

DAFTAR PUSTAKA

- AEA Technology Environment, 2006. Task 24: Energy from biological conversion of organic waste. [Online] Available at: www.ieabioenergy.com
- AFROX, 2011. Material Safety Data Sheet : Hydrogen Sulphide. [Online] Available at: www.afrox.co.za [Accessed 14 Januari 2023].
- Agustina, S. (2016). Skrinning Fitokimia Tanaman Obat di Kabupaten Bima. Indonesia E-Journal of Applied Chemistry. Vol(4),1.
- Air Liquide, 2018. Safety Data Sheet : Methane. [Online] Available at: Alsafetydatasheets.com [Accessed 14 Januari 2023].
- Ali, Sun J. 2015. Physico-chemical pretreatment and fungal biotreatment for park wastes and cattle dung for biogas production. Springerplus 2015;4(1):1–14. <https://doi.org/10.1186/s40064-015-1466-9>
- Annuycheewa, P. et al., 2016. Enhancing enzymatic hydrolysis and biogas production from rice straw by pretreatment with organic acids. Industrial Crops and Products, Volume 87, pp. 247-254.
- Anonim. (1989). The Biogas Technology in China. Chengdu Biogas Research Institute, Chengdu, China.
- ASME, 2018. ASME Setting the Standard. [Online] Available at: <https://www.asme.org/codes-standards/find-codes-standards/b31-8-gas-transmission-distribution-piping-systems>.
- Badan Pusat Statistik, 2021. Suhu provinsi Riau 2019-2021. [Online] Available at : <https://riau.bps.go.id/indikator/151/138/1/suhu.html> [Akses 7 November 2022].
- Badan Pusat Statistik, 2022. Populasi Sapi Potong menurut provinsi. [Online] Available at: <https://www.bps.go.id/indikator/24/469/1/populasi-sapi-potong-menurut-provinsi.html> [Akses 7 November 2022]
- Bethell, W. J., 2010. Biogas Upgrading. Auckland (NZ), Patent No. US20100107872A1.

- BPPT, 2018. Kunjungan Lapangan Pilot Plant Biogas dengan Teknologi CSTR. [Online] Available at: <https://ptseik.bppt.go.id/berita-ptseik/142-kunjungan-lapangan-pilot-plant-biogas-dengan-teknologi-cstr>
- Brown, G.G. 1978. *Unit Operation*. Modern Asia Edition. New York: John Wiley and Sons Inc.
- Carl L. Yaws & McGraw-Hill, 1999. *Chemical Properties Handbook: Physical, Thermodynamic, Environmental Transport, Safety & Health Properties*. s.l.:s.n.
- Chemical Engineering Plant Cost Index, www.chemengonline.com/pci
- Chemical Engineering World, 2019. Spherical Storage Tank Design. [Online] Available at: <https://chemicalengineeringworld.com/spherical-storage-tank-design/> [Accessed 28 April 2020].
- Chemical Engineering, 2011. Chemical Engineering Cost Index. [Online] Available at: http://folk.ntnu.no/magnehi/cepci_2011_py.pdf.
- Chemical Engineering, 2014. Economic Indicator. [Online] Available at: www.chemeng.queensu.ca/courses/CHEE332/files/CEPCI_2014.pdf
- CR Clean Air, 2015. The Importance of Selecting the Right Wet Scrubber Materials. [Online] Available at: <https://www.crcleanair.com/uncategorized/the-importance-of-selecting-wet-scrubber-materials/>
- DACHENG corp., n.d. Centrifugal Pump. [Online] Available at: <https://dacheng-pump.en.made-in-china.com/product/zKNEfpkYaPRC/China-1-5dk-20-Centrifugal-Pump-Industrial-Pump-1HP-Pump-Price.html> [Accessed 09 Januari 2023].
- Deublein, D. & Steinhauser, A., 2008. *Biogas from Waste and Renewable Resource*. Jerman: Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim.
- Disidry Silica Gel, n.d. How to regenerate. [Online] Available at: <https://www.silica-gel.it/en/content/14-how-to-regenerate-> [Accessed Desember 2022].
- Disidry Silica Gel, n.d. How to Regenerate Silica Gel. [Online] Available at: <https://www.silica-gel.it/en/content/14-how-to-regenerate->
- Donaldson Filtration Solutions, n.d. Heat Regenerated Adsorption Dryer. [Online] Available at: <https://www.donaldson.com/en-be/compressed-air-process/products/compressed-air-gas/dryers/heat-regenerated-adsorption/>

Duangmanee, T., 2009. Micro-aeration for hydrogen sulfide removal from biogas.

