

REFERENCES

- AMERICAN SOCIETY FOR TESTING AND MATERIALS, 2006. *ASTM C131: Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.* West Conshohocken, PA,: ASTM International.
- ASTM International. (1989). Annual Book of ASTM Standards, Vol 04.01: Cement; Lime; Gypsum. Annual Book of ASTM Standards (Vol. 04.01). Philadelphia.
- Barra, M. (1996). Study of the durability of recycled aggregate concrete in its application as structural concrete (Doctoral thesis, Polytechnic University of Catalonia, Barcelona, Spain).
- Barra, M., & Vazquez, E. (1996). The influence of retained moisture in aggregates from recycling on the properties of new hardened concrete. *Waste Management*, 16, 113–117.
- BRITISH STANDARD INSTITUTE, 1975. *BS 812: Part 2: Specific Gravity and Water Absorption test.* London: British Standards Institute.
- BRITISH STANDARD INSTITUTE, 1983. *BS 1881: Part 102: Slump test.* London: British Standards Institute.
- BRITISH STANDARD INSTITUTE, 1983. *BS 1881: Part 116: Compressive Strength test.* London: British Standards Institute.
- BRITISH STANDARD INSTITUTE, 1985. *BS 812: Part 2: Bulk Density test.* London: British Standards Institute.
- BRITISH STANDARD INSTITUTE, 1985. *BS-812-103.1: Particle size distribution test.* London: British Standards Institute.
- Campbell, D. H., Weise, C. H., & Love, H. (1982). Mount St. Helens volcanic ash in concrete. *Concrete International: Design & Construction*, 4(7), 24-31.
- Cement Concrete & Aggregates Australia. (2008). Use of Recycled Aggregates in Construction. Retrieved from Publications, Cement Concrete & Aggregates Australia website:
http://www.ccaa.com.au/imis_prod/documents/Library%20Documents/CCAA%20Reports/RecycledAggregates.pdf
- Ceylon Electricity Board. (2014). Tariff Plan. Retrieved from <http://www.ceb.lk/sub/residence/tariffplan.html>
- Cheenmatchaya, A., & Kungwankunakorn, S. (2014). Preparation of Activated Carbon Derived from Rice Husk by Simple Carbonization and Chemical

Activation for Using as Gasoline Adsorbent. *International Journal of Environmental Science and Development*, 5(2), 171-175. <http://www.ijesd.org/papers/472-CD0143.pdf>. 2015.2.18.

Chen, H. J., Yen, T., & Chen, K. H. (2003). Use of Building Rubbles as Recycled Aggregates. *Cement and Concrete Research*, 33, 125-132.

Cook, D.J. (1980). Using rice-husk for making cement-like materials. *Appropriate Technology*, 6 (4), 9-11.

Cook, D.J., & Suwanvitaya, P. (1983, May). *Properties and behavior of lime-rice husk ash cements*, ACI Spec. Pub. SP-79, Fly Ash, Silica Fume, Slag and Other Mineral By-Products, American Concrete Institute (pp 831-845).

Casper, S. D., Hallenbeck, W. H., & Brenniman, G. R. (1993). *Construction and Demolition Waste Generation, Regulation, Practices, Processing, and Policies* (Technical Report PB-93-174498/XAB). Illinois, Chicago, United States: University of Illinois Univ.

Costa, U., & Massazza, F. (1977). Influence of the thermal treatment on the reactivity of some natural pozzolanas with lime. *Il Cemento*, 3, 105-122.

COWAM Project. (2011). *Construction Waste Management in Sri Lanka*. Retrieved from <http://cowam.tec-hh.net/1Construction%20Waste%20Management%20in%20Sri%20Lanka>

Dabai, M. U., Muhammad, C., Bagudo, B.U., & Musa, A. (2009). Studies on the Effect of Rice Husk Ash as Cement Admixture. *Nigerian Journal of Basic and Applied Science*, 17(2), 252-256.

