

## DAFTAR PUSTAKA

- Aboutaleb, D., Safi, B., Chahour, K., Belaid, A., 2017. Use of refractory bricks as sand replacement in self-compacting mortar. <http://www.editorialmanager.com/cogenteng> 4. <https://doi.org/10.1080/23311916.2017.1360235>
- Agency, I.E., Programme, U.N.E., 2018. 2018 Global Status Report: Towards a Zero-emission, Efficient and Resilient Buildings and Construction Sector. Global Status Report 325.
- Akinyele, J.O., Igba, U.T., Ayorinde, T.O., Jimoh, P.O., 2020. Structural efficiency of burnt clay bricks containing waste crushed glass and polypropylene granules. Case Studies in Construction Materials 13, e00404. <https://doi.org/10.1016/J.CSCM.2020.E00404>
- Aragoncillo, A.M.M., Cleary, D.B., Lomboy, G.R., 2023. Estimating the permeability of porous aggregate concretes using electrical resistivity based tests. Constr Build Mater 364, 129909. <https://doi.org/10.1016/J.CONBUILDMAT.2022.129909>
- Cao, F., Miao, M., Yan, P., 2018. Hydration characteristics and expansive mechanism of MgO expansive agents. Constr Build Mater 183, 234–242. <https://doi.org/10.1016/J.CONBUILDMAT.2018.06.164>
- Caronge, M.A., Tjaronge, M.W., Hamada, H., Irmawaty, R., 2017. Effect of water curing duration on strength behaviour of portland composite cement (PCC) mortar. IOP Conf Ser Mater Sci Eng 271, 012018. <https://doi.org/10.1088/1757-899X/271/1/012018>
- Caronge, M.A., Tjaronge, M.W., Rahim, I.R., Irmawaty, R., Lapian, F.E.P., 2022. Feasibility study on the use of processed waste tea ash as cement replacement for sustainable concrete production. Journal of Building Engineering 52, 104458. <https://doi.org/10.1016/J.JOBE.2022.104458>
- Contreras-Llanes, M., Romero, M., Gázquez, M.J., Bolívar, J.P., 2021. Recycled Aggregates from Construction and Demolition Waste in the Manufacture of Urban Pavements. Materials 2021, Vol. 14, Page 6605 14, 6605. <https://doi.org/10.3390/MA14216605>
- Da Silva, F.M., Gachet Barbosa, L.A., Lintz, R.C.C., Jacintho, A.E.P.G.A., 2015. Investigation on the properties of concrete tactile PBs made with recycled tire rubber. Constr Build Mater 91, 71–79. <https://doi.org/10.1016/J.CONBUILDMAT.2015.05.027>
- Dang, J., Xiao, J., Duan, Z., 2022. Effect of pore structure and morphological characteristics of recycled fine aggregates from clay bricks on mechanical properties

of concrete. Constr Build Mater 358, 129455.  
<https://doi.org/10.1016/J.CONBUILDMAT.2022.129455>

Dang, J., Zhao, J., 2019. Influence of waste clay bricks as fine aggregate on the mechanical and microstructural properties of concrete. Constr Build Mater 228, 116757. <https://doi.org/10.1016/J.CONBUILDMAT.2019.116757>

Das, S., Patra, R.K., Mukharjee, B.B., 2021. Feasibility study of utilisation of ferrochrome slag as fine aggregate and rice husk ash as cement replacement for developing sustainable concrete. Innovative Infrastructure Solutions 6. <https://doi.org/10.1007/S41062-021-00461-9>

Datta, S.D., Sobuz, M.H.R., Akid, A.S.M., Islam, S., 2022. Influence of coarse aggregate size and content on the properties of recycled aggregate concrete using non-destructive testing methods. Journal of Building Engineering 61, 105249. <https://doi.org/10.1016/J.JBEME.2022.105249>

Dhal, B., Thatoi, H.N., Das, N.N., Pandey, B.D., 2013. Chemical and microbial remediation of hexavalent chromium from contaminated soil and mining/metallurgical solid waste: A review. J Hazard Mater 250–251, 272–291. <https://doi.org/10.1016/J.JHAZMAT.2013.01.048>

