

**DAFTAR PUSTAKA**

- Ayoubiou, F., Taromi, M., and Eftekhari, A., 2019, Tunnel Portal Instability In Landslide Area and Remedial Solution: A Case Study: Acta Polytechnica, v. 59, p. 435–447, doi:10.14311/AP.2019.59.0435.
- Badan Geologi, 2009, Peta Zona Kerentanan Gerakan Tanah Provinsi Banten: Pusat Vulkanologi dan Mitigasi Bencana Geologi Badan Geologi.
- Badan Standarisasi Nasional, 1991, SNI 03-2347 Metode Uji Laboratorium untuk Menentukan Parameter Sifat Fisika pada Sample Batuan:
- Badan Standarisasi Nasional, 1994, SNI 03-3637-1994 Metode Pengujian Berat Isi Tanah Berbutir Halus Cetakan Benda Uji:
- Badan Standarisasi Nasional, 1998, SNI 13-4691-1998 Penyusunan Peta Geologi:
- Badan Standarisasi Nasional, 1999, SNI 13-6185-1999 Penyusunan Peta Geomorfologi:
- Badan Standarisasi Nasional, 2008, SNI 2825:2008 Petunjuk Uji Kuat Tekan Uniaksial Batuan:
- Badan Standarisasi Nasional, 2020, SNI 3432-2020 Tata Cara Penetapan Banjir Desain Dan Kapasitas Pelimpah Untuk Bendungan:
- Badan Standarisasi Nasional, 2010, SNI 7573:2010 Analisis petrografi dan mineografi:
- Badan Standarisasi Nasional, 2017, SNI 8460:2017 Persyaratan Perancangan Geoteknik:
- Badan Standarisasi Nasional (BSN), 2016, SNI 3420: 2016 Metode Uji Kuat Geser Langsung Tanah Tidak Terkonsolidasi Dan Tidak Terdrainase.:
- Barton, N., Lien, R., and Lunde, J., 1974, Engineering Classification of Rock Masses for the Design of Tunnel Support. Rock Mechanics: Rock Mechanics, v. 6, p. 189–236, doi:<https://doi.org/10.1007/BF01239496>.
- Bemmelen, R.W.V., 1949, The Geology Of Indonesia Vol. I A General Geology of Indonesia And Adjacent Archipelagos: Government Printing, The Hague, v. I A.
- Bieniawski, Z.T., 1989a, Engineering Rock Mass Classification : a complete manual for engineers and geologists in mining, civil, and petroleum engineering: New York, John Wiley & Sons, Inc.
- Bieniawski, Z.T., 1989b, Engineering Rock Mass Classification: a complete manual for engineers and geologists in mining,civil, and petroleum engineering: Canada, A Wiley-Interscience Publication.
- Blissett, D.J., 2014, Geological field techniques: Geological Journal, v. 49, p. 107–108, doi:10.1002/gj.2449.
- Brahmantyo, B., and Bandono, 2006, Klasifikasi Bentuk Muka Bumi (Landform) untuk Pemetaan Geomorfologi pada Skala 1:25.000 dan Aplikasinya untuk Penataan Ruang: Jurnal Geoaplika, v. 1, p. 71–78, doi:10.31227/osf.io/8ah6v.
- Chow, V.T., 1959, Open Channel Hydraulics: New York, McGraw-Hill.
- Cole, J.W., Kohn, B.P., Pullar, W.A., Milne, J.D.G., Vucetich, C.G., and Healy, J., 1972, Pyroclastic nomenclature in New Zealand: New Zealand Journal of Geology and Geophysics, v. 15, p. 686–692, doi:10.1080/00288306.1972.10423994.
- Dearman, W.R., 1991, Engineering geological mapping: London ; Boston, Butterworth-Heinemann, Butterworths advanced series in geotechnical engineering, 387 p.
- Deere, D.U., Hendron, A.J., Patton, F.D., and Cording, E.J., 1967, Design of Surface and Near-Surface Construction in Rock. In Failure and Breakage of Rock: Proceedings of 8th US Symposium Rock Mechanics, Society of Mining Engineers, American Institute of Mining, Metallurgical and Petroleum Engineers (SAUS), p. 237–302.