Davis, R. E. (1950). *A review of pozzolanic materials and their use in concretes*. Symposium on Use of Pozzolanic Materials in Mortars and Concretes, ASTM STP-99 (pp 3-15). Stanton.

de Juan, M. S., & Gutiérrez, P. A. (2009). Study on the influence of attached mortar content on the properties of recycled concrete aggregate. *Construction and Building Materials*, 23, 872–877.

de Medeiros, R. A., Fucale, S. P., Póvoas, Y. V., & Gusmão, A. D. (2009, September). Research characterizing the physical properties of recycled aggregate of civil construction wastes. *Proceedings of the 11th International Conference on Non-conventional Materials and Technologies (NOCMAT 2009)* (pp. 6-9). Bath, UK.

Dosho, Y. (2007). Development of a Sustainable Concrete Waste Recycling System-Application of Recycled Aggregate Concrete Produced by Aggregate Replacing method. *Journal of Advanced Concrete Technology*, 5(1), 27-42.

Ekanayake, L., & Ofori, G., (2000, August). Construction material waste source evaluation. Paper presented at the Proceedings of Strategies for a Sustainable Built Environment, Pretoria (pp. 23-25)

Fong, W. F.K., Yeung, J. S.K., & Poon, C.S. (2004). Hong Kong experience of using recycled aggregates from construction and demolition materials in ready mix concrete. *International Workshop on Sustainable Development and Concrete Technology* (PART II, pp. 297-275). Beijing, China.

Food and Agriculture Organization of the United Nations. (1998). *Report of the Fifth External Programme and Management Review of International Rice Research Institute*. Retrieved from <http://www.fao.org/wairdocs/tac/x5801e/x5801e08.htm#1.1%20rice%20in%20asia>

Foundation, Concrete and Earthquake Engineering. (2014). *State of Moisture Content of Aggregate for Concrete*. Retrieved from <http://civil-engg-world.blogspot.com/2014/04/state-moisture-content-aggregate-Concrete.html>

Freedonia Group. (2013). *World Construction Aggregates, Industry Study with Forecasts for 2017 & 2022*. Retrieved from <http://www.freedomiagroup.com/brochure/30xx/3078smwe.pdf>

Ghorpade, G. V., & Sudarsana, H. R. (2012). Strength and permeability characteristics of fiber reinforced high performance concrete with recycled aggregates. *ASIAN journal of civil engineering (building and housing)*, 13(1), 55-77.

Givi, A. N., Rashid, S. A., Aziz, F. N. A., & Salleh, M. A. M. (2010). Contribution of Rice Husk Ash to the Properties of Mortar and Concrete: A Review. *Journal of American Science*, 6 (3), 157-165.

Godwin, A. A., Maurice, E. E., Akobo, I.Z.S., & Joseph, O. U. (2013). Structural properties of rice husk ash concrete. *International Journal of Engineering and Applied Sciences*, 3(3), (57-62).

Guneyisi, E., Gesoglu, M., Algin, Z., & Yazıcı, H. (2014). Effect of surface treatment methods on the properties of self-compacting concrete with recycled aggregates. *Construction and Building Materials*, 64, 172–183.

Hanna, K. M., & Afify, A., (1976). Some factors affecting strength development in pozzolanic Portland cement. *Sprechsaal*, 109, 440-446.

Hong Kong Tourism Board. (2015). *Hong Kong Wetland Park / Hong Kong Tourism Board*. Retrieved from <http://www.discoverhongkong.com/eng/see-do/great-outdoors/nature-parks/hong-kong-wetland-park.jsp>

Hwang, C.L., & Wu, D.S. (1989.). *Properties of cement paste containing rice husk ash*. ACI Spec. Pub. SP-114, paper presented at the Third International

Conference proceedings of Fly Ash, Silica Fume, Slag, and Natural Pozzolans in Concrete (pp 733-762). American Concrete Institute, Trondheim, Norway.

INDIAN STANDARD, 1997. *IS: 2386 part IV:Determination of Aggregate Impact Value*. New Delhi: Bureau of Indian Standards.

