UNIVERSITAS
GADJAH MADA
Analisis Simulasi Dampak Ledakan Gas Hidrogen dan Propana Sebagai Komponen Penerbangan Kapal Udara
Novrain Adetiq Pradana Pumojo Buypunto, Dr. Eng. Ir. Mohammad Kholid Ridwan, S.T., M.Sc., IPU., ASEAN Eng.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

[1] G. A. Khoury, *Airship technology*, 2nd ed. in Cambridge aerospace series, no. 10. Cambridge: Cambridge university press, 2012.

[2] B. A. Mahasyahputra, P. Wulandari, E. D. Maharani, A. H. Rahman, and S. Sahara, "Analisis Perbandingan Sistem Logistik Jakarta dengan Papua," *Jurnal Ilmu Wahana Pendidikan*, vol. 9, no. 14, pp. 208–216, doi: https://doi.org/10.5281/zenodo.8173334.

[3] L. Liao and I. Pasternak, "A review of airship structural research and development," *Progress in Aerospace Sciences*, vol. 45, no. 4–5, pp. 83–96, May 2009, doi: 10.1016/j.paerosci.2009.03.001.

[4] N. K. Mahto, "Feasibility study of a hot-air tethered aerostat system," Sep. 21, 2018. doi: 10.31224/osf.io/zwmqx.

[5] Federal Aviation Administration, *Balloon Flying Handbook*. Oklahoma City: U.S. Departement of Transport, 2001. [Online]. Available: https://www.faa.gov/sites/faa.gov/files/regulations_policies/handbooks_manuals/aviation/FAA-H-8083-11.pdf

[6] A. E. Gilpatrick, R. C. Fruge Jr., L. S. Beckett Jr., and P. T. Courtogius, "OPERATION OF BALLOON CARRIER FOR VERY HIGH ALTITUDE NUCLEAR DETONATION," The Defense Special Weapons Agency Technical Resource Center, Eniwetok Proving Ground, 1958. [Online]. Available: https://apps.dtic.mil/sti/tr/pdf/ADA322231.pdf

[7] S. M. Hoseyni, M. O. Mesbah Mostafa, and J. Cordiner, "Mitigating risks in hydrogen-powered transportation: A comprehensive risk assessment for hydrogen refuelling stations, vehicles, and garages," *International Journal of Hydrogen Energy*, vol. 91, pp. 1025–1044, Nov. 2024, doi: 10.1016/j.ijhydene.2024.10.074.

[8] Q. Ma *et al.*, "Numerical simulation of hydrogen explosion characteristics and disaster effects of hydrogen fueling station," *International Journal of Hydrogen Energy*, vol. 51, pp. 861–879, Jan. 2024, doi: 10.1016/j.ijhydene.2023.05.129.

[9] F. Synák, K. Čulík, V. Rievaj, and J. Gaňa, "Liquefied petroleum gas as an alternative fuel," *Transportation Research Procedia*, vol. 40, pp. 527–534, 2019, doi: 10.1016/j.trpro.2019.07.076.

[10] H. Liang, T. Wang, Z. Luo, X. Wang, X. Kang, and J. Deng, "Risk Assessment of Liquefied Petroleum Gas Explosion in a Limited Space," *ACS Omega*, vol. 6, no. 38, pp. 24683–24692, Sep. 2021, doi: 10.1021/acsomega.1c03430.

UNIVERSITAS
GADJAH MADA
Analisis Simulasi Dampak Ledakan Gas Hidrogen dan Propana Sebagai Komponen Penerbangan Kapal Udara
Novrain Adetiq Pradana Pumojo Buypunto, Dr. Eng. Ir. Mohammad Kholid Ridwan, S.T., M.Sc., IPU., ASEAN Eng.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

[11] M. Ejiri *et al.*, "Experimental Results of Polar Patrol Balloon Project in Antarctica," *Proceedings of the NIPR Symposium on Upper Atmosphere Physics*, vol. 8, pp. 60–64, Jan. 1995.

[12] F. Miro, *Pengantar Sistem Transportasi*. Jakarta: Erlangga, 2012.

[13] S. Fatimah, *Pengantar Transportasi*. Myria Publisher, 2019.

[14] S. A. Sasmita, *Perencanaan Transportasi*. Jalan Cabe Raya, Pondok Cabe, Pamulang, Tangerang Selatan 15418, Banten, Indonesia: Penerbit Universitas Terbuka, 2022.

