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DAFTAR PUSTAKA

[1] P. PT. PLN (PERSERO), "Statistik pln 2024 (revisi tabel 28 & 60)," in *accessed : Feb. 16. 2026*, ser. source : https://web.pln.co.id/stakeholder/laporan-statistik. PLN, 2025, pp. 3 – 4.

[2] D. Mulyani and D. Hartono, "Pengaruh efisiensi energi listrik pada sektor industri dan komersial terhadap permintaan listrik di indonesia," *Jurnal Ekonomi Kuantitatif Terapan*, vol. 11, pp. 1–17, 2018. [Online]. Available: https://api.semanticscholar.org/CorpusID:158768200

[3] P. N. Power, "Pln nusantara power official website," 2026. [Online]. Available: http://www.plnnusantarapower.co.id/

[4] A. D. S. A. I. Imam Hanafi, Sulanjari, "Analisa kinerja forced draft fan (fdf) sebelum dan sesudah overhaul pada unit 2 pltu banten 3 lontar," *Jurnal Inovasi Ilmu Pengetahuan dan Teknologi (JIPTEK)*, vol. 7, no. 1, 2025.

[5] H. Zhu, "Insulation resistance measurements versus temperature made on aged stator bars and coils," in *2007 Electrical Insulation Conference and Electrical Manufacturing Expo*, 2007, pp. 215–218.

[6] X. Zhao, R. Ning, X. Wang, and X. Zhang, "Maintenance optimization for production systems with polytype engineers under limited maintenance capability: A reinforcement learning approach," *IEEE Transactions on Reliability*, vol. 74, no. 4, pp. 5780–5791, 2025.

[7] N. A. Rahmawati, "Electrical test pada proses perbaikan motor induksi rotor sangkar 3300 v 750 kw," *D3 Elektro UGM (ETD)*, pp. 57–83, 2013.

[8] H. Torkaman and F. Karimi, "Influence of ambient and test conditions on insulation resistance/polarization index in hv electrical machines - a survey," *IEEE Transactions on Dielectrics and Electrical Insulation*, vol. 22, no. 1, pp. 241–250, 2015.

[9] H. Kim, T. Kong, S. B. Lee, T.-J. Kang, N. Oh, Y. Kim, S. Park, C. Lim, and G. C. Stone, "Experience with stator insulation testing and turn/phase insulation failures in the power generation industry," *IEEE Transactions on Industry Applications*, vol. 54, no. 3, pp. 2225–2236, 2018.

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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

[10] H. Abdillah, "Analisis pengukuran tahanan isolasi dan indeks polaritas pada motor 3 fasa," *INTRO : Journal Informatika dan Teknik Elektro*, 2023. [Online]. Available: https://api.semanticscholar.org/CorpusID:267176200

[11] A. Oktavianto and J. Joko, "Analisis kelayakan motor induksi 3 fasa berdasarkan tahanan isolasi dan indeks polaritas di pt. pln indonesia power grati pgu," *JURNAL TEKNIK ELEKTRO*, 2024. [Online]. Available: https://api.semanticscholar.org/CorpusID:278003491

[12] kumparan.com, "Anak perusahaan pln apa saja? ini daftar dan profilnya," *kumparan.com > berita-bisnis > anak-perusahaan-pln*, 2024. [Online]. Available: https://kumparan.com/berita-bisnis/anak-perusahaan-pln-apa-saja-ini-daftar-dan-profilnya-23MXMGpG3Py/full

[13] Institute for Essential Services Reform (IESR), "Pltu rembang dan masa depan listrik nasional," 2008, diakses pada 18 Februari 2026. [Online]. Available: https://iesr.or.id/en/pustaka/pltu-rembang-masa-depan-listrik-nasional/

[14] S. M. A. Husni Mubarak, Mahmuddin, "Efficiency of boiler and steam turbine for power plant unit 2 pt. xyz," *Mesin Nunsatara*, vol. 7, no. 1, pp. 49–62, 2024.

[15] S. W. Hanifah Mutiara Fitri, "Sistem kendali tekanan udara sekunder pada force draft fan (fdf) pembangkit listrik tenaga uap," *JURNAL ILMIAH BIDANG TEKNIK ELEKTRO DAN KOMPUTER*, vol. 14, no. 2, pp. 125–133, 2024.

[16] J. L. H. Leonardus Siregar, Rudianto Silaen, "Pengaruh perubahan beban terhadap putarandandayamasuk motor induksi tiga fasa(aplikasi pada laboratorium konversi energi listrik ft-uhn)," *Electric Power, Telecommunications Control System -ELPOTECS Jurnal*, vol. 4, no. 1, pp. 120–155, 2021.

[17] M. Kim, Brandon Verma, "Fundamentals of mv motors," *Materials Today: Proceedings*, pp. 01–76, 2018. [Online]. Available: https://hdl.handle.net/1969.1/175025

[18] P. Kinsler, "Faraday's law and magnetic induction: Cause and effect, experiment and theory," *Physics*, vol. 2, no. 2, pp. 150–163, 2020. [Online]. Available: https://www.mdpi.com/2624-8174/2/2/9

[19] D. C. Libres, "Comparison of fleming's right-hand rule and ijk-notation in determining the direction of magnetic force," *International Journal of Science Education and Teaching (IJSET)*, vol. 2, no. 3, pp. 144–149, 2023.

