

## DAFTAR PUSTAKA

- Abubakar, N., 2019. Analisa Teknis dan Ekonomis Perancangan Cold Storage Ikan Kapasitas 500 Ton dengan Sistem Refrigerasi Cascade Menggunakan Variasi Kombinasi Refrigeran.
- Adebayo, V., Abid, M., Adedeji, M., Dagbasi, M., Bamisile, O., 2021. Comparative thermodynamic performance analysis of a cascade refrigeration system with new refrigerants paired with CO<sub>2</sub>. *Appl Therm Eng* 184, 116286.
- Akan, A.E., Ünal, F., Özkan, D.B., 2021. Investigation of efficiency of R717 refrigerant single stage cooling system and R717/R744 refrigerant cascade cooling system. *Turkish Journal of Engineering* 5, 58–64.
- Akhmad, A., Amir, A., Nurhapsa, N., 2020. Analisis Faktor-Faktor yang Mempengaruhi Pendapatan Nelayan Tradisional di Kabupaten Bone, Sulawesi Selatan. *Jurnal Galung Tropika* 9, 324–331.
- Alimina, N., Sara, L., Arami, H., Mustafa, A., 2022. Pelatihan Penanganan Hasil Tangkapan Bagi Nelayan di Pelabuhan Perikanan Samudera Kendari. *Jurnal Pengabdian Magister Pendidikan IPA* 5, 129–134.
- Bellos, E., Tzivanidis, C., 2019. A theoretical comparative study of CO<sub>2</sub> cascade refrigeration systems. *Applied Sciences* 9, 790.
- Çengel, Y.A., Boles, M.A., 2014. *Thermodynamics An Engineering Approach* 8ed. McGraw-Hill Education. NY.
- Çengel, Y.A., Boles, M.A., 2011. *Thermodynamics: An Engineering Approach* Seventh Edition in SI Units.
- Das, I., Samanta, S., 2020. Comparative Energetic and Exergetic Analyses of a Cascade Refrigeration System Pairing R744 with R134a, R717, R1234yf, R600, R1234ze, R290, in: *Advances in Air Conditioning and Refrigeration: Select Proceedings of RAAR 2019*. Springer, pp. 221–234.
- Fadly, Z.R., Sitepu, M.H., Pi, S.T., Pi, M.T., Hermawan, F., Azis, M.A., Alamsyah, S., 2023. Keragaan Perikanan Cantrang (Studi Kasus di PPN Brondong). *Jurnal Marshela (Marine and Fisheries Tropical Applied Journal)* 1, 55–63.
- Getu, H.M., Bansal, P.K., 2008. Thermodynamic analysis of an R744–R717 cascade refrigeration system. *International journal of refrigeration* 31, 45–54.
- Haddad, W.M., 2017. Thermodynamics: The unique universal science. *Entropy* 19, 621.
- Hadi, E.S., Manik, P., 2012. Analisa Keandalan Terhadap Lifetime System Pendingin Kapal Ikan Km. Rukun Arta Sentosa 06 Menggunakan Refrigeran Co<sub>2</sub> Dan Kompresi Bantu Dari Energi Panas. *Kapal: Jurnal Ilmu Pengetahuan dan Teknologi Kelautan* 5, 52–59.
- Hermawan, R.F.A., 2022. Performance Of Combination Of Ice Gel, Dry Ice and CO<sub>2</sub> Gas As Fish Cooling Media. (Doctoral dissertation, Institut Teknologi Sepuluh Nopember).
- Hoşöz, M., 2005. Performance Comparison of Single-Stage and Cascade Refrigeration Systems Using R134a as the Working Fluid. *Turkish Journal of Engineering & Environmental Sciences* 29.
- Huber, M.L., Lemmon, E.W., Bell, I.H., McLinden, M.O., 2022. The NIST REFPROP database for highly accurate properties of industrially important fluids. *Ind Eng Chem Res* 61, 15449–15472.

