

11 REFERÊNCIAS

ALCOA, **Spent Potlining Worldwide Standard and Guidelines**. Disponível em: www.alcoa.com/global/en/environment/pdf/spent_pot_lining_standards.pdf >. Acesso em: 15/08/2006.

ASSOCIAÇÃO BRASILEIRA DE NORMAS TÉCNICAS, **NBR 10004 – Resíduos Sólidos**. Rio de Janeiro, 1987.

ABAL, Associação Brasileira do Alumínio, **Notícias**. Disponível em: <http://www.abal.org.br/> > Acesso em: 10/02/2007.

BANKER, D. B. *et al.* **Detoxification of aluminum spent potliner by thermal treatment, lime slurry quench and post-kiln treatment**. U.S. Patent N° 5164174, Reynolds Metals Company, Richmond, VA, 1992.

BELGIORNO, V. *et al.* Energy from gasification of solid wastes. **Waste Management**, 23, 1-15, 2003.

BESIDA, J. **Process for treating spent potlining containing inorganic matter**, U.S. Patent No 5939035, The University of Melbourne, Victoria, AU, 1999.

BLAYDEN, L. C.; EPSTEIN, S. G. Spent potlining symposium. **Journal of Metals**, 22 – 32, Jul. 1984.

BRILLOIT, P.; LOSSIUS, L. P.; ØYE, H. A. **Penetration and chemical reaction in carbon cathodes during aluminium electrolysis: Part I. Laboratory experiments**. Metallurgical Transactions B, Vol. 24B, 75 – 89, 1993.

BRISSON, P. Y. *et al.* The effect of sodium on the lining of the aluminium electrolysis cell – A review. **Canadian Metallurgical Quarterly**, Vol. 44, No 2, 265 – 280, 2005.

BRISSON, P. Y. *et al.* X-ray photoelectron spectroscopy study of sodium reactions in carbon cathode blocks of aluminium oxide reduction cells. **Carbon**, Volume 44, Issue 8, Pages 1438-1447, 2006.

BUSH, J. F. Destruction of SPL in existing kiln process. **Journal of Metals**, 36 – 37, Nov. 1986.

BYERS, L. R. Disposal of spent potlining by fluidized bed combustion. **Journal of Metals**, 24 - 26, Jul. 1984.

CASHMAN, J. B. **Detoxifying spent aluminum potliners**, U.S. Patent No 6190626, 2001.

CENCIC, M.; KOBAL, I.; GOLOB, J. Thermal hydrolysis of cyanides in spent pot lining aluminium electrolysis. **Chem Eng. Technol.** 21, 6, 523-532, 1998.

CHANANIA, F.; EBY, E. Best Demonstrated Available Technology (BDAT) Background Document For Spent Aluminum Potliners – K088. **U.S. Environmental Protection Agency**, Office of Solid Waste, 2000.

CONAMA, CONSELHO NACIONAL DO MEIO AMBIENTE, **Resolução Nº 264**, 26 de agosto 1999.

CONSTANS, D. L. Primary Aluminum Production Wastes Spent Aluminum Potliner, K088. **Gossman Consulting Inc. Publication**, Volume 4, Number 09, 1998.

COOPER, B. J.; COOPER, K. M.; COOPER, B. G.; COOPER, J. J. **Treatment of smelting by-products**. U.S. Patent Nº 20060053973, 2006.

COURBARIAUX, Y.; CHAOUKI, J.; GUY, C. Update on Spent Potliners Treatments: Kinetics of Cyanides Destruction at High Temperature. **Ind. Eng. Chem. Res.**, 43, 5828-5837, 2004.

DAHL, E. Q. **Method of recovering fluorine from carbonaceous waste material**, U.S. Patent No 4065551, Elkem-Spigerverket A/S, Oslo, NO, 1977.

DEVINE, R. J. Reprocessing potliners from Hall-Heroult cells. **JOM**, 49, 24 e 68, Aug. 1997.

DICCKIE, R. C. Spent Potlining as a fuel supplement in cement kiln. **Journal of Metals**, 28 – 29 Jul. 1984.

DICCKIE, R. C. Spent Potlining as a fuel supplement in cement kiln. **Journal of Metals**, 35 – 36, Nov. 1986.

DROGU, M. *et al.* Gasification of hazelnut shell in a downdraft gasifier. **Energy**, 27, 415-427, 2002.

FLOYD, J. M.; JOHNSON, G. A. The design of the Ausmelt technology smelting unit for the processing of spent pot lining (SPL) at Portland aluminium. **Proceedings of the TMS Fall Extraction and Processing Conference**, Volume 2, Pages 1005-1014, 1999.