[15] D. W. Utama, *Naskah sumber arsip moda transporatasi kuda hingga cikar dalam khasanah arsip*. Jakarta Selatan: Arsip Nasional Republik Indonesia, 2017.

[16] Y. C. Pandensolang, "LANDASAN KONSEPTUAL PERENCANAAN DAN PERANCANGAN PENGEMBANGAN STASIUN KERETA API TANJUNG KARANG DI LAMPUNG," Universitas Atma Jaya Yogyakarta, Yogyakarta, 2015. [Online]. Available: http://e-journal.uajy.ac.id/id/eprint/7732

[17] R. V. V. Petrescu *et al.*, "History of Aviation-A Short Review," *Journal of Aircraft and Spacecraft Technology*, vol. 1, no. 1, pp. 30–49, Jan. 2017, doi: 10.3844/jastsp.2017.30.49.

[18] J. Sandepp, "AIR TRANSPORTATION SYSTEMS (R15A2121)," 2018 2017. [Online]. Available: https://mrcet.com/downloads/digital_notes/AE/Air%20Transportation%20Systems.pdf

[19] D. A. R. Kurniawan, "SISTEM NAVIGASI PADA BALON UDARA MENGGUNAKAN GPS DAN KONTROL LOGIKA FUZZY," Institut Teknologi Sepuluh Nopember, Surabaya, 2016.

[20] Cameron Ballons, *GAS BALLOON FLIGHT MANUAL*. Bristol: Cameron Balloons Limited, 2019.

[21] M. A. Putra, "Analisis Produktifitas Gas Hidrogen dan Gas Oksigen pada Elektrolisis Larutan KOH".

[22] L. Sitohang, L. Hakim, and F. Hasfita, "PEMANFAATAN LIMBAH KALENG MINUMAN ALUMINIUM UNTUK PRODUKSI GAS HIDROGEN MENGGUNAKAN KATALIS KALIUM HIDROKSIDA (KOH)," *JTKU*, vol. 6, no. 1, p. 55, Mar. 2018, doi: 10.29103/jtku.v6i1.469.

[23] P. Purwadi, F. Sunarto, A. Muttaqin, and T. H. Seto, "APLIKASI MOBILE ZAPPELINE SEBAGAI MEDIA TEKNOLOGI MODIFIKASI CUACA (TMC) DAN PENIPISAN POLUTAN UDARA (ASAP)," *JSTMC*, vol. 15, no. 2, p. 57, Dec. 2014, doi: 10.29122/jstmc.v15i2.2671.

UNIVERSITAS
GADJAH MADA
Analisis Simulasi Dampak Ledakan Gas Hidrogen dan Propana Sebagai Komponen Penerbangan Kapal Udara
Novrain Adetiq Pradana Pumojo Buypunto, Dr. Eng. Ir. Mohammad Kholid Ridwan, S.T., M.Sc., IPU., ASEAN Eng.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

[24] American Institute of Chemical Engineers, Ed., *Guidelines for vapor cloud explosion, pressure vessel burst, BLEVE, and flash fire hazards*, 2nd ed. in CCPS concept book. Hoboken, N.J: Wiley, 2010. doi: 10.1002/9780470640449.

[25] "Propane." The Need Project, 2018. [Online]. Available: https://www.need.org/Files/curriculum/infobook/PropaneS.pdf

[26] D. Crowl and J. Louvar, *Chemical Process Safety: Fundamentals with Applications*, 4th ed. Upper Saddle River: Pearson, 2019.

[27] Y. A. Çengel and J. M. Cimbala, *Fluid mechanics: fundamentals and applications*, 3. ed. New York, NY: McGraw-Hill, 2014.

[28] "Gambaran Umum Wilayah." BPK RI. [Online]. Available: https://share.google/TI0ptsMB3JyYojlsX

[29] "Basic considerations for the safety of hydrogen systems," ISO, Swiss, Technical Report, 2015. [Online]. Available: https://cdn.standards.iteh.ai/samples/56546/ea6f718a98c340279b350c7d48c03d80/ISO-TR-15916-2015.pdf

[30] "BAB IV. Gambaran Umum Wilayah." Digilib ITB. [Online]. Available: https://digilib.itb.ac.id/assets/files/2025/QkFCIDQgUml3YW5keS5wZGY.pdf

[31] J.-P. Rodrigue, *The geography of transport systems*, Fifth edition. Abingdon, Oxon ; New York, NY: Routledge/Taylor & Francis Group, 2020.