- Irfan, A.M., 2012. Analisis Perubahan Tekanan dan Temperatur Kondensor Menggunakan Refrigeran R-22 pada AC 1 PK. *Jurnal Teknik Mesin Teknologi* 15, 43–50.
- Ismanto, D.T., Nugroho, T.F., Baheramsyah, A., 2013. Desain Sistem Pendingin Ruang Muat Kapal Ikan Tradisional Menggunakan Es Kering dengan Penambahan Campuran Silika Gel. *Jurnal Teknik ITS* 2, G177–G180.
- Jeon, M.J., n.d. Experimental analysis of the R744/R404A cascade refrigeration system with internal heat exchanger.
- Joybari, M.M., Selvnes, H., Vingelsgård, E., Sevault, A., Hafner, A., 2023. Parametric study of low-temperature thermal energy storage using carbon dioxide as the phase change material in pillow plate heat exchangers. *Appl Therm Eng* 221, 119796.
- Jumadi, J., n.d. PENGARUH PENGGUNAAN KATUP EKSPANSI JENIS KAPILER DAN TERMOSTATIK TERHADAP PERFORMANSI MESIN PENDINGIN SIKLUS KOMPRESI UAP HIBRIDA MENGGUNAKAN REFRIGERAN R 22. *Jurnal Sains dan Teknologi* 20, 14–17.
- Jumhan, A., Cappenberg, A.D., 2017. Analisis Kinerja Sistem Pendingin Ruang Palkah Ikan Dengan Menggunakan Refrigeran R-22 dan Hidrokarbon (MC-22). *Jurnal Kajian Teknik Mesin* 2, 14–25.
- Kamranpey, A., 2022. A study on effects of mass flow rate and compressor pressure ratio on gas turbine cycle performance. *International Journal of IC Engines and Gas Turbines* 8, 1–8.
- Katili, L., Santoso, H., Putri, E.T., Tolawo, R.G., 2024. Pengamatan Teknik Pengoperasian Alat Tangkap Rawai Tuna (Tuna Long Line) di KM. Mutiara 26 Perairan Samudera Hindia. *MANFISH JOURNAL* 5, 96–103.
- Kelautan, K.M., Nomor, P.R.I., 2017. tentang Estimasi Potensi, Jumlah Tangkapan yang Diperbolehkan, dan Tingkat Pemanfaatan Sumber Daya Ikan di Wilayah Pengelolaan Perikanan Negara Republik Indonesia.
- Khambali, Listiyono, Viyus, V., 2021. PENGARUH REFRIGERAN CAMPURAN HALOKARBON DAN HIDROKARBON TERHADAP TEMPERATUR EVAPORATOR. *Jurnal Teknik Ilmu Dan Aplikasi* 9, 8–11. <https://doi.org/10.33795/jtia.v9i2.25>
- Khan, S.A., Babaa, S.E., 2019. Controversial Second Law of Thermodynamics in the Application of Refrigeration Systems. *Int. J. Eng. Res. Technol.* 8, 43–50.
- Koczan, G.M., Zivieri, R., 2024. Revisions of the Phenomenological and Statistical Statements of the Second Law of Thermodynamics. *Entropy* 26, 1122.
- Kusnanto, S., 2004. Optimasi Pengaruh Kecepatan Udara Pendingin pada AC Mobil. Tugas Akhir S-1 Teknik Mesin Universitas Muhammadiyah Surakarta.
- Laguri, V., Kumar, K., Kumar, P., Kamath, R.P., Venkateswaran, M.B., Hafner, N.K.L.A., 2021. Performance Analysis of CO<sub>2</sub>/Natural Refrigerants for Cascade Refrigeration System, in: International Conference on Polygeneration, IISc.
- Lee, T.-S., Liu, C.-H., Chen, T.-W., 2006. Thermodynamic analysis of optimal condensing temperature of cascade-condenser in CO<sub>2</sub>/NH<sub>3</sub> cascade refrigeration systems. *International journal of refrigeration* 29, 1100–1108.
- Lemmon, E.W., 2010. Thermophysical properties of fluid systems. NIST chemistry WebBook.