Jeffery. G., Bassett. J., Mendham. J. and Denney. R. (1989). *VOGEL's Text Book of Quantitative Chemical Analysis*. London: Longman scientific and technical, pp. 779-803.

Kartini, K., Mahmud, H. B., & Hamidah, M. S. (2006, August). *Strength properties of grade 30 rice husk ash concrete*. Paper presented at the OUR WORLD IN CONCRETE & STRUCTURES 31st Conference, Singapore. Retrieved from <http://cipremier.com/100031025>

Kheder, G.F., & Al-Windawi, S.A. (2005). Variation in Mechanical Properties of Natural and Recycled Aggregate Concrete as Related to the Strength of Their Binding Mortar. *Materials and Structures*, 38, 701-709.

Kosmatka, S.H., Kerkhoff, B., & Panarese, W.C. (2002). *Design and Control of Concrete Mixtures* (14th ed.). United States of America: Portland Cement Association.

Kulatunga, U., Amaratunga, D., Haigh, R., & Rameezdeen, R. (2006), Attitudes and perceptions of construction workforce on construction waste in Sri Lanka. *Management of Environmental quality – An International Journal*, 17(1), 57-72.

Kumar, A., Mohanta, K., Kumar, D., & Parkash, O. (2012). Properties and Industrial Applications of Rice husk: A review. *International Journal of Emerging Technology and Advanced Engineering*, 2(10), 86-90.

Kyritsi, A., Tzia, C., & Karathanos, V. (2011). Vitamin fortified rice grain using spraying and soaking methods. *LWT-Food Science And Technology*, 44(1), 312-320.

Limbachiya, M. C., Koulouris, A., Roberts, J. J., & Fried, A. N. (2004). PERFORMANCE OF RECYCLED AGGREGATE CONCRETE. *RILEM International Symposium on Environment-Conscious Materials and Systems for Sustainable Development* (pp. 127 – 136). Kingston, UK.

Manmohan, D., & Mehta, P. K. (1981). Influence of pozzolana, slag and chemical admixtures on pore size distribution and permeability of hardened cement paste. *Cement, Concrete and Aggregates*, 3, 63-67.

Marinkovi, S. B., Ignjatovi, I. S., Radonjanin, V. S., & Malešev, M. M. (2010). Recycled aggregate concrete for structural use – an overview of technologies, properties and applications. *ACES Workshop, Innovative Materials and Techniques in Concrete Construction*. Corfu, Greece.

- Mehta, P. K. (1992, May). *Rice husk ash - A unique supplementary cementing materials*. CANMET/ACI International Conference on Advances in Concrete Technology (pp. 419-443). Athens.
- Mindess, S., Young, J. F., & Darwin, D. (Eds.). (2002). *Concrete* (2nd ed.). Upper Saddle River, NJ, USA: Prentice Hall.
- Mohammed, A., Deepthi, B., Tahsin, T., & Monty, S. (2012). Construction waste management in India: an exploratory study. *Construction Innovation: Information, Process, Management*, 12(2), 133 – 155.
- Nagrale, S. D., Hajare, H., & Modak, P. R. (2012). Utilization of Rice Husk Ash. *International Journal of Engineering Research and Applications (IJERA)*, 2(4), 001-005.
- Nastaranpoor, R. (2013). An Investigation for the Effects of Local Natural Pozzolans on Some Mechanical Properties of Concrete (Master thesis, Eastern Mediterranean University, Gazimağusa, North Cyprus). Retrieved from <http://i-rep.emu.edu.tr:8080/jspui/bitstream/11129/1350/1/NastaranpoorReza.pdf>
- Neville, A.M. (Eds.). (2011). *Properties of Concrete* (5th ed.). India: Dorling Kindersley
- Nitivattananon, V., & Borongan, G. (2007, September). *Construction and demolition waste management: current practices in Asia*. International Conference on SWM (pp. 5-7). India.
- Ogawa, K., Uchikawa, H., Takemoto, K., & Yasui, I. (1980). The mechanism of hydration in the system C₃S-pozzolana. *Cement and Concrete Research*, 10, 683-699.
- Osmani, M., Glass, J., & Price, A. D. F. (2008). Architects perspectives on construction waste reduction by design. *Waste Management*, 28(7), 1147-1158.
- Parboiled rice. (n.d.). In Wikipedia. Retrieved May 19, 2015, from https://en.wikipedia.org/wiki/Parboiled_rice#Process_and_chemistry
- Parekh, D. N. I., & Modhera, C. D. (2011). ASSESSMENT OF RECYCLED AGGREGATE CONCRETE. *Journal of Engineering Research and Studies*, 2(1), 1-9
- Pavement Interactive. (2011). *Gradation Test*. Retrieved from <http://www.pavementinteractive.org/article/gradation-test/>
- Peluso, M. J., Domingo, A., Ulloa, V. A., & Vergara, N. N. (2009). *Analysis of moisture state of recycled coarse aggregate and its influence on compression strength of the concrete*. Proceedings of the International Association for Shell and Spatial Structures (IASS) Symposium 2009; Valencia Evolution and Trends

