabile, E.\* Vandebek, R.R.** Relating explosives sensitivity laboratory results to field tests; *MRL/CAT 86/87 018* presented to the Society of Explosives Engineers at the "1987 Conference on Explosives and Blasting Technique"; Feb. 1-6, 1987, Miami, Florida, U.S.A.
- 0576 **Dainty, E.D.\* Gangal, M.K. Carlson, D.H.** A summary of underground mine investigations of ceramic diesel particulate filters and catalytic purifiers; *MRL/CAT 86/87 019* presented at the AMC General Meeting, Los Vegas, California, U.S.A. Oct. 7, 1986
- 0577 **Dainty, E.D.\* Mitchell, E. Schnakenberg, G.W.Jr.** Organization, objectives and achievements of a three government collaborative program on diesel emissions reduction research and development; *MRL/CAT 86/87 020* presented to the CIM/AGM, Montreal, Quebec, May 14, 1986

- 0578 **Dainty, E.D.\* Lawson, A. Vergeer, H.C. Manicom, B. Kreuzer, T.P. Engler, B.H.** Diesel emissions reduction by ceramic filters employing catalysts or a fuel additive; *MRL/CAT 86/87 021* presented to the *Society of Automotive Engineers International Congress*, Detroit, Mich., U.S.A. Feb. 24, 1987
- 0579 **Dainty, E.D.\* Lawson, A. Vergeer, H.C. Manicom, G. Kreuzer, T.P. Engler, B.H.** Diesel emissions reduction by ceramic filters employing catalysts or a fuel additive; *MRL/CAT 86/87 022* presented to the *1987 SAE International Congress and Exposition*; Detroit, Mich., U.S.A. Feb. 1987
- 0580 **Dave, N.\* Lim, T.P. Siwik, R. Blackport, R.** Geophysical and bihydrogeochemical investigations of an inactive sulphide tailings basin, Noranda, Quebec, Canada; *MRL/CAT 86/87 023* presented at *1986 National Symposium on Surface Mining, Hydrology, Sedimentology and Reclamation*, Lexington, Kentucky, 7-12 December 1986 (pres with an award for outstanding tech.paper)
- 0581 **Feng, K.K.\* Vandebek, R.R. Bauer, A. Katsabanis, P. Moroz, J. Duncan, D.** Numerical modelling of the high velocity impact sensitivity of commercial slurry and emulsion explosives; *MRL/CAT 86/87 024* presented to the *International Symposium on Intense Dynamic Loading and its effects*, June 3-7, 1986, Beijing, China
- 0582 **Feng, K.K.\* Vandebek, R.R. Bauer, A.** Evaluation of the propagation sensitivity of small diameter blasting slurries, water gels and emulsions; *MRL/CAT 86/87 025* presented at the *88th Annual General Meeting of the CIM*, Montreal, Quebec, May 1986
- 0583 **Feng, K.K.\* Vandebek, R.R. Bauer, A. Katsabanis, P. Moroz, J.** High velocity impact sensitivity of commercial slurry and emulsion explosives; *MRL/CAT 86/87 026* presented at the *22nd Explosives Safety Seminar Aug. 26-28, 1986*, Anaheim, California, U.S.A.
- 0584 **Feng, K.K.\* Vandebek, R.R. Bauer, A.** Evaluation of propagation sensitivity of commercial explosives in large diameter holes; *MRL/CAT 86/87 027* presented at the *13th Annual Conference on Explosives and blasting Technique and the 3rd Mini-Symposium on Research*, February 1-6, 1987 Miami, Florida, U.S.A.
- 0585 **Gangal, M.K.\* Mogan, J.P. Dainty, E.D.** Monitoring and assessment of air quality in dieselized mines; *MRL/CAT 86/87 028* presented at the *District No. 1 Meeting of the CIM*, Halifax, Nova Scotia, Nov. 20-22, 1986
- 0586 **Gangal, M.K.\* Dainty, E.D. McKinnon, D.L. Blanchard, R.A.** Evaluation of diesel emissions control technology at Noranda's Brunswick mining and smelting - mining division; *MRL/CAT 86/87 029* presented at the *17th Annual Technical Session*, New Brunswick branch of the CIM, Bathurst, New Brunswick, Sept. 5, 1986
- 0587 **Geller, L.B.\* Shook, C.A.** Experiments with slurries of coarse particles in a 250mm pipeline; *MRL/CAT 86/87 030* presented at the *10th International Conference on the Hydraulic Transport of Solids in Pipes*, Hydrotransport 10, Innsbruck, Austria, 29-31 October 1986
- 0588 **Grenier, M.\* Hardcastle, S. Bigu, J.** Characterization of respirable dust in a belt conveyor drift; *MRL/CAT 86/87 031* presented at the *88th Annual General Meeting of the CIM*, Montreal, Quebec, 11-15, May 1986

- 0589 **Hardcastle, S.\* Grenier, M. Bigu, J.** Determination of environmental variables underground - measurement techniques and instrumentation; *MRL/CAT 86/87 032* presented to *CIM (Algoma Branch)*, Elliot Lake, Ontario, Jan. 20, 1986
- 0590 **Herget, G.\*** Changes of ground stresses with depth in the Canadian Shield; *MRL/CAT 86/87 033* presented at the *International Symposium on Rock Stress Measurements*, Stockholm, Sweden, September 1-3, 1986
- 0591 **Lee, P.\* Vandebeek, R.R. Feng, K.K.** Evaluation of thermal runaway of high explosives using accelerating rate calorimetry; *MRL/CAT 86/87 034* presented at the *41st Annual Calorimetry Conference*, Aug. 17-22, 1986 at Somerset, New Jersey, U.S.A.
- 0592 **Mogan, J.P.\* Horton, A.J. Vergeer, H.C. Westaway, K.C.** A comparison of laboratory and underground mutagen levels for treated and untreated diesel exhaust; *MRL/CAT 86/87 035* presented to the *CIM/AGM*, Montreal, Quebec, May 14, 1986
- 0593 **Mogan, J.P.\*** Performance of conventional and advanced water scrubbers for controlling underground diesel exhaust emissions; *MRL/CAT 86/87 036* presented to the *CIM Annual General Meeting*, Montreal, Quebec, May 14, 1986
- 0594 **Mogan, J.P.\*** CANMET contribution to: diesel emission control: a success story; *MRL/CAT 86/87 037* presented at the *International Mining Show*, Las Vegas, Oct. 9, 1986
- 0595 **Nenonen, L.\* Scrimgeour, J. Pathak, J. Udd, J.E.** Mining automation activities at NRC and CANMET; *MRL/CAT 86/87 038* presented at the *1st Canadian Symposium on Automation in Mining*, Sudbury, Ontario, Oct. 14-16, 1986
- 0596 **Pathak, J.\* Dias, M.** Microprocessor controlled down-the-hole drill for enhancing productivity and accuracy in underground hardrock bulk mining methods; *MRL/CAT 86/87 039* presented at the *8th WVU International Mining Electrotechnology Conference*, Morgantown, West Virginia University, U.S.A. July 30-Aug 1, 1986
- 0597 **Savich, M.U.\* Weglo, J.K.** Attenuation measurements of ear muffs at Falconbridge Ltd., Canadian Nickel Division, Sudbury Operation, 1984; *MRL/CAT 86/87 040* presented at *Conf. on Occupational Health for Ontario Miners*, Sudbury, Ontario, November 1986
- 0598 **Thomson, I.\* Nielsen, T.K. Bigu, J.** A portable radon/thoron dosimeter for personal and environmental monitoring; *MRL/CAT 86/87 041* presented at the *31st Annual Meeting of the Health Physics Society*; June 29-July 3, 1986, Pittsburgh, Pennsylvania, U.S.A.
- 0599 **Udd, J.E.\* Billette, N.R.** La recherche minière à CANMET: son impact industriel; *MRL/CAT 86/87 042* présenté au colloque sur la recherche minière, son impact sur la rentabilité, Québec, Que. 19 février 1986
- 0600 **Udd, J.E.\* Dainty, E.D. Mogan, J.P. Geller, L.B.** Summary reports of progress on tripartite USBM/MOL/CANMET research projects, 1985-86; *MRL/CAT 86/87 043* presented at the *Annual USBM-CANMET Meeting* Sudbury, Ontario, May 27 & 28, 1986
- 0601 **Udd, J.E.\* Betournay, M.C.** Historique et perspectives des piliers de surface canadiens; *MRL/CAT 86/87 044* discours d'Ouverture, Colloque sur l'ingénierie des Piliers de Surface, Val d'Or, le 10 novembre 1986

- 0602 **Udd, J.E.\*** Some thoughts on minerals industry education for the 21st century; *MRL/CAT 86/87 045* prepared (as Chairman of the CIM Committee on Education); presented by the CIM to the 13th Congress of the Council of Mining and Metallurgical Institutions, Singapore, May 11-16, 1986
- 0603 **Udd, J.E.\*** Speech to Laurentian University students March 12, 1986; *MRL/CAT 86/87 046* presented to Laurentian University students, Mar. 12, 1986
- 0604 **Vongpaisal, S.\* Su, Y.L. Gregg, L.C. Fuchs, J.L. St. Pierre, J.A.** Communications systems for isolated areas in mines; *MRL/CAT 86/87 047* presented at the 88th Annual General Meeting of the CIM, Montreal, Quebec, May 11-15, 1986
- 0605 **Mogan, J.P.\* Dainty, E.D.** Diesel emission control catalysts: friend or foe?; *MRP/MRL 84-003(OP)* presented at the CIM Annual General Meeting, Ottawa, Ontario, April 17, 1984
- 0606 **Betournay, M.C.\*** Guide d'ingénierie des piliers de surface: objectifs et sujets traités; *TM&E/LRM 86-083(OP)* Présentation, Colloque sur l'Ingénierie des Piliers de Surface, Val d'Or, Quebec, le 10 novembre 1986
- 0607 **Feng, K.K.\* Vandebek, R.R. Bauer, A. Katsabanis, P. Moroz, J. Duncan, D.** Numerical modelling of the high velocity impact sensitivity of commercial slurry and emulsion explosives; *ACEA/MRL 86-047(OP&J)* International Symposium on Intense Dynamic Loading and Its effects, June 3-7, 1986 at Beijing, China (read by Dr. A. King); abstract published in the proceedings.
- 0608 **Feng, K.K.\* Vandebek, R.R. Bauer, A. Katsabanis, P. Moroz, J.** High velocity impact sensitivity of commercial slurry and emulsion explosives; *ACEA/MRL 86-146(OP&J)* Presented at the 22nd Explosives Safety Seminar August 26-28., 1986 at Anaheim, California, USA and published in the proceedings
- 0609 **Feng, K.K.\* Vandebek, R.R. Bauer, A.** Evaluation of propagation sensitivity of commercial explosives in large diameter holes; *ACEA/MRL 86-150(OP&J)* Presented to the 13th Annual Conference on Explosives and Blasting Technique and the 3rd Mini-Symposium on Research, February 1-6, 1987, Miami, Florida, & published in the proceedings
- 0610 **Bossert, J.A.\*** Fire resistant materials for use in underground mines; *ERP/MRL 83-044(OP&J)* Proc of the First International Potash Technology Conference; Saskatoon, October 3-6, 1983; p 467-472; Ed: R.M. McKerchei and eventual publication in proceedings
- 0611 **Lawson, A.\* Vergeer, H.C. Mitchell, E. Dainty, E.D.** Update of water/fuel emulsification effects on diesel emissions reduction; *ERP/MRL 84-004(OP&J)* presented at the CIM Annual General Meeting, Ottawa, Ontario, April 19, 1984
- 0612 **Larocque, G.\* Annor, A.** Overview: rock mechanics/rock properties; *ERP/MRL 84-010(OP&J)* Proc of the 17th Information Meeting of the Nuclear Fuel Waste Management Program; February 21-24, 1984; Ottawa; Atomic Energy of Canada Ltd. Technical Report TR-299 presented at the 17th Nuclear Fuel Waste Management Information Meeting, Carleton University, Ottawa, Ontario, Feb. 21-23, 1984
- 0613 **Mogan, J.P.\* Horton, A.J. Vergeer, H.C. Westaway, K.C.** A comparison of laboratory and underground mutagen levels for treated and untreated diesel exhaust; *M&ET/MRL 86-010(OP&J)* presented to the CIM AGM, Montreal, May 14, 1986 and published in the

- special CIM Volume 36 Heavy Duty Diesel Emission Control: A Review of Technology, Chap 1, pp 78-91.
- 0614 **Mogan, J.P.\* Lawson, A. Dainty, E.D.** Performance of conventional and advanced water scrubbers for controlling underground diesel exhaust emissions; *M&ET/MRL 86-011(OP&J)*  
*Presented to the CIM Annual General Meeting, Montreal, Quebec, May 14, 1986. Published in the Special CIM Volume "Diesel Emissions Control Technology for the Underground Mines"*
- 0615 **Dainty, E.D.\* Mitchell, E. Schnakenberg, G.W.Jr.** Organization, objectives and achievements of a three government collaborative program on diesel emissions reduction research and development; *M&ET/MRL 86-019(OP&J)* *Presented to the CIM/AGM, Montreal, May 14, 1986, and published in the Special Volume "Diesel Emission Control Technology for Underground Mines"*
- 0616 **Dainty, E.D.\* Gangal, M.K. Carlson, D.H. Vergeer, H.C. Mitchell, E.** A summary of underground mine investigations of ceramic diesel particulate filters and catalytic purifiers; *M&ET/MRL 86-020(OP&J)* *CIM Special Volume 36; paper no. 4; May 1986; pps 54-77*
- 0617 **Herget, G.\*** Changes of ground stresses with depth in the Canadian shield; *M&ET/MRL 86-032(OP&J)* *Published in the proceedings of the International Symposium on Rock Stress Measurements Stockholm. 1-3 September 1986: pps 61-68*
- 0618 **Annor, A.\* Jackson, R.** Mechanical and thermomechanical behaviour of Lac du Bonnet granite: some laboratory observations; *M&ET/MRL 86-078(OP&J)* *Canadian Nuclear Society, 2nd International Conference on Radioactive Waste Management; September 7-11, 1986 at the Winnipeg Convention Centre, Winnipeg, Manitoba, Canada Published in the proceedings; pps. 311-318*
- 0619 **Pathak, J.\* Dias, M.** Microprocessor controlled down-the-hole drill for enhancing productivity and accuracy in underground hardrock bulk mining methods; *M&ET/MRL 86-082(OP&J)* *8th WVU International Mining Electrotechnology Conference, Morgantown, West Virginia University, U.S.A., July 30-August 1, 1986 and published in the proceedings, pps 86-92*
- 0620 **Savich, M.U.\* Weglo, J.K.** Attenuation measurements of ear muffs at Falconbridge Limited, Canadian Nickel Division, Sudbury Operation, 1984; *M&ET/MRL 86-088(OP&J)*  
*Presented to the Conference on Occupational Health for Ontario Miners, held in Sudbury, ON, Nov. 1986 Published in the CIM Bulletin, Special Feature on Human Resources and Safety. Vol. 79, No. 894, Oct. 1986; p36-49*
- 0621 **Bigu, J.\*** On the plate-out of radon and thoron progeny on large surfaces; *M&ET/MRL 86-090(OP&J)* *presented to the 191st National Meeting of the American Chemical Society (section: Radon and its Decay Products: Occurrence, Properties, and Health Effects), April 13-18, 1986, New York published in: Radon and Its Decay Products: Occurrence Properties and Health Effects*
- 0622 **Betournay, M.C.\* Thivierge, S.** The Niobec mine: a case study of surface crown pillars; *M&ET/MRL 86-095(OP&J)* *Colloque sur l'Ingénierie des Piliers de Surface; le 10 novembre 1987; Val d'Or, Quebec; Centre de Recherches Minérales, Ste-Foy, Quebec 1987; pp 94-124*
- 0623 **Gangal, M.K.\* Dainty, E.D. McKinnon, D.L. Blanchard, R.A.** Evaluation of diesel emissions control technology at Noranda's Brunswick mining and smelting-mining division;

- M&ET/MRL 86-096(OP&J)* Pres. at the 17th. Ann. Tech. Session, N.B. Br. of the CIM, Bathurst, N.B., Sept.5/86 pub. in proc. "Facing the World Mining & Freer Trade"; 22 pp
- 0624 **Dave, N.K.\* Lim, T.P. Siwik, R. Blackport, R.** Geophysical and biohydrogeochemical investigations of an inactive sulphide tailings basin, Noranda, Quebec, Canada; *M&ET/MRL 86-099(OP&J)* presented at 1986 National Symposium on Surface Mining, Hydrology, Sedimentology and Reclamation, Lexington, Kentucky 7-12 December, 1986 presented with an award for outstanding technical paper. published in the proceedings
- 0625 **Nenonen, L.\* Scrimgeour, J. Pathak, J. Udd, J.E.** Mining automation activities at NRC and CANMET; *M&ET/MRL 86-100(OP&J)* Presented at the First Canadian Symposium on Automation in Mining, Sudbury, Ontario, Canada, October 14-16, 1986 published in the proceedings entitled "Symposium - Applications of Automation in Mining Present and Future" 18 pages
- 0626 **Dainty, E.D.\* Lawson, A. Vergeer, H.C. Manicom, B. Kreuzer, T.P. Engler, B.H.** Diesel emissions reduction by ceramic filters employing catalysts or a fuel additive; *M&ET/MRL 86-124(OP&J)* presented to the Society of Automotive Engineer s International Congress, Detroit, Michigan, U.S.A., Feb. 24, 1987
- 0627 **Dainty, E.D.\* Lawson, A. Vergeer, H.C. Manicom, B. Kreuzer, T.P. Engler, B.H.** Diesel emissions reduction by ceramic filters employing catalysts or a fuel additive; *M&ET/MRL 86-125(OP&J)* presented to the Society of Automotive Engineers International Congress, Detroit, Michigan, U.S.A., February 24, 1987; and published in the proceedings Diesel particulates: an update SP-702; Special volume of the Society of Automotive Engineer, Feb.1987; pp 57-65, SAE Paper no. 870014
- 0628 **Annor, A.\* Jackson, R.** Mechanical and thermomechanical behaviour of Lac Du Bonnet granite: some laboratory observations; *MRL/CAT 86/87 048* Proceedings of the 2nd It. Conf. on Radioactive Waste Management; Winnipeg, Manitoba; Sept. 7-11, 1986, pps. 311-318
- 0629 **Betournay, M.C.\*** Guide d'ingénierie des piliers de surface: objectifs et sujets traités; *MRL/CAT 86/87 049* Colloque sur l'Ingénierie des Piliers de Surface: le 10 novembre 1986. Val d'Or, Québec 1987; pps 248-267 Germany, May 20-26, 1989. The format is dictated by the Conference organizers.
- 0630 **Betournay, M.C.\* Thivierge, S.** The Niobec Mine: a case study of surface crown pillars; *MRL/CAT 86/87 050* Colloque sur l'Ingénierie des piliers de Surface; le 10 novembre 1986; Val d'Or, Québec; Centre de Recherches Minérales, Ste-Foy, Québec 1987; pps. 94-124
- 0631 **Betournay, M.C.\*** Sommaire des histoires de cas de piliers de surface; *MRL/CAT 86/87 051* Colloque sur l'Ingénierie des Piliers de Surface; le 10 novembre 1986; Val d'Or, Québec; Centre de Recherches Minérales, Ste-Foy, Québec 1987; pp. 11-24
- 0632 **Billette, N.R.\* Pathak, J.** Automates et robots en exploitation minière: évolution prévisible à cour *MRL/CAT 86/87 052* Colloque La Recherche Minerale, son impact sur la rentabilité; à l'Hotel Loews Le Concorde, Québec; 18-19 février 1986; pps. 280-293
- 0633 **Billette, N.R.\*** Les développements en équipement minier - les interventions récentes de CANMET; *MRL/CAT 86/87 053* Colloque sur les équipements miniers souterrains ...évolution à venir; le 12 novembre 1986, Val d'Or, Québec; Centre de Recherches Minérales, Ste-Foy, Que.1987, pps, 95-107

- 0634 **Dainty, E.D.\* Lawson, A. Vergeer, H.C. Manicom, B. Kreuzer, T.P. Engler, B.H.** Diesel emissions reduction by ceramic filters employing catalysts or a fuel additive; *MRL/CAT 86/87 054* *Proceedings - Society of Automotive Engineers*; SAE Special Publication 702; "Diesel particulates: an update"; pps. 57-66,
- 0635 **Dave, N.K.\* Lim, T.P. Siwik, R. Blackport, R.** Geophysical and bihydrogeochemical investigations of an inactive sulphide tailings basin, Noranda, Quebec; *MRL/CAT 86/87 055* *National Symposium on Surface Mining, Hydrology Sedimentology and Reclamation*; 13-19; Lexington Kentucky, December 7-12, 1986
- 0636 **Feng, K.K.\* Vandebek, R.R. Bauer, A. Katsabanis, P. Moroz, J. Duncan, D.** Numerical modelling of the high velocity impact sensitivity of commercial slurry and emulsion explosives; *MRL/CAT 86/87 056* *Proceedings of the International Symposium on intense dynamic loading and its effects*; June 1986
- 0637 **Feng, K.K.\* Vandebek, R.R. Bauer, A. Katsabanis, P. Moroz, J.** High velocity impact sensitivity of commercial slurry and emulsion explosives; *MRL/CAT 86/87 057* *Proceedings of the 22nd Explosives Safety Seminar*; Aug. 1986; pps 381-416
- 0638 **Gangal, M.K.\* Dainty, E.D. McKinnon, D.L. Blanchard, R.A.** Evaluation of diesel emissions control technology at Noranda's Brunswick mining and smelting - mining division; *MRL/CAT 86/87 058* *Proceedings "Facing the World Mining and Freer Trade" CIM New Brunswick Branch*; session 17; Sept. 5, 1986, Bathurst, N.B. 20 pages
- 0639 **Herget, G.\*** Changes of ground stresses with depth in the Canadian Shield; *MRL/CAT 86/87 059* *Proceedings of the International Symposium on Rock Stress Measurement*; Stockholm, Sweden; 1-3 Sept. 1986; pps. 61-68
- 0640 **Nenonen, L.\* Scrimgeour, J. Pathak, J. Udd, J.E.** Mining automation activities at NRC and CANMET; *MRL/CAT 86/87 060* *Proceedings "Symposium - Applications of automation in mining, present and future"*; 18 pages
- 0641 **Pathak, J.\* Dias, M.** Microprocessor controlled down-the-hole drill for enhancing productivity and accuracy in underground hardrock bulk mining methods; *MRL/CAT 86/87 061* *Proceedings of the 8th WVU International Mining Electrotechnology Conference*; Morgantown West Virginia University, U.S.A.; July 30-Aug. 30, 1986
- 0642 **Udd, J.E. Billette, N.R.** La recherche minière à CANMET: son impact industriel; *MRL/CAT 86/87 062* *Colloque La Recherche Minérale, son impact sur la rentabilité*; à l'Hotel Loews Le Concorde, Québec; 18 et 19 février 1986; pps 417-435
- 0643 **Udd, J.E.\*** Some examples of instrumentation for stability monitoring in Canadian underground hard rock mining; *MRL/CAT 86/87 063* *Proceedings of the International Symposium on Large Rock Caverns*; Helsinki, Finland; 25-28 Aug. 1986; vol. 1; section C2.17; pps. 433-446
- 0644 **Udd, J.E.\* Betournay, M.C.** Historique et perspectives des piliers de surface Canadiens; *MRL/CAT 86/87 064* *Colloque sur l'Ingénierie des Piliers de surface*"; le 10 novembre 1986; Val d'Or, Québec Centre de Recherches Minérales, Ste.-Foy, Québec; 1987; pps. 7-10

- 0645 **Udd, J.E.\* Billette, N.R.** La Recherche Minière à CANMET: son impact industriel; *TM&E/LRM 86-005(OP&J)* présenté au colloque sur la recherche minérale, son impact sur la rentabilité, Québec, Que., 19 février 1986
- 0646 **Billette, N.R.\* Pathak, J.** Automates et robots en exploitation minière évolution prévisible a court terme; *TM&E/LRM 86-018(OP&J)* colloque la Recherche Minérale, son impact sur la rentabilité; à l'Hotel Loews Le Concorde Québec, 18-19 Février 1986; pp 280-293
- 0647 **Dainty, E.D.\* Mitchell, D.W. Schnakenberg, G.W.Jr.** Organisation, objectifs et réalisations d'un programme de recherche entrepris conjointement par trois gouvernements, sur la recherche et le développement relatifs a la réduction des émissions de diesel; *TM&E/LRM 86-019(OP&J)* presented to the CIM/AGM, Montreal, Quebec, May 14, 1986
- 0648 **Dainty, E.D.\* Gangal, M.K. Carlson, D.H.** Résumé des études effectuées dans des mines souterraines sur les filtres en céramique et les épurateurs catalytiques retenant les particules rejetées par les machines diesel; *TM&E/LRM 86-020(OP&J)* CIM Special Volume 36; paper no. 4; May 1986; pp 54-77
- 0649 **Betournay, M.C.\*** Guide d'ingénierie des piliers de surface; objectifs et sujets traités; *TM&E/LRM 86-083(OP&J)* Colloque sur l'Ingénierie des Piliers de Surface; le 10 novembre 1986; Val d'Or, Québec; Centre de Recherches Minérales, Ste-Foy, Québec 1987; pp 248-267
- 0650 **Billette, N.R.\* Laflamme, M.** Impact du boni sur les accidents des mines souterraines: analyse multidimensionnelle; *TM&E/LRM 86-103(OP&J)* présenté au colloque sur "l'analyse des données appliquée à la santé et à la sécurité du travail" 8 octobre 1986, IRSST Montréal
- 0651 **Billette, N.R.\*** Automatisation et systèmes experts dans les mines métalliques: quant, comment, pourquoi, jusqu'à quel point? Le virage technologique - C'est les temps d'agir CAO/FAO 86, Montreal, 18 Sept. 1986; *TM&E/LRM 86-109(OP&J)*
- 0652 **Udd, J.E.\* Betournay, M.C.** Historique et perspectives des piliers de surface Canadiens; *TM&E/LRM 86-123(OP&J)* Discours de Ouverture, Colloque sur l'ingénierie des Piliers de Surface, Val d'Or, le 10 novembre 1986
- 0653 **Betournay, M.C.\*** Sommaire des histoires de cas de piliers de surface; *TM&E/LRM 86-132(OP&J)* Colloque sur l'Ingénierie des Piliers de surface; le 10 novembre 1986; Val d'Or, Québec; Centre de Recherches Minérales, Ste-Foy, Québec 1987; pps 11-24
- 0654 **Billette, N.R.\*** Les développements en équipement minier - les interventions récentes de CANMET; *TM&E/LRM 86-135(OP&J)* Colloque sur les équipements miniers souterrains ...Evolution à venir; le 12 novembre 1986 Val d'Or, Québec; Centre de Recherches Minérales, Ste.-Foy, Québec; 1987; pps 95-107
- 0655 *ERP/MRL 83-101(OP)* **Sarin, N.K.\*** Mine hydraulic fluids and testing at "CEAL"; for presentation at the fire-resistant fluids technology seminar hosted by Alberta Mines Inspection Branch of the Occupation Health and Safety Div. held on Oct. 18, 1983, Edmonton, Ab