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[20] S. A. Alkadhim, "Three-phase induction motor: Types and structure," *Electric Power, Telecommunications Control System -ELPOTECS Jurnal*, 2020. 07.

[21] I. S. 141™-1993(R1999), "Ieee recommended practice for electric power distribution for industrial plants," *American National Standards Institute*, pp. 62–63, 1993.

[22] V. Mrzljak, P. Blecich, N. Anđelić, and I. Lorencin, "Energy and exergy analyses of forced draft fan for marine steam propulsion system during load change," *Journal of Marine Science and Engineering*, vol. 7, no. 11, 2019. [Online]. Available: https://www.mdpi.com/2077-1312/7/11/381

[23] B. Rifahardiansyah and l. Isworo, "Studi proteksi motor listrik penggerak forced draft fan di pltu muara karang unit 4," *Diploma thesis, ITPLN*, pp. 05–45, 2017. [Online]. Available: https://repository.itpln.ac.id/id/eprint/4263

[24] A. D. S. A. I. Imam Hanafi, Sulanjari, "Analisa kinerja forced draft fan (fdf) sebelum dan sesudah overhaul pada unit 2 pltu banten 3 lontar," *Jurnal Inovasi Ilmu Pengetahuan dan Teknologi (JIPTEK)*, vol. 7, no. 1, pp. 23–29, 2025.

[25] M. M. R. Edhi Sarwono, Fahrizal Adnan, "Pemodelan dispersi emisi udara so2 dan no2 dengan menggunakan persamaan gaussian pada cerobong pltu muara jawa, kabupaten kutai kartanegara," *Jurnal Teknologi Lingkungan, UNIVERSITAS MULAWARMAN*, vol. 5, no. 2, p. 3981, 2021.

[26] S. B. N. Z. A. Liliana, Zulfatri Aini, "Evaluation and improvement of insulation resistance in induction motor stators using corrective maintenance methods," *Engineering and Technology Journal e-ISSN: 2456-3358*, vol. 10, no. 2, pp. 6647–6653, 2025.

[27] N. Sudheer Reddy, R. Kumar Jarial, and C. Ranga, "Life estimation of thermally stressed insulating papers of rotating machines by using arrhenius model," *Materials Today: Proceedings*, vol. 4, no. 9, pp. 10 643–10 647, 2017, international Conference on Recent Trends in Engineering and Material Sciences (ICEMS-2016), March 17-19, 2016, Jaipur, India. [Online]. Available: https://www.sciencedirect.com/science/article/pii/S2214785317312397

[28] A. I. M. D. H. A. F. D. S. T. A. R. G. M. P. S. K. A. A. S. Hilda Luthfiyah, Okghi Adam Qowiy, "An optimized stator and rotor design of squirrel cage induction motor for emu train," *Journal of Mechatronics, Electrical Power, and Vehicular Technology*, vol. 14, no. 2, pp. 35–46, 2023.

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[29] M. Sundaram and P. Navaneethan, "On the influence of stator slot shape on the energy conservation associated with the submersible induction motors," *American Journal of Applied Sciences*, vol. 8, pp. 393–399, Apr 2011. [Online]. Available: https://thescipub.com/abstract/ajassp.2011.393.399

[30] N. E. M. Association., "Safety standard and guide for selection, installation, and use of electric motors and generators," *NEMA Standards Publication MG 2-2001*, pp. 01–34, 2001.

[31] R. K. Mobley, "Maintenance fundamentals 2nd edition," *Elsevier Butterworth Heinemann*, pp. 05–55, 2004.

[32] I. Std.43-2013, "Ieee recommended practice for testing insulation resistance of electric machinery," *IEEE Std 43-2013 (Revision of IEEE Std 43-2000)*, pp. 1–37, 2014.

[33] S. M. K. M. Kyohei Suzuki, Hiroshi Sako, "Temperature dependence of insulation resistance and current components for generator stator bars," *Electrical Insulation Conference (EIC)*, pp. 452–455, 2016.

[34] S. Ridho, "Analisis tahanan isolasi transformator tenaga unit 6, 60 mva pada pemeliharaan shutdown measurement di pt pln (persero) gardu induk 150 kv manisrejo madiun," *Diploma thesis, ITPLN*, 2024.

[35] I. S. 286-2000, "Ieee recommended practice for measurement of power factor tip-up of electric machinery stator coil insulation," *IEEE Std 286-2000*, pp. 1–29, 2000.

[36] R. Omranipour and S. U. Haq, "How critical are iec 60034-27-3 maximum values for dielectric dissipation factor and tip-up to determine the reliability of motor stator insulation?" in *2015 IEEE Electrical Insulation Conference (EIC)*, 2015, pp. 364–368.

[37] Tokopedia, "Laptop lenovo ideapad 5 2in1," 2026.

[38] D. UK, "Megger mit-1025," 2026.

[39] O. Energy, "Tools omicron testrano 600," 2026.

[40] Omicron, "Tools omicron cp td-1," 2026.

[41] O. Energy, "Tools omicron cp cr-500," 2026.

[42] K. Johnson, "Motor drive technical primer," *Product Architect Teledyne LeCroy*, pp. 87–178, 2019.

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[43] A. Shaikh and H. Sedding, "Experience with dielectric dissipation factor testing of complete stator windings," pp. 296–299, 2024.