
DAFTAR PUSTAKA

- Alibaba. (2022). Retrieved June 20, 2022, from <https://www.alibaba.com/>
- Alliance Consulting International. (2008). Methanol Safe Handling Manual. *Methanol Institute*, 5, 1–37.
- Amran, U. I., Ahmad, A., & Othman, M. R. (2017). Kinetic based simulation of methane steam reforming and water gas shift for hydrogen production using aspen plus. *Chemical Engineering Transactions*, 56, 1681–1686. <https://doi.org/10.3303/CET1756281>
- Andersson, J., & Grönkvist, S. (2019). Large-scale storage of hydrogen. *International Journal of Hydrogen Energy*, 44(23), 11901–11919. <https://doi.org/10.1016/j.ijhydene.2019.03.063>
- ASME. (2017). *ASME Guidelines for Water Quality in Modern Industrial Water Tube Boilers for Reliable Continuous Operation*. 600.
- Borgna, A., Hensen, E. J. M., Van Veen, J. A. R., & Niemantsverdriet, J. W. (2004). Intrinsic kinetics of thiophene hydrodesulfurization on a sulfided NiMo/SiO₂ planar model catalyst. *Journal of Catalysis*, 221(2), 541–548. <https://doi.org/10.1016/j.jcat.2003.09.018>
- Bozzano, G., & Manenti, F. (2016). Efficient methanol synthesis: Perspectives, technologies and optimization strategies. *Progress in Energy and Combustion Science*, 56, 71–105. <https://doi.org/10.1016/j.pecs.2016.06.001>
- BPS (2013). *Statistik Perdagangan Luar Negeri Indonesia Impor Vol.1*. Available at <https://www.bps.go.id/publication/2013/07/08/c0dde6afde9610565111cf9f/statistik-perdagangan-luar-negeri-indonesia-impor-2013-jilid-i.html>
- BPS (2014). *Statistik Perdagangan Luar Negeri Indonesia Ekspor Vol.1*. Available at <https://www.bps.go.id/publication/2014/06/26/9dc139438fb815a71497cf67/statistik-perdagangan-luar-negeri-indonesia-ekspor-2013-jilid-i.html>
-

- BPS (2015). *Statistik Perdagangan Luar Negeri Indonesia Ekspor Vol.1*. Available at <https://www.bps.go.id/publication/2015/06/29/d1a5b9e91f2b7f1ff5c03615/statistik-perdagangan-luar-negeri-indonesia-ekspor-2014-jilid-i.html>
- BPS (2016). *Statistik Perdagangan Luar Negeri Indonesia Ekspor Vol.1*. Available at <https://www.bps.go.id/publication/2016/05/04/de8bd2ddfcfd7671ce3daa7d/statistik-perdagangan-luar-negeri-indonesia-ekspor-2015-jilid-i.html>
- BPS (2016). *Statistik Perdagangan Luar Negeri Indonesia Impor Vol.1*. Available at <https://www.bps.go.id/publication/2016/06/30/73cd412e66057c8debb0bcda/statistik-perdagangan-luar-negeri-indonesia-impor-jilid-i-tahun-2015.html>
- BPS (2017). *Statistik Perdagangan Luar Negeri Indonesia Ekspor Vol.1*. Available at <https://www.bps.go.id/publication/2017/06/06/3820bc9e0a03e86abd8d04d3/statistik-perdagangan-luar-negeri-indonesia-ekspor-2016-jilid-i.html>
- BPS (2017). *Statistik Perdagangan Luar Negeri Indonesia Impor Vol.1*. Available at <https://www.bps.go.id/publication/2017/06/05/b22c1a7e60bf6e7f7efb3b09/statistik-perdagangan-luar-negeri-indonesia-impor-2016-jilid-i.html>
- BPS (2018). *Statistik Perdagangan Luar Negeri Indonesia Ekspor Vol.1*. Available at <https://www.bps.go.id/publication/2018/06/04/2d27d1def4bf1f86c92ebbd7/statistik-perdagangan-luar-negeri-indonesia-ekspor-2017-jilid-i.html>
- BPS (2018). *Statistik Perdagangan Luar Negeri Indonesia Impor Vol.1*. Available at <https://www.bps.go.id/publication/2018/05/11/a9a77e8eea6ac3af80d8d3fc/statistik-perdagangan-luar-negeri-indonesia-impor-2017-jilid-i.html>
- BPS (2019). *Statistik Perdagangan Luar Negeri Indonesia Ekspor Vol.1*. Available at <https://www.bps.go.id/publication/2019/07/05/17703cb88c5ef84820141f9f/statistik-perdagangan-luar-negeri-indonesia-ekspor-2018-jilid-i.html>
- BPS (2019). *Statistik Perdagangan Luar Negeri Indonesia Impor Vol.1*. Available at <https://www.bps.go.id/publication/2019/05/08/b61e029397e3c37998a7e279/statistik-perdagangan-luar-negeri-indonesia-impor-2018-jilid-i.html>