**Technical Reports (TR) / Rapports techniques (TR)**

- 0656 *ACEA/MRL 86-021(TR)* Lee, P.\* Ketcheson, K. Vandebek, R.R. Studies into the thermal stability and reactivity of ammonium nitrate part 2: solid state decomposition of ammonium nitrate; PAGES: 21 FICHE: 1
- 0657 *ACEA/MRL 86-029(TR)* Lee, P.\* Vandebek, R.R. Studies into the thermal stability and reactivity of ammonium nitrate part 1: the reactivity of various metals with ammonium nitrate studied by accelerating rate calorimetry; PAGES: 26 FICHE: 1
- 0658 *ACEA/MRL 86-044(TR)* Contestabile, E.\* Shmoon, E. Evaluation of exploding wire technique as a calibrated energy source for initiating explosives; PAGES: 9 FICHE: 1
- 0659 *ACEA/MRL 86-046(TR)* Craig, T.R.\* CERL's facilities for determining ballistic properties of ammunition; PAGES: 8 FICHE: 1
- 0660 *ACEA/MRL 86-047(TR)* Vandebek, R.R. Bauer, A. Katsabanis, P. Moroz, J. Duncan, D. Numerical modelling of the high velocity impact sensitivity of commercial slurry and emulsion explosives; PAGES: 25 FICHE: 1
- 0661 *ACEA/MRL 86-073(TR)* Contestabile, E.\* Craig, T.R. Larsen, P. CERL's projectile impact testing facility; PAGES: 12 FICHE: 1
- 0662 *ACEA/MRL 86-093(TR)* Contestabile, E.\* Vandebek, R.R. CERL's sporting ammunition testing facility; PAGES: 14 FICHE: 1
- 0663 *ACEA/MRL 86-108(TR)* Contestabile, E.\* Craig, T.R. Cox, D. Nagy, E. Measuring the detonation velocity of explosives; PAGES: 9 FICHE: 1
- 0664 *ERP/MRL 85-059(TR)*. Services de certification et d'essai de matériel et des matériaux utilisés dans les mines grisouteuses, les mines non grisouteuses et dans d'autres emplacements dangereux; PAGES: 38 FICHE: 1
- 0665 *M&ET/MRL 86-002(TR)* Grenier, M.\* Bigu, J. Past, present and future of dust research at the Elliot Lake laboratory; PAGES: 37 FICHE: 1
- 0666 *M&ET/MRL 86-006(TR)* Yu, Y.S.\* Vongpaisal, S. Progress report for the 1985/86 Canada/Manitoba MDA Project;
- 0667 *M&ET/MRL 86-013(TR)* Herget, G.\* Kapeller, F. Stress determination with undercoring and pressure compensation; PAGES: 30 FICHE: 1
- 0668 *M&ET/MRL 86-025(TR)* Gorski, B.\* A multi-use load system for rock testing; PAGES: 47 FICHE: 1
- 0669 *M&ET/MRL 86-026(TR)* Grenier, M.\* Hazardous gases and substances found in underground mine air; PAGES: 21 FICHE: 1

- 0670 *M&ET/MRL 86-041(TR)* **Bossert, J.A.\* Lobay, G. Ralph, M.** List of certified equipment and materials for use in underground mines; PAGES: 83 FICHE: 1
- 0671 *M&ET/MRL 86-042(TR)* **Dainty, E.D.\* Lobay, G.** CSA standard M424 - iteration no. 8 flameproof diesel-powered vehicles for use in gassy underground coal mines; PAGES: 45 FICHE: 1
- 0672 *M&ET/MRL 86-043(TR)* **Fustos, A.\*** Assessment of in situ coal resources: Wood Mountain Coalfield, Saskatchewan; PAGES: 14 FICHE: 1
- 0673 *M&ET/MRL 86-048(TR)* **Jackson, R.\*** Anisotropic properties study of Lac du Bonnet granite specimens; PAGES: 66 FICHE: 1
- 0674 *M&ET/MRL 86-050(TR)* **Bigu, J.\*** Plate-out of radon and thoron progeny on large surfaces; PAGES: 35 FICHE: 1
- 0675 *M&ET/MRL 86-053(TR)* **Hill, D.M.\*** Mining Research Laboratories: annual report 1985-1986; PAGES: 128 FICHE: 2
- 0676 *M&ET/MRL 86-054(TR)* **Yu, Y.S.\* Toews, N.** A computer program for finite element analysis of axisymmetric solids subject to arbitrary loading (VAX/VMS Version); PAGES: 49 FICHE: 1
- 0677 *M&ET/MRL 86-057(TR)* **Arjang, B.\*** Field and pillar stress determinations at Campbell Red Lake mine, Ontario; PAGES: 31 FICHE: 1
- 0678 *M&ET/MRL 86-058(TR)* **Savich, M.U.\* Weglo, J.K.** Attenuation measurement of ear muffs at Falconbridge complex: no. 5 shaft, the east mine, and the mill and smelter, 1984; PAGES: 28 FICHE: 1
- 0679 *M&ET/MRL 86-059(TR)* **Savich, M.U.\* Weglo, J.K.** Attenuation measurements of ear muffs at Lockerby mine 1984; PAGES: 24 FICHE: 1
- 0680 *M&ET/MRL 86-060(TR)* **Savich, M.U.\* Weglo, J.K.** Attenuation measurements of ear muffs at Strathcona mine 1984; PAGES: 31 FICHE: 1
- 0681 *M&ET/MRL 86-061(TR)* **Savich, M.U.\* Weglo, J.K.** Attenuation measurements of ear muffs at Fraser mine 1984; PAGES: 25 FICHE: 1
- 0682 *M&ET/MRL 86-064(TR)* **Bigu, J.\*** Calibration of the pylon AB-5/AEP system, a continuous radon daughter working level monitor; PAGES: 32 FICHE: 1
- 0683 *M&ET/MRL 86-065(TR)* **Bigu, J.\*** Calibration of the pylon AB-5/EL and AB-5/PRD systems, two continuous radon gas monitors; PAGES: 26 FICHE: 1
- 0684 *M&ET/MRL 86-066(TR)* **Bigu, J.\*** Effect of several radiation control measures for remedial purposes in a dwelling in the Elliot Lake area; PAGES: 66 FICHE: 1
- 0685 *M&ET/MRL 86-075(TR)* **Bigu, J.\*** A review of the Underground Environment Research Program at the Elliot Lake laboratory; PAGES: 15 FICHE: 1

- 0686 *M&ET/MRL 86-079(TR)* **Jackson, R.\*** Anisotropic properties study of Lac du Bonnet granite specimens: report no. 2; PAGES: 69 FICHE: 1
- 0687 *M&ET/MRL 86-089(TR)* **Bigu, J.\*** Long-lived radioactivity associated with respirable quartz dust in hard rock underground uranium mines; PAGES: 17 FICHE: 1
- 0688 *M&ET/MRL 86-094(TR)* **Mintz, K.J.\* Boyle, M.J.** Long-term reproducibility of small-scale tests used for measuring the flammability of conveyor belting; PAGES: 22 FICHE: 1
- 0689 *M&ET/MRL 86-097(TR)* **Yu, Y.S.\* Vongpaisal, S. Toews, N. Wong, A.S.** A preliminary stability assessment of C-102-23 stope of the Niobec mine under gravitational loading; PAGES: 39 FICHE: 1
- 0690 *M&ET/MRL 86-104(TR)* **Grenier, M.\* Hardcastle, S. Frattini, A. Butler, K.C.** Comparison of dust sampling instruments in coal and uranium ore dust clouds in a dust chamber; PAGES: 17 FICHE: 1
- 0691 *M&ET/MRL 86-111(TR)* **Arjang, B.\*** Pillar stress measurements at Denison mine, Elliot Lake, Ontario; PAGES: 17 FICHE: 1
- 0692 *M&ET/MRL 86-112(TR)* **Imbesi, D.M.\*** Mining research projects: (except for coal) FY 1986-1987; PAGES: 46 FICHE: 1
- 0693 *M&ET/MRL 86-112(TR)F* Projets de recherche miniere (autres que ceux qui portent sur le charbon) AF 1986-1987; PAGES: 56 FICHE: 1
- 0694 *M&ET/MRL 86-115(TR)* **Grenier, M.\*** A simple apparatus for the determination of effective radium content of radium-bearing substances; PAGES: 11 FICHE: 1
- 0695 *M&ET/MRL 86-119(TR)* **Betournay, M.C.\*** Preliminary geomechanical assessment of the Montauban mine; PAGES: 30 FICHE: 1
- 0696 *M&ET/MRL 86-121(TR)* **Mintz, K.J.\*** The effect of temperature and humidity on the antistatic properties of conveyor belting; PAGES: 42 FICHE: 1
- 0697 *M&ET/MRL 86-122(TR)* **Butler, K.C.\*** Personal noise dosimetry survey of various occupational groups at four potash mines in Saskatchewan; PAGES: 44 FICHE: 1
- 0698 *M&ET/MRL 86-128(TR)* **Bigu, J.\* Frattini, A.** Evaluation of a charged water spray system for radiation control purposes in a hard rock underground uranium mine; PAGES: 19 FICHE: 1
- 0699 *M&ET/MRL 86-131(TR)* **Herget, G.\* Mackintosh, A.D.** Mining induced stresses in Saskatchewan potash; PAGES: 9 FICHE: 1
- 0700 *M&ET/MRL 86-133(TR)* **Bigu, J.\*** Calibration of radiation instrumentation in a radon/thoron test facility of the walk-in type; PAGES: 30 FICHE: 1
- 0701 *M&ET/MRL 86-134(TR)* **Bigu, J.\*** Calibration of radon and radon progeny instrumentation of the active and passive type in a large radon/thoron test facility of the walk-in type; PAGES: 33 FICHE: 1

- 0702 *M&ET/MRL 86-140(TR)* **Bigu, J.\* Grenier, M. Hardcastle, S.** Characterization of long-lived radioactive dust in a conveyor belt drift; PAGES: 29 FICHE: 1
- 0703 *M&ET/MRL 86-142(TR)* **Jackson, R.\*** Anisotropic properties studies of Lac Du Bonnet granite specimens: report no. 3; PAGES: 9 FICHE: 1
- 0704 *M&ET/MRL 86-144(TR)* **Betournay, M.C.\* Gorski, B. Situm, M.** Tetrauville limestone of the Niobec surface crown pillars: comparison of strength and deformation properties from various tests; PAGES: 16 FICHE: 1
- 0705 *M&ET/MRL 86-145(TR)* **Yu, Y.S.\* Vongpaisal, S. Wong, A.S. Toews, N.** Stability assessment of C-102-23 stope of the Niobec mine under tectonic stresses part II; PAGES: 23 FICHE: 1
- 0706 *M&ET/MRL 86-151(TR)* **Cheng, K.C.\* Cox, D.** Explosibility tests on ferrosilicon dust; PAGES: 17 FICHE: 1
- 0707 *M&ET/MRL 86-155(TR)* **Hedley, D.G.F.\*** Condition of the hanging wall above the rockburst area at Quirke mine; PAGES: 20 FICHE: 1
- 0708 *M&ET/MRL 86-156(TR)* **Grenier, M.\* Butler, K.C.** Comparison of respirable dust samplers in an underground hard rock mine; PAGES: 24 FICHE: 1
- 0709 *M&ET/MRL 86-158(TR)* **Li, H.\* Bigu, J.** Energy dependence of ultra-thin CaSO<sub>4</sub> .Tm chips to radon and thoron progeny; PAGES: 17 FICHE: 1
- 0710 *M&ET/MRL 86-161(TR)* **Bigu, J.\*** Effect of some variables on thoron progeny in artificial radioactive environments; PAGES: 18 FICHE: 1
- 0711 *MRL 87-001(TR)* **Udd, J.E.\* Hedley, D.G.F.** Rockburst research in Canada - 1987; PAGES: 18 FICHE: 1
- 0712 *MRL 87-015(TR)* **Arjang, B.\*** Field stress determinations at the Niobec mine, Chicoutimi, Quebec; PAGES: 24 FICHE: 1
- 0713 *MRL 87-021(TR)* **Arjang, B.\* Nemcsok, G.** Review of rockburst incidents at the Macassa mine, Kirkland Lake; PAGES: 21 FICHE: 1
- 0714 *MRL 87-024(TR)* **Udd, J.E.\*** The microseismic monitoring system at the Camborne School of Mines, Geothermal Energy Project, Rosemanowes Quarry, Cornwall, U.K.; PAGES: 16 FICHE: 1
- 0715 *MSL 87-038(TR)* **Barkley, D.J.\*** Nitrate and sulphate determinations in uranium process solutions by ion chromatography; PAGES: 17 FICHE: 1
- 0716 *MSL 87-045(TR)* **Barkley, D.J.\*** Ammonia determination in uranium process solutions; PAGES: 17 FICHE: 1
- 0717 *MSL 87-075(TR)* **Chen, T.T.\* Dutrizac, J.E.** Mineralogical characterization of two alunite and two natrojarosite samples; PAGES: 17 FICHE: 1

- 0510 *PMST / LRM 85-066(TR)* **Sabourin, C.A.\*** **Rapport annuel des Laboratoires de recherche minière 1984-1985;**
- 0718 *TM&E / LRM 86-053(TR)* **Imbesi, D.M.\*** **Rapport Annuel Des Laboratoires De Recherche Minière 1985-1986; PAGES: 144 FICHE: 2**
- 0719 *TM&E / LRM 86-112(TR)* **Imbesi, D.M.\*** **Projets de recherche minière (autres que ceux qui portent sur le charbon) AF 1986-1987; PAGES: 9 FICHE: 1**
- 0720 *TM&E / LRM 86-154(TR)* **Billette, N.R.\*** **Théorie générale sur le mélange des minerais; PAGES: 9 FICHE: 1**
- 0721 *TM&E / LRM 86-157(TR)* **Billette, N.R.\*** **Evolution de la manutention dans les mines a ciel ouvert: nouvelles technologies;**

### **Mineral Sciences Laboratories / Laboratoires de recherche en métallurgie physique**

#### **Declassified Report / Rapport déclassifié**

- 0722 *ERP / MSL 79-002(CF)* **Kaiman, S.\*** **Mineralogy of radioactive pegmatite ore from Getty Mines Ltd.; PAGES: 5 FICHE: 1**
- 0723 *ERP / MSL 82-001(CF)* **Bowman, W.S.\*** **Differential thermal analysis of coal ash and oil shale samples on behalf of New Brunswick Research and Productivity Council; PAGES: 6 FICHE: 1**
- 0724 *MRP / MSL 75-003(CF)* **Nebesar, B.\*** **Process for high-temperature analytical separation of volatile elements or compounds from vanadium pentoxide matrix; PAGES: 19 FICHE: 1**
- 0725 *MRP / MSL 75-003(CF)(P)* **Nebesar, B.\*** **Process for high-temperature analytical separation of volatile elements or compounds from vanadium pentoxide matrix; PAGES: 19 FICHE: 1**
- 0726 *MRP / MSL 77-012(CF)* **Brigham, R.J.\* Kilpatrick, M.W.** **Corrosion and wear during comminution part 5: grinding modifiers; PAGES: 13 FICHE: 1**
- 0727 *MRP / MSL 78-001(CF)* **Ritcey, G.M.\* Lucas, B.H.** **Development of a flowsheet for the treatment of chloride leach liquor: selection of a solvent extraction reagents: progress report no. 2; PAGES: 28 FICHE:**
- 0728 *MRP / MSL 78-010(CF)* **Hughson, M.R.\* Petruk, W.** **Image analysis study of samples from the South Bay and Detour deposits of Selco Mining Corporation; PAGES: 7 FICHE: 1**
- 0729 *MRP / MSL 78-012(CF)* **Mirkovich, V.V.\*** **Thermal conductivity of Creighton Mine rocks; PAGES: 16 FICHE: 1**

- 0730 *MRP/MSL 79-001(CF)* **Horwood, J.L.\*** A preliminary investigation of airborne thoron decay products in two uranium mines at Elliot Lake, Ontario; PAGES: 64 FICHE: 1
- 0731 *MRP/MSL 79-012(CF)* **Soles, J.A.\*** Identification of inorganic phases in lung tissue of a worker from the Labrador mining area, Newfoundland; PAGES: 10 FICHE: 1
- 0732 *MRP/MSL 80-006(CF)* **Wang, S.S.B.\*** Experimental melting and fiberizing of mixtures of trap rock and calcined limestone from CRIQ; PAGES: 6 FICHE: 1
- 0733 *MRP/MSL 81-002(CF)* **Wang, S.S.B.\*** Viscosity measurements of asbestos tailings mixtures; PAGES: 7 FICHE: 1
- 0734 *MRP/MSL 81-003(CF)* **Raicevic, M.\*** Preliminary beneficiation of a zircon and tantalocolumbite ore from Thor Lake, N.W.T.; PAGES: 21 FICHE: 1
- 0735 *MRP/MSL 81-004(CF)* **Petruk, W.\* Owens, D.R. Pinard, R.G.** Mineralogical and image analysis study of a magnetite concentrate from the Lake St. Joe iron deposit; PAGES: 13 FICHE: 1
- 0736 *MRP/MSL 81-006(CF)* **Bowman, W.S.\*** Thermal analysis of a low-grade phosphate sample on behalf of Esso Resources Canada Limited; PAGES: 9 FICHE: 1
- 0737 *MRP/MSL 81-007(CF)* **Chen, T.T.\* Pint, P.** The sources and distribution of mercury and arsenic in the Afton Copper Smelter, Kamloops, British Columbia; PAGES: 51 FICHE: 1
- 0738 *MRP/MSL 82-001(CF)* **Bowman, W.S.\*** Differential thermal analysis of coal ash and oil shale samples on behalf of New Brunswick Research and Productivity Council; PAGES: 6 FICHE: 1
- 0739 *MRP/MSL 82-001(CR)* **Bell, K.E.\*** Evaluation of three Saskatchewan bentonites as plasticizers for brick shales; PAGES: 11 FICHE: 1
- 0740 *MRP/MSL 82-002(CF)* **Owens, D.R.\*** Mineralogical investigation of Texasgulf zinc plant residues; PAGES: 18 FICHE: 1
- 0741 *MRP/MSL 82-004(CR)* **Lucas, B.H.\* Prud'homme, P.J.A.** Leach of sand from Magdalen Silica Sand Inc., to produce a glass quality product; PAGES: 16 FICHE: 1
- 0742 *MRP/MSL 82-005(CF)* **Cabri, L.J.\*** Preliminary mineralogical examination of a germanium prospect from Lang Creek, Powell River area, British Columbia; PAGES: 18 FICHE: 1
- 0743 *MRP/MSL 82-005(CR)* **Mathieu, G.I.\*** Beneficiation of Magdalen sand for foundry, glassmaking and building material utilization; PAGES: 69 FICHE: 1
- 0744 *MRP/MSL 82-006(CR)* **Collings, R.K.\* Wilson, H.S. Buchanan, R.M.** Examination of vermiculite samples from Cargill Township, Ontario; PAGES: 7 FICHE: 1
- 0745 *MRP/MSL 82-007(CR)* **Mathieu, G.I.\*** Feldspar upgrading for Magdalen Silica Inc., progress report no. 1; PAGES: 17 FICHE: 1

- 0746 *MRP/MSL 83-002(CF)* Lucas, B.H.\* Shimano, D.Y. Ferric chloride leach process: progress report; PAGES: 37 FICHE: 1
- 0747 *MRP/MSL 83-002(CR)* Collings, R.K.\* Buchanan, R.M. Bell, K.E. Lucas, B.H. A study of sand samples from Val Brilliant, Quebec; PAGES: 6 FICHE: 1
- 0748 *MRP/MSL 83-005(CR)* Wang, S.S.B.\* Viscosity measurement of a slag sample from Pacific Enercon Ltd.; PAGES: 9 FICHE: 1
- 0749 *MRP/MSL 83-006(CR)* Petruk, W.\* Pinard, R.G. Image analysis of galena in samples from Kidd Creek copper circuit; PAGES: 24 FICHE: 1
- 0750 *MRP/MSL 83-008(CR)* Petruk, W.\* Mineralogical investigation of drill core samples from a Zn-Pb-Ag-Au deposit of Billiton Canada in New Brunswick; PAGES: 18 FICHE: 1
- 0751 *MRP/MSL 83-010(CR)* Mathieu, G.I.\* Feldspar upgrading for Magdalen Silica Inc.; PAGES: 40 FICHE: 1
- 0752 *MRP/MSL 83-011(CR)* Stemerowicz, A.I.\* Leigh, G.W. Further cyanide tests on a sample of oxidized Ag-Au tailings from the Weaton Mine, Montauban, Quebec; PAGES: 11 FICHE: 1
- 0753 *MRP/MSL 84-007(CR)* Bell, K.E.\* Quon, D.H.H. Nozzle refractories for secondary specialty steel-making vessels; PAGES: 32 FICHE: 1
- 0754 *MRP/MSL 84-017(CR)* Jambor, J.L.\* Mineralogy and predictive metallurgy of the Tally Pond pyritic massive sulphide deposit, Buchans area, Newfoundland; PAGES: 39 FICHE: 1

### **Investigation Reports (IR) / Rapports d'étude (IR)**

- 0755 *MRP/MSL 83-148(IR)* Pouskouleli, G.\* Prud'homme, P.J.A. Solvent extraction of silver from nitrate system by tri-isobutylphosphine sulphide (TiBPS); PAGES: 14 FICHE: 1
- 0756 *MRP/MSL 84-081(IR)* Carette, G.G.\* Wilson, H.S. Tan, C.W. Development of superplasticized lightweight high-strength concrete incorporating steel fibres, silica fume and fly ash; PAGES: 27 FICHE: 1
- 0757 *MRP/MSL 85-002(IR)* Berry, E.E.\* Malhotra, V.M. Compilation of abstracts of papers from recent international conferences and symposia on fly ash in concrete; PAGES: 63 FICHE: 1
- 0758 *MRP/MSL 85-071(IR)* Wilson, H.S.\* Performance of ilmenite concrete at sustained elevated temperatures; PAGES: 37 FICHE: 1
- 0759 *MRP/MSL 86-065(IR)* Cristovici, M.A.\* Gilmour, T. Investigation to eliminate the detrimental effect of dust-suppressing-wetting agents on flotation results (OPEMISKA copper ore); PAGES: 63 FICHE: 1

- 0760 *MRP/MSL 86-086(IR)* **Wang, S.S.B.\* Collings, R.K.** Beneficiation of rock salt samples from Pugwash, N.S.; PAGES: 9 FICHE: 1
- 0761 *MSL 86-050(IR)* **Collings, R.K.\* Andrews, P.R.A.** Canadian silica resources: a study of the processing of selected silica samples from Nova Scotia, New Brunswick, Manitoba, Saskatchewan and British Columbia for glass and foundry sand; PAGES: 64 FICHE: 1
- 0762 *MSL 86-056(IR)* **Sutarno, R.\* Bowman, W.S.** ISO/TC 183/WG 6A-determination of zinc in zinc concentrates statistical evaluation of international test data 1984-1986; PAGES: 53 FICHE: 1
- 0763 *MSL 86-067(IR)* **Douglas, E.\* Hemmings, R.T.** Characterization of granulated blast furnace slag for Portland cement replacement in concrete; PAGES: 45 FICHE: 1
- 0764 *MSL 86-079(IR)* **Andrews, P.R.A.\*** Evaluation of a sample of kaolin from Black Island, Manitoba as source material for the paper industry; PAGES: 14 FICHE: 1
- 0765 *MSL 86-083(IR)* **Quon, D.H.H.\* Bell, K.E.** Performance of magnesia-carbon bricks in vacuum at high temperature; PAGES: 39 FICHE: 1
- 0766 *MSL 86-086(IR)* **Wang, S.S.B.\* Collings, R.K.** Beneficiation of rock salt samples from Pugwash, N.S.; PAGES: 9 FICHE:
- 0767 *MSL 86-087(IR)* **Petruk, W.\* Pinard, R.G.** Mineralogical and image analysis study of samples from core WA20 of the Waite Amulet tailings; PAGES: 23 FICHE: 1
- 0768 *MSL 86-088(IR)* **Andrews, P.R.A.\*** Beneficiation of a sample of nepheline syenite from British Columbia as source material for the glass industry; PAGES: 6 FICHE: 1
- 0769 *MSL 86-091(IR)* **Laflamme, J.H.G.\* Cabri, L.J.** Silver and bismuth of galena from the Brunswick no. 12 mine; PAGES: 19 FICHE: 1
- 0770 *MSL 86-093(IR)* **Sivasundaram, V.\*** Thermal crack control of mass concrete; PAGES: 39 FICHE: 1
- 0771 *MSL 86-095(IR)* **Collings, R.K.\* Lamothe, J.-M. Wang, S.S.B. Andrews, P.R.A.** A study of the processing of barite samples from selected deposits in Nova Scotia; PAGES: 33 FICHE: 1
- 0772 *MSL 86-099(IR)* **Sutarno, R.\* Bowman, W.S.** ISO/TC 102/SC 2/WG 19B determination of vanadium content in iron ores by BPHA spectrophotometric method: statistical analysis of international test data - 1986; PAGES: 54 FICHE: 1
- 0773 *MSL 86-116(IR)* **Sutarno, R.\* Bowman, W.S.** ISO/TC 102/SC 2/WG 25B and WG 28A determination of phosphorus content in iron ores by molybdenum blue spectrophotometric methods: statistical analysis of international test data - 1986; PAGES: 99 FICHE: 2
- 0774 *MSL 86-128(IR)* **Sutarno, R.\* Bowman, W.S.** ISO/TC 102/SC 2/WG 21B iron ores - determination of nickel and/or chromium content by flame atomic adsorption method: statistical analysis of international test data - 1986; PAGES: 80 FICHE: 1



- 0775 *MSL 86-130(IR)* **Sutarno, R.\* Bowman, W.S.** ISO/TC102/SC2/WG26B iron ores - determination of manganese content by atomic absorption spectrometric method statistical analysis of international test data - 1986; PAGES: 81 FICHE: 1
- 0776 *MSL 86-135(IR)* **Kuriakose, A.K.\* Quon, D.H.H.** Extrusion and induration of Carol Lake iron ore using polymers and calcium carbonate for bonding; PAGES: 17 FICHE: 1
- 0777 *MSL 86-137(IR)* **Jambor, J.L.\*** Detailed mineralogical examination of alteration products in core WA20 from Waite Amulet tailings; PAGES: 21 FICHE: 1
- 0778 *MSL 86-138(IR)* **Laflamme, J.H.G.\* Cabri, L.J.** Silver and antimony contents of galena from the Brunswick no. 12 mine; PAGES: 17 FICHE: 1
- 0779 *MSL 86-141(IR)* **Malhotra, V.M.\*** How to organize successfully an international conference; PAGES: 19 FICHE: 1
- 0780 *MSL 86-147(IR)* **Andrews, P.R.A.\* Morin, L.** An evaluation of parameters controlling fine particle classification using a Mozley hydrocyclone; PAGES: 26 FICHE: 1
- 0781 *MSL 86-154(IR)* **Smith, C.W.\* Steger, H.F. Bowman, W.S.** The certification of thorium and uranium concentrations in CCRMP reference material OKA-2; PAGES: 39 FICHE: 1
- 0511 *MSL 87-047(IR)* **Mathieu, G.I.\*** Mineralogy and deep-cleaning of Canadian high sulphur coals: report no. 2 - Donkin-Morien seam; PAGES: 17 FICHE: 1

### Journal Publications / Publication dans les revues

- 0782 *MSL 87-009(IR)* **Sutarno, R.\* Bowman, W.S.** ISO/TC 183/WG 5A determination of lead in lead concentrates statistical evaluation of international test data 1984-1986; PAGES: 81 FICHE: 1
- 0783 *ERP/MSL 83-050(J)* **Ahmad, A.\* Wheat, T.A. Kuriakose, A.K. Kindl, B.** Sodium beta"-aluminas by aqueous spray drying; *Journal of the Canadian Ceramic Soc.* 52:1-7, 1983
- 0784 *ERP/MSL 84-021(J)* **Douglas, E.\* Mainwaring, P.R.** Hydration and pozzolanic activity of nonferrous slags; *Ceramic Bull* 64:5:700-706; 1985
- 0785 *ERP/MSL 85-030(J)* **Chen, T.T.\* Quon, D.H.H. Wang, S.S.B.** Compositions and microstructures of furnace-bottom deposits produced from beneficiated Western Canadian bituminous coals; *Can Mineral* 24:229-237; 1986
- 0786 *ERP/MSL 85-109(J)* **Haque, K.E.\* Laliberte, J.J. Pruneau, J.** Batch and counter-current acid leaching of a low grade and a high grade uranium ores; *Hydrometallurgy*, 17(1987)229-238; Elsevier Science Publishers B.V., Amsterdam - printed in the Netherlands
- 0787 *MRP/MSL 81-067(J)* **Cabri, L.J.\*** Platinum group metals resources; *Encyclopedia of Materials Science and Engineering*; 3579-3582; 1986