- Metode ekskavasi, sistem penyangga dan kestabilan portal terowongan pengelak pada bendungan Pasir**
Kopo di Kabupaten Lebak, studi kasus: perubahan desain penampang
Andri Wirawan, Ir. I Gde Budi Indrawan, S.T., M.Eng., Ph.D., IPM.; Dr. Ing. Ir. Donatus Hendra Amijaya, S.T., M.T., IP
- Universitas Gadjah Mada, 2025 | Diunduh dari <http://etd.repository.ugm.ac.id/>
- Dharmansyah, R.G., Hidayatulloh, C.K., and Cahyani, R., 2021, Prediksi Modulus Deformasi Batuan Menggunakan Modulus Elastisitas Batuan pada Batu Gamping:
- Direktorat Jenderal Bina Marga, 2021a, SE Dirjen Bina Marga Nomor: 17/SE/Db/2021 tentang Penyelidikan Geologi Teknik dalam Pembangunan Terowongan Jalan:
- Direktorat Jenderal Bina Marga, 2021b, SE Dirjen Bina Marga Nomor: 17/SE/Db/2021 tentang Penyelidikan Geologi Teknik dalam Pembangunan Terowongan Jalan:
- Fathoni, M.R., 2013, Pemodelan Pemasangan Penyangga Sementara Menggunakan Perangkat Lunak Phase 2 Pada Headrace Tunnel Chainage 155 M – 265 M di PLTA Tulis Kabupaten Banjarnegara, Jawa Tengah: Geological Engineering E-Journal, v. 5, p. 167–182.
- Firincioglu, B.S., and Ercanoglu, M., 2021, Insights and perspectives into the limit equilibrium method from 2D and 3D analyses: Engineering Geology, v. 281, p. 105968, doi:10.1016/j.enggeo.2020.105968.
- Fisher, R.V., 1966, Rocks composed of volcanic fragments and their classification: Earth-Science Reviews, v. 1, p. 287–298, doi:10.1016/0012-8252(66)90010-9.
- Fitriyantina, L., 2023, The handling of tunnel collapse and settlement (case study: Jragung Dam diversion tunnel, Indonesia): IOP Conference Series: Earth and Environmental Science, v. 1233, p. 012016, doi:10.1088/1755-1315/1233/1/012016.
- Freymueller, J., 2017, Geodynamics, in Teunissen, P.J.G. and Montenbruck, O. eds., Springer Handbook of Global Navigation Satellite Systems, Cham, Springer International Publishing, p. 1063–1106, doi:10.1007/978-3-319-42928-1_37.
- Gattinoni, P., Pizzarotti, E.M., and Scesi, L., 2014, Engineering Geology for Underground Works: Dordrecht, Springer Netherlands, doi:10.1007/978-94-007-7850-4.
- Hardiyatmo, H.C., 2002, Mekanika Tanah 1: Yogyakarta, Gadjah Mada University Press.
- Hoek, E., 1994, Strength of rock and rock masses: News Journal of international Society for Rock Mechanics, p. 4–16.
- Hoek, E., and Brown, E.T., 2019, The Hoek–Brown failure criterion and GSI – 2018 edition: Journal of Rock Mechanics and Geotechnical Engineering, v. 11, p. 445–463, doi:10.1016/j.jrmge.2018.08.001.
- Hoek, E., Carranza-Torres, C., Corkum, B., Hoek, E., and Carranza-Torres, C., 2002, Hoek-Brown failure criterion - 2002 Edition, in Proceedings of the 5th North American Rock Mechanics Symposium and the 17th Tunnelling Association of Canada Conference, Toronto, p. 267–273.
- Hoek, E., Carter, T.G., and Diederichs, 2013, Quantification of the Geological Strength Index Chart, <https://api.semanticscholar.org/CorpusID:131619333>.
- Hoek, E., Kaiser, P.K., and Bawden, W.F., 1995, Support of Underground Excavation in Hard Rock: Rotterdam, A.A. Balkema.
- Hoek, E., Marinos, P., and Benissi, M., 1998, Applicability of the geological strength index (GSI) classification for very weak and sheared rock masses. The case of the Athens Schist Formation: Bulletin of Engineering Geology and the Environment, v. 57, p. 151–160, doi:10.1007/s100640050031.
- Hoek, E., Wood, D., and Shah, S., 1992, A modified Hoek-Brown failure criterion for jointed rock masses: Rock Characterization: ISRM Symposium, p. 209–213.
- Huang, Y., Fu, Z., Chen, J., Zhou, Z., and Wang, J., 2015, The external water pressure on a deep buried tunnel in fractured rock: Tunnelling and Underground Space Technology, v. 48, p. 58–66, doi:10.1016/j.tust.2015.02.003.
- Hungr, O., Leroueil, S., and Picarelli, L., 2014, The Varnes classification of landslide types, an update: Landslides, v. 11, p. 167–194, doi:10.1007/s10346-013-0436-y.



