

# 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 author selected a very interesting and intriguing topic and presented the study in a concise and solid form with good technical and scientific contributions. However, before finally publishing the paper, there are a few suggestions and comments on the work presented. These comments can be divided into two parts: English language comments, and technical/scientific comments.

## Language Comments:

1- The sentence in the introduction section "To increase the tensile strength, usually the concrete was added by fiber materials" is not written properly and gives the indication that concrete is the added material to fibers. It should be rewritten.

2- The paper should be revised for English language.

## Technical Comments:

1- In the introduction, before this sentence, "Therefore, another fiber material was developed and used in concrete such as steel fibers, glass fibers, carbon fibers, and polypropylene fibers. Investigation of fiber concrete using polypropylene fiber was already done by researchers," the author mentions steel fibers' disadvantages. Then the author lists steel fibers as an alternative to steel fibers. Thus, steel fibers in this sentence must be removed.

2- The following two sentences in the introduction last paragraph need to be supported by references.

"It was shown that polypropylene can improve the tensile strength of concretes. Investigation on self-compacting concrete was comprehensively carried out several decades ago. "

3- The mix proportion in the second mix Table 1, is the micro silica quantity correct at 570KG?

4- The section 2.2 might be better changed to specimens preparation. EFNARC organization standards that are mentioned in this section should be cited. Also, the size of the specimens (100mm cubes) should be justified according to the followed standard (ASTM, ISO, etc.) with proper citation.

5- There should be a separate section named "Results and Discussion." All results after Figure 3 should be moved to that section.

6- The conclusion section should be without discussion and rewritten in a bullet point format.

7- The second sentence of the first conclusion point should be rewritten to be more clear to readers.

8- The following two sentences in the introduction last paragraph need to be supported by references and elaborate more on what's missing in the literature

“However, study on self-compacting concrete using polypropylene is still rare. Therefore, a study on high-strength self-compacting concrete using polypropylene is still needed.”

9- The reinforcement information of the beam section in the paragraph is different from that in figure 2.

I recommend the paper to be accepted after comprehensive revision to incorporate these comments and suggestions.