



Original Paper | Chapter

Use of Crushed Waste Glass (CWG) for Partial Replacement of Fine Aggregate in Concrete Production: A Review

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Publisher: Springer Singapore

Published in: Advances in Geotechnics and Structural Engineering

Abstract

Safe disposal of waste glass is one of the biggest environmental challenges due to its inertness property across the globe. Among the various types of glasses, disposal of cathode ray tube (CRT) and liquid crystal display (LCD) is more challenging due to emission of harmful contents. It is not easy and safe to dispose of these glass waste in the landfills. As an environmental friendly solution, researchers evolve the possibility of using CWG in the construction industry. It may be used both as coarse and fine aggregate in concrete production. This review paper offers an overview of previous work in which the CWG is used as fine aggregate. The optimum workability, dry and wet density, and compressive, tensile, and flexural strength results presented by various researchers are compiled for various compositions of concrete with CWG. It can be observed that the results are inconsistent and did not follow a trend. CWG will marginally increase the strengths when it is used in the lower percentage. After reaching an optimum value, the strengths again reduce.