- 0788 MRP/MSL 83-099(J) **Silver, M.\*** Leaching characteristics of uranium tailings from Ontario and northern Saskatchewan; *Hydrometallurgy*, 14(1985) 189-217; Elsevier Science Publishers B.V. Amsterdam - Printed in The Netherlands
- 0789 MRP/MSL 84-014(J) **Szymanski, J.\*** The crystal structure of Mannardite, a new hydrated cryptomelane-group (Hollandite) mineral with a doubled short axis;
- 0790 MRP/MSL 84-033(J) **Jonejan, A.\*** Observations on the microbial cellulose degradation process that decreases water acidity; *International Biodeterioration* 22:3:207-211; 1986
- 0791 MRP/MSL 84-122(J) **Laguitton, D.\* Sirois, L.L. Flament, F.** Le calcul par ordinateur dans l'industrie minéralurgique Canadienne en 1984; *IMPAC Processing* 62-74; 1985
- 0792 MRP/MSL 85-006(J) **Dutrizac, J.E.\* Jambor, J.L. Chen, T.T.** Host minerals for the gallium-germanium ores of the Apek mine, Utah; *Economic Geology* 81:946-950; 1986
- 0793 MRP/MSL 85-025(J) **Silver, M.\*** Parameters par ordinateur dans l'industrie minéralurgique Canadienne en 1984; *Applied and Environmental Microbiology* 50:3: 663-669; 1985
- 0794 MRP/MSL 85-032(J) **Rolia, E.\* Tan, K.G.** The generation of thiosalts in mills processing complex sulphide ores; *Can Metall Q* 24:4:293-302; 1985
- 0795 MRP/MSL 85-033(J) **Townsend, M.G.\* Longworth, G. Roudaut, E.** Neutron diffractdinateur dans l'industrie mineralurgique Canadienne en 1984;
- 0796 MRP/MSL 85-045(J) **Townsend, M.G.\* Longworth, G. Kodama, H.** Magnetic interaction at low temperature in chlorites and their oxidation products: Mossbauer investigation; *Can Mineral* 24:105-115; 1986
- 0797 MRP/MSL 85-053(J) **Chen, T.T.\* Wang, S.S.B.** Constituents of calcined limestone and their relevance in paper manufacturing; *Can Mineral* 24:303-306; 1986
- 0798 MRP/MSL 85-059(J) **Tan, K.G.\* Rolia, E.** Chemical oxidation methods for the treatment of thiosalt-containing mill effluents; *36th Canadian Chemical Engineering Conference*, Sarnia, Ontario; October 1986
- 0799 MRP/MSL 85-062(J) **Dutrizac, J.E.\*** The reaction of zirconium with selenium vapour; *Can Metall Q* 24:4:375-376; 1985
- 0800 MRP/MSL 85-100(J) **Donaldson, E.M.\*** Determination of silver, antimony, bismuth, copper, cadmium and indium in ores, concentrates and related materials by atomic-adsorption spectrophotometry after methyl isobutyl ketone extraction as iodides; *Talanta* 33:233-242; 1986
- 0801 MRP/MSL 85-102(J) **Longworth, G.\* Townsend, M.G. Ross, C.A.M.** Mossbauer spectra of several magnetic sheet silicates in external magnetic field; *Hyperfine Interactions* 28:451-454; 1986
- 0802 MRP/MSL 85-107(J) **Wilson, L.J.\* Mikhail, S.A.** Investigation of the oxidation of niccolite by thermal analysis; *Thermochimica Acta*, 112(1987)197-213 Elsevier Science Publishers B.V., Amsterdam - Printed in the Netherlands

- 0803 MRP/MSL 85-114(J) **Andrews, P.R.A.\*** Talc in Canada: a review of past and present evaluation studies conducted at CANMET; *Industrial Minerals* 63-69; 1986
- 0804 MRP/MSL 85-117(J) **Deschenes, G.\*** Recovery of gold from thiourea solutions: literature survey; *CIM Bulletin: vol 79:895:p76-83 November 1986*
- 0805 MRP/MSL 85-122(J) **Ripmeester, J.A.\* Ratcliffe, C.I. Dutrizac, J.E.** Hydronium ion in the alunite-jarosite group; *Can Mineral* 24:435-447; 1986
- 0806 MRP/MSL 85-127(J) **Steger, H.F.\* Sutarno, R.** Stability of CRMs: significance to the user; *Geostandards Newsletter X:1:93-98; 1986*
- 0807 MRP/MSL 85-132(J) **Tan, L.K.\* Dutrizac, J.E.** Simultaneous determination of arsenic (III) and arsenic (V) in metallurgical processing media by ion chromatography with electrochemical and conductivity detectors; *Analytical Chemistry vol 58 no. 7, June 1986* 1383
- 0808 MRP/MSL 85-155(J) **Barkley, D.J.\* Blanchette, M. Cassidy, R.M. Elchuk, S.** Dynamic chromatographic systems for the determination of rare earths and thorium in samples from uranium ore refining processes; *Anal Chem* 58:2222-2226; 1986
- 0809 MRP/MSL 85-162(J) **Townsend, M.G.\*** Reply to 'Comment on magnetism in biotite' by O. Ballet; *Phys and Chem Minerals* 13:282-283; 1986
- 0810 MSL 86-003(J) **Ahmed, S.M.\*** The Canadian contribution to the I.E.A. work on photoelectrolysis of water; *Int J Hydrogen Energy* 11; 627-637; 1986
- 0811 MSL 86-054(J) **Cabri, L.J.\*** The 4th International Platinum Symposium preface; *Economic Geology* 81:5:1045-1048; 1986
- 0812 MSL 86-057(J) **Dutrizac, J.E.\* Jambor, J.L.** Behaviour of cesium and lithium during the precipitation of jarosite-type compounds; *Hydrometallurgy*, 17(1987) 251-265 Elsevier Science Publishers B.V., Amsterdam - Printed in The Netherlands
- 0813 MSL 86-097(J) **Steger, H.F.\*** Radium-226 in uranium mill tailings - I - fate and consequent dissolution; *J. Radioanal Chem* 110:1:95-104; 1987
- 0814 MSL 87-034(J) **Sirois, L.L.\* Moon, K.S.** Effect of humic acids on coal flotation part 1 coal flotation selectivity in the presence of humic acids; *Coal Preparation 1986 vol. 3 pp. 133-154*
- 0815 MSL/CAT 86/87 030 **Ahmed, S.M.\*** The Canadian contribution to the I.E.A. work on photoelectrolysis of water; *Int J Hydrogen Energy* 11; 627-637; 1986
- 0816 MSL/CAT 86/87 031 **Andrews, P.R.A.\*** A laboratory study of the flotation circuit at Bakertalc Inc. Highwater, Quebec; *CIM Bull* 78:884; 75-78; 1985
- 0817 MSL/CAT 86/87 032 **Andrews, P.R.A.\*** Talc in Canada: a review of past and present evaluation studies conducted at CANMET; *Industrial Minerals* 63-39; 1986
- 0818 MSL/CAT 86/87 033 **Barkley, D.J.\* Cassidy, R.M.** Dynamic chromatographic systems for the determination of rare earths and thorium in samples from uranium ore refining processing; *Anal Chem* 58:2222-2226; 1986

- 0819 MSL/CAT 86/87 034 **Bernier, G.\* Jandl, S. Provencher, R.** Spontaneous and stimulated photoluminescence of GaSe in the energy range of 2.075-2.125 eV; *J Luminescence* 35:2889-3000; 1986
- 0820 MSL/CAT 86/87 035 **Cabri, L.J.\*** The 4th International Platinum Symposium preface; *Economic Geology* 81:5:1045-1048; 1986
- 0821 MSL/CAT 86/87 036 **Chen, T.T.\* Quon, D.H.H. Wang, S.S.B.** Compositions and microstructures of furnace-bottom deposits produced from beneficiated western Canadian bituminous coals; *Can Mineral* 24:229-237; 1986
- 0822 MSL/CAT 86/87 037 **Chen, T.T.\* Wang, S.S.B.** Constituents of calcined limestone and their relevance in paper manufacturing; *Can Mineral* 24:303-306; 1986
- 0823 MSL/CAT 86/87 038 **Deschenes, G.\*** Recovery of gold from thiourea solutions; literature survey; *CIM Bull* 79:895:76-83; 1986
- 0824 MSL/CAT 86/87 039 **Donaldson, E.M.\* Wang, M.** Determination of silver, antimony, bismuth, copper, cadmium and indium in ores, concentrates and related materials by atomic-absorption spectrophotometry after methyl isobutyl ketone extraction as iodides; *Talanta* 33:233-242; 1986
- 0825 MSL/CAT 86/87 040 **Douglas, E.\* Mainwaring, P.R.** Hydration and pozzolanic activity of nonferrous slags; *Ceramic Bull* 64:5:700-706; 1985
- 0826 MSL/CAT 86/87 041 **Douglas, E.\* Zerbino, R.** Characterization of granulated and pelletized blast furnace slags; *Cement and Concrete Research* 16:622-670; 1986
- 0827 MSL/CAT 86/87 042 **Dutrizac, J.E.\*** The reaction of zirconium with selenium vapour; *Can Metall Q* 24:4:375-376; 1985
- 0828 MSL/CAT 86/87 043 **Dutrizac, J.E.\* Jambor, J.L. Chen, T.T.** Host minerals for the gallium-germanium ores of the Apek Mine, Utah; *Economic Geology* 81:946-950; 1986
- 0829 MSL/CAT 86/87 044 **Dutrizac, J.E.\* Jambor, J.L. Ripmeester, J.A.** Hydronium ion in the alunite-jarosite group; *Can Mineral* 24:435-447; 1986
- 0830 MSL/CAT 86/87 045 **Dutrizac, J.E.\* Jambor, J.L.** Behaviour of cesium and lithium during the precipitation of jarosite-type compounds; *Hydrometallurgy* 17:251-265; 1987
- 0831 MSL/CAT 86/87 046 **Haque, K.E.\* Lucas, B.H.** Mini pilot scale hydrochloric acid leaching of an Elliot Lake uranium ore; *Uranium* 2:327-342; 1986
- 0832 MSL/CAT 86/87 047 **Haque, K.E.\* Laliberte, J.J. Pruneau, J.** Batch and counter current acid leaching of uranium ore; *Hydrometallurgy* 17:229-238; 1987
- 0833 MSL/CAT 86/87 048 **Jongejan, A.\*** Observations on the microbial cellulose-degradation process that decreases water acidity; *International Biodeterioration* 22:3:207-211; 1986
- 0834 MSL/CAT 86/87 049 **Knight, G.\* Morre, E. Smith, C.W.** Size distribution of airborne dust in Labrador iron mines; *Am Ind Hyg Assoc J* 48:2:150-154; 1987

- 0835 MSL/CAT 86/87 050 **Laskowski, J.\* Sirois, L.L. Moon, K.S.** Effect of humic on coal flotation part 1 coal flotation selectivity in the presence of humic acids; *Coal Preparation* 3:133-154; 1986
- 0836 MSL/CAT 86/87 051 **Longworth, G.\* Townsend, M.G. Ross, C.A.M.** Mossbauer spectra of several sheet silicates in magnetic fields; *Hyperfine Interactions* 28:451-454; 1986
- 0837 MSL/CAT 86/87 052 **MacKinnon, D.J.\* Brannen, J.M. Fenn, P.L.** The effects of As(III) and As(V) on zinc electrowinning from industrial acid sulphate electrolyte; *Appl Electrochemistry* 16:899-906; 1986
- 0838 MSL/CAT 86/87 053 **McCorkell, R.\*** Radon emanation rate studies: interlaboratory standard reference materials and the effects of powdering and pelletizing; *CIM Bull* 70:66-69; 1986
- 0839 MSL/CAT 86/87 054 **McCready, R.G.L.\* Wadden, D. Marchbank, A.** Nutrient requirements for the in-place leaching of uranium by thiobacillus ferrooxidans; *Hydrometallurgy* 17:61-71; 1986
- 0840 MSL/CAT 86/87 055 **Nebesar, B.\* Carette, G.G.** Variations in the chemical composition, specific surface area, fineness, and pozzolanic activity of a condensed silica fume; *ASTM Cement, Concrete and Aggregates*; 1986
- 0841 MSL/CAT 86/87 056 **Peloquin, R.\* Provencher, R. Jandl, S. Aubin, M.** Optical transitions in ZrS, and ZrSe, from thermorefectance measurements; *J Phys C* 19:3141-3149; 1986
- 0842 MSL/CAT 86/87 057 **Provencher, R.\* Ayache, C. Jandl, S. Jay-Gerin, J.P.** Low-temperature specific heats of ZrS, and ZrSe; *Solid State Comm* 59:553-556; 1986
- 0843 MSL/CAT 86/87 058 **Rolia, E.\* Tan, K.G.** The generation of thiosalts in mills processing complex sulphide ores; *Can Metall Q* 24:4:293-302; 1985
- 0844 MSL/CAT 86/87 059 **Sequin, P.E.\* Poirier, M. Provencher, R.** Microwave dielectric function of ZrS<sub>3-x</sub>Sex compounds; *J Phys C* 19:4303-4313; 1986
- 0845 MSL/CAT 86/87 060 **Silver, M.\*** Parameters for the operation of bacterial thiosalt oxidation ponds; *Applied and Environmental Microbiology* 50:3: 663-669; 1985
- 0846 MSL/CAT 86/87 061 **Skeaff, J.M.\* Mainwaring, P.R. Speelman, J.L.** Thermochemical arsenide-oxide equilibria in the system Ni-As-O determined electrochemically between 438 degree and 866 degree C; *Can Metal Quarterly* 24:4:349; 1985
- 0847 MSL/CAT 86/87 062 **Steger, H.F.\* Sutarno, R.** Stability of CRMs: significance to the user; *Geostandards Newsletter* X:1:93-98; 1986
- 0848 MSL/CAT 86/87 063 **Steger, H.F.\* LeGeyt, M.** Radium-226 in uranium mill tailings - 1 - fate and consequent dissolution; *J. Radioanal Chem* 110:1:95-104; 1987
- 0849 MSL/CAT 86/87 064 **Sutarno, R.\* Bowman, W.S.** ISO/TC 102/SC 2/WG 12B - report on activities for the period of 1982-1984; *ISO/TC 102/SC Working Document*; 1984

- 0850 *MSL/CAT 86/87 065* **Sutarno, R.\* Steger, H.F.** Uses of certified reference materials for the assessment of a measurement process (sixth draft of ISO Guide 33); *ISO/Remco Guide 33*; 1985
- 0851 *MSL/CAT 86/87 066* **Townsend, M.G.\*** Reply to comments on magnetism in biotites; *Phys and Chem Minerals 13:282-283*; 1986
- 0852 *MSL/CAT 86/87 067* **Townsend, M.G.\* Longworth, G. Kodama, H.** Magnetic interaction at low temperature in chlorite and its products of oxidation: a Mossbauer investigation; *Can Mineral 124:105-115*; 1986
- 0853 *MSL/CAT 86/87 068* **Townsend, M.G.\* Longworth, G. Roudaut, E.** Triangular-spin kagome plane in jarosites; *Physical Review B 33:4919-4926*; 1986
- 0854 *MSL/CAT 86/87 069* **Wheat, T.A.\* Ahmad, A. Kuriakose, A.K. Canaday, J.D.** Hydrogen-conducting solids; *J. Can Ceramic Soc 54:32-39*; 1985
- 00855 *MSL/CAT 86/87 070* **Wilson, L.J.\* Mikhail, S.A.** Investigation of the oxidation of niccolite by thermal analysis; *Thermchimica Acta 112:197-213*; 1987

#### Literature Translations and Literature Surveys (LT) (LS) / Traductions et études documentaires

- 0856 **Sanmugasunderam, V.\* Brassinga, R.D. Fulford, G.D.** Biodegradation of silicate and alumino-silicate minerals: a literature review; *MRP/MSL 85-147(LS)* PAGES: 36 FICHE: 1

#### Oral Presentations / Présentations orales

- 0857 **Kuriakose, A.K.\*** Solid electrolytes; *ERP/MSL 84-049(OP)* *CANMET MSL Seminar on March 20, 1984, at Alice Wilson Hall, GSC*
- 0858 **Udd, J.E.\* Dainty, E.D. Mogan, J.P. Geller, L.B.** Summary reports of progress on tripartite USBM/MOL/CANMET Research Projects, 1985-86; *M&ET/MRL 86-063(OP)* *Presented at the Annual USBM-CANMET meeting held in Sudbury, Ontario, May 27-28, 1986*
- 0859 **Silver, M.\*** Biotechnology at CANMET; *MRP/MSL 84-064(OP)* *Presented at the Centre de Recherche Minérales, Ste-Foy, Quebec, 10 May, 1984*
- 0860 **Kuriakose, A.K.\* Wheat, T.A. Hanson, A.J.** Synthesis of silicon carbide; *MSL 86-028(OP)* *Annual Meeting of the Canadian Ceramic Society, February 24, 1987*
- 0861 **Ritcey, G.M.\*** Hydrometallurgy - its development and future; *MSL 86-038(OP)* *For presentation at the American Chemical Society Meeting, New York; April 1986*

- 0862 **Steger, H.F.\* LeGeyt, M.** The dissolution of radium-226 in uranium mill tailings; *MSL 86-068(OP)* 69th Canadian Chemical Conference, Saskatoon, Saskatchewan; June 1986
- 0863 **McCready, R.G.L.\*** Current biotechnology research in mining; *MSL 86-069(OP)* 36th Annual Meeting of the Canadian Society of Microbiologists; June 1986
- 0864 **Dalton, J.L.\* Smith, C.W. Steger, H.F.** CCRMP/NUTP interlaboratory measurement projects for radioisotopes in compositional reference materials; *MSL 86-071(OP)* 69th Canadian Chemical Conference, Saskatoon, Saskatchewan, June 1986
- 0865 **Wheat, T.A.\*** Advanced ceramics in Japan and Canada; *MSL 86-074(OP)* for presentation at the Annual Convention of the Canadian Institute for Mining and Metallurgy, Montreal; May 1986
- 0866 **Wheat, T.A.\*** Advanced ceramics - Japan today and Canada tomorrow; *MSL 86-084(OP)* for presentation at the Inaugural workshop of the Canadian Industry - Universities council for ceramics, Toronto; June 1986
- 0867 **Sutarno, R.\* Bowman, W.S.** ISO/TC 183 - copper, lead and zinc ores and concentrates international tests during the period of 1984/86; *MSL 86-100(OP)* Canadian Mineral Analysts Meeting, Kamloops, B.C.; September 1986
- 0868 **Gould, W.D.\* Beaudette, L. McCready, R.G.L.** Destruction of cyanide from gold mill effluents using enzymes; *MSL 86-105(OP)* 25th Annual CIM Conference of Metallurgists; Toronto; August 1986
- 0869 **Barkley, D.J.\* Villeneuve, K.N. Dahms, T.E.** Dynamically and permanently coated columns for liquid chromatographic determination of anionic species in samples from environmental control processes; *MSL 86-111(OP)* 16th International Symposium on Chromatography, Paris, France; September 1986
- 0870 **Ahmed, S.M.\*** Photoelectrochemical and impedance studies of specular hematite and photoluminescence studies of GaAs with and without cobalt films; *MSL/CAT 86/87 071* International Energy Agency Task VI Workshop, University of Leuven, Leuven, Belgium; July 1986
- 0871 **Ahmed, S.M.\*** Studies of the photoelectrolytic behaviour of specular hematite; *MSL/CAT 86/87 072* 6th World Hydrogen Energy Conference, Vienna, Austria; July 1986
- 0872 **Barkley, D.J.\*** Dynamically and permanently coated columns for liquid chromatographic determination of anionic species in samples from environmental control processes; *MSL/CAT 86/87 073* 16th International Symposium on Chromatography, Paris, France; September 1986
- 0873 **Carette, G.G.\*** Characterization of Canadian fly ashes and their relative performance in concrete; *MSL/CAT 86/87 074* Second International Conference on Fly Ash, Silica Fume, Slag and Natural Pozzolans in Concrete; Madrid, Spain; April 1986
- 0874 **Carette, G.G.\*** Properties and performance of Canadian fly ashes with particular reference to Nova Scotia lingan fly ash; *MSL/CAT 86/87 075* Seminar on Nova Scotia Fly Ashes, Halifax, N.S.; November 1986

- 0875 Forms of silver in hydrometallurgical zinc processing; *MSL/CAT 86/87 076* Geological Association of Canada and Mineralogical Association of Canada - Joint Annual Meeting, Ottawa, Ontario; May 1986
- 0876 **Chen, T.T.\*** Mineralogical overview of iron control in hydrometallurgical processing; *MSL/CAT 86/87 077* International Symposium on Iron Control in Hydrometallurgy, Toronto, Ontario; October 1986
- 0877 **Chen, T.T.\*** A mineralogical study of anode copper and copper refinery anode slimes *MSL/CAT 86/87 078* 25th Annual Conference of Metallurgists, Toronto, Ontario; August 1986
- 0878 **Dalton, J.L.\*** CCRMP/NUTP interlaboratory measurement projects for radionuclides in compositional reference materials; *MSL/CAT 86/87 079* 69th Canadian Chemical Conference, Saskatoon, Saskatchewan, June 1986
- 0879 **Doyle, D.M.\*** Canada-Nova Scotia MDAs research and technology; *MSL/CAT 86/87 080* Annual Meeting of Mining Society of Nova Scotia; June 1986
- 0880 **Doyle, D.M.\*** Beneficiation-grinding studies, asbestos, R&D activities at CANMET; *MSL/CAT 86/87 081* Colloque l'Amiante, Quebec City; October, 1986
- 0881 **Dutrizac, J.E.\*** Leaching of silver minerals; *MSL/CAT 86/87 082* Invited Seminar at Boliden Metall, Sweden; April 1986
- 0882 **Dutrizac, J.E.\*** Ferric chloride leaching of silver, antimonian silver and silver chloride; *MSL/CAT 86/87 083* 25th Annual Conference of Metallurgists, Toronto, August 1986
- 0883 **Dutrizac, J.E.\*** The behaviour of silver in zinc processing; *MSL/CAT 86/87 084* Invited Seminar at Cominco Ltd., Trail, B.C.; September 1986
- 0884 **Dutrizac, J.E.\*** Mineralogical characterization of the residues from the two-stage pressure leaching of bulk concentrate; *MSL/CAT 86/87 085* Invited Seminar, Sherritt Gordon Mines Ltd., Fort Saskatchewan, Alberta, September 1986
- 0885 **Gould, W.D.\*** Destruction of the cyanid from gold mill effluents using enzymes; *MSL/CAT 86/87 086* 25th Annual CIM Conference of Metallurgists; Toronto; August 1986
- 0886 **Haque, K.E.\*** The leachability of radium-226 from uranium ores; *MSL/CAT 86/87 087* 25th Annual CIM Conference of Metallurgists; Toronto; August 1986
- 0887 **Kuriakose, A.K.\*** Synthesis of silicon carbide; *MSL/CAT 86/87 088* For presentation at the Annual , Trail, B.C.; September 1986
- 0888 **Malhotra, V.M.\*** Durability of concrete containing supplementary cementing materials in marine environment; *MSL/CAT 86/87 089* CANMET/ACI 2nd International Conference on the Use of Fly Ash, Silica Fume, Slag and Natural Pozzolans in Concrete, Madrid, Spain, April 1986
- 0889 **McCready, R.G.L.\*** Current biotechnology research in mining; *MSL/CAT 86/87 090* 36th Annual Meeting of the Canadian Society of Microbiologists; June 1986



- 0890 **Mikhail, S.A.\*** Potential use of thermal analysis in monitoring fluid-bed coal combusters; *MSL/CAT 86/87 091* 15th North American Thermal Analysis Society Conference, Cincinnati, Ohio; September 1986
- 0891 **Ritcey, G.M.\*** Hydrometallurgy - its development and future; *MSL/CAT 86/87 092* For presentation at the American Chemical Society Meeting, New York; April 1986
- 0892 **Steger, H.F.\* LeGeyt, M.** The dissolution of radium-226 in uranium mill tailings; *MSL/CAT 86/87 093* 69th Canadian Chemical Conference, Saskatoon, Saskatchewan; June 1986
- 0893 **Sutarno, R.\*** ISO/TC 183 - copper, lead and zinc ores and concentrates: international tests during the period 1984-1986; *MSL/CAT 86/87 094* Canadian Mineral Analysts Meeting, Kamloops, B.C.; September 1986
- 0894 **Tan, K.G.\*** Development of a mini plant chlorinator for ferric chloride leach processes; *MSL/CAT 86/87 095* 36th Canadian Chemical Engineering Conference, Sarnia, Ontario; October 1986
- 0895 **Townsend, M.G.\*** Propriétés magnétiques des silicates bidimensionels; *MSL/CAT 86/87 096* Rennes, France; April 1986
- 0896 **Townsend, M.G.\*** Magnetic properties of bidimensional materials; *MSL/CAT 86/87 097* Magnetism and Materials International Conference, Baltimore, Maryland; November 1986
- 0897 **Wheat, T.A.\*** Advanced ceramics in Canada; *MSL/CAT 86/87 098* For presentation at the Annual Convention of the Canadian Institute for Mining and Metallurgy, Montreal; May 1986
- 0898 **Wheat, T.A.\*** Advanced ceramics in Japan and Canada; *MSL/CAT 86/87 099* For presentation at the Inaugural Workshop of the Canadian Industry - Universities Council for Ceramics, Toronto; June 1986
- 0899 **Wheat, T.A.\*** Advanced ceramics - Japan today and Canada tomorrow; *MSL/CAT 86/87 100* For presentation at the Industrial Seminars on Advanced Ceramics Sponsored by Dept. External Affairs in Co-operation with Dept. Regional Industrial Expansion at Montreal, 18 June, Toronto, 20 June and Vancouver; June 1986
- 0900 **Kelly, F.J. Craigen, W.J.S.** Uranium extraction costing in Canada; *ERP/MSL 83-031(OP&J)* for presentation at the NEA/IAEA Workshop on the Economics of Uranium Ore Processing Operations, Paris, April 25-26, 1983
- 0901 **Douglas, E.\* Malhotra, V.M. Emery, J.J.** Cementitious properties of non-ferrous slags from Canadian sources; *ERP/MSL 84-036(OP&J)* Cement, Concrete and Aggregates ASTM; 1985
- 0902 **Wheat, T.A.\* Ahmad, A. Kuriakose, A.K. Canaday, J.D.** Hydrogen-conducting solids; *ERP/MSL 85-028(OP&J)* J. Can Ceramic Soc 54:32-39; 1985
- 0903 **Douglas, E.\* Mainwaring, P.R. Hemmings, R.T.** Pozzolanic properties of Canadian non-ferrous slags; *ERP/MSL 85-054(OP&J)* Presented at the 2nd International Conference on the Use of Fly Ash, Silica Fumes, Slag and Natural Pozzolans in Concrete, April 1986 and published in the Proceedings of the conference

- 0904 **Ritcey, G.M.\*** Silica fouling in ion exchange, carbon-in-pulp and solvent extraction circuit; *MRP/ERP/MSL 84-047(OP&J)* *Proceedings of the 24th Annual Conference of Metallurgists, Vancouver, B.C.; 1985*
- 0905 **Carette, G.G.\* Malhotra, V.M.** Mechanical properties, durability and drying shrinkage of Portland cement concrete incorporating silica fume; *MRP/MSL 82-070(OP&J)* *Cement, Concrete & Aggregates, Summer 1983 PAGES: 35 FICHE: 1*
- 0906 **Malhotra, V.M.\*** Fresh concrete properties and compressive strengths of Melgran concrete; *MRP/MSL 83-037(OP&J)* *VII International Melment-Symposium, Berchtesgaden, March 24-25, 1983*
- 0907 **Petruk, W.\*** Image analysis studies to determine liberations of sphalerite, chalcopyrite and galena during grinding of fine grained pyritic Zn-Pb-Cu-Ag ores; *MRP/MSL 84-090(OP&J)* *Proceedings of the 15th International Mineral Proceeding Congress 77-87; 1985*
- 0908 **Sutarno, R.\* Bowman, W.S.** ISO/TC 102/SC 2/WG 12B report on activities for the period of 1982-84; *MRP/MSL 84-119(OP&J)* *ISQ/TC 102/SC Working Document; 1984*
- 0909 **Andrews, P.R.A.\*** A laboratory study of the flotation circuit at Bakertalc Inc., Highwater, Quebec; *MRP/MSL 84-127(OP&J)* *CIM Bull 78:884:75-78; 1985*
- 0910 **Malhotra, V.M.\*** Mechanical properties, and freezing and thawing resistance of non air-entrained and air-entrained condensed silica fume concrete using ASTM test C 666, procedures A and B; *MRP/MSL 84-153(OP&J)* *Cement, Concrete and Aggregates ASTM; 1985*
- 0911 **Campbell, M.C.\*** Canadian government activities in biotechnology as applied to the mineral industry; *MRP/MSL 85-050(OP&J)* *Can Biotechnology 16:377-382; 1986*
- 0912 **Malhotra, V.M.\*** Developments in materials technology: a state-of-the-art; *MRP/MSL 85-064(OP&J)* *International Colloquim on Concrete in Developing Countries - Materials, Design and Construction 1:3-38; 1985*
- 0913 **Skeaff, J.M.\* Mainwaring, P.R. Speelman, J.L.** Thermochemical arsenides-oxide equilibria in the system Ni-As-O determined electrochemically between 438 deg. and 866 deg. C; *MRP/MSL 85-073(OP&J)* *Can Metal Quarterly 24:4:349; 1985*
- 0914 **Carette, G.G.\* Malhotra, V.M. Bedard, C. De Benedictis, V. Plumat, M.** Development of heat-curing cycles for Portland cement/fly ash concrete for the precast industry; *MRP/MSL 85-088(OP&J)* *Proceedings of the 2nd International Conference on Fly Ash, Silica Fume, Slag, and Natural Pozzolans in Concrete; Madrid, Spain; 1986*
- 0915 **Sampson, S.\* Silver, M. Wheeland, K.G.** Biological treatment of thiosalts in mill effluents; *MRP/MSL 85-103(OP&J)* *Proceedings of the 15th Annual Hydrometallurgical Meeting; 1985*
- 0916 **Quon, D.H.H.\* Bell, K.E.** Degradation of direct bonded chrome magnesia bricks in secondary steelmaking under vacuum; *MRP/MSL 85-105(OP&J)* *Proceedings of TMS-AIME Conference, New Orleans 1986*