Dwinanda, V. C., 2017. Perancangan Wet Scrubber sebagai Unit Pengurang Kadar H₂S pada Produksi Biogas di PT Enero Mojokerto. Surabaya: Fakultas Teknik Industri, Institut Teknologi Sepuluh Nopember.

Energy Smarts, 2013. Anaerobic Digestion: Turning Waste into Renewable Energy. [Online] Available at: <http://blog.mass.gov/energy/green-business/anaerobic-digestion-turning-waste-into-renewable-energy/>

Engineering Tool Box, n.d. Engineering Tool Box. [Online] Available at: https://www.engineeringtoolbox.com/coal-heating-values-d_1675.html

Engineeringtoolbox.com. Methane – Density and Specific Weight vs Temperature and Pressure. Diakses pada 7 November 2020, dari Methane - Density and Specific Weight vs. Temperature and Pressure (engineeringtoolbox.com).

Engler, C. R., McFarland, M. J., Jordan, E. R. & Lacewall, R. D., 2003. Economics and Environmental Impact of Biogas Production as a Manure Management Strategy. Research Gate, Januari.

Filter Water, n.d. Iron and Hydrogen Sulfide Whole House Filter. [Online] Available at: <http://www.filterwater.com/p-220-iron-and-hydrogen-sulfide-whole-house-filter.aspx>

Geankoplis, C.J. 1983. *Transport Process and Unit Operation*. Third Edition. New Delhi: Prentice-Hall International, Inc.

Handayani, Sri. 2022. “Diktat Ekonomi Teknik”. Serpong: Institut Teknologi Indonesia.

Health Nutrition Corner, 2018. Phase Diagram and Triple Point. [Online] Available at: <http://healthnutritioncorner.blogspot.com/2018/08/phase-diagram-and-triple-point.html> [Accessed 06 Juni 2020].

HEIL, n.d. Corrosion Resistant Made From FRP. [Online] Available at: <https://heilprocessequipment.com/products/air-strippers>

Henry.mpch-mainz.gwdg.de. Henry’s Law Constant. Diakses pada 10 November 2022, dari <https://henry.mpch-mainz.gwdg.de/henry/>.

Himmelblau, David M. dan James B. riggs. 1989. “*Basic Principles and Calculations in Chemical Engineering*”. New Jersey: Prentice Hall.

- HOST, 2015. WABICO, WAALWIJK: From Waste to Biomethane, Clean Water, Solid Compost & Liquified CO₂. [Online] Available at: <https://www.host.nl/en/case/waalwijk-the-netherlands/> [Accessed 24 Januari 2023].
- Husnil, Y.A. 2018. Diktat Operasi Teknik Kimia 2. Tangerang Selatan : Institut Teknologi Indonesia.
- Indiamart, n.d. Stainless Steel Silo Tank. [Online] Available at: <https://www.indiamart.com/proddetail/stainless-steel-silo-tank-15320061055.html>
- J&M Industrial, n.d. CarbonSteel Tanks. [Online] Available at: <https://www.jmindustrial.com/product/13723-used-2500-gallon-carbon-steel-tank-with-stainless-mixer-8%C3%B8/>
- Joelianingsih. 2020. "Azaz Teknik kimia 1 dan 2 : *Mass Balance and Energy Balance*". Serpong: Institut Teknologi Indonesia.
- Kementrian Energi dan Sumber Daya Mineral, 2022. Data Penjualan, Ekspor dan impor LPG 2016-Semester I 2021. Direktorat Jenderal Minyak dan Gas Bumi.
- Kholiq, M. A., 2017. Mengenal Tipe-tipe Reaktor Biogas [Online] Available at: <https://ptseik.bppt.go.id/artikel-ilmiah/52-mengenal-tipe-tipe-reaktor-biogas>
- Klemm, D., Heublein, B., Fink, H.-P., & Bohn, A. (2005). Cellulose: Fascinating biopolymer and sustainable raw material. *Angewandte Chemie International Edition*, 44(22), 3358-3393.
- KOMPAS, 2012. Kotoran Sapi Termanfaatkan Menjadi Biogas. [Online] Available at: <https://internasional.kompas.com/read/2012/01/28/03135797/Kotoran.Sapi.Termanfaatkan.Menjadi.Gas>
- Kurs Transaksi Bank Indonesia, [Kurs Transaksi BI](#). Last Update : 3 Februari 2023
- LabChem Perfomance Through Chemistry, 2007. Citric Acid Safety Data Sheet. [Online] Available at: www.labchem.com
- LabChem: Perfomance through chemistry, 2013. Water Safety Data Sheet. [Online]. Linus Klackenberg, 2019. Biomethane in Sweden - market overview & policies, Sweden: November.