in Design, Analysis and Construction of Shell and Spatial Structures (pp 1-9), Valencia, Spain.

Pillaiyar, P. (1981). Household parboiling of parboiled rice. *Kisan World*, 8, 20–21.

Poon, C. S., Shui, Z.H., & Lam, L. (2004). Effect of microstructure of ITZ on compressive strength of concrete prepared with recycled aggregates. *Construction and Building Materials*, 18, 461–468.

Premasiri, E. S. Y., Kariapper, A. B. Y., Abeysignhe, A. M. G. G. M. B., & Karunaratne, S. (2013, June). *Use of Recycled Aggregates in Structural Concrete*. Paper presented at the 2nd World Construction Symposium (pp. 428-433). Sri Lanka.

Qiu, J., Tng, D. Q. S., & Yang, E. (2014). Surface treatment of recycled concrete aggregates through microbial carbonate precipitation. *Construction and Building Materials*, 57, 144–150.

Rahal, K. (2005). Mechanical properties of concrete with recycled coarse aggregate, *Building and Environment*, 42, 407–415.

Ramasamy, V. (2011). Compressive Strength and Durability Properties of Rice Husk Ash Concrete. *Korean Society of Civil Engineers Journal of Civil Engineering*, 16(1), 93-102.

Ramezanianpour, A. A., Mahdi, M. K., & Ahmadibeni, G. (2009). The Effect of Rice Husk Ash on Mechanical Properties and Durability of Sustainable Concretes. *International Journal of Civil Engineering*, 7(2), 83-91.

Ramezanianpour, A.A., & Shahnazari, M.R. (Eds.). (1989). *Concrete Technology* (2nd ed.). Tehran: Elmo Sanat Publication.

RICELAND INTERNATIONAL LIMITED. (2011). *Rice Parboiling*. Retrieved from <http://www.ricelandgroup.com/Parboiling.html>

Ricepedia. (2009). *Parts of the rice plant*. Retrieved from <http://ricepedia.org/rice-as-a-plant/parts-of-the-rice-plant>

Ricepedia. (2009). *Rice productivity*. Retrieved from <http://ricepedia.org/rice-as-a-crop/rice-productivity>

Ricepedia. (2009). *The global staple*. Retrieved from <http://ricepedia.org/rice-as-food/the-global-staple-rice-consumers>

Ricepedia. (2009). *What happens after harvest?*. Retrieved from <http://ricepedia.org/rice-as-a-crop/what-happens-after-harvest>

Robert, L. D. (1990). *Pozzolans for use in low-cost housing* (A technical report prepared for: the International Development Research Centre, Ottawa). Retrieved from International Development Research Centre website: <http://idl-bnc.idrc.ca/dspace/bitstream/10625/5782/1/49685.pdf>

Rukzon, S., & Chindaprasirt, P. (2008). Development of classified fly ash as a pozzolanic material. *Journal of Applied Sciences*, 8(6), 1097.

