



DAFTAR PUSTAKA

- Abidin, F., Harjanto, S., Kawigraha, A., Permatasari, N.V., 2018, *Pemanfaatan Karbon Biomassa sebagai Reduktor dalam Ekstraksi Fe-Ni dari Bijih Nickel Laerit*, Seminar Nasional Teknika
- Abidin, F., Harjanto, S., Kawigraha, A., Permatasari, N.V., 2019, *Characterization on Particle Size Distribution of Reduces Lateritic Nickel Ore using Biomass Carbon Reduction*, IOP Conf. Series: Materials Science and Engineering (602), 1-8; doi:10.1088/1757-899X/602/1/012080
- Bahfie, F., Shofi, A., Herlina, U., Handoko, A.S., Septiana, N.A., Syafriardi, Suharto, Sudibyo, Suhartono, Nurjaman, F., 2022, *The effect of sulfur, temperature, the duration of the process and reductant on the selective reduction of limonite ore*, Mineral Resources Management 38 (1), 123-136; DOI: 10.24425/gsm.2022.140606
- Cahyaningtyas, D., Suseno, T., Rochani, S., Yunianto, B., Rodliyah, I., Hartono, 2021, *The Role of Iron and Nickel Smelters for the Indonesian Steel Industries*, IOP Conf. Series: Earth and Environmental Science, 1-11; doi:10.1088/1755-1315/882/1/012076
- Chaeruni, W., Hadiyanto, Cahyadi, Sutardi, T., 2023, *Characterization of reactivity enhancement coal combustion with empty fruit bunches using thermogravimetry analysis*, E3S WEB OF Conferences 448; <https://doi.org/10.1051/e3sconf/202344803047>



Chen, G., Hwang, W., Liu, S., Shiau, J., 2015, *The Effect of Bio-Coal on the*

Carbothermic Reduction of Laterite Ores, Materials Transactions, Vol.

56, pp. 550-555; DOI: 10.2320/matertrans.M2014315

Chukwuleke, O.P., Jiu-Ju, C., Chukwujekwu, S., Song, X., 2009, *Shift from Coke*

to Coal Using Direct Reduction Method and Challenges, Journal of Iron

and Steel Research, 16(2): 01-05

Crundwell, F.K., Moats, M.S., Ramachandran, V., Robinson, T.G., Davenport,

W.G., 2011, *Extractive Metallurgy of Nickel, Cobalt and Platinum –*

Group Metals, Elsevier Ltd

Dalvi, A.D., Bacon, W.G., Osborne, R.C., 2004, *The Past and the Future of Nickel*

Laterites, PDAC 2004 International Convention, 1-27

DMT, 2022, Laporan Studi Kelayakan Tambang untuk Persiapan Hilirisasi

Batubara di Wilayah IUP OP Peranap, Kab. Indragiri Hulu, Prov. Riau,

Indonesia, tidak dipublikasikan

Elias, M., 2002, *Nickel Laterite Deposits – Geological Overview, Resources, and*

Exploitation, Research Gate, 1-24;

<https://www.researchgate.net/publication/281422746>

Elliott, R., Pickles, C.A., 2017, *Thermodynamic Analysis of the Selective Reduction*

of a Nickeliferous Limonitic Laterite Ore by Hydrogen, High. Temp.

Material Proc: 36(8), 835-846; DOI 10.1515/htmp-2015-0208

Elliott, R., Pickles, C.A., Peacey, J., 2017, *Ferronickel Particle Formation during*

the Carbothermic Reduction of a Limonitic Laterite Ore., Minerals

Engineering, 166-176; <http://dx.doi.org/10.1016/j.mineng.2016.10.020>



Forster, J., Pickles, C.A., Elliott, R., 2016, *Microwave Carbothermic Reduction*

Roasting of a Low Grade Nickeliferous Silicate Laterite Ore, Minerals

Engineering: 88, 18-27; <http://dx.doi.org/10.1016/j.mineng.2015.09.005>

GeoXP, 2019, Laporan Pemutakhiran Studi Kelayakan Tambang Batubara Banko

Tengah B Tanjung Enim, Sumatera Selatan, Indonesia, tidak
dipublikasikan

Gialanella, S., Girardi, F., Ischia, G., Lonardelli, I., Mattarelli, M., Montagna, M.,

2010, *On the goethite to hematite phase transformation*, Journal Therm.