- Liang, Y., Zhu, Y., Sun, Z., Ye, K., Wu, J., Lu, J., 2023. Feasibility assessment of a CO<sub>2</sub> based power, cooling, and heating system driven by exhaust gas from ocean-going fishing vessel. *J Clean Prod* 406, 137058.
- Mahmud, K., 2015. Pengaruh Variasi Temperatur Air Pendingin Kondensor Terhadap Tekanan Pada Beban Tetap. *JISI: Jurnal Integrasi Sistem Industri* 2, 1–8.
- Mainnah, M., Sarasati, W., Amir, M.R.F., 2023. STUDI KONTRUKSI ALAT PENANGKAP IKAN JENIS PUKAT CINCIN (PURSE SEINE) PADA KMN. ANUGRAH DI PELABUHAN PERIKANAN SAMUDERA (PPS) KENDARI, PROVINSI SULAWESI TENGGARA: STUDI KONTRUKSI ALAT PENANGKAP IKAN JENIS PUKAT CINCIN (PURSE SEINE) PADA KMN. ANUGRAH DI PELABUHAN PERIKANAN SAMUDERA (PPS) KENDARI, PROVINSI SULAWESI TENGGARA. *Jurnal Perikanan Unram* 13, 813–824.
- MAKAN, G.M., 2021. IKAN (GEMARIKAN) CEGAH STUNTING DI MASA PANDEMI COVID-19. OPTIMISME MENGHADAPI TANTANGAN PANDEMI COVID-19: Gagasan dan Pemikiran Dosen Fakultas Ilmu Kesehatan Universitas Muhammadiyah Parepare 199.
- Mastur, M., Setiyawan, K., Sugiantoro, B., 2017. Pengaruh Variasi Beban, Waktu Pendinginan Dan Temperatur Ruang Terhadap Performasi Mesin Pendingin. *Techno (Jurnal Fakultas Teknik, Universitas Muhammadiyah Purwokerto)* 17, 43–47.
- Masykur, M.A., 2012. Pengaruh Konsentrasi Co<sub>2</sub> Sebagai Inhibitor Refrigeran Alternatif Lpg Terhadap Unjuk Kerja Air Conditioner. (Doctoral dissertation, Universitas Brawijaya).
- Mboto, N.K., Nurani, T.W., Wisodo, S.H., Mustaruddin, M., 2014. Strategi Sistem Penanganan Ikan Tuna Segar Yang Baik Di Kapal Nelayan Hand Line Ppi Donggala. *Jurnal Teknologi Perikanan dan Kelautan* 5, 189–204.
- Messineo, A., 2012. R744-R717 cascade refrigeration system: performance evaluation compared with a HFC two-stage system. *Energy Procedia* 14, 56–65.
- Middelburg, J.J., 2024. The First Law: Work, Heat and Thermochemistry, in: *Thermodynamics and Equilibria in Earth System Sciences: An Introduction*. Springer, pp. 11–25.
- Mulyani, S., 2015. Strategi pengelolaan sumberdaya perikanan berbasis ekosistem. *Oseatek* 9.
- Nguyen, T., Dang, T., 2018. The Effects of Mass Flow Rate on the Performance of a Microchannel Evaporator Using CO<sub>2</sub> Refrigerant, in: *2018 4th International Conference on Green Technology and Sustainable Development (GTSD)*. IEEE, pp. 399–403.
- Novais, W., Cerqueira, E., Narváez-Romo, B., Simões-Moreira, J., 2022. Thermodynamic and heat transfer analysis of cooling technologies: a comparative study 21, 17–24. <https://doi.org/10.5380/reterm.v21i1.86687>
- Nugraha, B., Rahmat, E., 2017. Status perikanan huate (pole and line) di Bitung, Sulawesi Utara. *Jurnal Penelitian Perikanan Indonesia* 14, 313–320.
- Prayoga, M.Y., Iskandar, B.H., Wisudo, S.H., 2017. Peningkatan kinerja manajemen rantai pasok tuna segar di PPS Nizam Zachman Jakarta (PPSNZJ). *ALBACORE Jurnal Penelitian Perikanan Laut* 1, 77–88.

