

Analysis of light weight beams by using different waste materials

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Abstract

One of the most extensively used materials in the world is concrete. Many scientists and researchers are in search for developing alternate construction material or replacement of material with environment friendly or waste material for sustainable development. In reinforced cement concrete beams, strength of concrete lying near the neutral axis which is not fully utilized. This concrete can be replaced by some light weight and economical material because concrete just above the neutral axis is less stressed; whereas the concrete below the neutral axis serves as a shear transmitting media. Looking to the limitations of reinforced concrete beams, the concept of infilled RC beams has been developed. Partially utilized concrete of RC beam can be replaced by recycled aggregate concrete, scrap rubber aggregate concrete, steel scrap concrete, plastic waste etc. In this way the economy and strength are combined in infilled beams. This concrete can be used as infilled material in the less stressed zone near neutral axis. This will help in saving of aggregates for the future and also reuse of waste material.

Biography

Rakesh Patel has completed his PhD at the age of 35 years from MANIT Bhopal, India. He is the professor in the Civil Engineering department SIRTS Bhopal. He has over 50 publications that have many citations, and has been serving as an editorial board/ reviewer of many Journals. He is having membership of many professional bodies.



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