Anal. Calorim. 102:867-873; DOI 10.1007/s10973-010-0756-2

Handoko, S., Nurhadi, N., Mujiati, S., Fitriani, R., 2021, *Characterization of*

pyrolysis products of oil palm empty fruit bunch, IOP. Conf. Series: Earth

and Environmental Science 749, 012041 doi:10.1088/1755-

1315/749/1/012041

Harjanto, S., Rhamdani, M.A., 2019, *Sulfides Formation in Carbothermic*

Reduction of Saprolictic Nickel Laterite Ore Using Low-Rank Coals and

Additives: A Thermodynamic Simulation Analysis, Minerals, 1-21;

<https://doi.org/10.3390/min9100631>

Hidayat, W., Riniarti, M., Prasetia, H., Niswati, A., Hasanudin, U., Banuwa, I.S.,

Yoo, J., Kim, S., Lee, S., 2021, *Characteristics of Biochar Produced from*

*the Harvesting Wastes of Meranti (*Shorea sp.*) and Oil Palm (*Elaeis**

Guineensis) Empty Fruit Bunches

, IOP Conf. Series: Earth and Environment Science: 1-7; doi:10.1088/1755-1315/749/1/012040



Jamali, A., Binudi, R., Adjiantoro, B., 2018, *Proses Dekarbursasi Nickel Pig Iron*,

Majalah Metalurgi, 29(2): 153-160

Jephcott, B., 2016, *Nickel Industry Analysis 2016*, Golden Dragon Capital: Nickel Research, 1-15

Jiang, M., Sun, T., Liu, Z., Kou, Z., Liu, N., Zhang, S., 2013, *Mechanism of sodium sulfate in promoting selective reduction of nickel laterite ore during reduction roasting process*, International Journal of Mineral Processing (123), 32-38

Keskinkilic, E., 2019, *Nickel Laterite Smelting Processes and Some Examples of Recent Possible Modifications to the Conventional Route*, Metals:1-16; <https://doi.org/10.3390/met9090974>

Kim, J., Dodbiba, G., Tanno, H., Okaya, K., Matsuo, S., Fujita, T., 2010, *Calcination of Low-Grade Laterite for Concentration of Ni by Magnetic Separation*, Minerals Engineering (23), 282-288; doi:10.1016/j.mineng.2010.01.005

Konig, U., 2021, *Nickel Laterites – Mineralogical Monitoring for Grade Definition and Process Optimization*, Minerals, 1-16;

<https://doi.org/10.3390/min11111178>

Kyle, J.H., 2010, *Nickel Laterite Processing Technologies – Where to Next?*, ALTA 2010 Nickel/Cobalt/Copper Conference;

<https://www.researchgate.net/publication/262455145>



Li, G., Shi, T., Rao, M., Jiang, T., Zhang, Y., 2012, *Beneficiation of nickeliferous laterite by reduction roasting in the presence of sodium sulfate*, Minerals Engineering (32), 19-26

Li, G., Zhi, Q., Rao, M., Zhang, Y., Cai, W., Jiang, T., 2013, *Effect of Basicity on Sintering Behavior of Saprolitic Nickel Laterite in Air*, Powder Technology (249), 212-219;

<http://dx.doi.org/10.1016/j.powtec.2013.08.018>

Li, S., 1999, *Study of Nickeliferous Laterite Reduction*, Hamilton, Ontario: McMaster University Library

LPM ITB, 1998, *Telaah Kelayakan Penambangan Batubara Cerenti, Kabupaten Indragiri Hulu, Provinsi Riau*, LPM ITB, tidak dipublikasikan

Mayangsari, W., Prasetyo, A.B., 2016, *Proses reduksi selektif bijih nikel limonit menggunakan zat aditif CaSO₄*, Metalurgi (1), 1-68