- 0917 **Sutarno, R.\* Steger, H.F.** Uses of certified reference materials for the assessment of a measurement process: (sixth draft of ISO Guide 33); *MRP/MSL 85-111(OP&J)* Presented at Working Committee Meetings of ISO Published as ISO Guide 33
- 0918 **Demopoulos, G.P.\* Pouskouleli, G. Ritcey, G.M.** A novel solvent extraction system for the refining of precious metals; *MRP/MSL 86-047(OP&J)* ISEC '86; vol. II; 1986
- 0919 **Kuriakose, A.K.\* Quon, D.H.H. Bell, K.E. Soles, J.A.** Extrusion and induration of iron ore using polymers and calcium carbonate as plasticizer/ bond; *MSL 86-013(OP&J)* Proceedings of the TMS-AIME Conference, New Orleans; 1986
- 0920 **McCready, R.G.L.\* Lakshmanan, V.I.** Review of bioadsorption research to recover uranium from leach solutions in Canada immobilization of ions by bio-sorption; *MSL 86-045(OP&J)* Ellis Horwood Publications; Chichester, U.K., 1986
- 0921 **Demopoulos, G.P.\* Pouskouleli, G. Ritcey, G.M.** A novel solvent extraction system for the refining of precious metals; *MSL 86-047(OP&J)* Proceedings of TMS-AIME Conference, New Orleans 1986
- 0922 **Laskowski, J.\* Bustin, M. Moon, K.S. Sirois, L.L.** Desulfurizing flotation of eastern Canadian high-sulphur coal; *MSL 86-106(OP&J)* Processing and Utilization of High Sulfur coals - Coal Science and Technology 9:247-266; 1985
- 0923 **Ahmed, S.M.\* Leduc, J. Haller, S.F.** Studies of the poloelectrolytic behaviour of specular hematite; *MSL/CAT 86/87 004* Proceedings of the 6th World Hydrogen Energy Conference, vol. 2; ed. T.N. Veziroglu, N. Getoff and P. Weinzierl; 495-505; 1986
- 0924 **Campbell, M.C.\*** Canadian government activities in biotechnology as applied to the mineral industry; *MSL/CAT 86/87 005* Can Biotechnology 16:377-382; 1986
- 0925 **Carette, G.G.\* Malhotra, V.M. Bedard, C. De Benedictis, V. Plumat, M.** Development of heat-curing cycles for portland cement-fly ash concrete for the precast industry; *MSL/CAT 86/87 006* Proceedings of the 2nd International Conference on Fly Ash, Silica Fume, Slag, and Natural Pozzolans in Concrete; Madrid, Spain; 1986
- 0926 **Chen, T.T.\* Dutrizac, J.E.** Mineralogical characterization of anode slimes from the Kidd Creek copper refinery; *MSL/CAT 86/87 007* Copper Electrorefining and Winning '87, TMSAIME; 1986
- 0927 **Demopoulos, G.P.\* Pouskouleli, G. Ritcey, G.M.** A novel solvent extraction system for the refining of precious metals; *MSL/CAT 86/87 008* ISEC '86; vol. II; 1986
- 0928 **Douglas, E.\* Mainwaring, P.R. Hemmings, R.T.** Cementitious properties of non ferrous slags from Canadian sources; *MSL/CAT 86/87 009* Cement, Concrete and Aggregates ASTM; 1985
- 0929 **Dutrizac, J.E.\*** Kinetics of the ferric chloride leaching of silver, antimonian silver and silver chloride; *MSL/CAT 86/87 011* Hydrometallurgical Reactor Design and Kinetics, TMS-AIME, 1-21; 1986

- 0930 **Holmes, R.W.\* Murray, M.L. Chambers, D.B. Knapp, R.A.** An approach to risk assessment for Canadian uranium mill tailings; *MSL/CAT 86/87 012* *Proceedings of the 2nd International Conference on Radioactive Waste Management*, Winnipeg, Manitoba; 1986
- 0931 **John, R.D.\*** Research into the long-term environmental effects of uranium tailings; *MSL/CAT 86/87 013* *Proceedings of the 2nd International Conference on Radioactive Waste Management*, Winnipeg, Manitoba; 1986
- 0932 **Kuriakose, A.K.\* Quon, D.H.H. Bell, K.E. Soles, J.A.** Extrusion and induration of iron ore using polymers and calcium carbonate as plasticizer/ bond; *MSL/CAT 86/87 014* *Proceedings of the TMS-AIME Conference*, New Orleans; 1986
- 0933 **Laguitton, D.\* Sirois, L.L. Flament, F.** Le calcul par ordinateur dans l'industrie Minéralurgique Canadienne en 1984; *MSL/CAT 86/87 015* *IMPAC Processing 62-74*; 1985
- 0934 **Laskowski, J.\* Bustin, M. Moon, K.S. Sirois, L.L.** Desulfurizing flotation of eastern Canadian high-sulfur coal; *MSL/CAT 86/87 016* *Processing and Utilization of High Sulfur coals - Coal Science and Technology 9:247-266*; 1985
- 0935 **Malhotra, V.M.\*** Fresh concrete properties and compressive strengths of melgran concrete; *MSL/CAT 86/87 017* *Proceedings of VII International Melment Symposium Berchtesgaden*, March, 1983
- 0936 **Malhotra, V.M.\*** Mechanical properties, and freezing and thawing resistance of non air-entrained and air-entrained condensed silica fume concrete using ASTM Test C 666, procedures A and B; *MSL/CAT 86/87 018* *Cement, Concrete and Aggregates ASTM*; 1985
- 0937 **Malhotra, V.M.\*** Developments in materials technology a state-of-the-art; *MSL/CAT 86/87 019* *International Colloquium on Concrete in Developing Countries - Materials, Design and Construction 1:3-38*; 1985
- 0938 **McCready, R.G.L.\* Lakshmanan, V.I.** Review of bioadsorption research to recover uranium from leach solutions in Canada immobilization of ions by bio-sorption; *MSL/CAT 86/87 020* *Ed. H. Eccles and S. Hunt*; Ellis Horwood Publications; Chichester, U.K.; 1986
- 0939 **Mikhail, S.A.\*** Potential use of thermal analysis in monitoring fluid-bed coal combustors; *MSL/CAT 86/87 021* *Proceedings of the 15th North American Thermal Analysis Society Conference*; ed. H.K. Chen; 179-185; 1986
- 0940 **Petruk, W.\*** Image analysis studies to determine liberations of sphalerite, chalcopyrite and galena during grinding of fine grained pyritic Zn-Pb-Cu-Ag ores; *MSL/CAT 86/87 022* *Proceedings of the 15th International Mineral Proceeding Congress 77-87*; 1985
- 0941 **Pilgrim, R.F.\*** The SPOC project software and manual; *MSL/CAT 86/87 023* *Proceedings of the 18th Annual Meeting of the Canadian Mineral Processors*; 377-406; 1986
- 0942 **Quon, D.H.H.\* Moon, K.S.** Degradation of direct bonded chrome magnesia bricks in secondary steelmaking under vacuum; *MSL/CAT 86/87 024* *Proceedings of TMS-AIME Conference*, New Orleans 1986

- 0943 **Ritcey, G.M.\*** Silica fouling in ion exchange, carbon-in-pulp and solvent extraction circuits; *MSL/CAT 86/87 025* *Proceedings of the 24th Annual Conference of Metallurgists, Vancouver, B.C.; 1985*
- 0944 **Sampson, S.\* Silver, M. Wheeland, K.G.** Biological treatment of thiosalts in mill effluents; *MSL/CAT 86/87 026* *Proceedings of the 15th Annual Hydrometallurgical Meeting; 1985*
- 0945 **Skeaff, J.M.\* Mainwaring, P.R. Spezlman, J.L.** Electrochemical determination of arsenide-oxide equilibria in the system Ni-As-O between 438 degree and 866 degree C; *MSL/CAT 86/87 027* *Proceedings of the CIM-AIME Symposium on Complex Sulphides: Processing of Ores, Concentrates and By-products; San Diego, Nov. 10-13, 1985* edited by A.D. Zunkel et al., The Metallurgical Society of the AIME; Warrendale, Pa., U.S.A.; 1985
- 0946 **Tan, K.G.\* Bedard, P.L.** Development of a mini plant chlorinator for ferric chloride leach processes; *MSL/CAT 86/87 028* *Processings of the 36th Canadian Chemical Engineering Conference; Sarnia, Ontario, CSChE Paper 19a; 1986*
- 0947 *MSL/CAT 86/87 029* **Wheat, T.A.\*** Ceramics activities at CANMET; *Proceedings of the Industry-University Council of Advanced Ceramics; Toronto, Ontario; 1986*

### Technical Reports (TR) / Rapports techniques (TR)

- 0948 *ERP/MSL 84-057(TR)* **Ritcey, G.M.\* Wong, E.W.** Solvent extraction of uranium from a chloride leach liquor; PAGES: 24 FICHE: 1
- 0949 *MRP/MSL 77-012(CF)(TR)* **Brigham, R.J.\* Kilpatrick, M.W.** Corrosion and wear during comminution part 5: grinding modifiers; PAGES: 13 FICHE: 1
- 0950 *MRP/MSL 78-001(CF)(TR)* **Ritcey, G.M.\* Lucas, B.H.** Development of a flowsheet for the treatment of chloride leach liquor: selection of a solvent extraction reagents: progress report no. 2; PAGES: 28 FICHE: 1
- 0951 *MRP/MSL 84-026(TR)* **Sanmugasunderam, V.\* Dalton, J.L.** Adsorption of radium-226 by fungi; PAGES: 7 FICHE: 1
- 0952 *MSL 86-081(TR)* Mineral Sciences Laboratories: annual report 1985/86; PAGES: 78 FICHE: 1
- 0953 *MSL 86-107(TR)* **MacKinnon, D.J.\* Brannen, J.M.** Cementation of copper and silver on granular iron from simulated iron chloride leach solutions; PAGES: 32 FICHE: 1
- 0954 *MSL 86-108(TR)* **Hamer, C.A.\*** Evaluation of New Brunswick limestone as SO<sub>2</sub> sorbents in fluidized bed combustors; PAGES: 17 FICHE: 1
- 0955 *MSL 86-110(TR)* **Provencher, R.\* Brett, M.E.** A preliminary report on some magnetic and Mossbauer spectroscopy investigations of Waite Amulet tailings; PAGES: 14 FICHE: 1

- 0956 *MSL 86-118(TR)* **McCorkell, R.\*** Uranium determination by the fission track method; PAGES: 11 FICHE: 1
- 0957 *MSL 86-122(TR)* **McCorkell, R.\*** Methods for the field measurement of radon concentration; PAGES: 12 FICHE: 1
- 0958 *MSL 86-129(TR)* **McCready, R.G.L.\* Salley, J.** Preliminary results on the inhibition of pyrite oxidation by road salt and clay capping of Halifax pyritic shales; PAGES: 11 FICHE: 1
- 0959 *MSL 86-149(TR)* **Andrews, P.R.A.\* Wang, S.S.B. Lamothe, J.-M.** An evaluation of the Kipp-Kelly air table as a gravity concentration technique for industrial minerals; PAGES: 12 FICHE: 1
- 0960 *MSL 86-167(TR)* **Dalton, J.L.\*** The uranium analytical laboratory; PAGES: 13 FICHE: 1
- 0961 *MSL 86-168(TR)* **Sutarno, R.\*** ISO/TC 102/SC 2-13th International meeting Tokyo, Japan, 1986-11-9/14; PAGES: 10 FICHE: 1
- 0962 *MSL 86-170(TR)* **Bedard, P.L.\* Richer, P. Tan, K.G.** Interfacing of the Pye Unicam PU8610 UV/VIS spectrophotometer with the Osborne 01 microcomputer; PAGES: 40 FICHE: 1
- 0963 *MSL 87-002(TR)* **Dalton, J.L.\*** Calibration methodology and quality control in the uranium analytical laboratory; PAGES: 14 FICHE: 1
- 0964 *MSL 87-004(TR)* **Dalton, J.L.\* Hunt, G.** The analysis of mill process solutions for ferrous/ferric iron ratio, silicon and phosphorus concentrations by various analytical techniques; PAGES: 11 FICHE: 1
- 0965 *MSL 87-012(TR)* **Dalton, J.L.\* Boncardo, M.** The determination of uranium in ores, rocks and mineral processing solutions by X-ray fluorescence analysis; PAGES: 17 FICHE: 1
- 0966 *MSL 87-015(TR)* **Churchill, T.R.\* Horton, R.E.** Atomic emission spectroscopy methods for measurement of impurities in uranium; PAGES: 20 FICHE: 1
- 0967 *NUTP 85-006(TR)* Interim Report 1983-85;

## PHYSICAL METALLURGY RESEARCH LABORATORIES

### Journal Publications / Publication dans les revues

- 0968 *PMRL 86-049(J)* **Mak, D.K.\*** Computer polar plots of intensity of scattered wave from a rigid cylinder;

- 0969 **McGrath, J.T.\* Chandel, R.S. Orr, R.F. Gianetto, J.A.** Some factors affecting the structural integrity of weldments in heavy wall reactor vessels; *PMRL 86-095(J) Atlantic Section Conf. of the National Assoc. of Corrosion Engineers: Halifax, NS; Nov. 1986*

### Oral Presentations / Présentations orales

- 0970 **Sastri, V.S.\* Packwood, R.H. Brown, J.R.** Surface analysis in corrosion inhibition mechanisms; *PMRL 86-068(OP) Surface Canada '86; London, Ont.; June 1986 U.W.O. London, Ont.; June 1986 Werkstoffe und Korrosion: 38:77:1987*
- 0971 **Davis, K.G.\*** Workshops on gating and risering; *PMRL/CAT 86/86 140 Vancouver, Edmonton, Winnipeg, Nov. 1986, St.Hyacinthe, Mar. 1987*
- 0972 **Brigham, R.J.\*** The CANMET weld-zone corrosion program; *PMRL/CAT 86/87 072 CIM Conference of Metallurgists; Toronto, Ontario; August 1986*
- 0973 **Gilmour, J.B.\*** Corrosion in an atmosphere fluidized bed combustor; *PMRL/CAT 86/87 073 NACE Canadian Eastern Region Conference; Halifax, N.S.; Nov. 1986*
- 0974 **Gilmour, J.B.\* Lui, A.W. Briggs, D.C. Knight, R.F.** The Canadian AFBC materials program: part 1 - performance of alloys after 10,000 hours exposure; *PMRL/CAT 86/87 074 Corrosion/87; San Francisco, CA; March 1987*
- 0975 **Hindam, H.\* Gilmour, J.B. Packwood, R.H. Briggs, D.C. Lui, A.W.** Metallographic examination of candidate commercial alloys after one thousand hours exposure in an atmospheric fluidized bed coal combustor; *PMRL/CAT 86/87 075 CIM Conference of Metallurgists; Toronto, Ont.; August 1986*
- 0976 **Hoey, G.R.\* Revie, R.W. Ramsingh, R.R. Mak, D.K. Somerville, I.R.** Status report characterization of steels for sour service; *PMRL/CAT 86/87 076 CSA Sour Service Task Force Meeting; Toronto, Ont.; Sept. 1986*
- 0977 **Mitrovic-Scepanovic, V.\*** Effect of Cl ions on passivity of Fe-26 Cr alloy; *PMRL/CAT 86/87 077 The Electrochemical Society 169th Meeting; Boston, Mass.; May 1986*
- 0978 **Revie, R.W.\* Sastri, V.S.** Corrosion prevention-inhibitors; *PMRL/CAT 86/87 078 Corrosion and Corrosion Protection; Halifax, N.S.; June, 1986*
- 0979 **Sastri, V.S.\* Packwood, R.H. Brown, J.R.** Surface analysis in corrosion inhibition mechanisms; *PMRL/CAT 86/87 079 Surface Canada '86; London, Ont.; June 1986*
- 0980 **Sastri, V.S.\*** Corrosion inhibitors; *PMRL/CAT 86/87 080 Workshop on "Corrosion"; Technical Univ. of Nova Scotia, Halifax, N.S.; June 1986*
- 0981 **Bell, R.\* Vosikovsky, O.** 3-D stress intensity factors for weld toe cracks and fatigue life prediction of plate T-joints; *PMRL/CAT 86/87 081 4th Irish Durability and Fracture Conference; Belfast, Ireland; Sept. 1986*

- 0982 **Munaswamy, K.\* Bhuyan, G.S. Swamidas, A.S.J. Arockiasamy, M.** Experimental and analytical studies on fatigue of stiffened and unstiffened tubular T-joints; *PMRL/CAT 86/87 082 18th Annual Offshore Technology Conference*; Houston, Texas; May 1986
- 0983 **Roy, G.\* Tyson, W.R.** Stress analysis by the superposition and collocation method; *PMRL/CAT 86/87 083 Symposium on Computer Modelling of Fabrication Processes and Constitutive Behaviour of Metals*; Ottawa, Ont.; May 1986
- 0984 **Roy, G.\*** Elasto-plastic analysis by the superposition and collocation method; *PMRL/CAT 86/87 084 2nd Boundary Element Technology Conference, Betech 86*; Massachusetts Institute of Technology, Boston, MA; June 1986
- 0985 **Tyson, W.R.\*** Toughness and section thickness effects of constraint and variability; *PMRL/CAT 86/87 085 WIC Workshop on Steel Welding Research*; Oakville, Ont.; April 1986
- 0986 **Tyson, W.R.\*** Initiation control; *PMRL/CAT 86/87 086 CFER Workshop on Toughness Requirement*; Edmonton, Alberta; Feb. 1987
- 0987 **Tyson, W.R.\* Vosikovsky, O. Faucher, B. Burns, D.** Brittle fracture in heavy section welded Tjoints; *PMRL/CAT 86/87 087 ECSC/Canada Meeting*; Halifax, N.S.; Sept. 1986
- 0988 **Vosikovsky, O.\* Tyson, W.R.** Effects of cathodic protection on fatigue life of steel selded joints in seawater; *PMRL/CAT 86/87 088 CANMET/CFER Workshop on Cathodic Protection*; Dartmouth, N.S.; Sept. 1986
- 0989 **Carpenter, G.J.C.\*** Transmission electron microscopy of materials; *PMRL/CAT 86/87 089 ASM Course on Materials*; PMRL/CANMET, Ottawa, Ont.; April 1986
- 0990 **Carpenter, G.J.C.\*** Modern techniques of transmission electron microscopy; *PMRL/CAT 86/87 090 Algonquin College*, Ottawa, Ont.; Feb. 1987
- 0991 **Carpenter, G.J.C.\* Cherns, D. Mallard, R.** On the existence of MCP silicon in polysilicon; *PMRL/CAT 86/87 091 36th Canadian Metal Physics Conference*; RMC, Kingston, Ont.; June 1986
- 0992 **Carpenter, G.J.C.\*** Applications of analytical electron microscopy in materials research; *PMRL/CAT 86/87 092 Chalk River Nuclear Labs.*, Ontario; Feb. 1987
- 0993 **Galvani, C.\* L'Esperance, G. Crawley, A.F. Holt, R.A. Cousineau, E.J.C.** Precipitation and textural effects in rapid annealing of cold rolled A1-killed sheet; *PMRL/CAT 86/87 093 Canadian Metal Physics*, Kingston, Ont., June 1986
- 0994 **Gundjian, A.\* Badaye, M. Holt, R.A. Cousineau, E.J.C.** Crystallographic texture of vacuum deposited tellurium films; *PMRL/CAT 86/87 094 Canadian Metall Physics Conference*, Kingston, Ontario; June 1986
- 0995 **Hindam, H.\* Gilmour, J.B. Packwood, R.H. Briggs, D.C. Lui, A.W.** Metallographic examination of candidate commercial alloys after several thousand hours exposure in an atmospheric fluidized-bed coal combustor; *PMRL/CAT 86/87 095 C.I.M. Cof. of Metallurgists*; Toronto, Ont.; Aug. 1986



- 0996 **Holt, R.A.\* Brauss, M. Boag, J.** Simultaneous multiple pole figure determination in Ti-6% Al-4%V extrusions; *PMRL/CAT 86/87 096* *Canadian Metal Physics Conference*; Kingston, Ontario; June 1986
- 0997 **Holt, R.A.\* Brauss, M. Boag, J.** In-situ stress measurement with the CANMET portable X-ray stress diffractometer; *PMRL/CAT 86/87 097* *2nd International Symposium on Non-Destructive Characterization of Materials*, Montreal, Quebec July 1986
- 0998 **Holt, R.A.\* Gundjian, A. Badaye, M. Cousineau, E.J.C.** Crystallographic texture of vacuum deposited Te films; *PMRL/CAT 86/87 098* *Canadian Metal Physics*; Kingston; June 1986
- 0999 **Jackman, J.A.\*** Experiences in secondary ion mass spectrometry at Arizona State University; *PMRL/CAT 86/87 099* *PMRL/CANMET Ottawa*, Ont.; Dec. 1987
- 1000 **Packwood, R.H.\*** Microprobe analysis from semi-infinite to submonolayer specimens; *PMRL/CAT 86/87 100* *Dearborn, MI; Denver, CO; Palo Alto, CA; Pasadena, CA*; May 1986
- 1001 **Packwood, R.H.\* Parker, C. Moore, V.E.** Physics and chemistry in soft X-rays; *PMRL/CAT 86/87 101* *(Poster Presentations) 11th International Congress on X-ray Optics and Microanalysis*; U.W.O. London, Ont.; August 1986
- 1002 **Sastri, V.S.\* Packwood, R.H. Brown, J.R.** Surface analysis in corrosion inhibition mechanisms; *PMRL/CAT 86/87 102* *U.W.O. London*, Ont.; June 1986
- 1003 **Woo, W.T.\* Carpenter, G.J.C.** Identification of Zr and Ti hydrides by electron energy loss spectroscopy; *PMRL/CAT 86/87 103* *36th Canadian Metal Physics Conference*; RMC, Kingston, Ont.; June 1986
- 1004 **Woo, O.T.\* Carpenter, G.J.C. MacEwen, S.R. Parker, J.D.** Zr-Fe intermetallic particles in Zr-2.5% Nb; *PMRL/CAT 86/87 104* *36th Canadian Metal Physics Conference*; RMC, Kingston, Ont.; June 1986
- 1005 **Boyd, J.D.\*** New steels for oil country tubulars; *PMRL/CAT 86/87 105* *Calgary Chap. of ASM*; Calgary, Alta.; May 1986
- 1006 **Boyd, J.D.\*** New steels for oil country tubulars; *PMRL/CAT 86/87 106* *N. Ontario Chap. of ASM*; Sault Ste. Marie, Ont.; Sept. 1986
- 1007 **Boyd, J.D.\*** Microstructural effects on fracture in a Ti-V plate steel; *PMRL/CAT 86/87 107* *NRC-IMRI*; Boucherville, Quebec; Jan. 1987
- 1008 **Collins, L.E.\* McDougall, J.M. Boyd, J.D.** The effects of Cr, Mo and W on the transformation behavior of a Nb-microalloyed steel; *PMRL/CAT 86/87 108* *TMS Annual Meeting*; Denver, CO; Feb. 1987
- 1009 **Collins, L.E.\*** Update on Canadian activities in rapid solidification technology; *PMRL/CAT 86/87 109* *Seminar on Rapid Solidification Technology*; Winnipeg, Man.;
- 1010 **Collins, L.E.\* Wronski, Z.S.** Rapidly quenched meactivities in rapid solidification technology; *PMRL/CAT 86/87 110* *New Metallic Materials and New Fabrication Processes*; Montreal, Quebec; July 1986

- 1011 **Collins, L.E.\* Mitrovic-Scepanovic, V.** Microstructures and properties of rapidly solidified Fe-Al bronzes; *PMRL/CAT 86/87 111* 25th CIM Conference of Metallurgists; Toronto, Ont.; Aug 1986
- 1012 **Collins, L.E.\* Mitrovic-Scepanovic, V.** The development of improved Fe-Al bronzes by rapid solidification; *PMRL/CAT 86/87 112* 116th TMS Annual Meeting; Denver, CO.; Feb. 1987
- 1013 **Couture, A.\*** Microstructures and mechanical properties of heat-treated concast Mn-Ni-Al bronzes; *PMRL/CAT 86/87 113* 90th AFS Casting Congress; Minneapolis, Min; May 1986
- 1014 **Fegredo, D.M.\* Kalousek, J. Shehata, M.T. Palmer, A.** The effect of sulphide and oxide inclusions on the wear rates of standard and alloy rail steels; *PMRL/CAT 86/87 114* Third International Heavy Haul Railway Conference; Vancouver, B.C.; Oct. 1986
- 1015 **Fegredo, D.M.\* Kalousek, J.** The effect of mixed microstructures on wear; *PMRL/CAT 86/87 115* Second International Symposium on Contact Mechanics and Wear of Rail/Wheel Systems; Rhode Island University, Kingston, R.I.; July 1986
- 1016 **Himbeault, D.\* Varin, R.A. Piekarski, K. Wronski, Z.S.** A study of interfacial reactions during the deformation of an aluminum matrix composite; *PMRL/CAT 86/87 116* Canadian Metal Physics Conference; Kingston, Ont.; June 1986
- 1017 **Malis, T.\* Rajan, K. Weatherley, G.C. Titchmarsh, J.M.** EELS quantification and its range of validity; *PMRL/CAT 86/87 117* NRC Workshop on Intermediate Voltage Microscopy; NRC, Ottawa, Ont.; June 1986
- 1018 **Malis, T.\*** New developments in EELS; *PMRL/CAT 86/87 118* Microscopy Society of Canada Annual Meeting; McMaster Univ. Hamilton, Ont.; June. 1986
- 1019 **Malis, T.\*** An experimentalist approach to EELS quantification; *PMRL/CAT 86/87 119* 11th Int. Conf. on X-ray Optics and Microanalysis; London, Ont.; Aug. 1986
- 1020 **Malis, T.\* Vogan, B. Boyd, J.D.** Characterization of an unusual transformation product in a microalloyed steel (poster presentation); *PMRL/CAT 86/87 120* Metal Physics Conference; RMC, Kingston, Ont.; June, 1986
- 1021 **Gilmour, J.B.\* Lui, A.W. Knight, R.F. Hindam, H.** Corrosion in an atmospheric fluidized bed combustor; *PMRL/CAT 86/87 121* Canadian Eastern Region NACE Conf.; Halifax, N.S.; Nov.1986
- 1022 **Gilmour, J.B.\* Lui, A.W. Knight, R.F. Hindman, H.** Corrosion in an atmospheric fluidized bed combustor; *PMRL/CAT 86/87 122* Canadian Eastern Region NACE Conf.; Halifax, NS ; Nov. 1986
- 1023 **Ozsoy, I.C.\* Ruddle, G.E. Dogan, B. Crawley, A.F.** Optimization modelling of hot-rolling practices applied to Ti-V microalloyed steel; *PMRL/CAT 86/87 123* Symposium on Computer Modelling of Fabrication Processes and Constitutive Behaviour of Metals; Ottawa, Ont.; May 1986