Djamaluddin, A.R., Caronge, M.A., Tjaronge, M.W., Lando, A.T., Irmawaty, R., 2020. Evaluation of sustainable concrete PBs incorporating processed waste tea ash. Case Studies in Construction Materials 12, e00325. <https://doi.org/10.1016/J.CSCM.2019.E00325>

Djamaluddin, A.R., Caronge, M.A., Tjaronge, M.W., Rahim, I.R., Noor, N.M., 2018. Abrasion resistance and compressive strength of unprocessed rice husk ash concrete. Asian Journal of Civil Engineering 19, 867–876. <https://doi.org/10.1007/S42107-018-0069-5/METRICS>

Enhanced Reader [WWW Document], n.d. URL (accessed 4.6.24).

Farooq, M.U., Hameed, R., Tahir, M., Sohail, M.G., Shahzad, S., 2023. Mechanical and durability performance of 100% recycled aggregate concrete pavers made by compression casting. Journal of Building Engineering 73, 106729. <https://doi.org/10.1016/J.JBEME.2023.106729>

Fernando, P.-T., João, C.-G., Said, J., 2010. Durability and Environmental Performance of Alkali-Activated Tungsten Mine Waste Mud Mortars. Journal of Materials in Civil Engineering 22, 897–904. [https://doi.org/10.1061/\(ASCE\)MT.1943-5533.0000092](https://doi.org/10.1061/(ASCE)MT.1943-5533.0000092)

Filho, J.N.S., Silva, S.N. Da, Silva, G.C., Mendes, J.C., Peixoto, R.A.F., 2017. Technical and Environmental Feasibility of Interlocking Concrete Pavers with Iron Ore Tailings

from Tailings Dams. *Journal of Materials in Civil Engineering* 29, 04017104. [https://doi.org/10.1061/\(ASCE\)MT.1943-5533.0001937](https://doi.org/10.1061/(ASCE)MT.1943-5533.0001937)

George, E.S., Hari, R., Madhavan, M.K., 2024. Performance Assessment of Blended Self-Compacting Concrete with Ferrochrome Slag as Fine Aggregate using Functional ANOVA. *Journal of Building Engineering* 109390. <https://doi.org/10.1016/J.JOBE.2024.109390>

González Henao, S., Ghneim-Herrera, T., 2021. Heavy Metals in Soils and the Remediation Potential of Bacteria Associated With the Plant Microbiome. *Front Environ Sci* 9, 604216. <https://doi.org/10.3389/FENVS.2021.604216/BIBTEX>

Hchemi, S., Khattab, M., Benzetta, H., 2022. The effects of recycled brick and water/cement ratios on the physical and mechanical performance of recycled aggregates concrete. *Innovative Infrastructure Solutions* 7, 1–14. <https://doi.org/10.1007/S41062-022-00868-Y/METRICS>

Hengl, H.L., Füssl, J., 2016. The influence of superelevated profiles of PB structures on their load-bearing behavior. *Eng Struct* 117, 195–203. <https://doi.org/10.1016/J.ENGSTRUCT.2016.03.003>

Hong, G., Oh, S., Choi, S., Chin, W.J., Kim, Y.J., Song, C., 2021. Correlation between the Compressive Strength and Ultrasonic Pulse Velocity of Cement Mortars Blended with Silica Fume: An Analysis of Microstructure and Hydration Kinetics. *Materials* 2021, Vol. 14, Page 2476 14, 2476. <https://doi.org/10.3390/MA14102476>

Horckmans, L., Nielsen, P., Dierckx, P., Ducastel, A., 2019. Recycling of refractory bricks used in basic steelmaking: A review. *Resour Conserv Recycl* 140, 297–304. <https://doi.org/10.1016/J.RESCONREC.2018.09.025>

Huynh, T.P., Ho, L.S., Ho, Q. Van, 2022. Experimental investigation on the performance of concrete incorporating fine dune sand and ground granulated blast-furnace slag. *Constr Build Mater* 347, 128512. <https://doi.org/10.1016/J.CONBUILDMAT.2022.128512>

