

## DURABILITY TEST OF RECYCLED CONSTRUCTION DEMOLISHED WASTE MATERIALS.

The growing emphasis on sustainable construction practices has led to an increased focus on utilizing recycled materials derived from demolished structures. This study evaluates the durability of recycled construction demolished waste materials. A comprehensive durability test is conducted to assess the long-term performance of these materials when subjected to various environmental and physical stresses.

The primary objective of this research is to determine whether recycled construction materials can match the structural integrity and resilience of conventional materials. Standardized sample preparation and testing methodologies, aligned with ASTM, are employed to ensure consistency and reliability in results. Key parameters such as mechanical strength, resistance to weathering, and degradation under wet-dry cycles are examined.

The study begins with wet-dry cycle testing while incorporating findings from literature reviews to expand the testing scope. By verifying the durability of recycled construction demolished waste materials, this research aims to support their wider adoption in construction, promoting sustainability without compromising safety and quality standards. The results will contribute to the development of guidelines for optimizing the use of recycled materials in the construction industry.