Rukzon, S., Chindaprasirt, P., & Mahachai, R. (2009). Effect of grinding on chemical and physical properties of rice husk ash. *International Journal of Minerals, Metallurgy and Materials*, 16(2), 242 – 247.

Samwoh. (2010). Samwoh builds Eco-Green Building – a key milestone towards sustainable development. Retrieved from <http://www.samwoh.com.sg/index.php/component/content/article/34-%20samwoh/latest-news/69-samwoh-eco-green-building>

Samwoh. (2015). *Samwoh Recycling of Construction Wastes - Samwoh*. Retrieved from <http://www.samwoh.com.sg/index.php/2010-09-23-10-36-49/recycling-of-construction-wastes>

Sathish, R. K. (2012). Experimental study on the properties of concrete made with alternate construction materials. *International Journal of Modern Engineering Research (IJMER)*, 2(5), 3006-3012.

Sersale, R., (1980). *Structure and characterization of pozzolans and fly ashes*. Proceedings of the 7th International Congress On the Chemistry of Cements, Sub Theme IV-1, (pp 1-18). Paris, France.

Shetty, M. S. (Eds.). (2013). *Concrete technology theory and practice* (7th ed.). New Dheli, India: S. Chand.

Silva, R.V., de Brito, J., & Dhir, R. K. (2014). Properties and composition of recycled aggregates from construction and demolition waste suitable for concrete production. *Construction and Building Materials*, 65, 201–217.

Spence, R. J. S., & Cook, D. J. (1983). *Building Materials in Developing Countries*. London: Wiley.

Tabsh, S. W., & Abdelfatah, A. S. (2009). Influence of recycled concrete aggregates on strength properties of concrete. *Construction and Building Materials*, 23, 1163–1167.

The Constructor - Civil Engineering Home. (2011). *DETERMINATION OF LOS ANGELES ABRASION VALUE*. Retrieved from <http://theconstructor.org/building/building-material/determination-of-los-angeles-abrasion-value/1361/>

Tomoshige, R., Ashitani, T., Yatsukawa, H., Nagase, R., Kato, A., & Sakai, K. (2003). Synthesis of ceramic compounds utilizing woody waste materials and rice husk Construction and Building Materials. *Materials Science Forum*, Vols. 437-438 (pp. 411-414). Singapore.

UNDERSTANDING CEMENT. (2005). *Cement hydration*. Retrieved from <http://www.understanding-cement.com/hydration.html>

Vitro Minerals. (2015). *Concrete Chemistry*. Retrieved from http://www.vitrominerals.com/?page_id=64

Vyas, C. M., & Bhatt, D. R. (2013). Use of Recycled Coarse Aggregate in Concrete. *IJSR - INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH*, 2(1), 70-74.

worldometers. (2015). World Population Clock. Retrieved from <http://www.worldometers.info/world-population/#growthrate> (20.1.2015).

Yadav, S. R., & Pathak, S. R. (2009, August). Use of recycled concrete aggregate in making concrete- an overview. 34th Our World in Concrete and Structures 2009 (pp 1-8). Singapore.

Yagishita, F., Sano, M., & Yamada, M. (1994). Behaviour of reinforced concrete beams containing recycled coarse aggregate. *Demolition and Reuse of Concrete*. 331-342.

Yong, P. C. (2009). Utilization of recycle aggregate as course aggregate in concrete. *Unimass E-journal of civil engineering*, 1(1), 3-4.

Yong, P. C., & Teo, D. C. L. (2009). Utilization of recycled aggregates as coarse aggregate in concrete. *UNIMAS E-Journal of Civil Engineering*, 1(1),

Younis, K. H., & Pilakoutas, K. (2013). Strength prediction model and methods for improving recycled aggregate concrete. *Construction and Building Materials*, 49, 688–701.

Appendix – A

Details of the Tests Carried Out in the Research Study

Appendix – B

Calculations Performed to Obtain the Mix Design

Appendix – C

Photographs Taken During the Research Study

