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Material Characterisation of Macro Synthetic Fibre Reinforced Concrete

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Abstract:

In this paper, the post cracking behaviour of macro synthetic polypropylene fibre reinforced concrete is investigated through a series of matched tests that measure tension directly through uniaxial tension tests and indirectly through prism bending and determinate round panel tests. An analytical model previously developed by the authors for the determination of the residual tensile strength provided by steel fibres in prism bending tests is adapted for the round panel tests fibres and is shown to correlate well with the collected experimental data.

Keywords: *Macro synthetic, fibre reinforced concrete, bending, uniaxial tension, round panel, fracture*

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