- 1024 **Parsons, D.E.\* Fegredo, D.M. Sastri, V.S.** Hydrogen degassing to safe levels in alloy and standard C-Mn steels by controlled cooling; *PMRL/CAT 86/87 124* (Poster Presentation) 36th Canadian Metal Physics Conference; Kingston, Ont.; June 1986
- 1025 **Parsons, D.E.\* Fegredo, D.M. Sastri, V.S.** Hydrogen degassing to safe levels in alloy and standard C-Mn rail steels by controlled cooling; *PMRL/CAT 86/87 125* 25th Annual Conference of Metallurgists; Toronto, Ont.; August 1986 (poster session presented by J.D.Boyd)
- 1026 **Shehata, M.T.\* Boyd, J.D.** Assessment of non-metallic inclusions in steels by image analysis; *PMRL/CAT 86/87 126* CIM Conference of Metallurgists; Toronto, Ont.; Aug. 1986
- 1027 **Shehata, M.T.\*** Image analysis in microstructural characterization of steels; *PMRL/CAT 86/87 127* Seminar Dept. of Metallurgy, Cairo University; Cairo, Egypt; Jan. 1987
- 1028 **Tandon, K.N.\* Collins, L.E.** Corrosion-fatigue behaviour of metallic glasses; *PMRL/CAT 86/87 128* 25th CIM Conference of Metallurgist; Toronto, Ont.; Aug. 1986
- 1029 **Wronski, Z.S.\*** Rapidly solidified iron-Boron alloys for electromagnetic and electronic applications; *PMRL/CAT 86/87 129* Conf. of Metallurgists; Toronto, Ont.; Aug. 1986
- 1030 **Wronski, Z.S.\*** Amorphous steels and Fe-Zr alloys; *PMRL/CAT 86/87 130* TMS Fall Meeting; Orlando, Fl.; October 1986
- 1031 **Abdullah, Z.\* Salcudean, M. Davis, K.G.** Modeling the solidification of cast iron in permanent moulds; *PMRL/CAT 86/87 131* Computer Modelling of Fabrication Processes and Constitutive Behaviour of Metals; Ottawa, Ont.; May 1986
- 1032 **Buhr, R.K.\*** Technology transfer using a mobile foundry laboratory; *PMRL/CAT 86/87 132* Beijing International Foundry Conference; Beijing, China; Oct. 1986
- 1033 **Buhr, R.K.\* Davis, K.G. Magny, J.G.** Workshops on gating and rising; *PMRL/CAT 86/87 133* Vancouver, B.C., Nov. 1986 Edmonton, Alberta, Dec. 1986; Winnipeg, Man., Dec. 1986
- 1034 **Buhr, R.K.\*** Sand control in Canadian foundries; *PMRL/CAT 86/87 134* Soundness and Quality in Cast Metals II; Kingston, Ont.; Sept. 1986
- 1035 **Couture, A.\* Sahoo, M.** Microstructure and mechanical properties of heat treated concast Mn-Ni-Al bronzes; *PMRL/CAT 86/87 135* 90th AFS Casting Congress; Minneapolis, Min.; May 1986
- 1036 **Davis, K.G.\*** Foundry aids-an overview; *PMRL/CAT 86/87 136* Soundness and Quality in Cast Metal II; Kingston, Ont.; Sept. 1986
- 1037 **Davis, K.G.\*** New developments in the foundry industry; *PMRL/CAT 86/87 137* Cour et conférence sur les nouveaux procédés de fabrication; IGM/IMRI Boucherville, Québec; July 1986
- 1038 **Davis, K.G.\* Ding, H. Magny, J.G. Brown, D.A.** Inmold production of ductile iron in permanent moulds; *PMRL/CAT 86/87 138* Advanced Casting Technology-International Conference and Exposition; Kalamazoo, Mi; Nov. 1986

- 1039 **Davis, K.G.\*** Pièces coulées en moules permanents pour des alliages à haut point de fusion; *PMRL/CAT 86/87 139* *American Foundrymen's Society*; Montréal, Québec Feb. 1987
- 1040 **Jincheng, X.\* Palmer, A.R.** Studies on alumina inclusions in liquid steel and ingots; *PMRL/CAT 86/87 141* *Beijing International Foundry Conference*; Beijing, P.R. of China; Oct. 1986
- 1041 **Sahoo, M.\*** Mechanical properties characterization of slow-cooled aluminum bronzes; *PMRL/CAT 86/87 142* *90th AFS Casting Congress*; Minneapolis, Min.; May 1986
- 1042 **Sahoo, M.\* Whiting, L.V. Chartrand, V. Weatherall, G.** Effect of stontium on the structure and mechanical properties of zinc-aluminum foundry alloys; *PMRL/CAT 86/87 143* *90th AFS Casting Congress*; Minneapolis, Min.; May 1986
- 1043 **Sahoo, M.\*** Non-ferrous foundry developments - copper base alloys; *PMRL/CAT 86/87 144* *Soundness and Quality in Cast Metals-II*; Kingston, Ont.; Sept, 1986
- 1044 **Sahoo, M.\* Couture, A.** A review of CANMET work on high strength copper base alloys for shipboard systems; *PMRL/CAT 86/87 145* *Beijing International Foundry Conference*; Beijing, China; Oct. 1986 (presented by R.K.Buhr)
- 1045 **Warda, R.D.\*** Evaluation of Canadian foundries by the MFL; *PMRL/CAT 86/87 146* *Northwest Regional Conference of the AFS*
- 1046 **Warda, R.D.\*** Reduction of electric furnace melting costs; *PMRL/CAT 86/87 147* *Eastern Canada Chapter of the AFS. May 1986*
- 1047 **Warda, R.D.\*** Sensors and controls in foundries; *PMRL/CAT 86/87 148* *Soundness and Quality in Cast Metal II*; Kingston, Ont.; Sept. 1986
- 1048 **Whiting, L.V.\*** Cupola and induction furnace melting costs; *PMRL/CAT 86/87 149* *Soundness and Quality in Cast Metal II*; Kingston, Ont.; Sept. 1986
- 1049 **Baragar, D.L.\*** The evaluation of hot rolling models using Cam plastometer flow stress data; *PMRL/CAT 86/87 150* *28th Mechanical Working and Steel Processing Conference*; Pittsburgh, PA; Oct. 1986
- 1050 **Biner, S.B.\* Too, J.J.M.** Spring-element method and its application to fracture analysis; *PMRL/CAT 86/87 151* (presented by a rapporteur) *Sym. on Modelling of Fabrication Processes and Constitutive Behaviour of Metals*; Ottawa, Ont.; May
- 1051 **Biner, S.B.\* Harnaes, J. Too, J.J.M.** Analysis of axisymmetric extrusion with numerical and model material techniques; *PMRL/CAT 86/87 152* *Symp. on Modelling of Fabrication Processes and Constitutive Behaviour of Metals*; Ottawa; May 15-16, 1986
- 1052 **Crawley, A.F.\* Galvani, C.** Aspects of r-value development in continuously annealed sheet; *PMRL/CAT 86/87 153* *Fall Meeting of North American Deep Drawing Research Group*; Dearborn, MI; October 1986
- 1053 **Galvani, C.\* Crawley, A.F. L'Esperance, G. Holt, R.A. Cousineau, E.J.C.** Precipitation and textural effects in rapid annealing of cold rolled aluminium killed steel; *PMRL/CAT 86/87 154* *28th Mechanical Working and Steel Processing Conference*; Pittsburgh, PA; Oct. 1986

- 1054 **Galvani, C.\* Crawley, A.F. L'Esperance, G. Holt, R.A. Cousineau, E.J.C.** Precipitation and textural effects in rapid annealing of cold rolled aluminum killed sheet; *PMRL/CAT 86/87 155* (Poster presentation) *Canadian Metal Physics Conf.*; Kingston, Ont.; June 1986
- 1055 **Ozsoy, I.C.\* Ruddle, G.E. Dogan, B. Crawley, A.F.** Optimisation modelling of hot rolling practices applied to a Ti-V microalloyed steel; *PMRL/CAT 86/87 156* *Mathematical Modelling of Fabrication Processes and Constitutive Behaviour of Metals*; Ottawa, Ont.; May 1986
- 1056 **Ruddle, G.E.\* Ozsoy, I.C.** Modelling of roll force and torque for control of flat hot-rolling processes; *PMRL/CAT 86/87 157* *CIM 25th Annual Conference of Metallurgists*; Toronto, Ont.; Aug. 1986
- 1057 **Ruddle, G.E.\* Crawley, A.F.** Evaluation of through-thickness gradients of temperature, strain and flow stress in hot-rolling deformation of plain-carbon and microalloyed steel; *PMRL/CAT 86/87 158* *Annual Meeting of the Metallurgical Society of AIME*; Denver, CO; Feb. 1987
- 1058 **Too, J.J.M.\*** A coupled thermal/mechanical model for the prediction of deformation behavior of rolling processes; *PMRL/CAT 86/87 159* (Presented by a rapporteur) *Sym. on Modelling of Fabrication Processes and Constitutive Behaviour of Metals*; Ottawa, Ont.; May 1986
- 1059 **Mak, D.K.\*** Ultrasonic reflection tomography with a transmitter-receiver system; processes; *PMRL/CAT 86/87 160* *15th symposium on Acoustical Imaging*; Halifax; July 1986
- 1060 **Mak, D.K.\* Macecek, M. Kovacs, A.** Ultrasonic defect visualization in a metal block; *PMRL/CAT 86/87 161* (Poster Presentation) *15th Symposium on Acoustical Imaging*; Halifax; July 1986
- 1061 **Monchalain, J.-P.\*** Ultrasonic industrial materials characterisation by laser generation and optical detection; *PMRL/CAT 86/87 162* *12th Int. Congress on Acoustics*; Toronto, Ont.; July 1986
- 1062 **Bowker, J.T.\*** Heat affected zone microstructure and toughness of a range of TMCP steels; *PMRL/CAT 86/87 163* *Nippon Steel II Fundamental Research Laboratories*, Tokyo, Japan; July 1986
- 1063 **Bowker, J.T.\*** Thermal simulation using resistance heating and induction heating systems; *PMRL/CAT 86/87 164* *National Research Institute for Metals*; July 1986
- 1064 **Braid, J.E.M.\* Gianetto, J.A.** The effects of PWHT on the toughness of shielded metal arc weld metals for use in Canadian offshore structure fabrication; *PMRL/CAT 86/87 165* *Annual Assembly of the International Institute of Welding*; Tokyo, Japan; July, 1986
- 1065 **Braid, J.E.M.\*** Toughness of weld metal for Canadian offshore structure fabrication; *PMRL/CAT 86/87 166* *Workshop on Steel Welding Research*; Welding Intsitute of Canada, Oakville, Ont.; April 1986
- 1066 **Braid, J.E.M.\*** Effect of heat input and stress relief temperature on the microstructure of SMA weld metals; *PMRL/CAT 86/87 167* *25th Conf. of Metallurgists*; Toronto, Ont; Aug. 1986

- 1067 **Chandel, R.S.\* McGrath, J.T. Orr, R.F. Gianetto, J.A.** Microstructure and mechanical properties of SAW-NG welds in SA 516 Gr-70 pressure vessel steel; *PMRL/CAT 86/87 168 Conf. of Metallurgists*; Toronto, Ont.; Aug. 1986
- 1068 **Chandel, R.S.\* Bala, S.R.** Effect of welding parameters and groove angle on the soundness of root beads deposited by the SAW process; *PMRL/CAT 86/87 169 Trends in Welding Research*; Gotlinburg, Tenn.; May 1986 *Advances in Welding Science and Technology*; Ed. S.A. David; Gotlinburg, Tenn.; May 1986; ASM; 379;1986
- 1069 **Krishnadev, M.R.\* McGrath, J.T. Bowker, J.T. Dionne, S. Laasraoui, A.** HAZ microstructure and toughness of precipitation strengthened HSLA steels and conventional HY-grade steels; *PMRL/CAT 86/87 170 International Symposium on Welding Metallurgy of structural steels*; Denver, Colorado, Feb. 1987
- 1070 **McGrath, J.T.\*** Notch toughness properties in HAZ of HY80 Weldments; *PMRL/CAT 86/87 171 Workshop on Steel Welding Research*; Welding Institute of Canada, Oakville, Ont.; April 1986
- 1071 **McGrath, J.T.\* Chandel, R.S. Orr, R.F. Gianetto, J.A.** Some factors affecting the structural integrity of weldments in heavy wall reactor vessels; *PMRL/CAT 86/87 172 Atlantic Section Conf. of the National Assoc. of Corrosion Engineers*; Halifax, NS; Nov. 1986
- 1072 **Patchett, B.M.\* McGrath, J.T. Orr, R.F. Gianetto, J.A. Bicknell, A.C.** Control of microstructure and mechanical properties in SAW and GMAW weld metals; *PMRL/CAT 86/87 173 International Symposium on Welding Metallurgy of Structural Steels*; Denver, Colorado, Feb. 1987

### Oral Presentations / Présentations orales

- 1073 **Mak, D.K.\*** Temperature mapping of hot steel with ultrasonic tomography; *ERP/PMRL 84-020(OP&J)* Presented at the CSIRA Research workshop on Research and Development of Product Quality Sensors for Canadian Steel Mills, May 8-9, 1984 Burlington, Ontario
- 1074 **Chandel, R.S.\* Bala, S.R.** Effect of welding parameters and groove angle on the soundness of root beads; *PMRL 85-032(OP&J)* *Trends in Welding Research*; Gotlinburg, Tenn., May 1986 *Advances in Welding Science and Technology*: Ed . S.A. David: Gotlinburg, Tenn.; May 1986; ASM: 379;1986
- 1075 **Faucher, B.\* Tyson, W.R.** Measurements of J-resistance curves with three-point-bend specimens; *PMRL 85-064(OP&J)* *The Mechanisms of Fracture*; Ed V.S. Goel; 2-6; Salt Lake City, Utah; Dec. 1985; 205; 1986
- 1076 **Szabo, E.I.\* Kular, A.C. Gauthier, R.** Two novel cold-set foundry binder systems; *PMRL 86-006(OP&J)* *Trends in Welding Research*; Gotlinburg, Tenn., May 1986
- 1077 **Buhr, R.K.\*** Technology transfer using a mobile foundry laboratory; *PMRL 86-009(OP&J)* *Beijing International Foundry Conference*; Beijing , China; Oct., 1986; Foundry Institute of the Chinese Mechanical Engineering Society; 1344; 1986

- 1078 **Packwood, R.H.\*** A general equation for predicting X-ray intensities from stratified samples in the electron microprobe; *PMRL 86-010(OP&J) Microbeam Analysis Society; Eds A. Romig and W. Chambers, Albuquerque, New Mexico, Aug, 1986; 268, 1986*
- 1079 **Sahoo, M.\* Couture, A.** A review of CANMET's work on high-strength copper-base casting alloys for shipboard systems; *PMRL 86-018(OP&J) Beijing International Foundry Conference; Beijing, China; Oct., 1986; Foundry Institute of the Chinese Mechanical Engineering Society; 1289; 1986*
- 1080 **Fegredo, D.M.\* Kalousek, J. Palmer, A. Shehata, M.T.** The effect of sulphide and oxide inclusions on the wear rates of standard and alloy rail steels; *PMRL 86-023(OP&J) Third International Heavy Haul Railway Conference; Vancouver, B.C.; Oct. 1986; Int. Heavy Haul Assn.; Paper IB-14; 1986*
- 1081 **Mak, D.K.\*** Ultrasonic reflection tomography with a transmitter-receiver system; *PMRL 86-035(OP&J) Trends in Welding Research; Gotlinburg, Tenn., May 1986*
- 1082 **Davis, K.G.\*** New developments in the foundry industry; *PMRL 86-061(OP&J) Cour et conférence sur les nouveaux procédés de fabrication: IGM/IMRI Boucherville, Québec; July 1986*
- 1083 **Brigham, R.J.\*** Corrosion of welds in icebreaking ships; *PMRL 86-066(OP&J) Marine Engineering Digest; 6;2; 29 1986*
- 1084 **Hindam, H.\* Gilmour, J.B. Packwood, R.H. Lui, A.W. Briggs, D.C.** The Canadian Atmospheric Fluidized Bed Combustion Materials Program: part I-performance of alloys after 10,000 h. exposure;aphic observations; part II-metallographic observations; *PMRL 86-074(OP&J) part I: Corrosion 87; San Francisco, California; March 1987; NACE; 15-1; 1987 part II: Corrosion 87; San Francisco, California; March 1987; NACE; 16-1; 1987*
- 1085 **Galvani, C.\* Crawley, A.F.** Precipitation and textural effects in rapid annealing of cold rolled aluminum killed sheet; *PMRL 86-077(OP&J) Proc 28th Mechanical Working and Steel Processing Conference; Pittsburg, PA.; Oct. 1986; Iron and Steel Society of AIME; 287; 1986*
- 1086 **Gilmour, J.B.\* Lui, A.W. Hindam, H.** The Canadian AFBC materials program part 1 performance of alloys after 10,000h exposure; *PMRL 86-078(OP&J) Corrosion/87; San Francisco, CA; March 1987*
- 1087 **Brigham, R.J.\*** Corrosion of welds in icebreaking ships; *PMRL/CAT 86/87 001 Marine Engineering Digest; 6;2; 29 1986*
- 1088 **Gilmour, J.B.\* Lui, A.W. Briggs, D.C. Knight, R.F. Hindam, H.** The Canadian atmospheric fluidized bed combustion materials program: part I - performance of alloys after 10000 h. exposure; *PMRL/CAT 86/87 002 Corrosion 87; San Francisco, California; March 1987; NACE; 15-1; 1987*
- 1089 **Hui, A.W. Gilmour, J.B. Packwood, R.H. Briggs, D.C. Lui, A.W.** The Canadian atmospheric fluidized bed combustion materials program: part II - metallographic observations; *PMRL/CAT 86/87 003 Corrosion 87; San Francisco, California; March 1987; NACE; 16-1; 1987*

- 1090 **Hoey, G.R.\* Rilmour, J.B. Bowker, J.T.** Dependence of stress corrosion cracking of parent, heat-affected zone, and weld metal of HSLA line-pipe steel on potential; *PMRL/CAT 86/87 004 Corrosion Monitoring in Industrial Plants Using Nondestructive Testing and Electrochemical Methods*; Eds. G.C. Moran and P. Labine; American Society for Testing and Materials, Philadelphia, PA; ASTM STP 908; 386; 1986
- 1091 **Mitrovic-Scepanovic, V.\* MacDougall, B. Graham, M.J.** The effect of Cl-ions on passivation of Fe-26Cr alloy; *PMRL/CAT 86/87 005 Corrosion Science*; 27;3;239;1987
- 1092 **Sastri, V.S.\* Beauprie, R. Desgagne, M.** Molybdate as a pipeline corrosion inhibitor for coal-water slurry systems; *PMRL/CAT 86/87 006 Materials Performance*; 25;6;45;1986
- 1093 **Sastri, V.S.\* McIntyre, N.S. Johnston, D. Chauvin, W.J. Doern, F.E. Chan, T.C. McAlpine, E. Lister, D.** Analysis of corrosion and oxidation on metals by spectroscopic means *PMRL/CAT 86/87 007 Zeitschrift fur Anal. Chem.*; 324; 625; 1986
- 1094 **Sastri, V.S.\* Packwood, R.H.** Surface analysis in corrosion inhibition mechanisms; *PMRL/CAT 86/87 008 Werkstoffe und Korrosion*; 38;77;1987
- 1095 **Bell, R.\* Vosikovsky, O.** 3-D stress intensity factors for weld toe cracks and fatigue life prediction of plate T-joints; *PMRL/CAT 86/87 009 4th Irish Durability and Fracture Conference*; Belfast, Ireland; Sept. 1986; 214; 1986
- 1096 **Bhuyan, G.S.\* Arockiasamy, M. Munoswamy, K.** Three-dimensional stress analysis of tubular joint using rezone technique; *PMRL/CAT 86/87 010 Canadian Journal of Civil Engineering*; 13; 382; 1986
- 1097 **Bhuyan, G.S.\* Arockiasamy, M. Munoswamy, K. Vosikovsky, O.** Finite element analysis of cracked and uncracked tubular T-joint; *PMRL/CAT 86/87 011 Canadian Journal of Civil Engineering*; 13-261; 1986
- 1098 **Krishnadev, M.R.\* Bouchard, R. Romhanyi, K. Voyzelle, B.** Measurements of J. resistance curves with three-point-bend specimens; *PMRL/CAT 86/87 012 The Mechanism of Fracture*; Ed. V.S. Geol; 2-6; Salt-Lake City, Utah; Dec. 1985; 205; 1986
- 1099 **Brown, J.D.\* Packwood, R.H.** Quantitative electron probe microanalysis of small particles and thin films; *PMRL/CAT 86/87 014 Applied Surface Science*; 26; 294; 1986
- 1100 **Causey, A.R.\* Fidleris, V. Holt, R.A.** Acceleration of creep and growth of annealed zircaloy-4 by pre-irradiation to high fluences; *PMRL/CAT 86/87 015 J.Nucl.Mat.*; 139;227;1986
- 1101 **Galvani, C.\* Crawley, W. L'Esperance, G. Holt, R.A. Cousineau, E.J.C.** Precipitation and textural effects in rapid annealing of cold-rolled aluminum killed steels; *PMRL/CAT 86/87 016 Proc. 28th Mechanical Working and Steel Processing Conference*; Pittsburg, PA; Oct. 1986; Iron and Steel Society of AIME; 187; 1986
- 1102 **Holt, R.A.\*** A comprehensive approach to in-situ stress measurement; *PMRL/CAT 86/87 017 Advances in X-ray Analysis*; 29;29;1986
- 1103 **Holt, R.A.\* Gilbert, R.W.** Component dislocations in annealed zircaloy irradiated at about 570 K; *PMRL/CAT 86/87 018 J. of Nucl. Mat.*; 137;185;1986



- 1104 **Holt, R.A.\* Brauss, M. Boag, J.** In-situ stress measurement with the CANMET portable X-ray stress diffractometer; *PMRL/CAT 86/87 019* *2nd International Conference on Non-Destructive Characterization of Materials*; Montreal, Que.; July, 1986
- 1105 **Jackman, J.A.\* Holden, T.M. Buyers, W.J.L. DuPlessis, P deV. Vogt, O. Grenessor, J.** Systematic study of the lattice dynamics of uranium rocksalt structure compounds; *PMRL/CAT 86/87 020* *Physical Review*; B33; 7144;1986
- 1106 **Jackman, J.A.\* Kim, S.M. Buyers, T.M. Stott, M.J.** A temperature dependent angular correlation study of positron annihilation in single crystal zinc; *PMRL/CAT 86/87 021* *Journal of Physics F: Metal Physics*; 16;1319; 1986
- 1107 **Packwood, R.H.\* Remon, G. Brown, J.D.** Electron microprobe analysis of compositionally stratified materials; *PMRL/CAT 86/87 022* *11th International Congress on X-ray Optics and Microanalysis*; Eds. J. Brown and R.H. Packwood; London, Ontario; Aug. 1986; 396; 1987
- 1108 **Packwood, R.H.\*** A general equation for predicting X-ray intensities from stratified samples in the electron microprobe; *PMRL/CAT 86/87 023* *Microbeam Analysis Society*; Ed. A. Romig and W. Chambers; Albuquerque, New Mexico; August 1986; 168; 1986
- 1109 **Parikh, N.\* Thompson, D.A. Carpenter, G.J.C.** Ion implantation in CdS; *PMRL/CAT 86/87 024* *Radiation Effects*; 98;289;1986
- 1110 **Sahoo, M.\* Whiting, L.V. Chartrand, V. Weatherall, G.** Effect of strontium on the structure and mechanical properties of zinc-aluminum foundry alloys; *PMRL/CAT 86/87 025* *Transactions of the American Foundrymen's Society*;94;225;1986
- 1111 **Woo, O.T.\* Carpenter, G.J.C.** Identification of zirconium hydrides by electron energy loss spectroscopy; *PMRL/CAT 86/87 026* *Scripta Met*; 20;423;1986
- 1112 **Woo, O.T.\* Carpenter, G.J.C.** Identification of Zr and Ti hydrides by EELS; *PMRL/CAT 86/87 027* *11th Int. Conf. on X-Ray Optics and Microanalysis*; Eds. J. Brown and R.H. Packwood; London, Ontario; Aug. 1986; 396;1987
- 1113 **Collins, L.E.\* Knight, R.F. Ruddle, G.E. Boyd, J.D.** Laboratory development of accelerated cooling of microalloyed plate steels; *PMRL/CAT 86/87 028* *Accelerated Cooling of Steel*; Ed. P.D. Southwick; Pittsburgh, PA; Aug. 1985; TMS-AIME; 261; 1986
- 1114 **Couture, A.\* Sahoo, M.** Microstructure and mechanical properties of heat concast Mn-Ni-Al bronzes; *PMRL/CAT 86/87 029* *Transactions of American Foundrymen's Society*; 94;671;1986
- 1115 **Fegredo, D.M.\* Kalousek, J. Shehata, M.T. Palmer, A.** The effect of sulphide and oxide inclusions on the wear rates of standard and alloy rail steels; *PMRL/CAT 86/87 030* *Third International Heavy Haul Railway Conference*; Vancouver, B.C.; Oct 1986; Int. Heavy Haul Assn.; paper IB-14; 1986
- 1116 **Gilmour, J.B.\* Lui, A.W. Briggs, D.C. Knight, R.F. Hindam, H.** The Canadian atmospheric fluidized bed combustion materials program: part I performance of alloys after 10000 h exposure; *PMRL/CAT 86/87 031* *Corrosion 87*; San Francisco, CA; March 1987; NACE;15-1;1987

- 1117 **Laufer, E.E.\* Fegredo, D.M. Kalousek, J.** The effect of microstructure on wear in standard and head-hardened rails in heavy haul service; *PMRL/CAT 86/87 032* *Third International Heavy Haul Railway Conference*; Vancouver, B.C.; Oct 1986; Int. Heavy Haul Assn.; paper I-16; 1986
- 1118 **Sahoo, M.\* Couture, A.** A review of CANMET work on high-strength copper-base casting alloys for ships and systems; *PMRL/CAT 86/87 033* *Beijing International Foundry Conference*; Beijing, China; Oct., 1986; Foundry Institute of the Chinese Mechanical Engineering Society; 1289; 1986
- 1119 **Shehata, M.T.\* Chandel, R.S. Braid, J.E.M. McGrath, J.T.** Characterization of non metallic inclusions in weld metals; *PMRL/CAT 86/87 034* *Microstructural Science* 14;65;1986
- 1120 **Shehata, M.T.\* Boyd, J.D.** Assessment of non metallic inclusions in steels by automatic image analysis; *PMRL/CAT 86/87 035* *Effects and Control of Inclusions and Residuals in Steels*; Toronto, Ontario; Aug. 1986; CIM-METSOC;III:19;1986
- 1121 **Ayik, O.\* Ghoresky, M. Sahoo, M. Smith, R.W.** Solidification and foundry studies of Zn/Al alloys; *PMRL/CAT 86/87 036* *Journal of Crystal Growth*; 79;594;1986
- 1122 **Buhr, R.K.\*** Technology transfer using a mobile foundry laboratory; *PMRL/CAT 86/87 037* *Beijing International Foundry Conference*; Beijing, China; Oct., 1986; Foundry Institute of the Chinese Mechanical Engineering Society; 1344; 1986
- 1123 **Couture, A.\* Sahoo, M.** Microstructure and mechanical properties of heat treated concast Mn-Ni-Al bronzes; *PMRL/CAT 86/87 038* *Transactions of the American Foundrymen's Society*; 94;671;1986
- 1124 **Sahoo, M.\*** Mechanical properties characterization of slowcooled aluminum bronzes; *PMRL/CAT 86/87 039* *Transactions of the American Foundrymen's Society*;94;97;1986
- 1125 **Sahoo, M.\* Whiting, L.V. Chartrand, V. Weatherall, G.** Effect of strontium on the structure and mechanical properties of zinc-aluminum foundry alloys; *PMRL/CAT 86/87 040* *Transactions of the American Foundrymen's Society*;94;225;1986
- 1126 **Sahoo, M.\* Couture, A.** A review of CANMET work on high-strength copper-base casting alloys for ships and systems; *PMRL/CAT 86/87 041* *Beijing International Foundry Conference*; Beijing, China; Oct., 1986; Foundry Institute of the Chinese Mechanical Engineering Society; 1289;1986
- 1127 **Szabo, E.I.\* Gauthier, R. Kular, A.C.** Two novel cold set foundry binder systems; *PMRL/CAT 86/87 042* *American Foundrymen's Society*; Minneapolis, MN; May 12-15; AFS;433;1986
- 1128 **Baragar, D.L.\*** The high temperature, high strain rate behavior of a plain carbon and an HSLA steel; *PMRL/CAT 86/87 043* *J of Mechanical Working Tech.*; 12;201;1987
- 1129 **Baragar, D.L.\*** The evaluation of hot rolling models using Cam plastometer flow stress data; *PMRL/CAT 86/87 044* *28th Mechanical Working and Steel Processing Conf.*; Pittsburgh, PA; Oct.1986;Iron and Steel Society of AIME;161;1986.

