

DAFTAR PUSTAKA

- Abdollahi, M., Ghobadian, B., Najafi, G., Hoseini, S.S., Mofijur, M., Mazlan, M., 2020. Impact of water – biodiesel – diesel nano-emulsion fuel on performance parameters and diesel engine emission. *Fuel* 280, 118576. <https://doi.org/10.1016/J.FUEL.2020.118576>
- Alahmer, A., Yamin, J., Sakhrieh, A., Hamdan, M.A., 2010. Engine performance using emulsified diesel fuel. *Energy Convers Manag* 51, 1708–1713. <https://doi.org/10.1016/j.enconman.2009.11.044>
- Azmi, Luthfiana and Nur Sajida, G., 2016. The Effect of Surfactant Loading at Water-Oil Emulsions as Alternative Fuels in Diesel Engine. Institut Teknologi Sepuluh Nopember.
- Becher Paul, 1988. *Encyclopedia of Emulsion Technology*. New York.
- Bedford, F., Rutland, C., Dittrich, P., Raab, A., Wirbeleit, F., 2000. *Effects of Direct Water Injection on DI Diesel Engine Combustion*. Baltimore, Maryland.
- Dai, L., Li, W., Hou, X., 1997. Effect of the molecular structure of mixed nonionic surfactants on the temperature of miniemulsion formation, *Aspects*.
- Elsanusi, O.A., Roy, M.M., Sidhu, M.S., 2017. Experimental Investigation on a Diesel Engine Fueled by Diesel-Biodiesel Blends and their Emulsions at Various Engine Operating Conditions. *Appl Energy* 203, 582–593. <https://doi.org/10.1016/j.apenergy.2017.06.052>
- Fahd, M.E.A., Wenming, Y., Lee, P.S., Chou, S.K., Yap, C.R., 2013. Experimental investigation of the performance and emission characteristics of direct injection diesel engine by water emulsion diesel under varying engine load condition. *Appl Energy* 102, 1042–1049. <https://doi.org/10.1016/J.APENERGY.2012.06.041>
- Farn, R.J., 2007. *Chemistry and Technology of Surfactants*. *Chemistry and Technology of Surfactants* 1–315. <https://doi.org/10.1002/9780470988596>
- Fingas, M., Fieldhouse, B., 2003. Studies of the formation process of water-in-oil emulsions, in: *Marine Pollution Bulletin*. Elsevier Ltd, pp. 369–396. [https://doi.org/10.1016/S0025-326X\(03\)00212-1](https://doi.org/10.1016/S0025-326X(03)00212-1)
- Fu, W.B., Hou, L.Y., Wang, L., Ma, F.H., 2002. A unified model for the micro-explosion of emulsified droplets of oil and water. *Fuel Processing Technology* 79, 107–119. [https://doi.org/10.1016/S0378-3820\(02\)00106-6](https://doi.org/10.1016/S0378-3820(02)00106-6)

- Ghojel, J., Honnery, D., Al-Khaleefi, K., 2006. Performance, emissions and heat release characteristics of direct injection diesel engine operating on diesel oil emulsion. *Appl Therm Eng* 26, 2132–2141. <https://doi.org/10.1016/j.applthermaleng.2006.04.014>
- Giancoli, D.C., 2000. *Physics For Scientists & Engineers Third Edition With Modern Physics Third Edition*. Prentice Hall.
- Gowrishankar, S., Krishnasamy, A., 2022. Novel surfactants for stable biodiesel-water emulsions to improve performance and reduce exhaust emissions of a light-duty diesel engine. *Fuel* 330, 125562. <https://doi.org/10.1016/J.FUEL.2022.125562>
- Hagos, F., Aziz, A., international, I.T.-2011 I. 3rd, 2011, undefined, 2011. Water-in-diesel emulsion and its micro-explosion phenomenon-review. ieeexplore.ieee.org 314–318.
- Heywood, J., 2018. *Internal combustion engine fundamentals*.
- Irfan, S., Purnomo, H., 2018. Studi Komparasi Emisi Gas Buang Mesin Diesel Menggunakan Bahan Bakar Solar dan Minyak Kelapa (Virgin Coconut Oil). *Samudra Politeknik Pelayaran Surabaya* 3, 18–25.
- Ismail., Nova, D., Suparmanto, N., Rahayu, D., Rusliyanto, 2012. Pengaruh Emulgator Buah Lerak (sapindus rarak) dengan Emulsi Air dan Solar Sebagai Bahan Bakar Motor Diesel Ramah Lingkungan. *PELITA VII*, 29–38.
- Ithnin, A.M., Noge, H., Kadir, H.A., Jazair, W., 2014. An overview of utilizing water-in-diesel emulsion fuel in diesel engine and its potential research study. *Journal of the Energy Institute*. <https://doi.org/10.1016/j.joei.2014.04.002>
- Jiao, J., Pharmsci, D.B.-A., 2003, undefined, 2003. Rheology and stability of water-in-oil-in-water multiple emulsions containing Span 83 and Tween 80. *Springer* 5. <https://doi.org/10.1208/ps050107>
- Kannan, G.R., Anand, R., 2011. Experimental investigation on diesel engine with diestrol–water micro emulsions. *Energy* 36, 1680–1687. <https://doi.org/10.1016/J.ENERGY.2010.12.062>
- Kanokkhanarat, P., Karin, P., Depaiwa, N., Wongpattharaworakul, V., Srisurangkul, C., Yamakita, M., 2022. Influence of ethanol biodiesel blends on a diesel engine's efficiency and exhaust emission characteristics. *Mater Today Proc*. <https://doi.org/10.1016/j.matpr.2022.06.532>