Hanifa Ramadhani Akhira, 2025

*ANALISIS PERFORMA TWO-STAGE CASCADE REFRIGERATION CYCLE MENGGUNAKAN KOMBINASI REFRIGERAN R744 (CO<sub>2</sub>) DAN R717 (NH<sub>3</sub>) UNTUK SISTEM REFRIGERASI KAPAL IKAN*

UPN Veteran Jakarta, Fakultas Teknik, Teknik Perkapalan  
[www.upnvj.ac.id-www.library.upnvj.ac.id-www.repository.upnvj.ac.id]

- Purwanto, E., Ridhuan, K., 2014. Pengaruh Jenis Refrigerant Dan Beban Pendinginan Terhadap Kemampuan Kerja Mesin Pendingin. *Turbo: Jurnal Program Studi Teknik Mesin* 3.
- Putri, D.Z., 2024. ANALISIS SISTEM PENDINGIN KAPAL IKAN BERBASIS KARBON DIOKSIDA (R-744) DENGAN ENGINEERING EQUATION SOLVER. (Doctoral dissertation, Universitas Pembangunan Nasional Veteran Jakarta).
- Ramadhani, F., TK, B.F., Rozi, K., 2023. PERANCANGAN SISTEM HEAT EXCHANGER TIPE FINNED TUBE DENGAN FLUIDA R-134a MENGGUNAKAN SOFTWARE ENGINEERING EQUATION SOLVER. *JURNAL TEKNIK MESIN* 11, 249–254.
- Rosadi, R.T.W., 2009. PENGUJIAN SISTEM REFRIGERASI CASCADE DENGAN MENGGUNAKAN REFRIGERAN ALAMI CAMPURAN R744 DENGAN R170 UNTUK APLIKASI TEMPERATUR RENDAH. (Doctoral dissertation, Universitas Indonesia).
- Roy, R., Mandal, B.K., 2019. Energetic and exergetic performance comparison of cascade refrigeration system using R170-R161 and R41-R404A as refrigerant pairs. *Heat and Mass Transfer* 55, 723–731.
- Sahlil, M.H., Pujiyanto, M.E., Subri, M., 2024. ANALISA PERBANDINGAN PENGGUNAAN REFRIGERANT R-134a & R-1270 (MC-32) PADA SISTEM AIR CONDITIONING (AC) SPLIT 1 PK. *Journal of Industrial and Mechanical Engineering* 2, 12–20.
- Septiaji, M.N., 2022. Pengertian Perangkat Lunak (Software). *Journal of Software*.
- Shanmugasundar, G., Logesh, K., Čep, R., Roy, R., 2023. Evaluating eco-friendly refrigerant alternatives for cascade refrigeration systems: a thermoeconomic analysis. *Processes* 11, 1622.
- Shawyer, M., Pizzali, A.F.M., 2003. The use of ice on small fishing vessels. *Food & Agriculture Org.*
- Silitonga, C., Isnaniah, D.I.S., 2016. Studi Konstruksi Alat Tangkap Pukat Cincin (Purse Seine) Di Pelabuhan Perikanan Nusantara (PPN) Sibolga Kelurahan Pondok Batu Kota Sibolga Provinsi Sumatera Utara. Student Faculty Of Fisheries And Marine Science, University Of Riau.
- Sovanda, B.Y., Baheramsyah, A., 2013. Studi perencanaan Jacketed Storage System memanfaatkan CO<sub>2</sub> cair sebagai refrigeran. *Jurnal Teknik ITS* 2, G209–G212.
- Suamir, I.N., Wibolo, A., Subagia, I.W.A., Idrayana, I.P.E., Putra, A.A.N.D.I., 2021. Sistem refrigerasi CO<sub>2</sub>: solusi alternatif sistem refrigerasi ramah lingkungan untuk aplikasi supermarket. *Journal of Applied Mechanical Engineering and Green Technology* 2, 48–59.
- Supardi, A., 2007. Kapal Penangkap Ikan. Sekolah Tinggi Perikanan Teknologi Penangkapan Ikan. Jakarta.
- Supriana, P.D., Dantes, K.R., Nugraha, I.N.P., 2019. Pengaruh Variasi Fluida Pendingin Terhadap Capaian Suhu Optimal Pada Rancangan Mesin Pendingin Mini Water Chiller. *Jurnal Pendidikan Teknik Mesin Undiksha* 7, 36–42.
- Susana, I.G.B., Putra, I.K.P., 2024. Kinerja Pendinginan Suhu Konstan 150C dengan Variasi Dimensi Kondenser pada Truk Refrigerator: Cooling Performance 15C Constant Temperature with Variations Condenser Dimensions in Refrigerator Trucks. *Jurnal Pendidikan Teknik Mesin Undiksha* 12, 19–28.

