

## DAFTAR PUSTAKA

- Alghoul, M. A., Poovanaesvaran, P., Mohammed, M. H., Fadhil, A. M., Muftah, A. F., Alkilani, M. M., & Sopian, K. (2016). Design and experimental performance of brackish water reverse osmosis desalination unit powered by 2 kW photovoltaic system. *Renewable Energy*, 93, 101–114. <https://doi.org/10.1016/j.renene.2016.02.015>
- Alkaya, E., & Demirer, G. N. (2016). MINIMIZING AND ADDING VALUE TO SEAFOOD PROCESSING WASTES. *Food and Bioproducts Processing*. <https://doi.org/10.1016/j.fbp.2016.07.003>
- Alves, T. F. M. S. (2014). Wastewater characterization and monitoring and troubleshooting of an IASB reactor at a Fish-Canning Plant. Universidade Do Porto. Retrieved from <https://repositorio-aberto.up.pt/bitstream/10216/88739/2/31495.pdf>
- Bates, W. T. (2001). Cleaning your RO. Retrieved December 13, 2017, from [www.membranes.com/docs/papers/02\\_cleaning.pdf](http://www.membranes.com/docs/papers/02_cleaning.pdf)
- Benini, L., Mancini, L., Sala, S., Manfredi, S., Schau, E. M., & Pant, R. (2014). Normalisation method and data for Environmental Footprints. Luxembourg: European Commission, Joint Research Center, Institute for Environment and Sustainability, Publications Office of the European Union. <https://doi.org/10.2788/16415>
- Bhakar, V., Kumar, D. N. S. H., Krishna, N., & Singh, K. (2016). Life cycle assessment of filtration systems of reverse osmosis units : a case study of a university campus. *Procedia CIRP*, 40, 268–273. <https://doi.org/10.1016/j.procir.2016.01.119>
- BPS. (2017). Kecamatan Kumai dalam Angka Tahun 2017. Kotawaringin Barat: Badan Pusat Statistik Kabupaten Kotawaringin Barat.
- Chalamaiah, M., Dinesh, B., Hemalatha, R., & Jyothirmayi, T. (2012). Fish protein hydrolysates : Proximate composition , amino acid composition , antioxidant activities and applications : A review. *Food Chemistry*, 135(4), 3020–3038. <https://doi.org/10.1016/j.foodchem.2012.06.100>
- Carvalho, L., Di Bernardino, S., & Duarte, E. (n.d.). Anaerobic digestion of a fish processing industry sludge. In 16th European Biosolids and Organic Resources Conference. LEED UK. Retrieved from <http://repositorio.lneg.pt/>

bitstream/10400.9/1453/1/Paper fish sludge.pdf

Cheremisinoff, N. P. (2002). *Handbook of Water and Wastewater Treatment Technologies*. Boston, Oxford, Auckland, Johannesburg, Melbourne, New Delhi: Butterworth Heinemann.

Cleaning Procedures for AM-11. (n.d.). Retrieved December 13, 2017, from [https://www.appliedmembranes.com/media/wysiwyg/pdf/chemicals/am-11\\_cleaning\\_instr.pdf](https://www.appliedmembranes.com/media/wysiwyg/pdf/chemicals/am-11_cleaning_instr.pdf)

Cleaning Procedures for AM-55. (n.d.). Retrieved December 13, 2017, from [https://www.appliedmembranes.com/media/wysiwyg/pdf/chemicals/am-55\\_cleaning\\_instr.pdf](https://www.appliedmembranes.com/media/wysiwyg/pdf/chemicals/am-55_cleaning_instr.pdf)

Daddi, T., Nucci, B., & Iraldo, F. (2017). Using Life Cycle Assessment (LCA) to measure the environmental benefits of industrial symbiosis in an industrial cluster of SMEs. *Journal of Cleaner Production*, *147*, 157–164. <https://doi.org/10.1016/j.jclepro.2017.01.090>

Doorn, M. R. J., Towprayoon, S., Vieira, S. M. M., Irving, W., Palmer, C., Pipatti, R., & Wang, C. (2006). Wastewater Treatment and Discharge. In E. H.S., B. L., M. K., N. T., & T. K (Eds.), *2006 IPCC Guidelines for National Greenhouse Gas Inventories*. Prepared by the National Greenhouse Gas Inventories Programme. IGES, Japan.