- Knowles, D.A., 1998. Chemistry and Technology of Agrochemical Formulations. Chemistry and Technology of Agrochemical Formulations. <https://doi.org/10.1007/978-94-011-4956-3>
- Lin, C.Y., Wang, K.H., 2004. Effects of an oxygenated additive on the emulsification characteristics of two- and three-phase diesel emulsions. Fuel 83, 507–515. <https://doi.org/10.1016/j.fuel.2003.08.014>
- Maawa, W.N., Mamat, R., Najafi, G., de Goey, L.P.H., 2020. Performance, combustion, and emission characteristics of a CI engine fueled with emulsified diesel-biodiesel blends at different water contents. Fuel 267, 117265. <https://doi.org/10.1016/J.FUEL.2020.117265>
- Martin, J.A., Mullen, C.A., Boateng, A.A., 2014. Maximizing the stability of pyrolysis oil/diesel fuel emulsions. Energy and Fuels 28, 5918–5929. <https://doi.org/10.1021/ef5015583>
- Mura, E., Massoli, P., Josset, C., Loubar, K., Bellettre, J., 2012. Study of the micro-explosion temperature of water in oil emulsion droplets during the Leidenfrost effect. Exp Therm Fluid Sci 43, 63–70. <https://doi.org/10.1016/j.expthermflusci.2012.03.027>
- Myers, D., 2006. Surfactant Science and Technology Third Edition.
- Nadeem, M., Rangkuti, C., Anuar, K., Haq, M.R.U., Tan, I.B., Shah, S.S., 2006. Diesel engine performance and emission evaluation using emulsified fuels stabilized by conventional and gemini surfactants. Fuel 85, 2111–2119. <https://doi.org/10.1016/j.fuel.2006.03.013>
- Nakahira, A., Nakamura, S., Horimoto, M., 2007. Synthesis of modified hydroxyapatite (HAP) substituted with Fe ion for DDS application. IEEE Trans Magn 43, 2465–2467. <https://doi.org/10.1109/TMAG.2007.894358>
- Noor El-Din, M.R., El-Hamouly, S.H., Mohamed, H.M., Mishrif, M.R., Ragab, A.M., 2013. Water-in-diesel fuel nanoemulsions: Preparation, stability and physical properties. Egyptian Journal of Petroleum 22, 517–530. <https://doi.org/10.1016/j.ejpe.2013.11.006>
- Ocampo-barrera, R., Villasenor, R., Bartolo Atepehuacan, S., Diego-marin, A., 2001. An Experimental Study of the Effect of Water Content on Combustion of Heavy Fuel Oil/Water Emulsion Droplets.
- Ogunkoya, D., Li, S., Rojas, O.J., Fang, T., 2015. Performance, combustion, and emissions in a diesel engine operated with fuel-in-water emulsions based on