FAO - FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS. **Wood gas as engine fuel**. Forestry Department (1986). Disponível em: <<http://www.fao.org/docrep/t0512e/t0512e00.htm>>. Acesso em: 28/07/2006.

FERNANDEZ, M. C. **Investigação experimental de gaseificação de biomassa em leito fluidizado**. Tese de doutorado, Universidade Estadual de Campinas, Faculdade de Engenharia Mecânica, 2003.

FRYLING, G. R. **Combustion engineering**. Revised ed. - New York, Combustion Engineering, 1v, 1967.

GAMSONB, W.; HAYDEN, H. W. **Aluminum electrolytic cell cathode waste recovery**. U.S. Patent No 4355017, Swiss Aluminium Ltd., Chippis Switzerland, 1982.

GIVENS, H. L. Using spent potliner as a fuel supplement in coal-fired power plant. **JOM**, 57- 59, March 1989.

GOMES, V. *et al.* Co-processing at cement plant of spent potlining from the aluminum industry. **13th TMS Annual Meeting**; San Francisco, CA; 507-513, 2005.

GONÇALVES, A. C. **Tratamento de efluentes contendo cianeto livre através do sistema H_2O_2 /UV**. Tese doutorado - Pontifícia Universidade Católica do Rio de Janeiro, Departamento de Ciência dos Materiais e Metalurgia, 2004.

GOODES, CH. G.; WELLWOOD, G. A.; HAYDEN, JR., H. W. **Recovery of fluoride values from waste materials**. U.S. Patent No 4900535, Comalco Aluminum Limited, Melbourne, AU, 1990.

GRIESHABER, K. W.; PHILIPP, C. T.; BENNETT, G. F. Process for recycling spent potliner and electric arc furnace dust into commercial products using oxygen enrichment. **Waste Management**, Vol. 14, Nos. 3 – 4, 267 – 276, 1994.

GROLMAN, R. J. *et al.* **Recycling of spent pot linings**. U.S. Patent No 5470559, Alcan International Limited, Montreal, CA, 1995.

HITTNER, H. J. *et al.* **Rotary kiln treatment of potliner**. U.S. Patent No 5711018, Aluminum Company of America, Pittsburgh, PA, 1998.

HOLT N. **Gasification & IGCC – Design Issues & Opportunities**, GCEP Advanced Coal Workshop – Utah, 2005.

HOOKE, S. Measurement Issues in Single Wall Carbon Nanotubes, Cap. 2. **Thermogravimetric Analysis (TGA)**. National Institute of Standards and Technology, 2005. Disponível em: <[http://www.msrl.nist.gov/Nanotube2/Practice%20Guide Section%202 TGA.pdf](http://www.msrl.nist.gov/Nanotube2/Practice%20Guide%20Section%202%20TGA.pdf)>. Acesso em: 20/12/2006.

INTERNATIONAL ALUMINIUM INSTITUTE, **Sustainability Update 2005: Aluminium for Future Generations**. Disponível em: <http://www.world-aluminium.org/iai/publications/documents/update_2005.pdf>. Acesso em: 10/02/2007.

INTERNATIONAL ALUMINIUM INSTITUTE. Disponível em: <<http://www.world-aluminium.org/>> Acesso em 10/10/2006.

IRMIS, I.; SOUCY, G.; FAFARD, M. Carbon cathode resistance against sodium penetration during aluminium electrolysis – A review. **Acta Metallurgical Slovaca**, 11, 2: 231 – 243, 2005.

JAYAH, T. H. *et al.* Computer simulation of a downdraft wood gasifier for tea drying. **Biomass and Bioenergy**, 25, 459 – 469, 2003.

KASIREDDY, V.; BERNIER, J.; KIMMERLE, F. M. **Recycling of spent pot linings**. U.S. Patent No 6596252, Alcan International Limited, Montreal, CA, 2003.

KLEIN, A. **Gasification: An Alternative Process for Energy Recovery and Disposal of Municipal Solid Wastes**. Department of Earth and Environmental Engineering, Fu Foundation School of Engineering and Applied Science, Columbia University, 2002.

KOSKY, P. G.; FLOESS, J. K. Global Model of Countercurrent Coal Gasifiers. **Ind. Eng. Chem. Process Des. Dev.**, Vol. 19, No. 4, 586 – 592, 1980.

LI, W. *et al.* Volatilization behavior of fluorine in coal during fluidized-bed pyrolysis and CO_2 -gasification. **Fuel**, Volume 84, Issue 4, Pages 353-357, 2005.