DTIE UNEP. (2003). *Evaluation of Environmental Impacts In Life Cycle Assessment*. UNEP, EPA, CML, AGA.

Duangpaseuth, SDas, Q., Chotchamlong, N., Ariunbaatar, J., Khunchornyakong, A., & Prashanthini, V. (n.d.). *Seafood Processing*.

Dwiyitno, Aji, N., & Indriati, N. (2008). Residu Logam Berat pada Ikan dan Kualitas Lingkungan Perairan Muara Sungai Barito Kalimantan Selatan. *Jurnal Pascapanen Dan Bioteknologi Kelautan Dan Perikanan*, *3*(2). <https://doi.org/10.15578/jpbkp.v3i2.19>

Ellis, T. (2006). CE 421/521 Environmental biotechnology. Retrieved March 27, 2018, from [home.eng.iastate.edu/~tge/ce421-521/Lecture11-14-06.pdf](http://home.eng.iastate.edu/~tge/ce421-521/Lecture11-14-06.pdf)

Gao, W., Liang, H., Ma, J., Han, M., Chen, Z., Han, Z., & Li, G. (2011). Membrane fouling control in ultra filtration technology for drinking water production: A review. *Desalination*, *272*(1–3), 1–8. <https://doi.org/10.1016/j.desal.2011.01.051>

Garff, M., Cadena, E., Sanchez-Ramos, D., & Ferrer, I. (2016). Life cycle assessment of drinking water: Comparing conventional water treatment, reverse osmosis and mineral water in glass and plastic bottles. *Journal of Cleaner Production*, *137*, 997–

1003. <https://doi.org/10.1016/j.jclepro.2016.07.218>

- Goga, T. (2016). A Comparative Life Cycle Assessment ( LCA ) of Water Treatment Plants using Alternative Sources of Water ( Seawater and Mine Affected Water ) by Submitted in fulfilment of the academic requirements of Master of Science in Engineering School of Engineering. School of Engineering College of Agriculture, Engineering and Science, University of KwaZulu-Natal.
- Gómez, D. R., Watterson, J. D., Americanohia, B. B., Ha, C., Marland, G., Matsika, E., ... Treanton, K. (2006). Chapter 2: Stationary Combustion. In 2006 IPCC Guidelines for National Greenhouse Gas Inventories (p. 47). [https://doi.org/10.1016/S0166-526X\(06\)47021-5](https://doi.org/10.1016/S0166-526X(06)47021-5)
- Greenlee, L. F., Lawler, D. F., Freeman, B. D., Marrot, B., Moulin, P., & Ce, P. (2009). Reverse osmosis desalination: Water sources , technology , and today ' s challenges. *Water Research*, 43(9), 2317–2348. <https://doi.org/10.1016/j.watres.2009.03.010>
- Gustave, I. P., Arsana, K., & Sanjaya, I. P. Y. (2014). PERENCANAAN SISTEM JARINGAN DISTRIBUSI PENYEDIAAN AIR MINUM PEDESAAN DI DESA KUBU KECAMATAN KUBU. *Jurnal Ilmiah Teknik Sipil*, 18(2), 180–187.
- Hadi, S., & dkk. (2002). Pengumpulan Data dan Informasi untuk MCMA Propinsi Kalimantan Tengah. (N. S. Ningsih, Ed.) (I). Palangka Raya, Bandung: Pusat Penelitian Kelautan LPPM ITB, BAPPEDA Kalteng.
- Hait, S., & Mazumder, D. (2009). Performance evaluation of an aerobic biofilter with high organics containing synthetic wastewater. *International Journal of Environment and Pollution*, 37(2–3), 141–149. <https://doi.org/10.1504/IJEP.2009.025113>
- Hall, G. M., & Kose, S. (2014). Fish Processing Installations: Sustainable Operation. In I. S. Boziaris (Ed.), *Seafood Processing: Technology, Quality and Safety* (pp. 1–488). West Sussex: John Wiley & Sons. <https://doi.org/10.1002/9781118346174>
- Hanna, L. N., & Hadi, W. (2016). Kelayakan Teknologi Desalinasi Sebagai Alternatif Penyediaan Air Minum Kota Surabaya ( Studi Kasus : 50 Liter per detik ). *Jurnal Teknik ITS*, 5(2).
- Indriatmoko, R. H., & Herlambang, A. (1999). PENGOLAHAN AIR ASIN ATAU PAYAU DENGAN SISTEM OSMOSIS BALIK. Jakarta.
- Iribarren, D., Moreira, M. T., Iribarren, D., Moreira, M. T., & Feijoo, G. (2010). Life Cycle Assessment of fresh and canned mussel processing and consumption in Galicia ( NW Spain ). “*Resources, Conservation & Recycling*,” 55(2), 106–117.

