Review of: "Shear performance of polypropylene fiber reinforced high-strength self-compacting concrete beams"

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Potential competing interests: No potential competing interests to declare.

The article investigated various mechanical properties of PP-reinforced concretes. Some improvements are still needed. First, a comparison was made according to the weight ratios of PP fibers. However, since there is a significant difference between the specific gravity of concrete and PP fibers, it is necessary to make an evaluation according to the fiber volumetric ratio. Calculations of the fiber volumetric ratio can be found in the following article:

Karahan M, Karahan N. Influence of weaving structure and hybridization on the tensile properties of woven carbon-epoxy composites. Journal of Reinforced Plastics and Composites. 2014;33(2):212-222. doi:10.1177/0731684413504019

Fiber volumetric ratios should be calculated using the formulations in this article.

Additionally, interlayer shear strength is important in concrete composites. For this evaluation, the following article should be used, and the bending results should be converted to ILSS values:

Zahid, S., Nasir, M.A., Nauman, S. et al. Experimental analysis of ILSS of glass fiber reinforced thermoplastic and thermoset textile composites enhanced with multiwalled carbon nanotubes. J Mech Sci Technol 33, 197–204 (2019). https://doi.org/10.1007/s12206-018-1219-0