[32] M. A. Solihin, "Peta Administrasi Provinsi DKI Jakarta," DKI Jakarta, Sep. 2021. [Online]. Available: https://upload.wikimedia.org/wikipedia/commons/6/65/Prov._DKI_Jakarta.jpg

[33] "BAB IV. GAMBARAN UMUM." UMY. [Online]. Available: https://etd.umy.ac.id/id/eprint/69205/8/HALAMAN%20JUDUL

[34] M. A. Solihin, "Peta Administrasi Provinsi Sumatera Utara," DKI Jakarta, Sep. 2021. [Online]. Available: https://upload.wikimedia.org/wikipedia/commons/f/fd/Prov._Sumatera_Utara.jpg

[35] Z. A. D. K., Rif'ati Dina Handayani, and Yushardi Yushardi, "Pengaruh Bentuk Benda dan Kedalaman terhadap Gaya Angkat ke Atas (Fa) pada Fluida Statis," *Jurnal Pembelajaran Fisika Universitas Jember*, vol. 1, no. 4, pp. 405–410, 2012, doi: 10.19184/jpf.v1i4.23193.

[36] dreamhosters, "BID: Buoyant force / apparent weight." dreamhosters.

[37] "Barometic Pressure Protocol." GLOBE, 2014. [Online]. Available: https://www.globe.gov/documents/348614/a1ab9ecb-f8b1-41ba-9dd9-a420895f954b

UNIVERSITAS
GADJAH MADA
Analisis Simulasi Dampak Ledakan Gas Hidrogen dan Propana Sebagai Komponen Penerbangan Kapal Udara
Novrain Adetiq Pradana Pumojo Buypunto, Dr. Eng. Ir. Mohammad Kholid Ridwan, S.T., M.Sc., IPU., ASEAN Eng.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

[38] K. C. Parsons, *Human thermal environments: the effects of hot, moderate, and cold environments on human health, comfort, and performance*, Third edition. Boca Raton: CRC Press, Taylor & Francis Group, 2014.

[39] L. Lisnawati, E. E. S. Makmur, and D. S. Permana, "PROFIL KLIMATOLOGIS LAPSE RATE VERTIKAL DI MEDAN, PADANG, JAKARTA, PALU, DAN AMBON," *JMG*, vol. 18, no. 2, Mar. 2018, doi: 10.31172/jmg.v18i2.456.

[40] Sarifuddin, Winarno, and Jijin Arga Saputra, "PENGARUH KURANGNYA SUPPLY GAS LEMBAM DALAM PENANGANAN MUATAN DI MT. GANDINI DENGAN METODE FISHBONE," *db*, vol. 8, no. 2, May 2018, doi: 10.46484/db.v8i2.76.

[41] J. T. Choi, O. K. Kwon, and D. A. Cha, "A numerical study of the heat transfer and fluid flow of micro-channeled water block for computer CPU cooling," *J Mech Sci Technol*, vol. 25, no. 10, pp. 2657–2663, Oct. 2011, doi: 10.1007/s12206-011-0616-4.

[42] Linde, "Handling Of Hydrogen." Linde Gas Division. [Online]. Available: https://static.prd.echannel.linde.com/wcsstore/NL_RES_Industrial_Gas_Store/Assets/landingpages/Handling_of_Hydrogen.pdf

[43] Linde, "Helium Compressed Gas." Linde HKO LImited, 2022. [Online]. Available: https://static.prd.echannel.linde.com/wcsstore/HK_RGC_Industrial_Ntl_Store/pdf/product/en_HK/Helium_compressed%20gas.pdf

[44] V. N. Lu'lu, P. Widiatmoko, and H. Devianto, *Simulasi dan Pemodelan Komparatif Konsekuensi Ledakan Berdasarkan Ekuivalen TNT*. (2026). Python. Institut Teknologi Bandung, Bandung. [Online]. Available: https://xplosion.virsim.id/

[45] V. N. Lu'lu, H. Devianto, and P. Widiatmoko, "Comparative Simulation and Modeling of Hydrogen Explosion Consequences Based on TNT Equivalent," Institut Teknologi Bandung, Bandung, 2026. doi: https://doi.org/10.14710/reaktor.82563.