- BPS (2020). *Statistik Perdagangan Luar Negeri Indonesia Ekspor Vol.1*. Available at <https://www.bps.go.id/publication/2020/07/06/1fc0f62538843b51c2df2c79/statistik-perdagangan-luar-negeri-indonesia-ekspor-2019-jilid-i.html>
- BPS (2021). *Statistik Perdagangan Luar Negeri Indonesia Ekspor Vol.1*. Available at <https://www.bps.go.id/publication/2021/07/06/bdae29cceed062aef4a6d148/statistik-perdagangan-luar-negeri-indonesia-ekspor-2020--jilid-i.html>
- BPS (2021). *Statistik Perdagangan Luar Negeri Indonesia Impor Vol.1*. Available at <https://www.bps.go.id/publication/2021/06/10/2f4516969cc6fa220892f170/statistik-perdagangan-luar-negeri-indonesia-impor-2020-jilid-i.html>
- BPS Kota Bontang (2020). *Kota Bontang dalam Angka*. Available at <https://bontangkota.bps.go.id/publication/2020/04/27/d1d3de16e6373cd10ba8516e/kota-bontang-dalam-angka-2020.html>
- Brodkey, R. S., & Hershey, H. C. (2003). *Transport Phenomena: A Unified Approach*.
- Brooks, B. W. (1991). Chemical reactor analysis and design. In *The Chemical Engineering Journal* (Vol. 47, Issue 2). [https://doi.org/10.1016/0300-9467\(91\)85016-o](https://doi.org/10.1016/0300-9467(91)85016-o)
- Brownell, & Young. (1959). Process Equipment Design Handbook. In *Advances in Applied Science Research* (Vol. 3, Issue 3, p. 408).
- Clariant. (n.d.). *HDMax® 200 Catalyst for Hydrodesulfurization of Hydrocarbon Feedstock*. <https://www.clariant.com/en/Solutions/Products/2019/03/13/12/29/HDMax-200>
- Couper, J. R., Penney, W. R., Fair, J. R., & Walas, S. M. (2005). Chemical Process Equipment. In *Chemical Process Equipment*. <https://doi.org/10.1016/B978-0-7506-7510-9.X5000-1>

Crowl, D.A., Louvar, J.F. (2002). *Chemical Process Safety*. Prentice Hall. New Jersey.

Dalena, F., Senatore, A., Basile, M., Knani, S., Basile, A., & Iulianelli, A. (2018). Advances in methanol production and utilization, with particular emphasis toward hydrogen generation via membrane reactor technology. *Membranes*, 8(4). <https://doi.org/10.3390/membranes8040098>

Dalena, F., Senatore, A., Marino, A., Gordano, A., Basile, M., & Basile, A. (2018). Methanol Production and Applications: An Overview. In *Methanol* (Vol. 32, Issue 07, pp. 3–28). Elsevier. <https://doi.org/10.1016/B978-0-444-63903-5.00001-7>

Evans, F. L. (1974). Equipment Design Handbook for Refineries and Chemical Plants. In *Gulf Publishing Company*.

Filho, L. (2008). Comparative Evaluation Between Steam and Autothermal Reforming of Methane Processes To Produce Syngas. *Brazilian Journal of Petroleum and Gas*, 2(1), 27–35.