- Suyanto, S., Mustikawati, D.L., 2022a. PENGARUH TEKANAN REFRIGERAN TERHADAP UNJUK KERJA MESIN PENDINGIN MENGGUNAKAN FREON R-134A. *Jurnal Teknologi Maritim* 5.
- Suyanto, S., Mustikawati, D.L., 2022b. PENGARUH TEKANAN REFRIGERAN TERHADAP UNJUK KERJA MESIN PENDINGIN MENGGUNAKAN FREON R-134A. *Jurnal Teknologi Maritim* 5.
- Suyasa, I.N., 2005. Pengelolaan Sumberdaya Ikan Indonesia (Pendekatan Normatif). Makalah Falsafah Sains. Program Pascasarjana. Institut Pertanian Bogor. <http://rudyct.tripod.com/seperi yang diterima pada 16, 35>.
- TIMUR, M.K.B.J., KURNIASARI, Y., 2017. KOMPOSISI HASIL TANGKAPAN JARING INSANG PERMUKAAN (SURFACE GILL NET) DI UNIT PELAKSANA TEKNIS PELABUHAN DAN PENGELOLAAN SUMBERDAYA KELAUTAN DAN PERIKANAN (UPT P2SKP).
- Triyanto, A., 2023. PENGARUH VARIASI TEKANAN REFRIGERANT TERHADAP KINERJA SISTEM AIR CONDITIONER SPLIT KONVENTSIONAL. *OKTAL: Jurnal Ilmu Komputer dan Sains* 2, 3145–3150.
- Turgut, M.S., Turgut, O.E., 2019. Comparative investigation and multi objective design optimization of R744/R717, R744/R134a and R744/R1234yf cascade refrigeration systems. *Heat and Mass Transfer* 55, 445–465.
- Udroiu, C.-M., Mota-Babiloni, A., Navarro-Esbrí, J., 2022. Advanced two-stage cascade configurations for energy-efficient–80° C refrigeration. *Energy Convers Manag* 267, 115907.
- Vaishak, S., Singha, P., Dasgupta, M.S., Hafner, A., Widell, K., Bhattacharyya, S., Saini, S.K., Arun, B.S., Samuel, M.P., Ninan, G., 2023. Performance analysis of a CO<sub>2</sub>/NH<sub>3</sub> cascade refrigeration system with subcooling for low temperature freezing applications. *International Journal of Refrigeration* 153, 140–154.
- Victorin, C.K., Louis, A.O., Alain, A., Clotilde, G.T., 2020. Parametric study of NH<sub>3</sub>/CO<sub>2</sub> cascade refrigeration cycles for hot climates. *Int. J. Res. Rev* 7, 219–229.
- Wilyani, A., 2016. ANALISIS EKONOMI DAN LINGKUNGAN HIDUP DARI PENGGANTIAN REFRIGERANT AIR CONDITIONER DI UNIVERSITAS ISLAM NEGERI SULTAN SYARIF KASIM RIAU. (Doctoral dissertation, Universitas Islam Negeri Sultan Syarif Kasim Riau).
- Wuryandani, D., Meilani, H., 2011. Kebijakan pengelolaan sumber daya perikanan laut untuk menunjang ketahanan pangan di Indonesia. *Jurnal Ekonomi dan Kebijakan Publik* 2, 395–422.
- Zohuri, B., Zohuri, B., 2017. Thermodynamics of Cycles. Compact Heat Exchangers: Selection, Application, Design and Evaluation 291–313.
- Zulkifli, Z., Baharuddin, B., Sitepu, A.H., Farid, M., 2019. Desain Sistem Refrigerated Sea Water (RSW) pada Kapal Ikan Pelat Datar 10 GT. *Jurnal Penelitian Enjiniring* 23, 39–44.