Nurjaman, F., 2022, *Pengaruh Basisitas Slag pada Proses Reduksi Selektif Bijih Nikel Laterit (Limonit dan Saprolit)*, Disertasi, Fakultas Teknik Universitas Indonesia

Nurjaman, F., Astuti, W., Bahfie, F., Suharno, B., 2021, *Study of Selective Reduction in Lateritic Nickel Ore: Saprolite versus Limonite*, Materials Today: Proceedings, 1488-1494;

<https://doi.org/10.1016/j.matpr.2020.11.687>

Nurjaman, F., Bahfie, F., Herlina, U., Astuti, W., Suharno, B., 2020, *Kajian Literatur Parameter Proses Reduksi Selektif Bijih Nikel Laterit*, Metal Indonesia



Nurjaman, F., Handoko, A.S., Bahfie, F., Astuti, W., Suharno, B., 2021, *Effect of*

Modified Basicity in Selective Reduction Process of Limonitic Nickel Ore,

Journal of Materials Research and Technology, 15:6476-6490;

<https://doi.org/10.1016/j.jmrt.2021.11.052>

Nurjaman, F., Sa'adah, A., Shofi, A., Apriyana, W., Suharno, B., 2018, *The Effect*

of Additives and Reductors in Selective Reduction Process of Laterite

Nickel Ore, Jurnal Sains Materi Indonesia: Vol. 20, 8-14

Nurjaman, F., Sa'adah, A., Suharno, B., 2019, *Optimal Conditions for Selective*

Reduction Process of Nickel Laterite Ore, IOP Conf. Series: Materials

Science and Engineering, 1-6; doi:10.1088/1757-899X/523/1/012068

Oxley, A., Barcza, N., 2013, *Hydro-Pyro Integration in the Processing of Nickel*

Laterites, Minerals Engineering: 2-13

Pan, J., Zheng, G., Zhu, D., Zhou, X., 2013, *Utilization of Nickel Slag using*

Selective Reduction Followed by Magnetic Separation, Trans. Nonferrous

Met. Soc. China (23), 3421-3427;

DOI: 10.1016/S1003-6326(13)62883-6

Petrus, H.T.B.M., Diga, A., Rhamdani, A.R., Warmada, I.W., Yuliansyah, A.T.,

Perdana, I., 2017, *Lamtoro charcoal (l. leucocephala) as bioreductor in*

nickel laterite reduction: performance and kinetics study, IOP Conf.

Series: Journal of Physics, 817:012065; doi:10.1088/1742-

6596/817/1/012065

Petrus, H.T.B.M., Putera, A.D.P., Sugiarto, E., Perdana, I., Warmada, I.W.,

Nurjaman, F., Astuti, W., Mursito, A.T., 2019, *Kinetics on Roasting*



Reduction of Limonitic Laterite Ore Using Coconut-Charcoal and

Anthracite Reductants, Minerals Engineering, 126-133;

<https://doi.org/10.1016/j.mineng.2018.11.043>

Petrus, H.T.B.M., Putera, A.D.P., Warmada, I.W., Nurjaman, F., Astuti, W.,

Prasetya, A., 2022, *Investigation on Saprolitic Laterite Ore Reduction Process using Palm Kernel Shell Charcoal: Kinetics and Phase Transformation*, International Journal of Technology (13), 565-574; doi: 10.14716/ijtech.v13i3.4701

PTBA, 2022, *Keputusan Direksi PTBA tentang Merek Dagang (Brand) dan Spesifikasi Batubara PT Bukit Asam Tbk*, tidak dipublikasikan

Putera, A.D.P., Warmada, I.W., Amijaya, D.H., Astuti, W., Sukadana, I.G., Petrus, H.T.B.M., 2023, *A Comparison Study of Nickel Laterite Reduction Using Coal and Coconut Shell Charcoal: A FactSage Simulation*, International Journal of Technology, 267-275; doi: 10.14716/ijtech.v14i2.5808