[46] Kementrian PUPR, *Trans Papua road on Kebar valley of Tambrauw, Papua*. 2019. [Photgraphy]. Available: https://binamarga.pu.go.id/uploads/gal/652/4b7ed6126e828f119eeb07b05a6bc06d.jpg

[47] Azurevanilla.ash, *Autograph Tower, Jakarta, ID*. 2022. [Photgraphy]. Available: https://upload.wikimedia.org/wikipedia/en/1/1e/Autograph_Tower%2C_Jakarta%2C_ID_%E2%80%93_July_2022.png

UNIVERSITAS
GADJAH MADA
Analisis Simulasi Dampak Ledakan Gas Hidrogen dan Propana Sebagai Komponen Penerbangan Kapal Udara
Novrain Adetiq Pradana Pumojo Buypunto, Dr. Eng. Ir. Mohammad Kholid Ridwan, S.T., M.Sc., IPU., ASEAN Eng.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

[48] D. Quinn, *Sibuatan as seen from near Naga Linga*. 2011. [Photgraphy]. Available: https://www.gunungbagging.com/sibuatan/

[49] I. Chairani, "Provinsi Papua Dalam Angka 2022," Badan Pusat Statistik Provinsi Papua, Puncak Jaya, 4000.2202, 2022. [Online]. Available: https://papua.bps.go.id/id/publication/2022/02/25/e3c19d14b0c4b1210b49aa96/provinsi-papua-dalam-angka-2022.html

[50] "Provinsi Papua Barat Dalam Angka 2021," Badan Pusat Statisitik Provinsi Papua Barat, Papua Barat, 91000.2102, 2021.

[51] A. Y. Dewi and Halomoan, "Provinsi DKI Jakarta Dalam Angka 2022," Badan Pusat Statistik Provinsi DKI Jakarta, DKI Jakarta, 31000.223, 2023. [Online]. Available: https://web-api.bps.go.id/download.php?f=ruTkZ2bhs/Rp1S+x6hbztGZ5bk10QlVhYkRYYnhOOEMvVk1YeVBKSGx0eVlUT2hQeDIxc3hKdGw2NC8zT2pseGtQM1Z6aXdpNnlub1lTWUJiTmt0aVVORzRVWEVTUkhOVlZJbjRFWlpuVThHOCt4aDFKRy9yU0VRVVpnZ1pHYnhjTFVTaW9TZlprNmdWQmErYnRGYWt1clRxVE45ZjJNK1I1Y0RUMmlaT2ZqN3M1eDRtSDFsUDFKZ25jenZqZTdsSFFtT1FkUFJBOUk1T1RCUXpuVGJlQmRRUXByN1c5UUVzUkpLKy94Y3cwams1L3o3ZHZKa296WFBaSWlnd3FaeGJJQVhNRzFwb3RXRXlUS2Q=&_gl=1*1gx22p6*_ga*MTUxMzE1ODI5Ni4xNzM3MTg0ODkz*_ga_XXTTVXWHDB*czE3ODE1OTgwNTAkbzckZzEkdDE3ODE1OTg0MjYkajYwJGwwJGgw

[52] "Pengamatan Unsur Iklim di Stasiun Pengamatan Badan Meteorologi Klimatologi dan Geofisila (BMKG), 2022." Badan Pusat Statistik Sumatera Utara, Feb. 2023. [Online]. Available: https://sumut.bps.go.id/id/statistics-table/1/MjgyNCMx/pengamatan-unsur-iklim-di-stasiun-pengamatan-badan-meteorologi-klimatologi-dan-geofisila-bmkg-2022.html

[53] F. Díaz Alonso, E. González Ferradás, J. Francisco Sánchez Pérez, A. Miñana Aznar, J. Ruiz Gimeno, and J. Martínez Alonso, "Characteristic overpressure–impulse–distance curves for the detonation of explosives, pyrotechnics or unstable substances," *Journal of Loss Prevention in the Process Industries*, vol. 19, no. 6, pp. 724–728, Nov. 2006, doi: 10.1016/j.jlp.2006.06.001.

[54] D. A. Crowl, *Chemical process safety: fundamentals with applications*, 3rd ed. in Prentice Hall international series in the physical and chemical engineering sciences. Upper Saddle River, NJ: Prentice Hall, 2011.

[55] R. Jeremić and Z. Bajić, "An approach to determining the TNT equivalent of high explosives," *Scientific-Technical Review*, vol. LVI, pp. 58–62, Jan. 2006.