<https://doi.org/10.1016/j.resconrec.2010.08.001>

- Kalbar, P. P., Karmakar, S., & Asolekar, S. R. (2013). Assessment of wastewater treatment technologies: life cycle approach, 27(3), 261–268. <https://doi.org/10.1111/wej.12006>
- Kampschreur, M. J., Temmink, H., Kleerebezem, R., Jetten, M. S. M., & van Loosdrecht, M. C. M. (2009). Nitrous oxide emission during wastewater treatment. *Water Research*, 43(17), 4093–4103. <https://doi.org/10.1016/j.watres.2009.03.001>
- Kementerian Lingkungan Hidup. (2012). Pedoman Penyelenggaraan Inventarisasi Gas Rumah Kaca Nasional Buku II. Jakarta: Kementerian Lingkungan Hidup.
- Kepmen 5899 Tahun 2016\_Pengesahan RUPTL PLN 2016-2025\_Salinan Sesuai Aslinya.pdf. (2016).
- Knops, F., Steggink, M., & Korbl, I. (n.d.). Design of Ultrafiltration plants for safe drinking water. Retrieved March 3, 2018, from [varim.se/.../3-xflowuf-for-safe-drinking-water-final2-oct-20...](http://varim.se/.../3-xflowuf-for-safe-drinking-water-final2-oct-20...)
- Lier, J. B. Van, Mahmoud, N., & Zeeman, G. (2008). Anaerobic Wastewater Treatment. In M. Heze, M. van Loosdrecht, G. A. Ekama, & D. Brdjanovic
- Liu, Q., Jiang, P., Zhao, J., Zhang, B., Bian, H., & Qian, G. (2011). Life cycle assessment of an industrial symbiosis based on energy recovery from dried sludge and used oil. *Journal of Cleaner Production*, 19(15), 1700–1708. <https://doi.org/10.1016/j.jclepro.2011.06.013>
- Lin, S. D. (2007). *Water and Wastewater Calculation Manual* (2 nd). The McGraw-Hill Companies Inc. <https://doi.org/10.1036/0071476245>
- Mattila, T., Lehtoranta, S., Sokka, L., Melanen, M., & Nissinen, A. (2012). Methodological Aspects of Applying Life Cycle Assessment to Industrial Symbioses, 16(1), 51–60. <https://doi.org/10.1111/j.1530-9290.2011.00443.x>
- Maya-Altamira, L., Baun, A., Angelidaki, I., & Schmidt, J. E. (2008). Influence of wastewater characteristics on methane potential in food-processing industry wastewaters. *Water Research*, 42, 2195–2203. <https://doi.org/10.1016/j.watres.2007.11.033>
- Mechram, S. (2008). Penentuan Head Loss Emitter Tipe Selang Kecil dari Bahan Lokal Sepanjang Pipa Lateral pada Sistem Irigasi Tetes. *Jurnal Teknologi Pertanian*, 9(2), 114–120.
- Menoufi, K. A. I. (2011). Life Cycle Analysis and Life Cycle Impact Assessment Methodologies: A State of the Art.