- lignin. Appl Energy 154, 851–861.
<https://doi.org/10.1016/J.APENERGY.2015.05.036>
- Öztürk, E., 2015. Performance, emissions, combustion and injection characteristics of a diesel engine fuelled with canola oil-hazelnut soapstock biodiesel mixture. Fuel Processing Technology 129, 183–191.
<https://doi.org/10.1016/j.fuproc.2014.09.016>
- Park, S., Woo, S., Kim, H., Lee, K., 2016. Effect of Diesel-Water Emulsified Fuel on the NO_x and PM Emissions of a Diesel Engine. Energy and Fuels 30, 6070–6079. <https://doi.org/10.1021/acs.energyfuels.6b00089>
- PT Pertamina (Persero), 2020. Spesifikasi Produk BBM, BBN dan LPG. DKI JAKARTA.
- Purwatama, K.U.A., Syaiful, 2014. Performa dan Emisi Jelaga dari Mesin Diesel Pada Putaran Rendah Dengan Menggunakan Bahan Bakar Campuran Biosolar dan Metanol Kadar Rendah. Jurnal Teknik Mesin S-1 2, 18–25.
- Rosen, M.J., Kunjappu, J.T., 2012. Surfactants and Interfacial Phenomena: Fourth Edition. Surfactants and Interfacial Phenomena: Fourth Edition.
<https://doi.org/10.1002/9781118228920>
- Scarpete, E.D., 2013. Diesel-Water Emulsion, An Alternative Fuel to Reduce Diesel Engine Emissions. Romania.
- Schramm, J., Sigvardsen, R.S., Forman, M., 2003. Bitumen/Water Emulsions as Fuels for High-Speed CI Engines Preliminary Investigations. Pittsburgh, Pennsylvania USA.
- Selim, M.Y.E., Ghannam, M.T., 2010. Combustion study of stabilized water-in-diesel fuel emulsion. Energy Sources, Part A: Recovery, Utilization and Environmental Effects 32, 256–274.
<https://doi.org/10.1080/15567030802467621>
- Sheng, H.-Z., Chen, L., Wu, C.-K., 1995. The Droplet Group Micro-Explosions in W/O Diesel Fuel Emulsion Sprays. JOURNAL OF ENGINES 104.
- Smolinske, S.C., Raton, B., Arbor, A., Tokvo, L., 1992. Handbook of Food, Drug, and Cosmetic Excipients.
- Subramanian, K.A., 2011a. A comparison of water–diesel emulsion and timed injection of water into the intake manifold of a diesel engine for simultaneous control of NO and smoke emissions. Energy Convers Manag 52, 849–857.
<https://doi.org/10.1016/J.ENCONMAN.2010.08.010>

- Subramanian, K.A., 2011b. A comparison of water–diesel emulsion and timed injection of water into the intake manifold of a diesel engine for simultaneous control of NO and smoke emissions. *Energy Convers Manag* 52, 849–857. <https://doi.org/10.1016/J.ENCONMAN.2010.08.010>
- Suryadi, J., 2018. The Production of Diesel Fuel-Water Emulsion Using Low Energy Emulsification Method.
- Tipanluisa, L., Thakkar, K., Fonseca, N., López, J.-M., 2022. Investigation of diesel/n-butanol blends as drop-in fuel for heavy-duty diesel engines: Combustion, performance, and emissions. *Energy Convers Manag* 255, 115334. <https://doi.org/10.1016/J.ENCONMAN.2022.115334>
- Vellaiyan, S., Amirthagadeswaran, K.S., 2017. Emission characteristics of water-emulsified diesel fuel at optimized engine operation condition. *Pet Sci Technol* 35, 1355–1363. <https://doi.org/10.1080/10916466.2017.1330348>
- Vellaiyan, S., Amirthagadeswaran, K.S., 2016. The role of water-in-diesel emulsion and its additives on diesel engine performance and emission levels: A retrospective review. *Alexandria Engineering Journal*. <https://doi.org/10.1016/j.aej.2016.07.021>
- Watanabe, H., Suzuki, Y., Harada, T., Matsushita, Y., Aoki, H., Miura, T., 2010. An experimental investigation of the breakup characteristics of secondary atomization of emulsified fuel droplet. *Energy* 35, 806–813. <https://doi.org/10.1016/j.energy.2009.08.021>
- Woo, S., Kim, W., Lee, J., Lee, K., 2021. Fuel properties of water emulsion fuel prepared using porous membrane method for low pollutant engine at various temperatures. *Energy Reports* 7, 6638–6650. <https://doi.org/10.1016/j.egyr.2021.09.082>
- Xin Qianfan, 2011. The analytical design process and diesel engine system design 1. *Diesel Engine System Design* 3–112. <https://doi.org/10.1533/97808570908361.3>
- Yang, W.M., An, H., Chou, S.K., Chua, K.J., Mohan, B., Sivasankaralingam, V., Raman, V., Maghbouli, A., Li, J., 2013. Impact of emulsion fuel with nano-organic additives on the performance of diesel engine. *Appl Energy* 112, 1206–1212. <https://doi.org/10.1016/j.apenergy.2013.02.027>
- Yanmar, 1991. Yanmar Service Manual.