LIU, D. *et al.* Behavior of Fluorine in the Combustion of Chinese Coal in Small Furnaces. **Energy & Fuels**, 20, 1406-1410, 2006.

LOPES, C. R. **Cinética da gaseificação de carvões e coques com CO₂ num reator de leito fluidizado**, Dissertação Mestrado - Pontifícia Universidade Católica do Rio de Janeiro, DCMM, 1992.

LOSSIUS, L. P.; ØYE, H. A. Melt penetration and chemical reactions in 16 industrial Aluminium carbon cathodes. **Metallurgical and Materials Transactions B**, volume 31B, 1213-1224, 2000.

LOSSIUS, L. P.; ØYE, H. A. Melt penetration and chemical reaction in 16 industrial aluminium carbon cathodes. **Metallurgical Transactions B**, Vol. 31B, 1213 – 1224, 1993.

LUCAS, C. **High temperature air/steam gasification of biomass in an updraft fixed bed batch type gasifier**. Doctoral thesis, The Royal Institute of Technology, 2005.

MADSHUS, S. **Thermal Reactivity and Structure of Carbonized Binder Pitches**, Doctoral thesis, Norwegian University of Science and Technology, Faculty of Natural Sciences and Technology, 2005.

MANSFIELD, K. **SPL treatment and ‘fluoride’ recycling project**. Portland Aluminium, Portland, 1999.

MANSFIELD, K.; SWAYN, G.; HARPLEY, J. The spent pot lining treatment and fluoride recycling project, Portland Aluminium. **Green processing conference**, 307- 314, 2002.

MASSACCI, P.; DE NARDIS, M. Remediation of Spent Pot Linings. New Remediation Technology in the Changing Environmental Arena, Scheiner *et al.* (Editors), **Society for Mining, Metallurgy and Exploration (SME)**, Littleton, CO, pp. 191-197, 1995.

MCKENDRY, P. Energy production from biomass (part 3): gasification technologies. **Bioresource Technology**, Volume 83, Issue 1, Pages 55-63, 2002.

MIDILLI, A. *et al.* Combustible gas production from sewage sludge with a downdraft gasifier. **Energy Conversion and Management**, 42, 157-172, 2001.

MIKHALEV, Y.; ØYE, H. A. Absorption of metallic sodium in carbon cathode materials. **Carbon**, Vol.34, No1, 37 – 41, 1996.

MIKSA, M. H.; SAMEC, N. Spent potlining utilization possibilities. **Waste management and research**, 21, 467 – 473, 2003.

MIOLANEN, A. Thermogravimetric characterizations of biomass and waste for gasification processes. **VTT Publications** 607. 103 p. + app. 97 p, Espoo, 2006.

MORGENTHALER, G. W.; STRUTHERS, J. L.; CARTER, G. W. **Plasma torch furnace processing of spent potliner from aluminum smelters**, U.S. Patent No 5222448, Columbia Ventures Corporation, Vancouver, WA, 1993.

MOURA, J. C.; D'ÁVILA, S. G.; ROCHA NETO, T. **Processo de gaseificação e combustão combinadas (GCC) para disposição final de resíduos industriais**, 12º Congresso Brasileiro de engenharia Química, Porto Alegre, RS, Brasil, 1998

NIESSEN, W. R. **Combustion and incineration processes**. 3rd ed., rev. and expanded New York: Marcel Dekker, 715, 2002.

O'CONNOR, W. K.; TURNER, P. C.; ADDISON, G. W. **Method for processing aluminum spent potliner in a graphite electrode ARC furnace**, U.S. Patent No 6498282, The United States of America as represented by the United States Department, Washington, DC, 2002.

ØYE, H. A. Long life for high amperage cells. **Scandinavian Journal of Metallurgy**, 30: 415 – 419, 2001.

PAWLEK, R. P. Recent development in the treatment of spent potlining. **JOM**, 48 – 52, Nov 1993

PAWLEK, R. P. Spent potlining: an Update. **The twelfth international Aluminium symposium**, 2003.

PERSONNET, P.; E BOUZAT, G. **Process for insolubilizing and consolidating Spent Linings from Hall-Heroult electrolysis cells**, U.S. Patent No 5947888, Aluminium Pechiney, France, 1999.

PONG, T. K. *et al.* Spent potlining a hazardous waste made safe, **Process Safety and Environmental Protection: Transactions of the Institution of Chemical Engineers, Part B**, Volume 78, Issue 3, Pages 204-208, 2000.