- Mendez, R., Omil, F., & Lema, J. M. (1992). Pilot Plant Studies on the Anaerobic Treatment of Different Wastewaters from a Fish-Canning Factory. *Water Science & Technology*, 25(1). Retrieved from <http://wst.iwaponline.com/content/25/1/37>
- Midgley, P., Wang, M., Berntsen, T., Bey, I., Brasseur, G., Buja, L., ... Yantosca, R. (2001). Atmospheric Chemistry and Greenhouse Gases. In *Climate Change 2001: The Scientific Basis*. IPCC. Retrieved from <https://www.ipcc.ch/ipccreports/tar/wg1/pdf/TAR-04.PDF>
- Najjar, Y. S. H. (2011). Gaseous Pollutants Formation and Their Harmful Effects on Health and Environment. *Innovative Energy Policies*, 1, 1–8. <https://doi.org/10.4303/iep/E101203>
- Opara, LU., S M Al-Jufaili, and M. S. R. (2007). Postharvest Handling and Preservation of Fresh Fish and Seafood. In M. S. Rahman (Ed.), *Handbook of Food Preservation* (2nd Edition, pp. 151–172). Boca Raton London New York: CRC Press.
- Opher, T., & Friedler, E. (2016). Comparative LCA of decentralized wastewater treatment alternatives for non-potable urban reuse. *Journal of Environmental Management*, 182, 464–476. <https://doi.org/10.1016/j.jenvman.2016.07.080>
- Oxtoby, D. W., Gillis, H. P., & Nachtrieb, N. H. (2001). *Prinsip-prinsip Kimia Modern*. Jilid I (Edisi ke 4). Penerbit Erlangga.
- Pintilie, L., Torres, C. M., Teodosiu, C., & Castells, F. (2016). Urban wastewater reclamation for industrial reuse : An LCA case study. *Journal of Cleaner Production*, 139, 1–14. <https://doi.org/10.1016/j.jclepro.2016.07.209>
- Polruang, S., Sirivithayapakorn, S., & Prateep, N. T. R. (2017). A comparative life cycle assessment of municipal wastewater treatment plants in Thailand under variable power schemes and effluent management programs. *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2017.10.183>
- Prasertsan, P., Jung, S., & Buckle, K. a. (1994). Anaerobic filter treatment of fishery wastewater. *World Journal of Microbiology & Biotechnology*, 10(1), 11–3. <https://doi.org/10.1007/BF00357553>
- Pusat Studi Sumber Daya dan Teknologi Kelautan UGM. (2014). Jenis, Potensi, Peluang Pemanfaatan Sumber Daya Kelautan dan Perikanan. In L. dan U. Sahubawa (Ed.), *Teknologi Pengawetan dan Pengolahan Hasil Perikanan*. Yogyakarta: Gadjah Mada University Press.
- Ramakrishnan, V., Ghaly, A., Brooks, M., & Budge, S. (2013). Extraction of Oil from Mackerel Fish Processing Waste using Alcalase Enzyme. *Enzyme Engineering*,

