

DAFTAR PUSTAKA

- [1] “Kementerian ESDM RI - Media Center - Arsip Berita - Pemilik Cadangan Nikel dan Bauksit Terbesar di Dunia, Ini Yang Dilakukan Indonesia.” Diakses: 13 Januari 2026. [Daring]. Tersedia pada: <https://www.esdm.go.id/id/media-center/arsip-berita/pemilik-cadangan-nikel-dan-bauksit-terbesar-di-dunia-ini-yang-dilakukan-indonesia>
- [2] “Hilirisasi Nikel sebagai Langkah Awal Transformasi dan Akselerasi Perekonomian Indonesia.” Diakses: 19 Januari 2026. [Daring]. Tersedia pada: <https://maritim.go.id/detail/hilirisasi-nikel-sebagai-langkah-awal-transformasi-dan-akselerasi-perekonomian-indonesia>
- [3] “Ambisi Transisi Energi Indonesia: Hilirisasi Nikel dan Seterusnya | Natural Resource Governance Institute.” Diakses: 19 Januari 2026. [Daring]. Tersedia pada: <https://resourcegovernance.org/id/articles/indonesia-energy-transition-ambitions-nickel-downstreaming-and-beyond>
- [4] “Sejarah Vale di Indonesia - Vale.” Diakses: 19 Januari 2026. [Daring]. Tersedia pada: <https://vale.com/in/indonesia/sejarah-vale-di-indonesia>
- [5] Y. Bai, N. Muralidharan, Y. K. Sun, S. Passerini, M. Stanley Whittingham, dan I. Belharouak, “Energy and environmental aspects in recycling lithium-ion batteries: Concept of Battery Identity Global Passport,” *Mater. Today*, vol. 41, hal. 304–315, Des 2020, doi: 10.1016/J.MATTOD.2020.09.001.
- [6] R. D. K. Naibaho, “Process Plant Orientation for New Hire Summary Report During Orientation at PT. Vale Indonesia Tbk.,” 2021.
- [7] D. G. Ellingsen, N. Horn, dan J. Aaseth, “Copper,” *Handb. Toxicol. Met.*, hal. 529–546, Jan 2007, doi: 10.1016/B978-012369413-3/50081-1.
- [8] S. Zhang, B. Yi, F. Guo, dan P. Zhu, “Experimental investigation of high-impulse oxygen lancing to achieve ultra-low nitrogen oxide formation in air-and oxy-fuel co-combustion,” *Results Eng.*, vol. 340, hal. 109576, Feb 2026, doi: 10.1016/j.jelepro.2022.130813.
- [9] C. L. Zuo, H. Zhang, J. Kang, J. Zhang, J. Wang, dan C. Guo, “Damage characteristics and material removal mechanisms of SSiC scratched by diamond grits: comparison with RB-SiC,” *Ceram. Int.*, vol. 51, no. 19, hal. 28954–28969, Agu 2025, doi: 10.1016/j.ceramint.2025.04.104.
- [10] J. Tu, X. Duan, X. Luan, D. He, dan L. Cheng, “Low-Velocity Impact Damage Behavior and Failure Mechanism of 2.5D SiC/SiC Composites,” *J. Compos. Sci.*, vol. 9, no. 8, hal. 1–13, 2025, doi: 10.3390/jcs9080388.
- [11] X. Wang, X. Gao, Z. Zhang, L. Cheng, H. Ma, dan W. Yang, “Advances in modifications and high-temperature applications of silicon carbide ceramic matrix composites in aerospace: A focused review,” *J. Eur. Ceram. Soc.*, vol. 41, no. 9, hal. 4671–4688, 2021, doi: 10.1016/j.jeurceramsoc.2021.03.051.
- [12] R. Muhammad, N. Khan, G. Hussain, N. Ullah, A. S. Mohammad, dan A. A. Al Ahmadi, “Computational investigation of the dynamic response of silicon carbide ceramic under impact loading,” *Mater. Res. Express*, vol. 9, no. 9, 2022, doi: 10.1088/2053-1591/ac92c7.
- [13] S. Yashiro, K. Ogi, dan M. Oshita, “High-velocity impact damage behavior of plain-woven SiC/SiC composites after thermal loading,” *Compos. Part B Eng.*, vol. 43, no. 3, hal. 1353–1362, 2012, doi: 10.1016/j.compositesb.2011.11.021.