- Indrawan, I.G.B., Sunardi, Murti, A.B., and Alfrianto, R., 2024, Comparison of stability analysis methods for safe design of volcanic rock slope: *Journal of Degraded and Mining Lands Management*, v. 12, p. 6651–6664, doi:10.15243/jdmlm.2024.121.6651.
- Institute, A.G., and Howell, J.V., 1960, *Glossary of Geology and Related Sciences: A Cooperative Project of the American Geological Institute*: American Geological Institute, <https://books.google.co.id/books?id=6UIrAAAAYAAJ>.
- Islam, M.S., and Iskander, M., 2021, Twin tunnelling induced ground settlements: A review: *Tunnelling and Underground Space Technology*, v. 110, p. 103614, doi:10.1016/j.tust.2020.103614.
- ISRM, 1978, *Suggested methods for the quantitative description of discontinuities in rock masses*: International Society for Rock Mechanics: Pergamon Press Ltd, v. 15, p. 319–368.
- Japan Society of Civil Engineers (JSCE), 2018, *Standard Specification For Tunneling - 2016: Mountain Tunnels*:
- Jo, Y.-S., Cho, S.-H., and Jang, Y.-S., 2016, Field investigation and analysis of ground sinking development in a metropolitan city, Seoul, Korea: *Environmental Earth Sciences*, v. 75, p. 1353, doi:10.1007/s12665-016-6141-0.
- Khabbaz, H., Gibson, R., and Fatahi, B., 2019, Effect of constructing twin tunnels under a building supported by pile foundations in the Sydney central business district: *Underground Space*, v. 4, p. 261–276, doi:10.1016/j.undsp.2019.03.008.
- Kuntjoro, and Subakti, I., 2019, Perencanaan Bendung Pengelak Waduk Jadi 1 di Tuban: *YSCEJ: Yos Soedarso Civil Engineering Journal*, v. 1, p. 1–20.
- Kurniawan, P., and Hadimuljono, B., 2021, *Applied Geotechnics For Engineers 1: Yogyakarta, Andi Offset*, <https://books.google.co.id/books?id=JWUD0AEACAAJ>.
- Liang, X., Guan, L., Tang, Y., Chen, M., Peng, J., and Xu, C., 2023, A Study on the Influence of Dewatering in the Excavation of Adjacent Tunnels under Lateral Soil Effects: *Applied Sciences*, v. 14, p. 102, doi:10.3390/app14010102.
- Marinos, P.G., and Hoek, E., 2001, Estimating the geotechnical properties of heterogeneous rock masses such as flysch: *Bulletin of Engineering Geology and the Environment*, v. 60, p. 85–92.
- Marinos, P.G., and Hoek, E., 2000, GSI: A Geologically Friendly Tool For Rock Mass Strength Estimation, <https://api.semanticscholar.org/CorpusID:126913216>.
- Marinos, P.G., Marinos, V., and Hoek, E., 2007, Geological Strength Index (GSI). A characterization tool for assessing engineering properties for rock masses, <https://api.semanticscholar.org/CorpusID:31150181>.
- Mohr, O., 1900, Welche Umstände bedingen die Elast- izitätsgrenze und den Bruch eines Materials? *Z. Ver. dt. Ing.*: v. 44, p. 1524–1530.
- Morgenstern, N.R., and Price, V.E., 1965, The Analysis of the Stability of General Slip Surfaces: *Géotechnique*, v. 15, p. 79–93, doi:10.1680/geot.1965.15.1.79.
- Morton, K.L., and Van Mekerk, F.A., 1993, A phased approach to mine dewatering: *Mine Water and the Environment*, v. 12, p. 27–33, doi:10.1007/BF02914796.
- Narendra, A.A.Ngr.B., Yujana, C.A., Bagiarta, I.K.Y., and Aryastana, P., 2021, Analisis Alternatif Perencanaan Dimensi Terowongan Pengelak Bendungan Sidan: *PADURAKSA: Jurnal Teknik Sipil Universitas Warmadewa*, v. 10, p. 325–337, doi:10.22225/pd.10.2.3357.325-337.
- Onyelowe, K.C., Ebid, A.M., Ramani Sujatha, E., Fazel-Mojtahedi, F., Golaghaei-Darzi, A., Kontoni, D.-P.N., and Nooraldin-Othman, N., 2023, Extensive overview of