- 2(2). <https://doi.org/10.4172/2329-6674.1000115>
- Renouf, M. ., Grant, T., Sevenster, M., Logie, J., Ridoutt, B., Ximenes, F., ... Lane, J. (2015). Best Practice Guide for Life Cycle Impact Assessment ( LCIA ) in Australia. Australian Life cycle Assessment Society. Retrieved from [www.alcas.asn.au](http://www.alcas.asn.au)
- Resun LP series. (2018). Retrieved March 28, 2018, from <http://www.balekoi.com/resun-lp-series.html>
- Rizaldi Boer, Dewi, R. G., Siagian, U. W., Ardiansyah, M., Surmaini, E., Ridha, D. M., ... Parinderati, R. (2012). Pedoman Penyelenggaraan Inventarisasi Gas Rumah Kaca Nasional Buku Ii - Volume 1 Metodologi Penghitungan Tingkat Emisi Gas Rumah Kaca Kegiatan Pengadaan Dan Penggunaan Energi (Vol. 1). Kementerian Lingkungan Hidup.
- Ras, C., & von Blottnitz, H. (2012). A comparative life cycle assessment of process water treatment technologies at the Secunda industrial complex , South Africa. *Water SA*, 38(4), 549–554. <https://doi.org/http://dx.doi.org/10.4314/wsa.v38i4.10>
- Said, N. I. (2003). Aplikasi Teknologi Osmosis Balik Untuk Memenuhi Kebutuhan Air Minum. *J.Tek.Ling. P3TL-BPPT*, 4(2), 16–35.
- Said, N. I., & Firly. (2005). Uji Performance Biofilter Anaerobik Unggun Tetap Menggunakan Media Biofilter Sarang Tawon untuk Pengolahan Air Limbah Rumah Potong Ayam. *JAI*, 1(3), 289–303.
- Said, N. I. (2008). Pengolahan Payau Menjadi Air Minum dengan Teknologi Reverse Osmosis. In *Teknologi Pengolahan Air Minum* (pp. 443–501). Jakarta: BPPT.
- Said, N. I. (2017). *Teknologi Pengolahan Air Limbah*. Jakarta: Penerbit Erlangga.
- Sampels, S. (2015). The effects of processing technologies and preparation on the final quality of fish products. *Trends in Food Science & Technology*, 44(2), 131–146. <https://doi.org/10.1016/j.tifs.2015.04.003>
- SNI 6728.1:2015. Penyusunan Neraca Sumber daya - Bagian 1 Sumber Daya Air Spasial. Indonesia. Retrieved from Setiyono, & Yudo, S. (2010). Prototipe Instalasi Pengolahan Air Limbah Industri Pengolahan Ikan Di Kecamatan Muncar, Kabupaten Banyuwangi. *J. Tek. Ling*, 11(1), 7–26.
- Sperling, M. von, & Chernicharo, C. A. de L. (2005). *Biological Wastewater Treatment in Warm Climate Regions*. London: IWA Publishing. Retrieved from <http://www.iwapublishing.com/sites/default/files/ebooks/9781780402734.pdf>  
<http://www.bakosurtanal.go.id/assets/download/sni/SNI/SNI-19-6728.1-2002.pdf>

