

Shear Behaviour of RCC Beam Retrofitted With Externally Bonded Basalt Textile Fabric

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I. INTRODUCTION

- Shear on beam is defined as the internal shear stress of a beam caused by the shear force applied to the beam.
- The fiber reinforced polymer (FRP) has arisen as a promising material for shear strengthening of RCC structures due to their superior qualities such as high specific strength, better fatigue and chemical resistance.
- This resistance to sliding or resistance to forces that are parallel to the beam surface, generates a shear stress within the material.
- Basalt fiber has possessed high tensile strength, better chemical and heat resistance which is higher than that of steel fiber.
- The study finds that the beams strengthened with and without BFRP (basalt fiber reinforced polymer) strips fails in shear for L/d ratio 2.5 and the enhancement of the shear capacity of strengthened beams ranges from 5 % to 20 %.

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