Irmawaty, R., Caronge, M.A., Tjaronge, M.W., Abdurrahman, M.A., Ahmad, S.B., 2023. Compressive strength and corrosion behavior of steel bars embedded in concrete produced with ferronickel slag aggregate and fly ash: an experimental study. *Innovative Infrastructure Solutions* 8, 1–15. <https://doi.org/10.1007/S41062-023-01162-1/METRICS>

Jankovic, K., Nikolic, D., Bojovic, D., 2012. Concrete PBs and flags made with crushed brick as aggregate. *Constr Build Mater* 28, 659–663. <https://doi.org/10.1016/J.CONBUILDMAT.2011.10.036>

- Jureje, U., Tjaronge, M.W., Caronge, M.A., 2024. Basic Engineering Properties of Concrete with Refractory Brick as Coarse Aggregate: Compressive Stress-Time Relationship Assessment. *International Journal of Engineering* 37, 931–940. <https://doi.org/10.5829/IJE.2024.37.05B.11>
- Klak, F.S., Saleh, H., Tais, A.S., 2023. Recycling of crushed clay bricks as fine aggregate in concrete and cement mortar. *Australian Journal of Structural Engineering* 24, 67–76. <https://doi.org/10.1080/13287982.2022.2098600>
- Koksal, F., Gencel, O., Sahin, Y., Okur, O., 2021. Recycling bottom ash in production of eco-friendly interlocking concrete PBs. *J Mater Cycles Waste Manag* 23, 985–1001. <https://doi.org/10.1007/S10163-021-01186-8/METRICS>
- Kuenzel, C., Zhang, F., Ferrández-Mas, V., Cheeseman, C.R., Gartner, E.M., 2018. The mechanism of hydration of MgO-hydromagnesite blends. *Cem Concr Res* 103, 123–129. <https://doi.org/10.1016/J.CEMCONRES.2017.10.003>
- Kumar, A., Kumar, R., Das, V., Jhatial, A.A., Ali, T.H., 2021. Assessing the structural efficiency and durability of burnt clay bricks incorporating fly ash and silica fume as additives. *Constr Build Mater* 310, 125233. <https://doi.org/10.1016/J.CONBUILDMAT.2021.125233>
- Ma, D., Zhang, M., Cui, J., 2023. A review on the deterioration of mechanical and durability performance of marine-concrete under the scouring action. *Journal of Building Engineering* 66, 105924. <https://doi.org/10.1016/J.JOBE.2023.105924>
- Majer, J.D., Delabie, J.H.C., McKenzie, N.L., 2021. The use of recycled aggregate from waste refractory brick for the future of sustainable concrete. *Insectes Soc* 1, 255–266. <https://doi.org/10.1007/s000400050046>
- Mendoza, J.M.F., Oliver-Solà, J., Gabarrell, X., Rieradevall, J., Josa, A., 2012. Planning strategies for promoting environmentally suitable pedestrian pavements in cities. *Transp Res D Transp Environ* 17, 442–450. <https://doi.org/10.1016/J.TRD.2012.05.008>
- Meng, T., Lai, Z., Yang, X., Dai, D., Jia, Y., Yu, H., 2024. An approach to effectively improve the properties of recycled concrete aggregate and recycled brick aggregate by micro-nano particle reconstruction. *Constr Build Mater* 421, 135669. <https://doi.org/10.1016/J.CONBUILDMAT.2024.135669>
- Meng, Y., Ling, T.C., Mo, K.H., 2018. Recycling of wastes for value-added applications in concrete blocks: An overview. *Resour Conserv Recycl* 138, 298–312. <https://doi.org/10.1016/J.RESCONREC.2018.07.029>
- Mo, L., Liu, M., Al-Tabbaa, A., Deng, M., 2015. Deformation and mechanical properties of the expansive cements produced by inter-grinding cement clinker and MgOs with