- [14] F. Habashi, "Fire and the art of metals: A short history of pyrometallurgy," *Trans. Institutions Min. Metall. Sect. C Miner. Process. Extr. Metall.*, vol. 114, no. 3, 2005, doi: 10.1179/037195505X63358.
- [15] J. Zhang, "Pyrometallurgy-based applications in spent lithium-ion battery recycling," *Nano Technol. Batter. Recycl. Remanufacturing, Reusing*, hal. 171–182, Jan 2022, doi: 10.1016/B978-0-323-91134-4.00002-9.
- [16] L. Fu *et al.*, "Design, fabrication and properties of lightweight wear lining refractories: A review," *J. Eur. Ceram. Soc.*, vol. 42, no. 3, hal. 744–763, Mar 2022, doi: 10.1016/j.jeurceramsoc.2021.11.019.
- [17] Y. Huo *et al.*, "Thickness monitoring and discontinuous degradation mechanism of wear lining refractories for refining ladle," *钢铁研究学报 (英文版)*, 2022, Vol. 29, Issue 7, Pages 1110–1118, vol. 29, no. 7, hal. 1110–1118, Jul 2022, doi: 10.1007/s42243-021-00731-x.
- [18] S. N. Silva *et al.*, "Wear mechanism for blast furnace hearth refractory lining," *Ironmak. Steelmak.*, vol. 32, no. 6, hal. 459–467, Jan 2005, doi: 10.1179/174328105X48160.
- [19] A. B. Dresch, J. Venturini, S. Arcaro, O. R. K. Montedo, dan C. P. Bergmann, "Ballistic ceramics and analysis of their mechanical properties for armour applications: A review," *Ceram. Int.*, vol. 47, no. 7, hal. 8743–8761, Apr 2021, doi: 10.1016/J.CERAMINT.2020.12.095.
- [20] Gorgeous, "Sintering Silicon Carbide: Everything You Should Know." Diakses: 2 Maret 2026. [Daring]. Tersedia pada: <https://ggsceramic.com/news-item/sintering-silicon-carbide-everything-you-should-know>
- [21] Z. Fan, J. Zhang, Z. Wang, C. Shan, C. Huang, dan F. Wang, "A State-of-the-Art Review of Fracture Toughness of Silicon Carbide: Implications for High-Precision Laser Dicing Techniques," *Process. 2024, Vol. 12*, vol. 12, no. 12, Nov 2024, doi: 10.3390/pr12122696.
- [22] H. M. Kim dan Y. W. Kim, "Low temperature pressureless sintering of silicon carbide ceramics with aluminayttriamagnesia-calcia," *J. Ceram. Soc. Japan*, vol. 127, no. 4, hal. 207–214, Apr 2019, doi: 10.2109/jcersj2.19024.
- [23] R. G. Munro, "Material Properties of a Sintered -SiC," *J. Phys. Chem. Ref. Data*, vol. 26, hal. 1195, 1997, doi: 10.1063/1.556000.
- [24] A. Malikov dan A. Golyshev, "Investigation of the Resistance to High-Speed Impact Loads of a Heterogeneous Materials Reinforced with Silicon Carbide Fibers and Powder.," *Mater. (Basel, Switzerland)*, vol. 16, no. 2, Jan 2023, doi: 10.3390/ma16020783.
- [25] Y. Peng, Y. Liu, dan W. Zhang, "Analysis of Dynamic Response Behavior of Crack under Impact Stress Wave," *Met. 2021, Vol. 11*, vol. 11, no. 12, Nov 2021, doi: 10.3390/met11121920.
- [26] Z. Wang *et al.*, "Research on the dynamic tensile characteristics and surface crack evolution of coal under impact loading," *Sci. Reports 2024 141*, vol. 14, no. 1, hal. 13283–, Jun 2024, doi: 10.1038/s41598-024-64342-8.
- [27] "Cross Section of Electric Arc Furnace showing Lance position - Kandi Engineering Pvt Ltd." Diakses: 9 Maret 2026. [Daring]. Tersedia pada: <https://www.kandi.co.in/products/calorised-ceramic-coated-pipes/cccp-electric-arc-furnace/>
- [28] J. Li, Z. Ma, C. Chen, J. Zhang, dan B. Wang, "Behavior of Top-Blown Jet

- under a New Cyclone Oxygen Lance during BOF Steelmaking Process,” *Process. 2022, Vol. 10*, vol. 10, no. 3, Mar 2022, doi: 10.3390/pr10030507.
- [29] J. Hu, Q. Yang, S. Yang, H. Yu, dan H. Wang, “Enhanced Impingement Characteristics of Supersonic Oxygen Jets on Molten Bath Using a Multi-nozzle Oxygen Lance in a Converter,” *ISIJ Int.*, vol. 64, no. 5, hal. 773–784, Mar 2024, doi: 10.2355/isijinternational.ISIJINT-2023-362.
- [30] J. Solórzano-López, M. A. Ramírez-Argáez, dan R. Zenit, “Physical modeling of the impingement of an air jet on a water surface,” *Rev. Metal.*, vol. 46, no. 5, hal. 421–434, Okt 2010, doi: 10.3989/revmetalm.0954.
- [31] J. Solórzano-López, R. Zenit, dan M. A. Ramírez-Argáez, “Mathematical and physical simulation of the interaction between a gas jet and a liquid free surface,” *Appl. Math. Model.*, vol. 35, no. 10, hal. 4991–5005, Okt 2011, doi: 10.1016/j.apm.2011.04.012.
- [32] D. Kreculj dan B. Rasuo, “Impact damage modeling in laminated composite aircraft structures,” *Sustain. Compos. Aerosp. Appl.*, hal. 125–153, Jan 2018, doi: 10.1016/B978-0-08-102131-6.00007-4.
- [33] J. Ajeet Vasant, G. Gopi, J. John Rozario Jegaraj, K. Ramesh Kumar, P. Kuppan, dan R. Oyyaravelu, “Finite Element Simulation and Experimental Validation of Laser Assisted Machining of Inconel 718,” *Mater. Today Proc.*, vol. 5, no. 5, hal. 13637–13649, Jan 2018, doi: 10.1016/J.MATPR.2018.02.361.
- [34] C. Felhő, F. Tesfom, dan G. Varga, “ANOVA Analysis and L9 Taguchi Design for Examination of Flat Slide Burnishing of Unalloyed Structural Carbon Steel,” *J. Manuf. Mater. Process. 2023, Vol. 7, Page 136*, vol. 7, no. 4, hal. 136, Jul 2023, doi: 10.3390/JMMP7040136.
- [35] E. Strassburger, H. Senf, H. Rothenhäusler, dan H. Rothenhausler, “Fracture propagation during impact in three types of ceramics,” *J. Phys. IV Proc.*, vol. 4, no. C8, hal. 4, 1994, doi: 10.1051/jp4:1994899.
- [36] M. Sobhani dan A. Balooch, “Fabrication of lightweight clay-based refractory bricks using recycled EPS polymer,” *Case Stud. Constr. Mater.*, vol. 22, hal. e04683, Jul 2025, doi: 10.1016/J.CSCM.2025.E04683.