Flynn, A. M., Akashige, T., & Theodore, L. (2019). Kern's Process Heat Transfer. In *Kern's Process Heat Transfer*. Wiley. <https://doi.org/10.1002/9781119364825>

Foust, A. (1981). *Principles of unit operations, 2nd Edition*

Froment, G. F., & Xu, J. (1989). Methane Steam Reforming , Methanation and Water-Gas Shift : 1 . Intrinsic Kinetics. *AIChE Journal*, 35(1), 88–96.

Global Asset Protection Services LLC. (2001). Oil and Chemical Plant Layout and Spacing. *GAPS Guidelines, GAP.2.5.2*, 1–13.

Green, D. D. W., & Southard, D. M. Z. (2019). Perry's Chemical Engineers' Handbook, 9th Edition. In *Perry's Chemical Engineers' Handbook, 9th Edition*.

Huang, Y., Zhou, Z., Qi, Y., Li, X., Cheng, Z., & Yuan, W. (2011). Hierarchically macro-/mesoporous structured Co-Mo-Ni/ γ -Al₂O₃ catalyst for the hydrodesulfurization of thiophene. *Chemical Engineering Journal*, 172(1), 444–451. <https://doi.org/10.1016/j.cej.2011.06.006>

Indiamart. (2022). Retrieved June 20, 2022, from <https://www.indiamart.com/>

Izbassarov, D., Nyári, J., Tekgül, B., Laurila, E., Kallio, T., Santasalo-Aarnio, A., Kaario, O., & Vuorinen, V. (2021). A numerical performance study of a fixed-bed reactor for methanol synthesis by CO₂ hydrogenation. *International Journal of Hydrogen Energy*, 46(29), 15635–15648. <https://doi.org/10.1016/j.ijhydene.2021.02.031>

Jack P. Holman. (2010). Heat Transfer, Tenth Edition (McGraw-Hill Series in Mechanical Engineering). In *McGraw-Hill, Inc, New York: Vol. 9 MB*.

Jianguo, Xu, & (Petrochemische Techniek Rijksuniversiteit Gent Gent, B. (1989). Methane Steam Reforming, Methanation and Water-Gas shift. *AIChE Journal*, 35(1), 88–96.

Karimi-Golpayegani, M., Akhavan-Abdollahian, A., & Mostoufi, N. (2005). Simulation of a fluidized-bed steam reformer. *Industrial Fluidization South Africa, November*, 323–329.

Kementerian ESDM (2020), *Peraturan Menteri ESDM No. 8 Tahun 2020*

Lange, J. P. (2001). Methanol synthesis: A short review of technology improvements. *Catalysis Today*, 64(1–2), 3–8. [https://doi.org/10.1016/S0920-5861\(00\)00503-4](https://doi.org/10.1016/S0920-5861(00)00503-4)

Leonzio, G. (2020). Analysis and optimization of a methanol reactor with the adsorption of carbon monoxide and water. *Renewable Energy*, 146, 2744–2757. <https://doi.org/10.1016/j.renene.2019.08.084>

- Manenti, F., Cieri, S., & Restelli, M. (2011). Considerations on the steady-state modeling of methanol synthesis fixed-bed reactor. *Chemical Engineering Science*, 66(2), 152–162. <https://doi.org/10.1016/j.ces.2010.09.036>
- Matche. (2014). Retrieved June 20, 2022, from <https://www.matche.com/>
- Material Safety Data Sheet (MSDS)*
- Metcalf & Eddy, Tchobanoglous, G., Burton, F., & Stensel, H. D. (2017). *Wastewater Engineering Treatment Disposal Reuse*.
- Methanol Institute (2011). *Methanol 2011 Milestones*. Available at www.methanol.org
- Methanol Institute. (2012). *Atmospheric Above Ground Tank Storage of Methanol*. 1–7.
- MHHE. (2014). Retrieved June 20, 2022, from <https://www.mhhe.com/>
- Peppley, B., Amphlett, J., Kearns, L., & Mann, R. (1999). Methanol-steam reforming on Cu/ZnO/Al₂O₃. Part 1 : the reaction network. *Applied Catalysis A: General*, 179, 21–29.
- Peraturan Pemerintah Republik Indonesia No. 41 Tahun 1999 tentang Pengendalian Pencemaran Udara
- Peters, M. S., & Peters, J. I. (1959). Plant design and economics for chemical engineers. In *Engineering Economist* (Vol. 5, Issue 1). <https://doi.org/10.1080/00137915908965075>
- Pilling, M., & Summers, D. R. (2012). Be Smart about Column Design. *American Institute of Chemical Engineers, November*, 32–38.
- PT. Badak NGL (2019). *Annual Report PT. Badak NGL 2019*. Available at <http://portal.badaklng.co.id/images/pdf/Annual-Report-Badak-LNG-2019.pdf>