- various reactivities. Constr Build Mater 80, 1–8. <https://doi.org/10.1016/J.CONBUILDMAT.2015.01.066>
- Muhiddin, A.B., Tjaronge, M.W., Caronge, M.A., Khalid, N.H.A., 2024. Reliability assessment of carbon fiber mortar: Combined pulse velocity, point load, and compressive strength tests. Results in Engineering 21, 101735. <https://doi.org/10.1016/J.RINENG.2023.101735>
- Nandi, S., Ransinchung, G.D.R.N., 2021. Performance evaluation and sustainability assessment of precast concrete paver blocks containing coarse and fine RAP fractions: A comprehensive comparative study. Constr Build Mater 300, 124042. <https://doi.org/10.1016/J.CONBUILDMAT.2021.124042>
- Nematzadeh, M., Baradaran-Nasiri, A., 2017. Residual Properties of Concrete Containing Recycled Refractory Brick Aggregate at Elevated Temperatures. Journal of Materials in Civil Engineering 30, 04017255. [https://doi.org/10.1061/\(ASCE\)MT.1943-5533.0002125](https://doi.org/10.1061/(ASCE)MT.1943-5533.0002125)
- Nili, M., Ehsani, A., 2015. Investigating the effect of the cement paste and transition zone on strength development of concrete containing nanosilica and silica fume. Mater Des 75, 174–183. <https://doi.org/10.1016/J.MATDES.2015.03.024>
- Penteado, C.S.G., Viviani De Carvalho, E., Lintz, R.C.C., 2016. Reusing ceramic tile polishing waste in PB manufacturing. J Clean Prod 112, 514–520. <https://doi.org/10.1016/J.JCLEPRO.2015.06.142>
- Rethinavelsamy, B.M., Chidambarathanu, N., 2016. Investigation on precast concrete paver block with waste tyre crumb rubber. Road Materials and Pavement Design 17, 719–736. <https://doi.org/10.1080/14680629.2015.1119056>
- Saluja, S., Somani, P., Gaur, A., Mundra, S., Ahmad, K., 2024. Stabilized municipal solid waste as an alternative to natural sand in paver block construction. Process Safety and Environmental Protection 182, 1035–1046. <https://doi.org/10.1016/J.PSEP.2023.12.032>
- Silva, W.B.C., Barroso, S.H.A., Cabral, A.E.B., Stefanutti, R., Picado-Santos, L.G., 2023. Assessment of concrete road PBs with coal bottom ash: Physical and mechanical characterization. Case Studies in Construction Materials 18, e02094. <https://doi.org/10.1016/J.CSCM.2023.E02094>
- Sormunen, P., Kärki, T., 2019. Recycled construction and demolition waste as a possible source of materials for composite manufacturing. Journal of Building Engineering 24, 100742. <https://doi.org/10.1016/J.JBEE.2019.100742>