- Snip, L. J. P. (2010). Quantifying the greenhouse gas emissions of wastewater treatment plants. Wageningen University. Retrieved from [http://modeleau.fsg.ulaval.ca/fileadmin/modeleau/documents/Publications/MSc\\_s/sniplaura\\_msc.pdf](http://modeleau.fsg.ulaval.ca/fileadmin/modeleau/documents/Publications/MSc_s/sniplaura_msc.pdf)
- Sperling, M. von, & Chernicharo, C. A. de L. (2005). *Biological Wastewater Treatment in Warm Climate Regions*. London: IWA Publishing. Retrieved from [//www.iwapublishing.com/sites/default/files/ebooks/9781780402734.pdf](http://www.iwapublishing.com/sites/default/files/ebooks/9781780402734.pdf)
- Stranddorf, H. K., Hoffmann, L., & Schmidt, A. (2005). Impact categories, normalisation and weighting in LCA. *Environmental News* (Vol. 78). [https://doi.org/Environmental project nr. 995](https://doi.org/Environmental%20project%20nr.%20995)
- Suhadi, D. R., & Febrina, A. S. (2013). *Pedoman Teknis Penyusunan Inventarisasi Emisi Pencemar Udara Di Perkotaan*, 153.
- Sunny, N., & Mathai P, L. (2013). Physicochemical process for fish processing wastewater. *International Journal of Innovative Research in Science, Engineering and Technology*, 2(4), 901–905.
- Sularso, & Tahara, H. (2000). *Pompa dan Kompresor*. Jakarta: PT. Pradnya Paramita.
- Surat\_Penyampaian\_Faktor\_Emisi\_GRK\_Subsektor\_Ketenagalistrikan.pdf. (2016).
- Suhadi, D. R., & Febrina, A. S. (2013). *Pedoman Teknis Penyusunan Inventarisasi Emisi Pencemar Udara Di Perkotaan*, 153.
- Sularso, & Tahara, H. (2000). *Pompa dan Kompresor*. Jakarta: PT. Pradnya Paramita.
- Tariq Al-Sarkal, H. A. A. (2013). Ultrafiltration versus sedimentation-based pretreatment in Fujairah-1 RO plant: Environmental impact study. *Desalination*, 317, 55–66. <https://doi.org/http://dx.doi.org/10.1016/j.desal.2013.02.019>
- Tarnacki, K., Meneses, M., Melin, T., Medevoort, J. van, & Jansen, A. (2012). Environmental assessment of desalination processes: Reverse osmosis and Memstill. *Desalination*, 296, 69–80. <https://doi.org/10.1016/j.desal.2012.04.009>
- Tay, J.-H., Show, K.-Y., & Hung, Y.-T. (2004). Seafood Processing Wastewater Treatment. In L. K. Wang, Y. Hung, H. H. Lo, & C. Yapijakise (Eds.), *Handbook of industrial and hazardous wastes treatment* (2nd ed., Vol. Chapter 14, pp. 29–66). New York, Basel: Marcel Dekker, Inc.
- Tchobanoglous, G., Burton, F. R., & Stensel, H. D. (2003). *Wastewater Engineering. Treatment and Reuse* (4 th). Metcalf & Eddy, Inc.
- The DOW Chemical Company. (n.d.-a). *FILMTEC Membranes System Design: The*

- Steps to Design a Membrane System. Retrieved March 6, 2018, from <https://www.dow.com/webapps/lit/litorder.asp?filepath=liquidseps/pdfs/noreg/609-02055.pdf&pdf=true&pdf=true>
- The DOW Chemical Company. (n.d.-b). System Design Guidelines for Commercial Elements. Retrieved March 6, 2018, from <https://www.dow.com/webapps/lit/litorder.asp?filepath=liquidseps/pdfs/noreg/609-02054.pdf&pdf=true>
- The DOW Chemical Company. (2016). DOW FILMTEC™ SW30HRLE – 400 Element. Retrieved March 6, 2018, from <http://www.dow.com/webapps/include/GetDoc.aspx?filepath=liquidseps/pdfs/noreg/609-03001.pdf>
- Titan Flow Control Inc. (2000). Technical and performance data. pressure drop charts, WYE & Basket Strainers. Retrieved March 14, 2018, from <http://www.titanfci.com/docs/technical-data/strpdc.pdf>
- Tukiman, Santoso, P., & Satmoko, A. (2013). Perhitungan Dan Pemilihan Pompa Pada Instalasi Pengolahan Air Bebas Mineral Iradiator Gamma Kapasitas 200 KCi. In *Prosiding Pertemuan Ilmiah Perencanaan Perangkat Nuklir PRPN-BATAN*, 14 November 2013. Tangerang Selatan: BATAN.
- Veiga, M. C., Mendez, R., & Lema, J. M. (1994). Anaerobic filter and DSFF reactors in anaerobic treatment of tuna processing wastewater. *Wat. Sci. Tech*, 30(12), 425–432.
- Versluys, H. (2014). Primary sedimentation investigation using a physical-chemical analysis method. Universiteit Gent. Retrieved from [https://lib.ugent.be/fulltxt/RUG01/002/166/774/RUG01-002166774\\_2014\\_0001\\_AC.pdf](https://lib.ugent.be/fulltxt/RUG01/002/166/774/RUG01-002166774_2014_0001_AC.pdf)
- Vince, F., Aoustin, E., Bréant, P., & Marechal, F. (2008). LCA tool for the environmental evaluation of potable water production. *Desalination*, 220(1–3), 37–56. <https://doi.org/10.1016/j.desal.2007.01.021>
- Voutchkov, N. (2013). *Desalination Engineering Planning and Design*. New York: McGraw-Hill.
- WHO. (2005). WHO Air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide. World Health Organization. Retrieved from <http://www.euro.who.int/Document/E87950.pdf>.
- Widiyanto, A., Kato, S., & Maruyana, N. (2003). Environmental Impact Analysis of



