

SUSTAINABLE APPLICATION OF RECYCLED CONCRETE IN REINFORCED CONCRETE FRAME ELEMENTS IN DEVELOPING COUNTRIES

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Abstract

Recycled Aggregate although environment friendly, yields concrete of low compressive strength. Furthermore, the literature shows that the typical construction methods in Pakistan, which is a developing country, also produces low strength concrete. It is well known that reinforced concrete strength, ductility and energy dissipation capacity increases with increase in confining reinforcement ratio. Thus concrete fabricated from low strength concrete and improved confinement will exhibit more ductility, therefore, suitable for use anywhere specially earthquake prone areas. There are different confining models developed over time to estimate the possible increase in strength and ductility in concrete. These models are not tested for low strength concrete as it is not general practice to fabricate low strength concrete. This paper gives a review of the confining models that can possibly be used for the design of recycled aggregate low strength concrete. Future work is also recommended to experimentally validate some of the recommended confining models for strength and ductility enhancement.