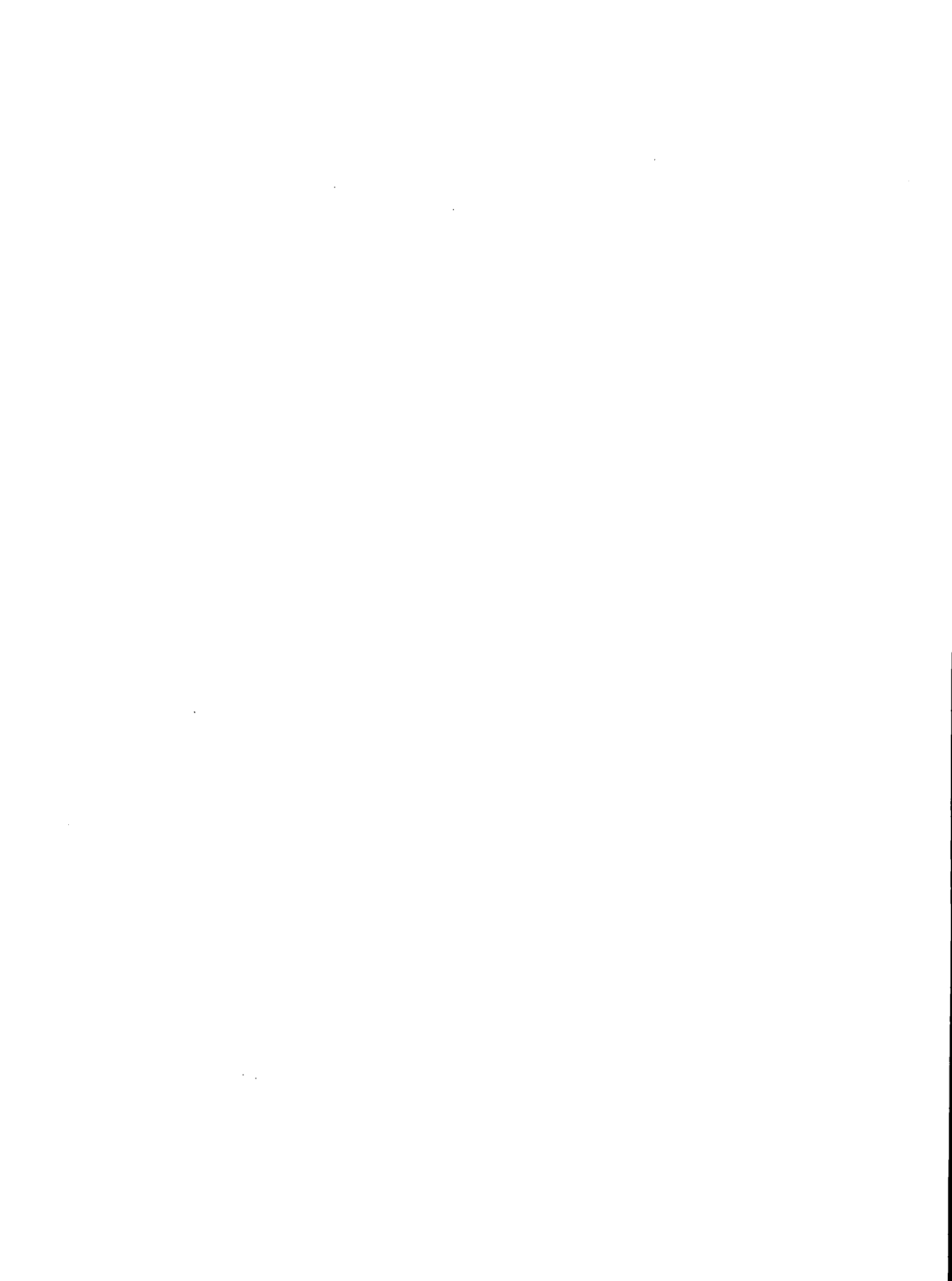
- 1130 **Biner, S.B.\* Too, J.J.M.** Analysis of cracks in welded T-joints; *PMRL/CAT 86/87 045 Proc. of Fatigue Prevention and Design*; Ed. J.T.Barnby; Amsterdam, The Netherlands; April 1986; 272; 1986
- 1131 **Collins, L.E.\* Knight, R.F. Ruddle, G.E. Boyd, J.D.** Laboratory development of accelerated cooling of microalloyed plate steels; *PMRL/CAT 86/87 046 Accelerated Cooling of Steel*; Ed. P.D. Southwick; Pittsburgh, Pa; Aug. 1985; TMSAIME; 261; 1986
- 1132 **Galvani, C.\* Crawley, A.F. L'Esperance, G. Holt, R.A. Cousineau, E.J.C.** Precipitation and textural effects in rapid annealing of cold-rolled aluminum killed steels; *PMRL/CAT 86/87 047 Proc 28th Mechanical Working and Steel Processing Conference*; Pittsburg, PA; Oct. 1986; Iron and Steel Society of AIME; 187; 1986
- 1133 **Ozsoy, I.C.\* Ruddle, G.E. Crawley, A.F.** A drafting model for hot plate rolling to minimise processing costs and crop losses; *PMRL/CAT 86/87 048 Seventh International Symposium on Measurement and Control*; eds. A.T. Dinibutin, M.H. Hamza and A. Kuzucu; Istanbul, Turkey; July 1985; 195; 1986
- 1134 **Ruddle, G.E.\* Baragar, D.L.** Grain refinement by recrystallization hot-rolling to achieve high strength and notch toughness in microalloyed steel plate; *PMRL/CAT 86/87 049 Seventh International Symposium on the Strength of Metals and Alloys (ICSMA 7)*; Eds. H.J. McQueen et. al.; Montreal, PQ; Aug., 1985; Pergamon Press; 2091; 1986
- 1135 **Louis, G.\* Lepoutre, F. Monchalin, J.-P.** Influence of condenser microphones on phase measurements in photoacoustics at low pressure; *PMRL/CAT 86/87 050 Canadian J. of Physics*; 64; 1111; 1986
- 1136 **Mak, D.K.\*** Correction of beam entry point for the pitch-catch technique in ultrasonic testing; *PMRL/CAT 86/87 051 CSNDT Journal*; 7;22;1986
- 1137 **Mak, D.K.\*** Computer polar plots of intensity of scattered waves from a rigid cylinder; *PMRL/CAT 86/87 052 Acoustics Letters*; 10;1;1986
- 1138 **Monchalin, J.-P.\* Heon, R.** Laser ultrasonic generation and optical detection with a confocal Fabry-Perot interferometer; *PMRL/CAT 86/87 053 Material Evaluation*;44;1231;1986
- 1139 **Monchalin, J.-P.\*** Optical detection of ultrasound; *PMRL/CAT 86/87 054 IEEE Trans. on Sonics, Ultrasonics Ferroelectrics and Frequency Control*; UFFC-33;485; 1986
- 1140 **Monchalin, J.-P.\*** Detection at a distance of laser-generated ultrasound using a confocal Fabry-Perot interferometer; *PMRL/CAT 86/87 055 Canadian J. of Physics*; 64;1320;1986
- 1141 **Monchalin, J.-P.\* Bussiere, J.F. Bertrand, L.** Thermal-wave vignetting and standing-wave effects in the infrared detection of ultrasonic absorption; *PMRL/CAT 86/87 056 Canadian J. of Physics*; 64;1059;1986
- 1142 **Monchalin, J.-P.\* Heon, R. Muzak, N.** Evaluation of ultrasonic inspection procedures by field mapping with an optical probe; *PMRL/CAT 86/87 057 Canadian Metallurgical Quarterly*;25;3;247;1986

- 1143 **Monchalín, J.-P.\*** Ultrasonic industrial materials characterization by laser generation and optical detection; *PMRL/CAT 86/87 058* 12th Int. Congress on Acoustics; Toronto, Ontario; July 1986; Paper G3-6; 1986
- 1144 **Piche, L.\* Champagne, B. Monchalín, J.-P.** Laser-ultrasonic measurement of elastic constants of composites; *PMRL/CAT 86/87 059* *Material Evaluation*;45;74;1987
- 1145 **Braid, J.E.M.\*** Offshore structure materials research: ongoing programmes of CANMET's Physical Metallurgy Research Laboratories; *PMRL/CAT 86/87 060* *Marine Engineering Digest*;6:1;23;1986
- 1146 **Braid, J.E.M.\* McGrath, J.T.** The influence of microstructure and strain on the toughness of welded joints in structural steels for offshore applications; *PMRL/CAT 86/87 061* *Canadian Metallurgical Quarterly*;25;2;131 1986
- 1147 **Braid, J.E.M.\* Gianetto, J.A.** The effects of PWHT on the toughness of shielded metal arc weld metals for use in Canadian offshore structure fabrication; *PMRL/CAT 86/87 062* *Welding for Challenging Environments*; Ed; Welding Institute of Canada, Toronto, Ontario; Oct. 1985; Pergamon Press; 145; 1986
- 1148 **Braid, J.E.M.\* Gianetto, J.A.** The effects of PWHT on the toughness of shielded metal arc weld metals for use in Canadian offshore structure fabrication; *PMRL/CAT 86/87 063* *International Institute of Welding Annual Meeting*; Tokyo, Japan; July 1986; IIW DOC IIA684-86, IX-1385-86, X-1101-86; 1986
- 1149 **Chandel, R.S.\*** Prediction of weld metal dilution from SAW parameters; *PMRL/CAT 86/87 064* *Welding Review*;6:1;45;1987
- 1150 **Chandel, R.S.\* Orr, R.F. Gianetto, J.A. McGrath, J.T. Wright, B.** Some factors affecting the mechanical properties of submerged-arc narrow-gap welds; *PMRL/CAT 86/87 065* *Welding for Challenging Environments*; Ed: Welding Institute of Canada, Toronto, Ontario; Oct. 1985; Pergamon Press; 97;1986
- 1151 **Chandel, R.S.\* Malik, L.** Relationship between wire feed speed and SAW parameters; *PMRL/CAT 86/87 066* *Welding for Challenging Environments*; Ed: Welding Institute of Canada, Toronto, Ontario; Oct. 1985; Pergamon Press; 245;1986
- 1152 **Chandel, R.S.\* Bala, S.R.** Effect of welding parameters and groove angle on the soundness of root beads deposited by the SAW process; *PMRL/CAT 86/87 067* *Advances in Welding Science and Technology*; Ed. S.A. David; Gotlinburg, Tenn.; May 1986; ASM; 379;1986 Trends in Welding Research: Gotlinburg, Tenn.; May 1986
- 1153 **Hoey, G.R.\* Ramsingh, R.R. Bowker, J.T.** Dependence of stress corrosion cracking of parent, heat-affected zone, and weld metal of HSLA line-pipe steel on potential; *PMRL/CAT 86/87 068* *Corrosion Monitoring in Industrial Plants Using Nondestructive Testing and Electrochemical Methods*;Eds. G.C.Moran and P. Labine; American Society for Testing and Materials, Philadelphia PA;ASTM STP908;386;1986
- 1154 **McGrath, J.T.\*** The microstructure and mechanical properties of low alloy Cr/Mo steel weld metals; *PMRL/CAT 86/87 069* *International Institute of Welding Annual Meeting*; Tokyo, Japan; July 1986; IIW DOC IXG326-86;1986

- 1155 **Romharyi, K.\* Krishnadev, M.R. McDonald, R. Bowker, J.T. McGrath, J.T.** Comparison of simulated HAZ microstructure and toughness for two high strength steels; *PMRL/CAT 86/87 070 International Institute of Welding Annual Meeting*; Tokyo, Japan; July 1986; IIW DOC ILX1419-86;1986
- 1156 *PMRL/CAT 86/87 071* **Shehata, M.T.\* Chandel, R.S. Braid, J.E.M. McGrath, J.T.** Characterization of non-metallic inclusions in weld metals; *Microstructural Science* 14;65;1986

### Technical Reports (TR) / Rapports techniques (TR)

- 1157 *LRMP 87-019F(TR)* **Faucher, B.\*** Evaluation des propriétés mécaniques des matériaux fragiles; PAGES: 8 FICHE: 1
- 1158 *PMRL 85-024(TR)* **Erickson, W.H.\* Thomson, R. White, D.W.G.** PMRL annual report FY 84-85; PAGES: 90 FICHE: 1
- 1159 *PMRL 85-024F(TR)* **Erickson, W.H.\*** Rapport Annuel AF 1985-86;
- 1160 *PMRL 85-039(TR)* **Fegredo, D.M.\* Collins, L.E. Bowker, J.T.** Laboratory simulation of flash-butt welding of rail: interim report; PAGES: 20 FICHE: 1
- 1161 *PMRL 85-065(TR)* **Vosikovsky, O.\* Rivard, A.** Effect of thickness on fatigue life of welded plate T-joints; PAGES: 40 FICHE: 1
- 1162 *PMRL 86-003(TR)* **Gilmour, J.B.\* Lui, A.W. Briggs, D.C. Knight, R.F.** The EMR/NSPC AFBC materials program: evaluation of the probes removed at the end of run 9; PAGES: 196 FICHE: 2
- 1163 *PMRL 86-025(TR)* **Chandel, R.S.\*** Prediction of wire feed speed from AC submerged-arc-welding parameters; PAGES: 8 FICHE: 1
- 1164 *PMRL 86-027(TR)* **Whiting, L.V.\*** Analysis of high chromium and Ni-hard abrasion resistance cast iron in the mobile foundry laboratory; PAGES: 37 FICHE: 1
- 1165 *PMRL 86-039(TR)* **Gilmour, J.B.\* Lui, A.W. Knight, R.F.** EMR/NSPC. AFBC materials program. Evaluation of the probe remove at the end of run 9; PAGES: 194 FICHE: 2
- 1166 *PMRL 86-040(TR)* **Erickson, W.H.\*** PMRL annual report FY 85/86;
- 1167 *PMRL 86-053(TR)* **McGrath, J.T.\*** The microstructure and mechanical properties of low-alloy Cr/Mo steel weld metals; PAGES: 35 FICHE: 1
- 1168 *PMRL 86-056(TR)* **Dixon, C.\*** Metals research activities; PAGES: 80 FICHE: 1



# INDEXES





## AUTHOR LIST

- |  |   |
|--|---|
| Abdullah, Z. .... (1031)                   | Banerjee, D.K. .... (0127) (0323)         |
| Absolom, D.R. .... (0147) (0160) (0270)    | Banks, G.N. .... (0319)                   |
| Acott, G. .... (0299)                      | Baragar, D.L. .... (1049) (1128) (1129)   |
| Adler, T. .... (0332)                      | ..... (1134)                              |
| Adnot, A. .... (0339)                      | Barkley, D.J. .... (0715) (0716) (0808)   |
| Afrouz, A. .... (0186)                     | ..... (0818) (0869) (0872)                |
| Ahmad, A. .... (0783) (0854) (0902)        | Barron, K. .... (0213)                    |
| Ahmed, S.M. .... (0377) (0458) (0466)      | Barua, S. .... (0100) (0353)              |
| ..... (0502) (0503) (0810) (0815) (0870)   | Bauer, A. .... (0523) (0581) (0582)       |
| ..... (0871) (0923)                        | ..... (0583) (0584) (0607) (0608) (0609)  |
| Allenger, V.M. .... (0320) (0321) (0363)   | ..... (0636) (0637) (0660)                |
| ..... (0364) (0365) (0366) (0367) (0505)   | Bawden, W. .... (0021) (0022)             |
| Anderson, R.B. .... (0345)                 | Beaudette, L. .... (0868)                 |
| Andres, T.H. .... (0116)                   | Beauprie, R. .... (1092)                  |
| Andrews, P.R.A. .... (0761) (0764) (0768)  | Becker, H.A. .... (0043) (0452)           |
| ..... (0771) (0780) (0803) (0816) (0817)   | Becker, H.R. .... (0476) (0477)           |
| ..... (0909) (0959)                        | Bedard, C. .... (0914) (0925)             |
| Angle, C.W. .... (0174) (0202) (0203)      | Bedard, P.L. .... (0946) (0962)           |
| Annor, A. .... (0558) (0612) (0618) (0628) | Bell, K.E. .... (0739) (0747) (0753)      |
| Ansari, R.R. .... (0204)                   | ..... (0765) (0916) (0919) (0932)         |
| Anthony, E.J. .... (0322) (0368) (0369)    | Bell, R. .... (0981) (1095)               |
| ..... (0370) (0371) (0372) (0446) (0452)   | Bennett, A. .... (0453)                   |
| ..... (0454) (0455) (0456) (0460) (0506)   | Bernier, G. .... (0819)                   |
| Arjang, B. .... (0677) (0691) (0712)       | Berry, E.E. .... (0454) (0455) (0456)     |
| ..... (0713)                               | ..... (0506) (0757)                       |
| Arockiasamy, M. .... (0982) (1096) (1097)  | Bertie, J.E. .... (0153)                  |
| Arsenault, R. .... (0346)                  | Bertrand, L. .... (1141)                  |
| Ashraf, F.A. .... (0078)                   | Betournay, M.C. .... (0549) (0554) (0559) |
| Aston, T.R.C. .... (0138) (0194) (0205)    | ..... (0560) (0561) (0562) (0601) (0606)  |
| ..... (0206) (0267) (0275) (0276) (0290)   | ..... (0622) (0629) (0630) (0631) (0644)  |
| ..... (0291) (0292) (0294)                 | ..... (0649) (0652) (0653) (0695) (0704)  |
| At-Tawell, A.M. .... (0148)                | Bhuyan, G.S. .... (0982) (1096) (1097)    |
| Aubin, M. .... (0841)                      | Bicknell, A.C. .... (1072)                |
| Axelson, D.E. .... (0149) (0150) (0151)    | Bigu, J. .... (0519) (0539) (0543)        |
| ..... (0152) (0172) (0173) (0175) (0176)   | ..... (0547) (0550) (0551) (0555) (0556)  |
| ..... (0207) (0216)                        | ..... (0563) (0564) (0565) (0566) (0567)  |
| Ayache, C. .... (0842)                     | ..... (0588) (0589) (0598) (0621) (0665)  |
| Ayik, O. .... (1121)                       | ..... (0674) (0682) (0683) (0684) (0685)  |
| Bacharach, J.P.L. .... (0247)              | ..... (0687) (0698) (0700) (0701) (0702)  |
| Bachelor, F.W. .... (0064)                 | ..... (0709) (0710)                       |
| Back, M.H. .... (0512) (0513) (0527)       | Billette, N.R. .... (0568) (0569) (0570)  |
| ..... (0528)                               | ..... (0571) (0599) (0632) (0633) (0642)  |
| Badaye, M. .... (0994) (0998)              | ..... (0645) (0646) (0650) (0651) (0654)  |
| Baikowitz, H. .... (0332)                  | ..... (0720) (0721)                       |
| Bakhshi, N.N. .... (0130) (0133) (0357)    | Biner, S.B. .... (1050) (1051) (1130)     |
| ..... (0494) (0495)                        | Birk, D. .... (0103)                      |
| Bala, S.R. .... (0071) (1068) (1074)       | Blackport, R. .... (0580) (0624) (0635)   |
| ..... (1152)                               | Blanchard, R.A. .... (0586) (0623) (0638) |
| Baldwin, G.J. .... (0209)                  | Blanchette, M. .... (0808)                |
| Bancroft, G.M. .... (0335)                 | Boag, J. .... (0996) (0997) (1104)        |

*Author Index*  
*Index des auteurs*

- Boncardo, M. ....(0965)  
 Bonnell, G.W. ....(0177) (0274) (0301)  
 Bossert, J.A. ....(0538) (0542) (0610)  
 ..... (0670)  
 Bouchard, R. ....(1098)  
 Boulos, M.I. ....(0046)  
 Bowker, J.T. ....(1062) (1063) (1069)  
 ..... (1090) (1153) (1155) (1160)  
 Bowman, W.S. ....(0723) (0736) (0738)  
 ..... (0762) (0772) (0773) (0774) (0775)  
 ..... (0781) (0782) (0849) (0867) (0908)  
 Boyd, J.D. ....(1005) (1006) (1007)  
 ..... (1008) (1020) (1026) (1113) (1120)  
 ..... (1131)  
 Boyle, M.J. ....(0688)  
 Braaten, R.W. ....(0465)  
 Braid, J.E.M. ....(1064) (1065) (1066)  
 ..... (1119) (1145) (1146) (1147) (1148)  
 ..... (1156)  
 Brannen, J.M. ....(0837) (0953)  
 Brassinga, R.D. ....(0856)  
 Brauss, M. ....(0996) (0997) (1104)  
 Brehaut, C.H. ....(0014)  
 Brett, M.E. ....(0955)  
 Breu, F. ....(0574)  
 Briggs, D.C. ....(0974) (0975) (0995)  
 ..... (1084) (1088) (1089) (1116) (1162)  
 Brigham, R.J. ....(0726) (0949) (0972)  
 ..... (1083) (1087) (1169)  
 Brown, D.A. ....(1038)  
 Brown, J.D. ....(1099) (1107)  
 Brown, J.R. ....(0324) (0325) (0336)  
 ..... (0343) (0367) (0373) (0374) (0375)  
 ..... (0376) (0378) (0379) (0419) (0433)  
 ..... (0443) (0457) (0459) (0500) (0504)  
 ..... (0505) (0970) (0979) (1002)  
 Buchanan, R.M. ....(0744) (0747)  
 Buhr, R.K. ....(1032) (1033) (1034)  
 ..... (1077) (1122)  
 Burill, K.F. ....(0453)  
 Burnett, D. ....(0453)  
 Burns, D. ....(0987)  
 Burt, R.O. ....(0050)  
 Burtnyk, N. ....(0548)  
 Bussiere, J.F. ....(1141)  
 Bustin, M. ....(0922) (0934)  
 Butler, K.C. ....(0690) (0697) (0708)  
 Buyers, T.M. ....(1106)  
 Buyers, W.J.L. ....(1105)  
 Cabri, L.J. ....(0742) (0769) (0778)  
 ..... (0787) (0811) (0820)  
 Cain, P. ....(0137) (0140) (0143)  
 ..... (0145) (0146) (0186) (0198)  
 ..... (0218) (0278)  
 Campbell, M.C. ....(0911) (0924)  
 Canaday, J.D. ....(0854) (0902)  
 Capes, C.E. ....(0356) (0453)  
 Carette, G.G. ....(0005) (0756) (0840)  
 ..... (0873) (0874) (0905) (0914) (0925)  
 Carlson, D.H. ....(0521) (0576) (0616)  
 ..... (0648)  
 Carpenter, G.J.C. ....(0989) (0990) (0991)  
 ..... (0992) (1003) (1004) (1109) (1111)  
 ..... (1112)  
 Cassidy, R.M. ....(0808) (0818)  
 Causey, A.R. ....(1100)  
 Cavers, D.S. ....(0209)  
 Chakravorty, R.N. ....(0154) (0197) (0199)  
 ..... (0208) (0284) (0296) (0306) (0311)  
 Chakrovorty, R.N. ....(0273)  
 Chambers, D.B. ....(0930)  
 Champagne, B. ....(1144)  
 Chan, T.C. ....(1093)  
 Chandel, R.S. ....(0969) (1067) (1068)  
 ..... (1071) (1074) (1119) (1149) (1150)  
 ..... (1151) (1152) (1156) (1163)  
 Chang, J.R. ....(0418)  
 Chantal, P.D. ....(0377) (0458) (0466)  
 ..... (0503) (0508) (0509)  
 Chartrand, V. ....(1042) (1110) (1125)  
 Chauvin, W.J. ....(1093)  
 Chen, T.T. ....(0717) (0737) (0785)  
 ..... (0792) (0797) (0821) (0822) (0828)  
 ..... (0876) (0877) (0926)  
 Cheng, K.C. ....(0706)  
 Cherns, D. ....(0991)  
 Chiasson, L.A. ....(0293)  
 Chiu, N.W. ....(0030)  
 Chornet, E. ....(0346) (0420)  
 Churchill, T.R. ....(0966)  
 Ciavaglia, L.A. ....(0346)  
 Clarke, R. ....(0025)  
 Clausen, G. ....(0297) (0312)  
 Clift, R. ....(0327)  
 Coatsworth, L.L. ....(0325) (0343) (0378)  
 ..... (0379) (0421) (0459)  
 Code, R.K. ....(0452) (0476)  
 Colbow, K. ....(0123)  
 Collings, R.K. ....(0744) (0747) (0760)  
 ..... (0761) (0766) (0771)  
 Collins, J.L. ....(0234) (0237)  
 Collins, L.E. ....(1008) (1009) (1010)  
 ..... (1011) (1012) (1028) (1113) (1131)  
 ..... (1160)  
 Contestabile, E. ....(0537) (0575) (0658)  
 ..... (0661) (0662) (0663)

Cooke, N.E. ....(0078)	Deschenes, G. ....(0804) (0823)
Corbett, G.R. ....(0177) (0196) (0215)	Desgagne, M. ....(1092)
.....(0301)	Dianji, H. ....(0078)
Cormack, D.E. ....(0124)	Dias, M. ....(0596) (0619) (0641)
Coulombe, S. ....(0326) (0380) (0508)	Ding, H. ....(1038)
.....(0509)	Dionne, S. ....(1069)
Coury, J.R. ....(0327)	Dixon, C. ....(1168)
Cousineau, E.J.C. ....(0993) (0994) (0998)	Doern, F.E. ....(1093)
.....(1053) (1054) (1101) (1132)	Dogan, B. ....(1023) (1055)
Couture, A. ....(1013) (1035) (1044)	Donaldson, E.M. ....(0800) (0824)
.....(1079) (1114) (1118) (1123) (1126)	Donepudi, V.S. ....(0034) (0102)
Covill, I.D. ....(0445) (0483) (0499)	Donini, J.C. ....(0156)
Cox, D. ....(0663) (0706)	Douglas, E. ....(0763) (0784) (0825)
Cozak, D. ....(0339)	.....(0826) (0901) (0903) (0928)
Craig, T. ....(0132)	Douglas, P.L. ....(0043)
Craig, T.R. ....(0659) (0661) (0663)	Doyle, D.M. ....(0879) (0880)
Craigen, W.J.S. ....(0900)	Duncan, D. ....(0081) (0581) (0607)
Crawford, A. ....(0143)	.....(0636) (0660)
Crawley, A.F. ....(0993) (1023) (1052)	Duncan, J.L. ....(0129)
.....(1053) (1054) (1055) (1057) (1085)	DuPlessis, P deV. ....(1105)
.....(1132) (1133)	Dutrizac, J.E. ....(0717) (0792) (0799)
Crawley, W. ....(1101)	.....(0805) (0807) (0812) (0827) (0828)
Cristovici, M.A. ....(0759)	.....(0829) (0830) (0881) (0882) (0883)
Cross, D.B. ....(0155)	.....(0884) (0926) (0929)
Currie, J.A. ....(0297) (0312)	Dymock, K.R. ....(0076)
Curts, L.E. ....(0076)	Elchuk, S. ....(0808)
Dahms, T.E. ....(0869)	Embury, J.D. ....(0129)
Dainty, E.D. ....(0515) (0518) (0520)	Emery, J.J. ....(0901)
.....(0521) (0522) (0530) (0531) (0552)	Enga, B.E. ....(0574)
.....(0574) (0576) (0577) (0578) (0579)	Engler, B.H. ....(0522) (0578) (0579)
.....(0585) (0586) (0600) (0605) (0611)	.....(0626) (0627) (0634)
.....(0614) (0615) (0616) (0623) (0626)	Eom, K. ....(0147)
.....(0627) (0634) (0638) (0647) (0648)	Erickson, W.H. ....(1158) (1159) (1166)
.....(0671) (0858)	Eysel, H.H. ....(0153)
Dalton, J.L. ....(0864) (0878) (0951)	Fairbridge, C. ....(0328) (0329) (0382)
.....(0960) (0963) (0964) (0965)	.....(0383) (0408) (0424) (0426) (0451)
Das, B. ....(0155) (0178) (0179) (0180)	.....(0474)
.....(0210) (0211) (0212) (0213) (0250)	Farnand, B.A. ....(0461) (0462)
.....(0252) (0253) (0280)	Faroug Ali, S.M. ....(0463)
Dave, N. ....(0580)	Faucher, B. ....(0987) (1075) (1157)
Dave, N.K. ....(0624) (0635)	Fegredo, D.M. ....(1014) (1015) (1024)
Davis, K.G. ....(0971) (1031) (1033)	.....(1025) (1080) (1115) (1117) (1160)
.....(1036) (1037) (1038) (1039) (1082)	Feng, K.K. ....(0514) (0523) (0535)
De Benedictis, V. ....(0914) (0925)	.....(0536) (0581) (0582) (0583) (0584)
de Bruijn, T.J.W. ....(0351) (0362) (0486)	.....(0591) (0607) (0608) (0609) (0636)
de Caumia, B. ....(0045)	.....(0637)
Dean, J.R. ....(0030)	Fenn, P.L. ....(0837)
DeBuda, P.G. ....(0124)	Fidleris, V. ....(1100)
Delory, B. ....(0148)	Fisekci, M.Y. ....(0280)
Demopoulos, G.P. ....(0918) (0921) (0927)	Fisher, I.P. ....(0358) (0360)
Desai, D.L. ....(0381)	Flament, F. ....(0791) (0933)
Desai, E.L. ....(0460)	Flemming, J. ....(0050)
Desbiens, M. ....(0377)	Forrester, P.I. ....(0199) (0306)

