

DAFTAR PUSTAKA

- Adam, A. (2021). Analisis kinerja turbin air arus bawah bentuk sudu bengkok 45° untuk pembangkit listrik dengan variasi material. Universitas Hasanuddin.
- Adhikari, R., & Wood, D. (2018). The design of high efficiency crossflow hydro turbines: A review and extension. *Energies*, 11(2), Article 267.
- Aditama, H. D. (2023). Studi eksperimental pengaruh variasi jarak nozzle terhadap daya dan efisiensi pada turbin pelton. *JTM*, 11(2), 81–88.
- Anand, R., Jawahar, C., Bellos, E., & Malmquist, A. (2021). A comprehensive review on Crossflow turbine for hydropower applications. *Ocean Engineering*, 240, 110015.
- Astro, R. B., Doa, H., & Hendro. (2020). Fisika kontekstual pembangkit listrik tenaga mikrohidro. *ORBITA: Jurnal Hasil Kajian, Inovasi, dan Aplikasi Pendidikan Fisika*, 6(1), 142–149.
- Benzon, D. S., Aggidis, G. A., & Anagnostopoulos, J. S. (2018). Development of the Turgo Impulse turbine: Past and present. *ARNP Journal of Engineering and Applied Sciences*, 13(1).
- Bisen, D., Shukla, S., & Sharma, P. K. (2014). Optimization and simulation of hydro-turbine nozzle in based on ansys analysis. *International Journal of Advance Engineering and Research Development*, 1(10), 5–13.
- Bozarov, O., Aliyev, R., Kodirov, D., & Begmatov, E. (2023). Counter-rotor hydraulic unit on the basis of a nozzle jet hydro turbine. *E3S Web of Conferences*, 434, Article 01007.
- Breeze, P. (2018). *Power generation technologies* (3rd ed.). Oxford: Newnes.
- Brekke, H. (2001). *Hydraulic Turbines: Design, Erection and Operation*. Southampton: WIT Press.
- Çengel, Y. A., Boles, M. A., & Kanoğlu, M. (2019). *Thermodynamics: An engineering approach* (9th ed.). McGraw-Hill Education.
- Cobb, B. R., & Sharp, K. V. (2013). *Impulse (Turgo and Pelton) turbine performance characteristics and applications*. Idaho National Laboratory (INL).
- Il, C. A. (2013). *Fluid Mechanics and Thermodynamics of* (7th ed.). Boston: Butterworth-Heinemann.
- , & Dahlan, M. (2023). Analisis kinerja turbin air tipe arus atas 8 (delapan) sudu lengkung. *Journal of Energy, Materials, & Technology (JEMMTEC)*, 2(1), 40–46.



- Fahdita, & Muthahhari, A. A. (2020). Evaluasi bukaan wicket gate dan pintu air terhadap putaran generator pada very low head water turbine. Institut Teknologi Nasional Bandung.
- Gómez, R., Águeda, E. I., Crespo, A., & Calvo, J. (2019). Flow visualization and PIV measurements around a Pelton turbine micro-model. *Experimental Thermal and Fluid Science*, 109, 109865.
- Gupta, A. (2017). A nozzle is an essential part of fluid and pneumatic system to increase or decrease kinetic energy of fluid at the expense of pressure.
- Harfi, R., Setiadi, B., & Afif, G. Y. (2022). Analisis pengaruh variasi nosel terhadap putaran dan daya turbin pada prototipe turbin pelton. *Presisi*, 24(2), 33–41.
- Irawan, D., Nugroho, E., & Widiyanto, E. (2020). Pengaruh jumlah nozzle terhadap kinerja turbin pelton sebagai pembangkit listrik di Desa Sumber Agung Kecamatan Suoh Kabupaten Lampung Barat. *TURBO: Jurnal Program Studi Teknik Mesin UM Metro*, 9(2), 265–269.
- Jain, S. V., & Patel, R. N. (2014). Investigations on effect of bucket splitter angle on performance of Pelton turbine. *International Journal of Research in Engineering and Technology*, 3(4), 216-222.
- Kurniady, I., Amirshyam., & Amrinsyah. (2019). Kapasitas aliran terhadap daya turbin. *JESCE (Journal of Electrical and System Control Engineering)*, 2(2), 98–115.
- Kusnadi, Mulyono, A., Pakki, G., & Gunarko. (2018). Rancang bangun dan uji performansi turbin air jenis kaplan skala mikrohidro. *TURBO: Jurnal Teknik Mesin Universitas Muhammadiyah Metro*, 7(2), 207–213.
- Mafruddin, Irawan R. M., Setiawan N., Rajabiah N., Dwi I., (2019). Pengaruh jumlah sudu dan diameter nosel terhadap kinerja turbin Pelton. *Jurnal Program Studi Teknik Mesin UM Metro. TURBO Vol. 8 No. 2. (2019)*
- Massugianto & Ibrahim, A. F. (2015). Rancang bangun dan analisa kinerja roda turbin undershot dengan memanfaatkan air buangan turbin PLTMH. *Sinergi*, 13(1), 47–61.
- Meleychuk, O., Vanyeyev, S., Koroliov, S., Miroshnychenko, O., Baha, T., Pavlenko, I., Ochowiak, M., Krupińska, A., Matuszak, M., & Włodarczak, S. (2025). Experimental study and CFD analysis of a steam turbogenerator based on a *ergies*, 18(14), 3867.