- Lewicki. A., et al., 2018. *Potential of Biogas Production from Palm Oil Empty Fruit Bunch (EFB) in South-East Asia*. Poland : *Institute of Biosystems Engineering Poznan University of Life Sciences Poznan*
- Li, R., Chen, S. & Li, X., 2007. Performance Evaluation of Anaerobic Digestion of Dairy Manure in Plug Flow Reactor and Continuous Stirred Tank Reactor.
- Lothar Gunther, 2013. *Method and plant for treating crude gas, in particular biogas, containing methane and carbon dioxide in order to produce methane*. Geretsried (DE), Patent No. US 8500864 B2.
- Menteri Energi dan Sumber Daya Mineral Republik Indonesia, 2018. Keputusan Menteri Energi dan Sumber Daya Mineral Republik Indonesia. s.l.:Menteri Energi dan Sumber Daya Mineral Republik Indonesia.
- MERCK, 2018. Lembaran Data Keselamatan Bahan, s.l.: Peraturan (UE) No.1907/2006.
- Monses & Hastuti, N. B., 2007. Pra Rancangan Pabrik Biogas dari POME sebagai Pembangkit Listrik , Tangerang Selatan: Institut Teknologi Indonesia.
- Muddarisna, N. & Prijono, S., 2014. The Potential of Arachis pintoi Biomass to Improve Quality of Soil Continously used for Cassava Cropping. *Journal of Degraded and Mining Lands Management*, Volume 1, pp. 87-92.
- Nuringtyas, Tri Rini. 2010. *Karbohidrat*. Gajah Mada University Press: Yogyakarta
- OHIO, n.d. Property Tables Ideal Gas. [Online] Available at: https://www.ohio.edu/mechanical/thermo/property_tables/gas/idealGas.html [Accessed 05 Januari 2023].
- Ohio State University, n.d. Biogas Cleaning and Upgrading Technologies. [Online] Available at: <https://ohioline.osu.edu/factsheet/AEX-653.1-14> [Accessed 20 Januari 2023].
- OUC, The Reliable One, n.d. Large Offices, Average Energy Use data. [Online] Available at: <https://ouc.bizenergyadvisor.com/article/large-offices>
- Peraturan Menteri Pekerjaan Umum dan Perumahan Rakyat Nomor 14/MRT/M2020 Tahun 2010 tentang Standar Pelayanan Minimal Bidang Pekerjaan Umum dan Penataan Ruang.
- Perry, R.H. and Green, D. 1999. *Chemical Engineering Handbook*. ed. 7. New York: Mc Graw Hill.

