

Article

Flexural behavior of reinforced geo-polymer concrete beams at ambient temperature

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Abstract

An experimental study was carried out on geo-polymer and reinforced concrete beams to evaluate the flexural behavior of the beams for the structural grade of M30 concrete. The results show that the geo-polymer concrete beams exhibit similar flexural strength when compared to reinforced concrete beams. The split tensile strength, stiffness characters, the energy capacity and ductility relationship were also found with satisfactory results. The deflection and the stiffness degradation at the salient stages were found to be similar and thus the geo-polymer concrete beams find a good alternative to reinforced concrete beams under flexural behavior.

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