Merryfield, F. (2014). Cross-flow turbine design for variable conditions. *Procedia Engineering*, 70, 1539–1548.

- Mohamed, M. H., Janiga, G., Pap, E., & Thévenin, D. (2020). Experimental and cfd analysis of impact of surface roughness on hydrodynamic performance of a darrieus hydro (dh) turbine. *Energies*, 13(2), 534.
- Munson, B. R., Rothmayer, A. P., Okiishi, T. H., & Huebsch, W. W. (2013). *Fundamentals of Fluid Mechanics* (7th ed.). Hoboken, NJ: John Wiley & Sons.
- Panjaitan, J. G. Y. (2025). Analisis kinerja turbin air arus atas dengan variasi jumlah nosel. Universitas Hasanuddin.
- Pons-Prats, J., Valero, C., Štefan, D., & Egusquiza, E. (2020). Experimental study of the performance of a micro Pelton turbine. *Renewable Energy*, 161, 692-701.
- Rahayu, L. N., & Windarta, J. (2022). Tinjauan potensi dan kebijakan pengembangan PLTA, PLTM, dan PLTMh di Indonesia. *JEBT: Jurnal Energi Baru & Terbarukan*, 3(2), 88–98.
- Ramaputra, D., & Haurissa, J. (2022). Analisa kinerja turbin turgo dan turbin pelton skala laboratorium. *Jurnal Dinamis*, 19(1), 28–34.
- Rantererung, C. L., Tandiseno, T., & Mallisa, M. (2018). Development of cross flow turbine with multi nozzle. *ARNP Journal of Engineering and Applied Sciences*, 13(1), 249–254.
- Saleh, A., Irawan, D., & Suherman, S. (2018). Analisis numerik pengaruh variasi debit aliran terhadap efisiensi turbin Pelton menggunakan computational fluid dynamic (CFD). *TURBO: Jurnal Program Studi Teknik Mesin*, 7(1), 74-81.
- Santolin, A., Cavazzini, G., Ardizzon, G., & Pavesi, G. (2011). Numerical and experimental investigation of the flow field in a Pelton turbine. *Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy*, 225(7), 891-903.
- Saputra, I. G. N., Jasa, L., & Wijaya, I. W. A. (2020). Pengaruh jumlah sudu pada prototype PLTMH dengan menggunakan turbin pelton terhadap efisiensi yang dihasilkan. *Jurnal Spektrum*, 7(4), 161–172.
- Singh, P., & Nestmann, F. (2011). Experimental optimization of a cross-flow turbine. *Experimental Thermal and Fluid Science*, 35(7), 1239-1248.
- Štigler, J. (2022). Overshot water wheel efficiency measurements for low heads and



EPJ Web of Conferences, 269, 01058.

ika, S., & Hartono, R. Y. (2022). Analisa performa turbin air p variasi jumlah sudu dan bukaan katub pada beban lampu. *Jurnal Teknik Mesin Universitas 17 Agustus 1945 Surabaya*, 8(1),

- Thake, J. (2000). *The Micro-Hydro Pelton Turbine Manual: Design, Manufacture and Installation for Small-Scale Hydro-Power*. London: ITDG Publishing.
- Williamson, S. J., Stark, B. H., & Booker, J. D. (2016). Low head pico hydro turbine selection using a multi-criteria analysis. *Renewable Energy*, 88, 47-55.
- Yasa, I. P. B. S., Wijaya, I. W. A., & Janardana, I. G. N. (2022). Pengaruh variasi sudut nozzle terhadap kecepatan putar turbin dan daya output pada prototype PLTMH menggunakan turbin turgo. *Jurnal Spektrum*, 9(2), 112–119.
- Yusuf, M. R., Hasbi, M., & Samhuddin. (2019). Analisa pengaruh variasi tekanan dan jarak semprot nozzle terhadap daya output pada instalasi turbin pelton. *Enthalpy: Jurnal Ilmiah Mahasiswa Teknik Mesin*, 4(1), 1–10.
- Židonis, A., & Aggidis, G. A. (2015). State of the art in Pelton Turbine research. *Renewable and Sustainable Energy Reviews*, 51, 664-679.
- Zikri, A. (2022). Analisa pengaruh jarak semprot nozzle dan variasi bukaan katup pengatur debit air terhadap unjuk kerja turbin pelton. Universitas Islam Riau.