soil constitutive relations and applications for geotechnical engineering problems:
Heliyon, v. 9, p. e14465, doi:10.1016/j.heliyon.2023.e14465.

Pettijohn, F.J., 1975, Sedimentary Rocks: Harper & Row, Harper international edition,
<https://books.google.co.id/books?id=9EYSAQAAIAAJ>.

PT. Mettana, 2018, Laporan Akhir Pekerjaan Detail Desain Bendungan Pasir Kopo di Kabupaten Lebak Tahap II:

Rahman, A., and Muhyiddin, F.N., 2018, Uji Laboratorium Mekanika Batuan Menggunakan Metode Unconfined Compressive Strength (Ucs) Pada Batuan Inti (Core) Batu Pasir: Jurnal Migasian, v. 2, p. 35–41, doi:10.36601/jurnal-migasian.v2i2.44.

Rai, M.A., 2014, Mekanika Batuan: Bandung, Penerbit ITB.

Reinke, P., and Ravn, S., 2025, Twin-tube, single-track high-speed rail tunnels and consequences for aerodynamics, climate, equipment and ventilation:

Rose, N.D., Scholz, M., Burden, J., King, M., Maggs, C., and Havaej, M., 2018, Quantifying transitional rock mass disturbance in open pit slopes related to mining excavation.: Proceedings of the XIV international congress on energy and mineral resources.,

Soleman, M.K., 2012, Pemetaan multirawan bencana di Provinsi Banten: Globe, v. 14, p. 46–59.

Spencer, E., 1973, Thrust line criterion in embankment stability analysis: Géotechnique, v. 23, p. 85–100, doi:10.1680/geot.1973.23.1.85.

Sujatmiko, and Santosa, S., 1992, Peta Geologi Lembar Leuwidamar: Geological Survey Systematic Geological Map, Indonesia.

Tim Pusat Studi Gempa Nasional, 2017, Peta Sumber dan Bahaya Gempa di Indonesia Tahun 2017: Bandung, Pusat Penelitian dan Pengembangan Perumahan Permukiman Badan Penelitian dan Pengembangan Kementerian Pekerjaan Umum dan Perumahan Rakyat.

Wentworth, C.K., 1932, The classification and terminology of the pyroclastic rocks: Natl. Res. Council Bull., v. 89, p. 19–53.

Wulan, A., and Prastiwi, B., 2011, Analisa pembangunan terowongan air sebagai bangunan pengelak waduk Jatigede, Sumedang, Jawa Barat: Proceeding PESAT (Psikologi, Ekonomi, Sastra, Arsitektur & Sipil), v. 4.

Wyllie, D.C., and Mah, C.W., 2017, Rock slope engineering: civil and mining: CRC Press, doi:10.1201/9781315274980.

Zhou, Z., Ding, H., Miao, L., and Gong, C., 2021, Predictive model for the surface settlement caused by the excavation of twin tunnels: Tunnelling and Underground Space Technology, v. 114, p. 104014, doi:10.1016/j.tust.2021.104014.

Zuidam, R.A. van, 1985, Aerial photo-interpretation in terrain analysis and geomorphologic mapping: The Hague, Smits Publishers, 442 p.