PRASAD, S. The principal problems of aluminium eletrowinning: an update. **Brazilian Journal of Chemical Engineering**, Vol. 2, 2000.

PRINS, M. J. **Thermodynamic analysis of biomass gasification and torrefaction**, Doctoral Thesis, Technische Universiteit Eindhoven, 2005.

RESENDE, F. L. P. **Comparação entre as técnicas de análise termogravimétrica e leito fluidizado para pirólise de biomassa**. Dissertação de mestrado, Universidade Estadual de Campinas, Faculdade de Engenharia Mecânica, 2003.

RICKMAN, W. S. **Method for the removal of cyanides from spent potlinings from aluminum manufacture**, U.S. Patent No 4973464, Ogden Environmental Services, Nov. 1990.

RICKMAN, W. S; KAAE, J. L.; GAMSON, G.W. **Method for the combustion of spent potlinings from the manufacture of aluminum**, U.S. Patent No 4763585, Ogden Environmental Services, Aug. 1988.

SANCHO, J. P; DEL CAMPO J. J.; GRJOTHEIM, K. G., **La metalurgia del aluminio**, Düsseldorf: Aluminium - Verlag , 1994.

SATERLAY, A. J. *et al.* Ultrasonically enhanced leaching: removal and destruction of cyanide and other ions from used carbon cathodes. **Ultrasonics Sonochemistry**, 7, 1–6, 2000.

SILVEIRA, *et al.* Characterization of inorganic fraction of spent potliners: evaluation of the cyanides and fluorides content. **Journal of Hazardous Materials**, B89, 177–183, 2002.

SILVEIRA, B. I. *et al.* Effectiveness of cement-based systems for stabilization and solidification of spent pot liner inorganic fraction. **Journal of Hazardous Materials**, B98, 183–190, 2003.

SLEPPY, W. Reaction of sodium with graphite at 400°, **Inorganic Chemistry**, Vol. 5, No 11, 2021 – 2023, 1966.

SMITH, A; MURDDER, T. **The Chemistry and Treatment of Cyanidation Wastes**. Mining Journal Books Limited, London, 1991.

SNODGRASS, J. B.; CAMBRIDGE, E. L. **Method for the recovery of fluorides from spent aluminum potlining and the production of an environmentally safe waste residue**, U.S. Patent No 4444740, Atlantic Richfield Company, Los Angeles, CA, 1984.

SOARES, R. W. *et al.* Characterization of carbonaceous products. **Journal of Thermal Analysis**, Vol. 49, 657 – 661, 1997.

SØRLIE, M.; ØYE, H. A. **Cathodes in aluminium electrolysis**, 2nd edition, Dusseldorf: Aluminium – Verlag, 1994.

SPIEGEL, S. J.; PELIS, T. K. Regulations and practices for the disposal of spent potliner by the Aluminium industry. **JOM**, 70 – 73, Nov. 1990.

TABERY, R. S.; DANGTRAN, K. **Fluidized bed combustion of aluminum smelting waste**. U.S. Patent No 4993323, 1991.

U.S. ENVIRONMENTAL PROTECTION AGENCY. **40 CFR Parts 268 and 271 Land Disposal Restrictions; Treatment Standards for Spent Potliners from Primary Aluminum Reduction (K088)**. Final Rule, 1998.

U.S. ENVIRONMENTAL PROTECTION AGENCY. **Economic Assessment of the Revised LDR Treatment Standards for Spent Aluminum Potliner (K088)**. Office of Solid Waste and Emergency Response Economics, 2000.

US ENVIRONMENTAL PROTECTION AGENCY (EPA), **Land Disposal Restrictions-Background Document to Establish the Effective Date for Amended Treatment Standards for Spent Aluminum Potliners (Proposed Rule)**. Office of Solid Waste, 2000.

VICK, S. C.; VON STEIGER, H. O. Beneficial recycling of metal refining waste via gasification. Gasification technologies 2001 at San Francisco, **Gasification technologies council**, 2001.

VICK, S. C.; VON STEIGER, H. O. **Process for thermal destruction of spent potliners**. U.S. Patent No 6074623, 2000.

VICK, S. V.; SETEIGER, H. V. Beneficial recycling of metals refining waste via gasification. **Gasification technologies**, 2001.

YOUNG, A. C.; NORDWICK, S.; FOOTE M. Review of technologies and the development of a novel approach for spent potlining remediation. **Proceedings of the Fourth International Conference on Materials Engineering for Resources**, 1, pp. 13-25, 2001.