*Author Index*  
*Index des auteurs*

Fossen, W.F. ....	(0032)	.....	(0588) (0589) (0665) (0669) (0690)
Fouda, S.A. ....	(0354) (0478)	.....	(0694) (0702) (0708)
Frattini, A. ....	(0690) (0698)	Guard, S. ....	(0377)
Friedrich, F.D. ....	(0322) (0384) (0385)	Gundjian, A. ....	(0994) (0998)
.....	(0386) (0387) (0460)	Hager, D. ....	(0153)
Friesen, W.I. ....	(0157) (0181) (0214)	Haller, S.F. ....	(0923)
.....	(0217)	Hallett, F.R. ....	(0204)
Fuchs, J.L. ....	(0546) (0604)	Hamer, C.A. ....	(0954)
Fulford, G.D. ....	(0856)	Hamilton, D.M. ....	(0276)
Funt, L. ....	(0123)	Hamza, H.A. ....	(0147) (0148) (0160)
Furimsky, E. ....	(0330) (0331) (0332)	.....	(0170) (0202) (0203) (0270)
.....	(0333) (0347) (0353) (0359)	Hannah, T. ....	(0209)
Fustos, A. ....	(0672)	Hanson, A.J. ....	(0860)
Fyfe, W.S. ....	(0324) (0336)	Haque, K.E. ....	(0786) (0831) (0832)
Fytas, K. ....	(0231) (0233) (0234)	.....	(0886)
.....	(0237) (0246) (0258) (0264)	Hardcastle, S. ....	(0281) (0543) (0547)
Gallant, W.D. ....	(0276) (0277)	.....	(0588) (0589) (0690) (0702)
Galuszka, J. ....	(0388) (0389)	Harnaes, J. ....	(1051)
Galvani, C. ....	(0993) (1052) (1053) (1054)	Hashmi, K.A. ....	(0182) (0183) (0184)
.....	(1085) (1101) (1132)	Haslett, G.A. ....	(0141) (0142) (0185)
Gangal, M.K. ....	(0518) (0521) (0552)	.....	(0196) (0215) (0279)
.....	(0576) (0585) (0586) (0616) (0623)	Hassani, F.P. ....	(0186) (0198) (0218)
.....	(0638) (0648)	Hawkins, R.E. ....	(0352)
Gardner, L. ....	(0334)	Hayden, A.C.S. ....	(0337) (0338) (0391)
Garner, A. ....	(0034)	.....	(0392) (0393) (0394) (0395) (0396)
Gauthier, R. ....	(1076) (1127)	.....	(0397) (0464) (0465) (0470) (0471)
Geller, L.B. ....	(0028) (0540) (0587)	.....	(0472) (0475)
.....	(0600) (0858)	Hedley, D.G.F. ....	(0017) (0707) (0711)
George, A.E. ....	(0390) (0463)	Hemmings, R.T. ....	(0763) (0903) (0928)
Gesser, H.D. ....	(0131) (0135)	Heon, R. ....	(1138) (1142)
Ghoresky, M. ....	(1121)	Herget, G. ....	(0590) (0617) (0639)
Gianetto, J.A. ....	(0969) (1064) (1067)	.....	(0667) (0699)
.....	(1071) (1072) (1147) (1148) (1150)	Heximer, M. ....	(0300) (0305) (0308)
Gibbon, W.M. ....	(0031)	.....	(0316)
Gilbert, R.W. ....	(1103)	Hill, D.M. ....	(0675)
Gilmour, J.B. ....	(0973) (0974) (0975)	Himbeault, D. ....	(1016)
.....	(0995) (1021) (1022) (1084) (1086)	Hindam, H. ....	(0975) (0995) (1021)
.....	(1088) (1089) (1116) (1162) (1165)	.....	(1084) (1086) (1088) (1116)
Gilmour, T. ....	(0759)	Hindman, H. ....	(1022)
Gladysiewicz, L. ....	(0244) (0261)	Hoey, G.R. ....	(0976) (1090) (1153)
Glavincevski, B. ....	(0334)	Holden, T.M. ....	(1105)
Glover, A.G. ....	(0073)	Holmes, R.W. ....	(0930)
Golding, J.A. ....	(0136)	Holt, R.A. ....	(0993) (0994) (0996)
Golosinski, T.S. ....	(0163) (0193) (0230)	.....	(0997) (0998) (1053) (1054) (1100)
.....	(0235) (0257) (0263)	.....	(1101) (1102) (1103) (1104) (1132)
Goodwin, B.W. ....	(0116)	Hopkins, J. ....	(0136)
Gorski, B. ....	(0668) (0704)	Horton, A.J. ....	(0529) (0541) (0592)
Gould, W.D. ....	(0868) (0885)	.....	(0613)
Graham, M.J. ....	(1091)	Horton, R.E. ....	(0966)
Gransden, J.F. ....	(0468) (0507)	Horwood, J.L. ....	(0730)
Gregg, L.C. ....	(0546) (0604)	Hucka, V.J. ....	(0211) (0253)
Grenessor, J. ....	(1105)	Hughes, P.M.J. ....	(0398) (0399) (0400)
Grenier, M. ....	(0016) (0543) (0547)	.....	(0401) (0402) (0403) (0446)

Hughson, M.R. ....(0728)	Klinowski, W.G. ....(0142) (0144) (0185)
Hui, A.W. ....(1089)	Knapp, R.A. ....(0930)
Humeniuk, O.E. ....(0259)	Knight, G. ....(0524) (0525) (0526)
Hunt, G. ....(0964)	.....(0534) (0834)
Hunter, N.R. ....(0131) (0135)	Knight, R.F. ....(0974) (1021) (1022)
Hutchins, D.A. ....(0128)	.....(1088) (1113) (1116) (1131) (1162)
Hwang, C.Y. ....(0288)	.....(1165)
Hwang, J. ....(0177)	Kochhar, J.K. ....(0158)
Ikura, M. ....(0404) (0405) (0406)	Kodama, H. ....(0796) (0852)
.....(0450)	Kolada, R.J. ....(0154) (0248) (0254)
Imbesi, D.M. ....(0692) (0718) (0719)	.....(0284) (0285) (0304)
Issard, M. ....(0292) (0294)	Konda, B.W. ....(0158)
Jackman, J.A. ....(0999) (1105) (1106)	Konecny, M. ....(0078)
Jackson, R. ....(0558) (0618) (0628)	Kovacs, A. ....(1060)
.....(0673) (0686) (0703)	Kreuzer, T.P. ....(0522) (0578) (0579)
Jain, A.K. ....(0351)	.....(0626) (0627) (0634)
Jambor, J.L. ....(0754) (0777) (0792)	Krishnadev, M.R. ....(1069) (1098) (1155)
.....(0812) (0828) (0829) (0830)	Kriz, J.F. ....(0328) (0344) (0358)
Jandl, S. ....(0819) (0841) (0842)	.....(0360) (0408) (0422) (0424) (0442)
Jay-Gerin, J.P. ....(0842)	.....(0443) (0451) (0473) (0500)
Jean, G. ....(0335) (0377) (0418)	Kronberg, B.I. ....(0324) (0336) (0342)
.....(0458) (0466) (0503) (0508) (0509)	.....(0419)
Jincheng, X. ....(1040)	Krzanowsky, R.M. ....(0236)
John, R.D. ....(0931)	Kular, A.C. ....(1076) (1127)
Johnson, D.D. ....(0341)	Kuriakose, A.K. ....(0776) (0783) (0854)
Johnston, D. ....(0325) (0343) (0378)	.....(0857) (0860) (0887) (0902) (0919)
.....(0421) (1093)	Kybett, B.D. ....(0350)
Jonasson, K.A. ....(0453)	L'Esperance, G. ....(0993) (1053) (1054)
Jonejan, A. ....(0790)	.....(1101) (1132)
Jones, D.E.G. ....(0332) (0536)	Laasraoui, A. ....(1069)
Jongejan, A. ....(0833)	Laflamme, J.H.G. ....(0769) (0778)
Kaiman, S. ....(0722)	Laflamme, M. ....(0569) (0650)
Kaliaguine, S. ....(0339) (0509)	Lafleur, R.J. ....(0409)
Kaliaquine, S. ....(0508)	Laguitton, D. ....(0791) (0933)
Kalmanovitch, D. ....(0456) (0467) (0506)	Laidler, K.J. ....(0127) (0323)
Kalousek, J. ....(1014) (1015) (1080)	Lakshmanan, V.I. ....(0920) (0938)
.....(1115) (1117)	Laliberte, J.J. ....(0786) (0832)
Kapeller, F. ....(0667)	Lambert, J.M. ....(0410) (0469)
Kar, K. ....(0311)	Lamothe, J.-M. ....(0771) (0959)
Kashi, M. ....(0170)	Lanteigne, R. ....(0199) (0306)
Katsabanis, P. ....(0081) (0581) (0583)	Lantos, S.L. ....(0042)
.....(0607) (0608) (0636) (0637) (0660)	Larocque, G. ....(0612)
Kazi, H.A. ....(0062)	LaRocque, G.H. ....(0308) (0316)
Keefer, B.G. ....(0101)	Larouche, J.-P. ....(0045)
Kelly, F.J. ....(0900)	Larsen, P. ....(0661)
Kelly, J.F. ....(0407) (0478)	Laskowski, J. ....(0835) (0922) (0934)
Kennedy, D. ....(0177) (0185)	Lau, D. ....(0143)
Kennedy, D.J. ....(0287)	Lau, I.T. ....(0411)
Ketcheson, K. ....(0656)	Laufer, E.E. ....(1117)
Khan, M.A. ....(0468)	Lawson, A. ....(0095) (0522) (0530)
Kilpatrick, M.W. ....(0726) (0949)	.....(0578) (0579) (0611) (0614) (0626)
Kim, S.M. ....(1106)	.....(0627) (0634)
Kindl, B. ....(0783)	

*Author Index*  
*Index des auteurs*

LeBel, G. ....(0143)	Makuch, A. ....(0026)
Leduc, J. ....(0923)	Malhotra, V.M. ....(0005) (0757) (0779)
Lee, C.W. ....(0472)	..... (0888) (0901) (0905) (0906) (0910)
Lee, G.K. ....(0438) (0447) (0467)	..... (0912) (0914) (0925) (0935) (0936)
Lee, P. ....(0512) (0513) (0527)	..... (0937)
..... (0528) (0535) (0591) (0656) (0657)	Malik, L. ....(0034) (1151)
Lee, S.W. ....(0334) (0337) (0338)	Malis, T. ....(1017) (1018) (1019)
..... (0412) (0413) (0414) (0415) (0416)	..... (1020)
..... (0417) (0470) (0471)	Mallard, R. ....(0991)
Leen, K. ....(0418)	Manicom, B. ....(0095) (0522) (0578)
LeGeyst, M. ....(0106) (0848) (0862)	..... (0626) (0627) (0634)
..... (0892)	Manicom, G. ....(0579)
Leigh, G.W. ....(0752)	Mansour, N.A. ....(0168) (0187) (0188)
Lemay, G. ....(0339)	..... (0219) (0220) (0241) (0242) (0245)
Lepoutre, F. ....(1135)	..... (0260) (0271) (0272)
Lesarge, K. ....(0419)	Marchbank, A. ....(0839)
Leung, W.M. ....(0151) (0203) (0216)	Martin, R.R. ....(0341) (0342)
Levine, S. ....(0217)	Martinovic, T.I. ....(0093)
Li, H. ....(0709)	Mathews, J.F. ....(0357) (0494) (0495)
Lim, T.P. ....(0580) (0624) (0635)	Mathieu, G.I. ....(0511) (0743) (0745)
Lipsett, J.J. ....(0340) (0361)	..... (0751)
Lister, D. ....(1093)	McAlpine, E. ....(1093)
Liu, D.D.S. ....(0340) (0361)	McAuley, K.C. ....(0289)
Lobay, G. ....(0670) (0671)	McCleave, R.W. ....(0452)
Locas, P. ....(0418)	McCorkell, R. ....(0838) (0956) (0957)
Long, D.G.F. ....(0324)	McCready, R.G.L. ....(0009) (0010) (0019)
Longworth, G. ....(0795) (0796) (0801)	..... (0020) (0839) (0863) (0868) (0889)
..... (0836) (0852) (0853)	..... (0920) (0938) (0958)
Louis, G. ....(1135)	McDonald, R. ....(1155)
Lucas, B.H. ....(0727) (0741) (0746)	McDougall, J.M. ....(1008)
..... (0747) (0831) (0950)	McGrath, J.T. ....(0969) (1067) (1069)
Lui, A.W. ....(0974) (0975) (0995)	..... (1070) (1071) (1072) (1119) (1146)
..... (1021) (1022) (1084) (1086) (1088)	..... (1150) (1154) (1155) (1156) (1167)
..... (1089) (1116) (1162) (1165)	McIntyre, N.S. ....(0102) (0325) (0341)
Lyall, R.W. ....(0033)	..... (0342) (0343) (0378) (0419) (0421)
MacDougall, B. ....(1091)	..... (1093)
MacDougall, W.J. ....(0350)	McKinnon, D.L. ....(0586) (0623) (0638)
Macecek, M. ....(1060)	McLean, D.D. ....(0320) (0367) (0505)
MacEwen, S.R. ....(1004)	McLean, M. ....(0034)
MacKinnon, D.J. ....(0837) (0953)	McLean, V.M. ....(0321)
Mackintosh, A.D. ....(0699)	Michaelian, K.H. ....(0153) (0156) (0157)
MacPhee, J.A. ....(0341) (0342) (0346)	..... (0159) (0167) (0279)
..... (0352) (0420)	Mikhail, M.W. ....(0161) (0189) (0224)
Madill, T. ....(0557)	..... (0226) (0255) (0259)
Magny, J.G. ....(1033) (1038)	Mikhail, S.A. ....(0802) (0855) (0890)
Mainwaring, P.R. ....(0001) (0007) (0443)	..... (0939)
..... (0500) (0784) (0825) (0846) (0903)	Mikhlin, J. ....(0332)
..... (0913) (0928) (0945)	Mikula, R.J. ....(0203) (0214) (0221)
Mair, H.D. ....(0128)	..... (0255) (0259)
Majdi, A. ....(0198) (0218)	Miller, H.D.S. ....(0557)
Majumdar, A. ....(0064)	Mintz, K.J. ....(0169) (0517) (0533)
Mak, D.K. ....(0968) (0976) (1059)	..... (0538) (0688) (0696)
..... (1060) (1073) (1081) (1136) (1137)	Mirkovich, V.V. ....(0729)

- Mitchell, D.W. ....(0647)  
 Mitchell, E. ....(0520) (0577) (0611)  
 ..... (0615) (0616)  
 Mitrovic-Scepanovic, V. ....(0977) (1011)  
 ..... (1012) (1091)  
 Mogan, J.P. ....(0515) (0518) (0529)  
 ..... (0530) (0531) (0541) (0552) (0553)  
 ..... (0585) (0592) (0593) (0594) (0600)  
 ..... (0605) (0613) (0614) (0858)  
 Moloughney, P.E. ....(0012) (0013)  
 Monchalin, J.-P. ....(1061) (1135) (1138)  
 ..... (1139) (1140) (1141) (1142) (1143)  
 ..... (1144)  
 Monnier, J. ....(0339) (0344) (0345)  
 ..... (0422) (0423) (0424) (0451) (0473)  
 Moon, K.S. ....(0814) (0835) (0922)  
 ..... (0934) (0942)  
 Moore, E. ....(0524) (0525) (0526)  
 Moore, V.E. ....(1001)  
 Morin, L. ....(0780)  
 Moroz, J. ....(0081) (0581) (0583)  
 ..... (0607) (0608) (0636) (0637) (0660)  
 Morre, E. ....(0834)  
 Morrison, S.R. ....(0123)  
 Morton, L.A. ....(0131) (0135)  
 Muirhead, I.R. ....(0254)  
 Munaswany, K. ....(0982)  
 Munoswamy, K. ....(1096) (1097)  
 Munoz, V.A. ....(0289)  
 Murray, F.H. ....(0324) (0336)  
 Murray, M.L. ....(0930)  
 Muzak, N. ....(1142)  
 Nagy, E. ....(0663)  
 Nahar, S. ....(0339)  
 Naidu, H.G. ....(0222) (0266) (0279)  
 ..... (0282) (0297) (0302) (0312)  
 Nandi, B.N. ....(0323) (0346) (0352)  
 ..... (0420) (0425)  
 Neale, A.J. ....(0497)  
 Neame, P.A. ....(0054)  
 Nebesar, B. ....(0724) (0725) (0840)  
 Nemcsok, G. ....(0713)  
 Nenonen, L. ....(0595) (0625) (0640)  
 Neumann, A.W. ....(0147) (0160) (0170)  
 ..... (0223) (0270)  
 Neumiller, C. ....(0305)  
 Ng, S.H. ....(0329) (0357) (0426)  
 ..... (0474) (0494) (0495)  
 Nicholson, R.P. ....(0445)  
 Nielsen, T.K. ....(0556) (0598)  
 Niewiadomski, J. ....(0027)  
 Noble, R.D. ....(0340) (0361)  
 O'Neil, D. ....(0103)  
 Orr, R.F. ....(0969) (1067) (1071)  
 ..... (1072) (1150)  
 Osborne, D.G. ....(0164) (0249)  
 Owens, D.R. ....(0735) (0740)  
 Owerie, P. ....(0078)  
 Ozsoy, I.C. ....(1023) (1055) (1056)  
 ..... (1133)  
 Packwood, R.H. ....(0355) (0433) (0970)  
 ..... (0975) (0979) (0995) (1000) (1001)  
 ..... (1002) (1078) (1084) (1089) (1094)  
 ..... (1099) (1107) (1108)  
 Pakalnis, R.C.T. ....(0557)  
 Palmer, A. ....(0330) (0331) (0347)  
 ..... (1014) (1080) (1115)  
 Palmer, A.D. ....(0329) (0426) (0474)  
 Palmer, A.R. ....(1040)  
 Parikh, N. ....(1109)  
 Parkash, S. ....(0152)  
 Parker, C. ....(1001)  
 Parker, J.D. ....(1004)  
 Parsons, D.E. ....(1024) (1025)  
 Patchett, B.M. ....(1072)  
 Patching, T.H. ....(0161)  
 Pathak, J. ....(0548) (0568) (0595)  
 ..... (0596) (0619) (0625) (0632) (0640)  
 ..... (0641) (0646)  
 Patmore, D.J. ....(0323)  
 Pegg, M.J. ....(0427)  
 Peloquin, R. ....(0841)  
 Petruk, W. ....(0001) (0003) (0007)  
 ..... (0728) (0735) (0749) (0750) (0767)  
 ..... (0907) (0940)  
 Piche, L. ....(1144)  
 Pick, R.J. ....(0073)  
 Piekarski, K. ....(1016)  
 Pilgrim, R.F. ....(0941)  
 Pinard, R.G. ....(0735) (0749) (0767)  
 Pint, P. ....(0737)  
 Piskorz, J. ....(0351) (0354)  
 Plumat, M. ....(0914) (0925)  
 Poirier, M. ....(0844)  
 Poirier, M.A. ....(0348) (0349) (0487)  
 ..... (0501) (0502)  
 Poon, A.W. ....(0194)  
 Potoczny, Z.M. ....(0190)  
 Potoczny, Z.P. ....(0223)  
 Potter, J. ....(0350)  
 Pouskouleli, G. ....(0755) (0918) (0921)  
 ..... (0927)  
 Powell, M. ....(0324) (0336)  
 Powers, E. ....(1169)  
 Preto, F. ....(0338) (0472) (0475)

*Author Index*  
*Index des auteurs*

- ..... (0476) (0477)  
Price, J.T. ....(0350) (0428) (0429)  
..... (0468) (0507)  
Proctor, M.L. ....(0463)  
Proux, G. ....(0092)  
Provencher, R. ....(0819) (0841) (0842)  
..... (0844) (0955)  
Prud'homme, P.J.A. ....(0741) (0755)  
Pruitt, F. ....(0032)  
Pruneau, J. ....(0786) (0832)  
Quach, Thi-Quy (0078)  
Quilliam, M.A. ....(0345)  
Quon, D.H.H. ....(0753) (0765) (0776)  
... (0785) (0821) (0916) (0919) (0932) (0942)  
Rahimi, P.M. ....(0350) (0430) (0478) (0502)  
Raicevic, M. ....(0734)  
Rajan, K. ....(1017)  
Ralph, M. ....(0670)  
Ramsingh, R.R. ....(0976) (1153)  
Rankin, D.M. ....(0445) (0480) (0481)  
..... (0482) (0483) (0485) (0497) (0498)  
..... (0499)  
Rankin, J.M. ....(0479)  
Ratcliffe, C.I. ....(0805)  
Razbin, V.V. ....(0431) (0432) (0460)  
..... (0484)  
Read, P.J. ....(0479) (0480) (0481)  
..... (0482) (0483) (0485) (0497) (0499)  
Reilly, I.G. ....(0351) (0486)  
Remon, G. ....(1107)  
Revie, R.W. ....(0976) (0978)  
Richer, P. ....(0962)  
Rilmour, J.B. ....(1090)  
Ripmeester, J.A. ....(0352) (0420) (0805)  
..... (0829)  
Ritcey, G.M. ....(0727) (0861) (0891)  
..... (0904) (0918) (0921) (0927) (0943)  
..... (0948) (0950)  
Ritchie, C. ....(0100)  
Rivard, A. ....(1161)  
Robson, R. ....(0100)  
Rolia, E. ....(0794) (0798) (0843)  
Romaniuk, A.S. ....(0004) (0191) (0201)  
Romhanyi, K. ....(1098)  
Romharyi, K. ....(1155)  
Ross, C.A.M. ....(0801) (0836)  
Ross, S.D. ....(0140)  
Roudaut, E. ....(0795) (0853)  
Roy, C. ....(0045)  
Roy, G. ....(0983) (0984)  
Ruddle, G.E. ....(1023) (1055) (1056)  
..... (1057) (1113) (1131) (1133) (1134)  
Sabourin, C.A. ....(0510)  
Sahay, H. ....(0166) (0197) (0227)  
..... (0296)  
Sahoo, M. ....(1035) (1041) (1042)  
..... (1043) (1044) (1079) (1110) (1114)  
..... (1118) (1121) (1123) (1124) (1125)  
..... (1126)  
Salama, A.I.A. ....(0224) (0225) (0226)  
..... (0268) (0269)  
Salcudean, M. ....(1031)  
Salib, P. ....(0100) (0353)  
Salley, J. ....(0958)  
Sampson, S. ....(0915) (0944)  
Sanders, D.C. ....(0341)  
Sanmugasunderam, V. ..(0009) (0856) (0951)  
Santyr, S. ....(0034) (0071) (0092)  
Sarin, N.K. ....(0655)  
Sastri, V.S. ....(0433) (0970) (0978)  
..... (0979) (0980) (1002) (1024) (1025)  
..... (1092) (1093) (1094)  
Savich, M.U. ....(0532) (0597) (0620) (0678)  
..... (0679) (0680) (0681)  
Sawatzky, H. ....(0326) (0348) (0349)  
..... (0377) (0458) (0461) (0462) (0466)  
..... (0487) (0503)  
Schnakenberg, G.W.Jr. .(0520) (0577) (0615)  
..... (0647)  
Scott, D. ....(0351) (0354) (0486)  
Scrimgeour, J. ....(0548) (0595) (0625)  
..... (0640)  
Sedlacek, J. ....(0240) (0256)  
Sekhar, M.V.C. ....(0434) (0435) (0488)  
Sequin, P.E. ....(0844)  
Shay, H. ....(0208)  
Shehata, M.T. ....(1014) (1026) (1027)  
..... (1080) (1115) (1119) (1120) (1156)  
Shimano, D.Y. ....(0746)  
Shimizu, H. ....(0031) (0033)  
Shimoon, E. ....(0658)  
Shook, C.A. ....(0587)  
Shook, J.A. ....(0540)  
Silbernagel, W.S. ....(0289)  
Silver, M. ....(0002) (0788) (0793)  
..... (0845) (0859) (0915) (0944)  
Simpson, B. ....(0210)  
Singhal, R.K. ....(0162) (0163) (0164)  
..... (0165) (0166) (0171) (0192) (0193)  
..... (0195) (0209) (0222) (0227) (0228)  
..... (0229) (0230) (0231) (0232) (0233)  
..... (0234) (0235) (0236) (0237) (0246)  
..... (0247) (0248) (0249) (0257) (0258)  
..... (0263) (0264) (0282) (0283) (0297)  
..... (0312)  
Sirois, L.L. ....(0791) (0814) (0835)



..... (0922) (0933) (0934)	Tan, C.W. .... (0756)
Situm, M. .... (0704)	Tan, K.G. .... (0794) (0798) (0843)
Sivasundaram, V. .... (0770)	..... (0894) (0946) (0962)
Siwik, R. .... (0580) (0624) (0635)	Tan, L.K. .... (0807)
Skeaff, J.M. .... (0846) (0913) (0945)	Tandon, K.N. .... (1028)
Skubnik, M. .... (0496)	Ternan, M. .... (0320) (0321) (0355)
Smiley, G.T. .... (0501)	..... (0367) (0435) (0436) (0490) (0505)
Smith, C.W. .... (0526) (0781) (0834)	Thambimuthu, K.V. .... (0327) (0356)
..... (0864)	..... (0427) (0437) (0438) (0453) (0489)
Smith, R.W. .... (1121)	..... (0491) (0492) (0493)
Soles, J.A. .... (0731) (0919) (0932)	Thayer, W.L. .... (0453)
Somerville, I.R. .... (0976)	Thivierge, S. .... (0554) (0561) (0622)
Sowerby, R. .... (0129)	..... (0630)
Speelman, J.L. .... (0846) (0913)	Thompson, D.A. .... (1109)
Spevak, P. .... (0378) (0421)	Thomson, I. .... (0556) (0598)
Spezman, J.L. .... (0945)	Thomson, R. .... (1158)
Srajer, V. .... (0139) (0238) (0239)	Titchmarsh, J.M. .... (1017)
..... (0240) (0251) (0256) (0285) (0295)	Toews, N. .... (0676) (0689) (0705)
..... (0299) (0300) (0309) (0310) (0317)	Tomin, M.J. .... (0042)
..... (0318)	Too, J.J.M. .... (1050) (1051) (1058) (1130)
St. Pierre, J.A. .... (0546) (0604)	Topp, R. .... (0574)
Stefanski, M. .... (0148)	Townsend, M.G. .... (0795) (0796) (0801)
Steger, H.F. .... (0781) (0806) (0813)	..... (0809) (0836) (0851) (0852) (0853)
..... (0847) (0848) (0850) (0862) (0864)	..... (0895) (0896)
..... (0892) (0917)	Trotter, D.M. .... (0054)
Stemerowicz, A.I. .... (0752)	Try, C.F. .... (0324)
Stephenson, J.R. .... (0452)	Tu, H.J. .... (0211) (0253)
Stewart, D.B. .... (0141) (0247)	Twa, S.P. .... (0286)
Stimpson, B. .... (0252)	Tyson, W.R. .... (0983) (0985) (0986)
Stokes, A. .... (0144) (0185) (0265)	..... (0987) (0988) (1075)
..... (0278) (0281) (0293)	Udd, J.E. .... (0029) (0516) (0544)
Stott, M.J. .... (1106)	..... (0545) (0548) (0595) (0599) (0600)
Stover, N.S.H. .... (0489)	..... (0601) (0602) (0603) (0625) (0640)
Stowe, K.G. .... (0048)	..... (0642) (0643) (0644) (0645) (0652)
Stuart, N. .... (0280) (0285) (0305)	..... (0711) (0714) (0858)
..... (0307) (0315)	Van der Flier, E. .... (0324)
Su, Y.L. .... (0546) (0604)	Vandebeek, R.R. .... (0523) (0535) (0537)
Suh, J.S. .... (0167)	..... (0575) (0581) (0582) (0583) (0584)
Sullivan, J.D. .... (0032) (0033)	..... (0591) (0607) (0608) (0609) (0636)
Sutarno, R. .... (0762) (0772) (0773)	..... (0637) (0656) (0657) (0660) (0662)
..... (0774) (0775) (0782) (0806) (0847)	Vanderhulst, L. .... (0378)
..... (0849) (0850) (0867) (0893) (0908)	VanDyke, J.D. .... (0151)
..... (0917) (0961)	Vargha-Butler, E.I. .... (0147) (0160)
Swamidas, A.S.J. .... (0982)	..... (0170) (0223) (0270)
Syme, D. .... (0216)	Varin, R.A. .... (1016)
Szabo, E.I. .... (1076) (1127)	Varma, R.L. .... (0357) (0494) (0495)
Sze, W. .... (0031)	Vasu Nambudiri, E.M. .... (0350)
Szymanski, J. .... (0168) (0169) (0200)	Veldhuis, W. .... (0300) (0305) (0308)
..... (0241) (0242) (0243) (0244) (0245)	..... (0316)
..... (0260) (0261) (0262) (0272) (0285)	Vergeer, H.C. .... (0095) (0522) (0529)
..... (0298) (0303) (0308) (0313) (0314)	..... (0541) (0578) (0579) (0592) (0611)
..... (0316) (0517) (0533) (0789)	..... (0613) (0616) (0626) (0627) (0634)
Tammemagi, H.Y. .... (0194)	Veska, E. .... (0054)