- R. Perry, D. G. (2008). Perrys chemical Engineerings' handbook. In *McGraw-Hill, New York*.
- Rezaie, N., Jahanmiri, A., Moghtaderi, B., & Rahimpour, M. R. (2005). A comparison of homogeneous and heterogeneous dynamic models for industrial methanol reactors in the presence of catalyst deactivation. *Chemical Engineering and Processing: Process Intensification*, 44(8), 911–921. <https://doi.org/10.1016/j.cep.2004.10.004>
- Sanders, R. E. (2005). Chemical Process Safety. In *Chemical Process Safety*. Elsevier. <https://doi.org/10.1016/B978-0-7506-7749-3.X5000-X>
- Sanou, Y., Pare, S., Baba, G., Segbeaya, N. K., & Bonzi-Coulibaly, L. Y. (2017). Removal of COD in wastewaters by activated charcoal from rice husk. *Revue Des Sciences de l'eau*, 29(3), 265–277. <https://doi.org/10.7202/1038927ar>
- Seong, M., Shin, M., Cho, J. H., Lee, Y. C., Park, Y. K., & Jeon, J. K. (2014). Reactor sizing for butane steam reforming over Ni and Ru catalysts. *Korean Journal of Chemical Engineering*, 31(3), 412–418. <https://doi.org/10.1007/s11814-013-0225-2>
- Sinnott, R. K., & Towler, G. (2013). Chemical Engineering Design. In *Chemical Engineering Design*. <https://doi.org/10.1016/C2009-0-61216-2>
- Smith, J. M. (1950). Introduction to chemical engineering thermodynamics. In *Journal of Chemical Education* (Vol. 27, Issue 10). <https://doi.org/10.1021/ed027p584.3>
- Sunggyu, L. (2015). Handbook of Alternative Fuel Technologies 2nd ed. *CRC Press Taylor & Francis Group*.
- Ulrich, G. D. (1984). A Guide to Chemical Engineering Process Design and Economics. In *John Wiley & Sons*.

Vanden Bussche, K. M., & Froment, G. F. (1996). A steady-state kinetic model for methanol synthesis and the water gas shift reaction on a commercial Cu/ZnO/Al₂O₃ catalyst. *Journal of Catalysis*, 161(1), 1–10. <https://doi.org/10.1006/jcat.1996.0156>

Walas, S. M. (2013). Chemical process equipment: Selection and design. In *Chemical Process Equipment: Selection and Design*. <https://doi.org/10.1016/C2009-0-25916-2>

Wilson, D. M. (1957). Chemical Engineering Cost Estimation. In *Chemical Engineering Science* (Vol. 6, Issue 3). [https://doi.org/10.1016/0009-2509\(57\)85011-8](https://doi.org/10.1016/0009-2509(57)85011-8)

Winterbottom, J. M. (1990). Catalyst Handbook. *Chemical Engineering Science*, 45(6), 1657. [https://doi.org/10.1016/0009-2509\(90\)80027-c](https://doi.org/10.1016/0009-2509(90)80027-c)

Yaws, C. L. (2003). Yaws' Handbook of Thermodynamic and Physical Properties of Chemical Compounds. In *Knovel*.

Yu, Y. H., & Sosna, M. H. (2001). Modeling for Industrial Heat Exchanger Type Steam Reformer. *Korean Journal of Chemical Engineering*, 18(1), 127–132. <https://doi.org/10.1007/BF02707209>