Rasyid, M.H., Diga, A., Petrus, H.T.B.M., 2016, *Study on Biomass Performance in Reduction of Nickel Laterite from Pomalaa, Sulawesi Tenggara*, AIP Conference Proceedings, 1-8; <https://doi.org/10.1063/1.4958490>

Salleh, M.A.M., Kisiki, N.H., Yusuf, H.M., Wan Ab Karim Ghani, W.A., 2010, *Gasification of biochar from empty fruit bunch in a fluidized bed reactor*, Energies, 1344-1352; doi:10.3390/en3071344

Seok, C.W., Lee, K.H., Son, W.Y., Park, J.K., Kang, Y., 2021, *Study on the Refining Conditions of Nickel Pig Iron for High Purity Nickel Matte Production*,



Infacon XVI: International Ferro-Alloys Congress, 1-7;

<https://ssrn.com/abstract=3926649>

Shofi, A., Rahmawati, A., Nurjaman, F., Suharno, B., 2019, *Effect of Reduction Temperature and Sodium-Based Additives on Nickel Upgradign Process of Laterites Ores*, IOP Conf. Series: Materials Science and Engineering (541), 1-9; doi:10.1088/1757-899X/541/1/012002

Sucofindo, 2019, *Pelaporan hasil pekerjaan pengeboran eksplorasi pengembangan Tambang Banko Selatan (SPPH 10648-1) antara PT Bukit Asam Tbk dan PT Sucofindo (Persero)*, tidak dipublikasikan

Suharno, S., Ilman, N.P., Shofi, A., Ferdian, D., Nurjaman, F., 2019, *Study of Low Grade Nickel Laterite Processing using Palm Shell Charcoal as Reductant*, Proc. of Quality in Research Conference

Sutarwan, A.H., 1995, *Petrographical and chemical properties of coals from the southern peranap deposit central Sumatra basin, Indonesia*, The University of Wollongong: Thesis; <https://ro.uow.edu.au/theses>

Tarumingkeng, S., Mustopa, E.J., Hendrajaya, L., 2016, *Termodinamika dalam Memahami Proses Pengolahan Mineral*, Prosiding Seminal Nasional Fisika Volume V, 37-42; DOI: doi.org/10.21009/0305020607

Trytten, L., 2021, *Matte from NPI – a Good Idea?*, Trytten Consulting Services, 1-3; <https://www.researchgate.net/publication/351250289>

Tyassena, F.Y.P., Agus, T.G., Nur, M.A., Prameswara, G., Amin, I., 2022, *Perbandingan Batubara dan CaSO₄ sebagai Reduktör dalam Proses Reduksi Bijih Nikel Laterit*, Jurnal Teknologi Kimia Mineral, 31-35



Van Wyk, S., 2016, *Coal evaluation and reactivity for direct solid based pre-reduction of sponge iron*, North – West University: Thesis.

Wang, X., Sun, T., Chen, C., Hu, T., 2017, *Current Studies of Treating Processes for Nickel Laterite Ores*, Advances in Computer Science Research Volume 70, 139-152

Yunus, N.A., Ani, M.H., Salleh, H.M., Rashid, R.Z.A., Akiyama, T., Purwanto, H., Othman, N.E.F., 2014, *Effect of Reduction Roasting by Using Bio-Char Derived from Empty Fruit Bunch on the Magnetic Properties of Malaysian Iron Ore*, International Journal of Minerals, Metallurgy and Materials (21), 326-330; DOI: 10.1007/s12613-014-0912-y

Zevgolis, E.N., Daskalakis, K.A., 2021, *The Nickel Production Methods from Laterites and the Greek Ferronickel Production among Them*, Materials Proceedings, 1-12; <https://doi.org/10.3390/materproc2021005104>

Zhu, D.Q., Cui, Y., Vining, K., Hapugoda, S., Douglas, J., Pan, J., Zheng, G.I., 2012, *Upgrading low nickel content laterite ores using selective reduction followed by magnetic separation*, International Journal of Mineral Processing (106-109), 1-7