*Author Index*  
*Index des auteurs*

Villeneuve, K.N. ....	(0869)	.....	(1030)
Vladut, T. ....	(0229) (0248)	Yarlagadda, P.S. ....	(0131)
Vleeskens, J.M. ....	(0425)	Yoshimura, Y. ....	(0333) (0359)
Vogan, B. ....	(1020)	Young, B.E. ....	(0043)
Vogt, O. ....	(1105)	Young, D.A. ....	(0177) (0196) (0215)
Vongpaisal, S. ....	(0546) (0557) (0604)	.....	(0267)
.....	(0666) (0689) (0705)	Yu, Y.S. ....	(0666) (0676) (0689)
Vosikovsky, O. ....	(0981) (0987) (0988)	.....	(0705)
.....	(1095) (1097) (1161)	Yuen, C.M.K. ....	(0143)
Voyzelle, B. ....	(1098)	Zahary, G. ....	(0247)
Wadden, D. ....	(0839)	Zerbino, R. ....	(0826)
Wade, N.H. ....	(0236)	Zinck, D. ....	(0275) (0290)
Wang, M. ....	(0824)	Zoldners, N.G. ....	(0011)
Wang, S.S.B. ....	(0732) (0733) (0748)		
.....	(0760) (0766) (0771) (0785) (0797)		
.....	(0821) (0822) (0959)		
Ward, M.-C. ....	(0496)		
Warda, R.D. ....	(1045) (1046) (1047)		
Weatherall, G. ....	(1042) (1110) (1125)		
Weatherley, G.C. ....	(1017)		
Weglo, J.K. ....	(0532) (0597) (0620)		
.....	(0678) (0679) (0680) (0681)		
Westaway, K.C. ....	(0529) (0541) (0592)		
.....	(0613)		
Whaley, H. ....	(0319) (0356) (0438)		
.....	(0445) (0446) (0448) (0449) (0467)		
.....	(0479) (0480) (0481) (0482) (0483)		
.....	(0485) (0497) (0498) (0499)		
Wheat, T.A. ....	(0783) (0854) (0860)		
.....	(0865) (0866) (0897) (0898) (0899)		
.....	(0902) (0947)		
Wheeland, K.G. ....	(0915) (0944)		
White, D.W.G. ....	(1158)		
Whiting, L.V. ....	(1042) (1048) (1110)		
.....	(1125) (1164)		
Wiens, B. ....	(0342)		
Wiggin, M. ....	(0439) (0440) (0441)		
Wilson, E.B. ....	(0264)		
Wilson, E.G. ....	(0233)		
Wilson, H.S. ....	(0744) (0756) (0758)		
Wilson, L.J. ....	(0802) (0855)		
Wilson, M.F. ....	(0358) (0360) (0408)		
.....	(0410) (0442) (0443) (0444) (0451)		
.....	(0469) (0500)		
Winder, C.G. ....	(0324) (0336) (0341)		
Wong, A.S. ....	(0689) (0705)		
Wong, E.W. ....	(0948)		
Wong, J.K. ....	(0319)		
Woo, O.T. ....	(1004) (1111) (1112)		
Woo, W.T. ....	(1003)		
Wozniczek, J. ....	(0148)		
Wright, B. ....	(1150)		
Wronski, Z.S. ....	(1010) (1016) (1029)		

## CONTRACTOR LIST

AMCA International Ltd. ....(0071) (0092)	Research and Productivity Council .....(0100)
..... (0102)	Roche Ltd. ....(0087)
Acres, Davy, McKee Eng. Inc. ....(0108)	Roche Ltee .....(0088)
Algoma Steel .....(0034)	SNC Inc. ....(0036) (0078) (0085)
Alloy Casting Industries Ltd. ....(0069)	Senes Consultants Ltd. ....(0111)
Associated Mining Consultants Ltd. ....(0089)	Sinteris Canada Ltd. ....(0032)
Atlantic Analytical Services Ltd. ....(0113)	Steffen, Robertson & Kirsten (B.C.) Inc. ....(0109)
Atlantic Coal Institute .....(0103)	..... (0110)
Atlantic Nuclear Services Ltd. ....(0115)	Stelco .....(0060)
Atomic Energy of Canada Research Co. ....(0116)	Tantalum Mining Corporation of Canada Ltd. ....(0050)
B.C. Research Laboratories .....(0091)	Technical University of Nova Scotia .....(0056)
Beak Consultants Ltd. ....(0055) (0105)	Texaco Inc. ....(0107)
Bondar-Clegg and Company Ltd. ....(0094)	The Conserver Group Inc. ....(0041)
CRIQ .....(0074)	Univ. Alberta .....(0047)
Central Canada Potash .....(0070)	Univ. Calgary .....(0064)
Chemex Labs Ltd. ....(0106)	Univ. California .....(0090)
Cominco .....(0058)	Univ. Guelph .....(0132)
Det norske Veritas (Canada) Ltd. ....(0042)	Univ. Manitoba .....(0131) (0135)
Ecole Polytechnique de Montreal .....(0125)	Univ. McMaster .....(0122) (0129) (0134)
Geostat Systems International Inc. ....(0080)	Univ. Ottawa .....(0127) (0136)
Golder Associates .....(0077)	Univ. Queen's .....(0043) (0128)
Golder Associates (Eastern Can.) .....(0096)	Univ. Saskatchewan .....(0130) (0133)
Gulf Canada Corp. ....(0097)	Univ. Simon Fraser .....(0123)
Gulf Canada Ltd. ....(0075) (0076)	Univ. St. Francis Xavier .....(0065)
Highquest Engineering Inc. ....(0101)	Univ. Toronto .....(0124)
Iron Ore Company of Canada .....(0093)	Univ. Waterloo .....(0126)
Jacques, Whitford & Associates Ltd. ....(0098)	Univ. de Sherbrooke .....(0045) (0046)
John Emery Geotechnical Engineering Ltd. ....(0052)	Univ. du Quebec a Chicoutimi .....(0044)
Kanata Consulting Group .....(0059) (0063)	Watts Cement Ltd. ....(0072)
Lakefield Research .....(0120)	Welding Institute of Canada .....(0073)
Manitoba Research Council .....(0061)	Williams Brothers Canada Ltd. ....(0121)
Melis Consulting Engineers Ltd. ....(0053)	Wittek Development Inc. ....(0039)
Mining Resource Engineering Ltd. ....(0081)	..... (0040) (0049)
Monenco Consultants Ltd. ....(0051) (0054)	
..... (0082) (0117)	
Moniteq Ltd. ....(0037)	
Mono Research Laboratories Ltd. ....(0084)	
N.G. Zoldners .....(0035)	
Nolan, Davis & Associates (N.S.) Ltd. ....(0118)	
Nolan, Davis & Associates Ltd. ....(0112)	
Noranda Exploration Co. ....(0048)	
Noranda Minerals Inc. ....(0057)	
Nordco Ltd. ....(0114)	
Nova Scotia Research Foundation Corp. ....(0062)	
Ontario Research Foundation .....(0031) (0033)	
..... (0066) (0095) (0099) (0104)	
Pollutech Ltd. ....(0119)	
Polymath Energy Consultants Ltd. ....(0086)	
Ralph Grossman (0079)	
Raylo Chemicals Ltd. ....(0067) (0068)	

## SUBJECT LIST

- Abrasion .....(1164)  
 Acetylene .....(0505)  
 Adsorption .....(0038) (0503) (0951)  
 Afton mine .....(0737)  
 Aggregates .....(0035) (0104) (0758)  
     ..... (0919)  
 Air .....(0265)  
 Air pollution .....(0054) (0506)  
     ..... (0552) (0613) (0614) (0615) (0623)  
     ..... (0627) (0648) (0858)  
 Alberta .....(0089)  
 Alloys .....(0061) (0069) (0122) (1079)  
     ..... (1167)  
 Aluminum .....(1085)  
 Ammonia .....(0716)  
 Ammonium nitrate .....(0656) (0657)  
 Analytical methodology .....(0762)  
 Analyzing .....(0035) (0048) (0104)  
     ..... (0281) (0725) (0772) (0773) (0774)  
     ..... (0775) (0778) (0782) (0908) (0956)  
     ..... (0957) (0961) (0962) (0963) (0964)  
     ..... (0965) (0970)  
 Analyzing ..... bs., 82/83 (0960)  
 Antimony .....(0778)  
 Arctic .....(0034) (0042) (1083)  
 Arsenic .....(0737)  
 Asbestos tailings .....(0733)  
 Ashes .....(0552) (0723) (0756)  
     ..... (0757)  
 Austenite .....(1169)  
 Automation .....(0548) (0619) (0625)  
 Barite .....(0056) (0771) (0959)  
 Bauxite .....(0856)  
 Beneficiation .....(0106) (0734) (0743)  
     ..... (0760) (0768) (0771)  
 Bentonite .....(0739)  
 Biodegradation .....(0856) (0920) (0958)  
 Biotechnology .....(0111) (0856) (0920)  
     ..... (0951)  
 Bismuth .....(0769)  
 Black Island, Manitoba .....(0764)  
 Blasting .....(0080)  
 British Columbia .....(0089) (0768)  
 Buchans, Newfoundland .....(0754)  
 CANMET .....(0038) (0104) (0106) (0747)  
     ..... (0952)  
 Calcined limestone (0732)  
 Calibration .....(0682) (0683) (0690)  
     ..... (0700) (0701) (0960)  
 Campbell Red Lake (0677)  
 Canada .....(0004) (0023) (0037) (0087)  
     ..... (0104) (0254) (0507) (0516) (0711)  
 Canadian shield .....(0617)  
 Carbon .....(0038) (0648)  
 Casting .....(0069) (0302) (0312) (1079)  
 Catalysts .....(0123) (0133) (0504) (0505)  
     ..... (0613) (0623) (0648)  
 Cements .....(0035) (0052) (0763)  
 Ceramics .....(0119) (0623) (0627)  
     ..... (0648) (0741) (0753) (0768) (0860)  
     ..... (0916)  
 Certification .....(0670)  
 Cesium .....(0812)  
 Characterization .....(0286) (0509) (0763)  
 Chloride .....(0057) (0948) (0950) (0953)  
     ..... (1169)  
 Chromatography .....(0508) (0509)  
 Chromite .....(0120)  
 Chromium .....(0774) (1164)  
 Classification .....(0301) (0304) (0780)  
 Clay .....(0958)  
 Coal .....(0089) (0125) (0138) (0141)  
     .....(0200) (0201) (0249) (0252) (0254)  
     ..... (0255) (0265) (0267) (0270) (0273)  
     ..... (0276) (0287) (0288) (0296) (0306)  
     ..... (0311) (0319) (0507) (0672) (0814)  
 Coal & preparation .....(0255)  
 Coal liquids .....(0200) (0260)  
 Coal mines .....(0037) (0089) (0099)  
     ..... (0137) (0139) (0140) (0141) (0142)  
     ..... (0143) (0145) (0196) (0198) (0251)  
     ..... (0253) (0254) (0256) (0265) (0277)  
     ..... (0278) (0281) (0288) (0293) (0299)  
     ..... (0300) (0302) (0304) (0316) (0317)  
     ..... (0318) (0671) (0672)  
 Coal preparation (0004) (0249) (0255)  
     ..... (0259) (0288) (0289)  
 Coal reserves (0266) (0274) (0672)  
 Coatings (0031)  
 Coke (0507)  
 Coking (0289) (0507)  
 Collectors (0780)  
 Combustion properties (0319)  
 Comminution (0259) (0744) (0780)  
 Computers (0253) (0264) (0267)  
     ..... (0268) (0271) (0275) (0290) (0292)  
     ..... (0294) (0299) (0305) (0313) (0314)  
     ..... (0316) (0548) (0619) (0625) (0707)  
     ..... (0962) (0968)  
 Concentration (0068) (0959)

Concretes (0035) (0052) (0104) (0756)	Fluid mechanics . . . . .(0260) (0272)
. . . . . (0757) (0758) (0763) (0770) (0906)	Fluidized bed combustion . . . . .(0038) (0125)
Construction materials . . . . .(0035) (0104)	. . . . . (0506) (0906)
Control . . . . .(0104) (0110) (0306) (0555)	Fluidized beds . . . . .(1086)
. . . . . (0802)	Fossil fuels . . . . .(0031)
Conveyors . . . . .(0314) (0517) (0547) (0688)	Foundry . . . . .(0063) (1076) (1077) (1164)
. . . . . (0696)	Fracture . . . . .(0042) (0073)
Conveyors . . . . .bs., 82/83 (0313)	Fumes . . . . .(0552) (0613) (0614) (0615)
Copper . . . . .(0737) (0759) (0953) (1079)	. . . . . (0623) (0627) (0648) (0756) (0858)
Corrosion . . . . .(0034) (0061) (0104)	Galena . . . . .(0749) (0769) (0778)
. . . . . (0122) (0970) (1080) (1083) (1086)	Gases . . . . .(0276)
. . . . . (1169)	Gasoline . . . . .(0074)
Creighton mine . . . . .(0729)	Germanium . . . . .(0742)
Crushing . . . . .(0035) (0259)	Glass quality product . . . . .(0741)
Data . . . . .(0080) (0087)	Gold . . . . .(0038) (0804)
Design . . . . .(0037) (0087) (0549)	Ground & subsidence . . . . .(0194)
Desulphurization . . . . .(0504)	Ground subsidence . . . . .(0070) (0138)
Development . . . . .(0133) (0138)	. . . . . (0196) (0253) (0267) (0290) (0291)
Diesel equipment . . . . .(0552) (0613) (0623)	. . . . . (0617)
. . . . . (0648) (0671)	Hauling . . . . .(0139) (0258)
Drilling . . . . .(0609) (0619) (0750)	Hazards . . . . .(0146) (0696)
Dust . . . . .(0016) (0665) (0759)	Health hazards . . . . .(0550) (0731)
Dust samplers . . . . .(0708)	Heating . . . . .(0041) (0729)
Dust sampling . . . . .(0690)	Heavy wall . . . . .(0969)
Electrolysis . . . . .(0123) (0916)	Humic acid . . . . .(0814)
Electrometallurgy . . . . .(0804)	Hydrocarbons . . . . .(0451) (0509)
Elliot Lake, Ontario . . . . .(0053) (0684)	Hydrogen . . . . .(0102)
. . . . . (0685) (0711) (0730)	Hydrometallurgy . . . . .(0504) (0755)
Emulsions . . . . .(0286)	Ilmenite . . . . .(0758)
Energy sources . . . . .(0033) (0658) (0714)	Impact strength . . . . .(0607) (0608) (0661)
Environment . . . . .(0106) (0119) (0284)	Industrial minerals . . . . .(0732) (0733)
. . . . . (0551) (0669)	Iron . . . . .(0035) (0080) (0735) (0772)
Evaluation . . . . .(1165)	. . . . . (0773) (0774) (0775) (0776) (0919)
Excavation . . . . .(0139) (0195) (0196)	. . . . . (0953) (0964) (1164)
. . . . . (0247) (0256) (0257) (0258) (0264)	Jarosite . . . . .(0740) (0812)
. . . . . (0283) (0300) (0305) (0516) (0689)	Kaolin . . . . .(0764)
. . . . . (0695) (0705)	Kidd Creek . . . . .(0740) (0749)
Explosions . . . . .	Labrador . . . . .(0535) (0542) (0607) (0731)
. . . . . (0658) (0659) (0663)	Lake St. Joe . . . . .(0735)
Explosives . . . . .(0512) (0513) (0535)	Lang Creek . . . . .(0742)
. . . . . (0536) (0607) (0608) (0609) (0656)	Leaching . . . . .(0038) (0106) (0741) (0746)
. . . . . (0657) (0658) (0659) (0661) (0663)	. . . . . (0786) (0804) (0920) (0948) (0950)
Extractive metallurgy . . . . .(0049) (0723)	. . . . . (0953)
. . . . . (0746) (0755) (0769) (0773) (0948)	Lead . . . . .(0782)
. . . . . (0950) (0953)	Leakage . . . . .(0265)
Fatigue . . . . .(0061)	Limestone . . . . .(0704) (0954)
Feldspar . . . . .(0050) (0745) (0751)	Liquefaction . . . . .(0450)
Filters . . . . .(0271) (0613) (0623) (0627)	Liquid fuels . . . . .(0078) (0123)
. . . . . (0648)	Lithium . . . . .(0812)
Fire prevention . . . . .(0146) (0517) (0608)	Magnesia-carbon bricks . . . . .(0765)
. . . . . (0671) (0688)	Management . . . . .(0960) (0963)
Flammability . . . . .(0517) (0688)	Manganese . . . . .(0049) (0775)
Flotation . . . . .(0362) (0759) (0765) (0814)	Materials . . . . .(0272) (0753) (1084) (1086)

*Subject Index*  
*Index des sujets*

..... (1165)	Nitrogen .....(0276) (0503)
Materials handling .....(0028) (0625)	Noise control .....(0620) (0678) (0679)
Materials testing .....(1165)	..... (0680) (0681) (0697)
Measurement .....(0037) (0089) (0272)	Nondestructive testing .....(0968) (1081)
..... (0361) (0620) (0678) (0680)	Nova Scotia (0140) (0274)
Measuring instruments .....(0037) (0543)	Nova Scotia .....bs., 82/83 (0771)
Mechanical properties .....(0060) (1167)	Offshore structures .....(0042)
Mechanical tests .....(0617)	Oil sands .....(0248) (0314) (0315) (0451)
Mercury .....(0737)	Oil shales .....(0723)
Metallography .....(1084)	Ontario .....(0035) (0711)
Metallurgy .....(0129) (0507) (1085)	Oxidation .....(0122) (0131) (0255) (0648)
Metals .....(0069) (0122) (1168)	Pegmatite .....(0722)
Methane .....(0037) (0089) (0135) (0141)	Personnel .....(0731)
..... (0293) (0306)	Phosphorus .....(0773) (0964)
Methanol .....(0131) (0135)	Physical properties .....(0102) (0725)
Microscopy .....(0731) (1078)	..... (0758) (0906)
Mine communications .....(0546)	Pipelines .....(0028) (0253)
Mine environment .....(0141) (0543)	Pollution .....(0669) (0802)
..... (0551) (0552) (0623) (0685) (0708)	Polymers .....(0503) (0776)
Mine gases .....(0037) (0089) (0276)	Potash .....(0058) (0070)
..... (0281) (0287) (0669) (0671)	Powder metallurgy .....(0032) (0033) (0965)
Mine haulage .....(0139) (0195) (0258)	Powell River, B.C. ....(0742)
..... (0264) (0305)	Precipitation .....(0812) (1085)
Mine ventilation .....(0613) (0648) (0671)	Process mineralogy .....(0778)
Mineral deposits .....(0048) (0080)	Processing .....(0735) (0919)
Mineral processing .....(0049) (0050) (0056)	Pugwash, N.S. ....(0760)
..... (0057) (0058) (0080) (0114) (0120)	Pydrometallurgy .....(0737)
..... (0734) (0745) (0747) (0748) (0751)	Pyritic shale .....(0958)
..... (0760) (0771) (0776) (0780) (0952)	Pyrometallurgy .....(1085)
Mineralogy .....(0673) (0686) (0722) (0728)	Quality control .....(0960) (0963)
..... (0735) (0739) (0740) (0742) (0744)	Quebec .....(0080) (0104)
..... (0749) (0750) (0754) (0764) (0767)	Radiation .....(0037) (0082) (0361)
..... (0777) (0778)	..... (0550) (0555) (0556) (0621) (0674)
Mines .....(0138)	..... (0682) (0683) (0684) (0698) (0700)
Mining .....(0018) (0025) (0087) (0104)	..... (0701) (0722) (0730) (0951)
..... (0141) (0196) (0247) (0249) (0254)	Radioactive isotopes .....(0106)
..... (0314) (0315) (0316) (0516) (0548)	Radioactive wastes .....(0054) (0082)
..... (0625) (0692) (0695) (0713)	..... (0105) (0684) (0687)
Mining equipment .....(0141) (0195) (0248)	Radium .....(0106) (0694) (0951)
..... (0251) (0283)	Radon .....(0555) (0556) (0674)
Models .....(0105) (0111) (0116)	..... (0682) (0683) (0684) (0694) (0698)
..... (0260) (0607) (0622) (0695)	..... (0700) (0701) (0709) (0957)
Monitoring .....(0037) (0255) (0295) (0516)	Radon gas monitor .....(0683)
..... (0552) (0556) (0695) (0701) (0714)	Radon progeny .....(0621)
Monitors .....(0283) (0552)	Rapid solidification .....(0032) (0033)
Muscovite .....(0959)	Recovery .....(0038)
National Uranium Tailings Program ..(0053)	Reference materials .....(0774) (0775)
..... (0054) (0082) (0105) (0110) (0111)	..... (0781) (0917)
..... (0116)	Refractories .....(0753) (0916)
Natural gas .....(0078) (0131)	Research .....(0548) (0549) (0551)
Nepheline syenite .....(0768)	..... (0615) (0685) (0692) (0711) (1077)
Niccolite .....(0802)	Reserves .....(0201)
Nickel .....(0774) (1164)	Resins .....(0277)

Resources .....	(0266)	Sulphur dioxide .....	(0954)
Respirable dust .....	(0196) (0288) (0547)	Surface mining .....	(0139) (0195)
.....	(0552) (0623) (0648) (0687) (0690)	.....	(0248) (0251) (0256) (0257) (0258)
.....	(0708)	.....	(0264) (0280) (0282) (0283) (0299)
Rock bursts (0014) (0021) (0026) (0143)		.....	(0302) (0312) (0317) (0318) (0625)
.....	(0145) (0677) (0707) (0711) (0713)	Surface properties .....	(0270) (0275)
Rock mechanics (0017) (0069) (0087)		Synthetic fuels .....	(0074) (0123) (0315)
.....	(0104) (0140) (0196) (0254) (0266)	.....	(0451) (0503)
.....	(0277) (0280) (0292) (0294) (0516)	Tailings .....	(0035) (0053) (0054) (0082)
.....	(0617) (0618) (0622) (0667) (0668)	.....	(0104) (0105) (0106) (0110) (0111)
.....	(0673) (0677) (0686) (0691) (0704)	... (0116) (0624) (0733) (0767) (0777) (0955)	
.....	(0729)	Tantalocolumbite .....	(0734)
Rock mechanics .....	bs., 82/83 (0695)	Tar sands .....	(0451)
Safety .....	(0550) (0622) (0709) (0731)	Testing .....	(0035) (0038) (0070) (0073)
Sampling .....	(0114) (0708)	.....	(0089) (0104) (0143) (0276) (0618)
Sand .....	(0035) (0104) (0609) (0747) (1076)	.....	(0656) (0657) (0661) (0663) (0668)
Saskatchewan .....	(0070) (0082) (0105)	Tetryl .....	(0535)
Separation .....	(0057) (0058) (0068) (0725)	Thermal analysis .....	(0512) (0513)
Silica .....	(0741) (0743) (0756) (0761)	.....	(0536) (0618) (0656) (0657) (0723)
.....	(0860)	Thiourea .....	(0804)
Silicates .....	(0856)	Thor Lake, N.W.T. ....	(0734)
Silicon .....	(0860) (0964)	Thorium .....	(0053) (0106) (0781)
Silver .....	(0755) (0769) (0778) (0953)	Thoron .....	(0621) (0674) (0682) (0683)
Slags .....	(0052) (0748) (0764) (0765)	.....	(0709) (0730)
Slurries .....	(0028) (0450) (0607) (0608)	Transportation .....	(0004) (0028) (0253)
Smelting .....	(0737)	.....	(0295) (0306)
Soil mechanics .....	(0280) (0695) (0712)	Tunneling (0099) (0547)	
Sorbitol .....	(0508)	Underground mining .....	(0037) (0070)
Spectroscopy .....	(0102) (0508) (0509)	.....	(0087) (0137) (0146) (0196) (0198)
.....	(0772) (0773) (0955) (0962) (0966)	.....	(0220) (0252) (0254) (0265) (0267)
Spontaneous combustion .....	(0311)	.....	(0276) (0277) (0287) (0288) (0290)
Stability .....	(0070) (0087) (0099)	.....	(0291) (0304) (0516) (0543) (0546)
.....	(0110) (0137) (0140) (0141) (0196)	.....	(0547) (0617) (0619) (0648) (0669)
.....	(0198) (0247) (0252) (0254) (0267)	.....	(0670) (0685) (0687) (0696) (0711)
.....	(0277) (0290) (0516) (0549) (0622)	Upgrading .....	(0508) (0745) (0751)
.....	(0656) (0657) (0668) (0677) (0689)	Uranium .....	(0053) (0054) (0082) (0104)
.....	(0691) (0695) (0704) (0705)	.....	(0105) (0106) (0110) (0111) (0116)
Standards .....	(0762) (0782) (0908)	.....	(0144) (0550) (0555) (0687) (0694)
.....	(0917) (0961)	.....	(0698) (0716) (0730) (0781) (0786)
Steels .....	(0032) (0034) (0071) (0102)	... (0920) (0948) (0956) (0963) (0965) (0966)	
.....	(0129) (0916) (1080) (1167) (1169)	Utilization .....	(0052)
Storage .....	(0004) (0089) (0296)	Val Brilliant, Quebec .....	(0747)
Stowing .....	(0070) (0278) (0694)	Vanadium .....	(0725) (0772)
Strata control .....	(0069) (0070) (0080)	Ventilation .....	(0142) (0144) (0265)
.....	(0087) (0141) (0198) (0247) (0267)	.....	(0278) (0281) (0552) (0623) (0648)
... (0278) (0290) (0516) (0677) (0691) (0695)		Vermiculite .....	(0744) (0959)
Stresses .....	(0252) (0622) (0667) (0689)	Viscosity measurements .....	(0733)
.....	(0691) (0704) (0705) (0713)	Waste utilization .....	(0104)
Sudbury, Ontario .....	(0711)	Wastes .....	(0035) (0506) (0964) (0964)
Sulphides .....	(0624) (0746) (0750)	Water .....	(0196) (0275) (0286)
.....	(0754) (0953) (1080)	Wear .....	(1080)
Sulphur .....	(0125) (0249) (0281)	Welding .....	(0034) (0060) (0071) (0073)
.....	(0648) (0814)	.....	(0092) (0969) (1074) (1075) (1075)

*Subject Index*  
*Index des sujets*

---

..... (1083) (1160) (1163) (1163) (1167)  
West Germany .....(0317) (0317)  
X-ray analysis .....(0965) (1078)  
Zinc .....(0740) (0762)  
Ziolite .....(0509)