- Indonesian Electric Generation Systems. *JSME International Journal Series B*, 46 No. 4(June), 650–659. <https://doi.org/10.1299/jsmeb.46.650>
- Widiyanto, A., Kato, S., & Maruyana, N. (2003). Environmental Impact Analysis of Indonesian Electric Generation Systems. *JSME International Journal Series B*, 46 No. 4(June), 650–659. <https://doi.org/10.1299/jsmeb.46.650>
- Widiyasa, I. N., Paramita, V., & Kusumayanti, H. (2009). BWRO Desalination for Potable Water Supply Enhancement in Coastal Region. *Journal of Coastal Development*, 12(2), 81–88.
- Widiyasa, I. N., & Yoshi, L. A. (2016). Techno-Economy Analysis A Small Scale Reverse Osmosis System for Brackish Water Desalination. *Internat. J. Sci. Eng.*, 10(2), 51–57. <https://doi.org/10.12777/ijse.10.2.51-57>
- Winarni. (2003). KOAGULASI MENGGUNAKAN ALUM DAN PACl. *Makara, Teknologi*, 7(3), 89–95.
- Yoshi, L. A., & Widiyasa, I. N. (2016). Sistem Desalinasi Membran Reverse Osmosis ( RO ) untuk Penyediaan Air Bersih. In *Prosiding Seminar Nasional Teknik Kimia “Kejuangan” Pengembangan Teknologi Kimia untuk Pengolahan Sumber Daya Alam Indonesia*. Yogyakarta, 17 Maret 2016 (pp. 1–7). Yogyakarta: Program Studi Teknik Kimia, UPN “Veteran” Yogyakarta.
- Zang, Y., Li, Y., Wang, C., Zhang, W., & Xiong, W. (2015). Towards more accurate life cycle assessment of biological wastewater treatment plants: A review. *Journal of Cleaner Production*, 107, 676–692. <https://doi.org/10.1016/j.jclepro.2015.05.060>
- Zainudin, Sayoga, I. M. A., & Nuarsa, I. M. (2012). Analisa Pengaruh Variasi Sudut Sambungan Belokan Terhadap Head Losses Aliran Pipa. *Dinamika Teknik Mesin*, 2(2), 74–83. Retrieved from <https://www.scribd.com/document/323035437/Head-Loss-Pipa-Belokan>
- Zhou, J., Chang, V. W. C., & Fane, A. G. (2011). Environmental life cycle assessment of brackish water reverse osmosis desalination for different electricity production models. *Energy Environ. Sci.*, 4, 2267–2278. <https://doi.org/10.1039/c0ee00828a>
- Zijp, M. ., & Van der Laan, H. (2015). Life Cycle Assessment of two drinking water production schemes. Bilthoven.