- PRAXAIR, 2016. Safety Data Sheet : Carbon Dioxide. [Online] Available at: amp.generalair.com [Accessed 14 Januari 2023].
- PT. Karya Sakti Sentosa, n.d. Dump Truck. [Online] Available at: <https://www.ksskaroseri.com/>
- Putri, D. A., Saputro, R. R. & Budiyo, B., 2012. *Biogas Production from Cow Manure*. Int. Journal of Renewable Energy Development, pp. 61-64.
- Putri, R. D. A. & Tsani, S. T., 2015. Pengaruh Suhu dan Konsentrasi Rumen Sapi Terhadap Produksi Biogas Dari Vinasse. Jurnal Bahan Alam Terbarukan, Volume 1, pp. 1-5.
- Raabe, S., 2009. Cow Waste to Help Xcel Produce Electricity. [Online] Available at: <https://www.denverpost.com/2009/03/05/cow-waste-to-help-xcel-produceelectricity/>[Accessed 24 Desember 2022].
- Roy, K.D., Thomas, A.M., and Ian, B. 2012. *Reaction system for anaerobic digestion*. US, Patent No US20120164723A1.
- Sander, S. P., Abbatt, J., Barker, J. R., Burkholder, J. B., Friedl, R. R., Golden, D. M., Huie, R. E., Kolb, C. E., Kurylo, M. J., Moortgat, G. K., Orkin, V. L., & Wine, P. H.: Chemical Kinetics and Photochemical Data for Use in Atmospheric Studies, Evaluation No. 17, JPL Publication 10-6, Jet Propulsion Laboratory, Pasadena, URL <http://jpldataeval.jpl.nasa.gov> (2011).
- Sadi, T. A., 2008. Biogas Handbook. Denmark: University of Southern Denmark Esbjerg, Niels Bohrs Vej.
- Singh, K. J. & Sooch, S. S., 2004. Comparative study of economics of different models of family size biogas plants for state of Punjab, India. Energy Conversion and Management, pp. 1329-1341.
- Soehartanto, T., Sarwono & Noryati, R. D., 2016. Pengembangan Teknologi Purifikasi Biogas (Kandungan Gas H₂S Dan CO₂) dengan Menggunakan Kombinasi Wet Scrubber-Batu Gamping. s.l., Institut Teknologi sepuluh Nopember.
- Suhartati, S. et al., 2016. Analisis Sifat Fisika dan Kimia Lignin Tandan Kosong Kelapa Sawit asal Desa Sape, Kabupaten Sanggau, Kalimantan Barat. Jurnal Penelitian dan Pengembangan Ilmu Kimia, 2(No.1), pp. 24-29.

- Solutions Energy Pvt. Ltd., n.d. Process of Converting Cow Dung to Power. [Online] Available at: http://www.s4e.co.in/waste_cattle_dung.php [Accessed 24 Desember 2022].
- Sorbent Media, 2019. How to Regenerate Silica Gel. [Online] Available at: <https://sorbentmedia.com/blogs/news/how-to-regenerate-silica-gel>
- Srinivasan, V.R. and John, J.S. 2004. *Plug flow anaerobic digester*. WO, Patent No US6673243B2.
- State Supply, n.d. Spirax-Sarco Flash Tanks. [Online] Available at: <https://www.statesupply.com/spirax-sarco/flash-tank>
- Stover, E.L. and Ted, R.S. 2017. *Optimized biogas (biomethane) production from anaerobic reactors*. WO, Patent No.US20170016031A1.
- The Engineering Toolbox, 2017. Carbon Dioxide Phase Diagram. [Online] Available at: https://www.engineeringtoolbox.com/CO2-carbon-dioxide-properties-d_2017.html [Accessed 24 Desember 2022].
- Transgasindo. (2020). Laporan Tahunan PT Transportasi Gas Indonesia. PT Transportasi Gas Indonesia
- United Nation. (1984). Updated Guidebook On Biogas Development. New York: United Nation
- Gantina, T. M., Iriani, P., Maridjo, & Wachjoe, C. K. (2020). Biogas purification using water scrubber with variations of water flow rate and biogas pressure. *Journal of Physics: Conference Series*, 1450(1). <https://doi.org/10.1088/1742-6596/1450/1/012011>
- Li, R., Li, X., & Chen, S. (2007). Performance evaluation of anaerobic digestion of dairy manure in plug flow reactor and continuous stirred tank reactor. *Nongye Gongcheng Xuebao/Transactions of the Chinese Society of Agricultural Engineering*, 23(9).
- Wadchasit, P., Siripattana, C., & Nuithitikul, K. (2020). The effect of pretreatment methods for improved biogas production from oil-palm empty fruit bunches (EFB): Experimental and model. *IOP Conference Series: Earth and Environmental Science*, 463(1). <https://doi.org/10.1088/1755-1315/463/1/012126>
- Warneck, P. & Williams, J.: The Atmospheric Chemist's Companion: Numerical Data for Use in the Atmospheric Sciences, Springer Verlag, doi:10.1007/978-94-007-2275-0 (2012)

Wellinger, A. & Lindberg, A., 2000. Biogas Upgrading and Utilisation. International Energy Association.

Widodo, T. W., Asari, A., Ana, N. & Rahmarestia, E., 2007. Pemanfaatan Limbah Industri Pertanian untuk Energi Biogas. s.l., Badan Litbang Pertanian.