- Soutsos, M.N., Tang, K., Millard, S.G., 2011. Use of recycled demolition aggregate in precast products, phase II: Concrete PBs. *Constr Build Mater* 25, 3131–3143. <https://doi.org/10.1016/J.CONBUILDMAT.2010.12.024>
- Su, T., Wang, T., Zhang, Z., Sun, X., Gong, S., Mei, X., Tan, Z., Cui, S., 2023. Mechanical properties and frost resistance of recycled brick aggregate concrete modified by nano-SiO<sub>2</sub>. *Nanotechnol Rev* 12. <https://doi.org/10.1515/NTREV-2023-0576/MACHINEREADABLECITATION/RIS>
- Viranthy Dian Pertiwi, A., Caronge, M.A., Tjaronge, M.W., 2024. Producing Eco-Friendly Concrete PB Using Waste Refractory Brick Aggregates. *International Journal of Pavement Research and Technology* 1–13. <https://doi.org/10.1007/S42947-024-00425-Z/METRICS>
- Wang, L., Li, G., Li, X., Guo, F., Tang, S., Lu, X., Hanif, A., 2022a. Influence of reactivity and dosage of MgO expansive agent on shrinkage and crack resistance of face slab concrete. *Cem Concr Compos* 126, 104333. <https://doi.org/10.1016/J.CEMCONCOMP.2021.104333>
- Wang, L., Lu, X., Liu, L., Xiao, J., Zhang, G., Guo, F., Li, L., 2022b. Influence of MgO on the Hydration and Shrinkage Behavior of Low Heat Portland Cement-Based Materials via Pore Structural and Fractal Analysis. *Fractal and Fractional* 2022, Vol. 6, Page 40 6, 40. <https://doi.org/10.3390/FRACTALFRACT6010040>
- Wang, X., Li, X., Lian, L., Jia, X., Qian, J., 2023. Recycling of waste magnesia refractory brick powder in preparing magnesium phosphate cement mortar: Hydration activity, mechanical properties and long-term performance. *Constr Build Mater* 402, 133019. <https://doi.org/10.1016/J.CONBUILDMAT.2023.133019>
- Wongkeo, W., Thongsanitgarn, P., Pimraksa, K., Chaipanich, A., 2012. Compressive strength, flexural strength and thermal conductivity of autoclaved concrete block made using bottom ash as cement replacement materials. *Mater Des* 35, 434–439. <https://doi.org/10.1016/J.MATDES.2011.08.046>
- Xiao, H., Li, Y., Wang, M., Yan, D., Liu, Z., 2021. The migration and transformation of chromium during co-processing of cement raw meal mixed with chrome-polluted soil. *Environ Technol Innov* 24, 101971. <https://doi.org/10.1016/J.ETI.2021.101971>
- Xiao, S., Cheng, H., Que, Z., Liu, T., Zou, D., 2024. Enhancing marine anti-washout concrete: Optimal silica fume usage for improved compressive strength and abrasion resistance. *Constr Build Mater* 428, 136262. <https://doi.org/10.1016/J.CONBUILDMAT.2024.136262>
- Xue, K., Han, J., Jiao, F., Liu, W., Qin, W., Cai, L., Xu, T., 2018. Comprehensive utilization of spent magnesia-chrome refractories with gravity separation followed by flotation. *Miner Eng* 127, 125–133. <https://doi.org/10.1016/J.MINENG.2018.08.010>

- Xue, X., Zheng, X., Guan, B., Liu, J., Ding, D., Xiong, R., Zhao, H., Wei, F., 2022. Long-term skid resistance of high-friction surface treatment of pavement using high-alumina refractory waste. *Constr. Build. Mater.* 351, 128961. <https://doi.org/10.1016/J.CONBUILDMAT.2022.128961>
- Yeo, J.S., Koting, S., Onn, C.C., Radwan, M.K.H., Cheah, C.B., Mo, K.H., 2023. Optimisation and environmental impact analysis of green dry mix mortar PB incorporating high volume recycled waste glass and ground granulated blast furnace slag. *Environmental Science and Pollution Research* 30, 58493–58515. <https://doi.org/10.1007/S11356-023-26496-2/METRICS>
- Zeghad, M., Mitterpach, J., Safi, B., Amrane, B., Saidi, M., 2017. Reuse of Refractory Brick Wastes (RBW) as a Supplementary Cementitious Material in a Concrete. *Periodica Polytechnica Civil Engineering* 61, 75–80. <https://doi.org/10.3311/PPCI.8194>
- Zhao, Y., Gao, J., Chen, F., Liu, C., Chen, X., 2018. Utilization of waste clay bricks as coarse and fine aggregates for the preparation of lightweight aggregate concrete. *J. Clean Prod.* 201, 706–715. <https://doi.org/10.1016/J.JCLEPRO.2018.08.103>

## LAMPIRAN

	<b>Universitas Hasanuddin Program Studi Magister Teknik Sipil</b>	<b>Nama : Muh Risal NIM : D012221005</b>
	<b>LAMPIRAN</b>	<b>Tgl Percobaan : Maret 2023</b>

<b>PERSIAPAN MATERIAL</b>	
	
	

## LAMPIRAN

	<b>Universitas Hasanuddin</b> <b>Program Studi Magister</b> <b>Teknik Sipil</b>	<b>Nama : Muh Risal</b> <b>NIM : D012221005</b>
	<b>LAMPIRAN</b>	<b>Tgl Percobaan : Maret 2023</b>

<b>PENGUJIAN</b>	
	