To Reviewer 2

The authors sincerely thank the reviewer for taking the time and effort to review our manuscript, raise key issues and questions, and provide valuable comments and feedback. Thanks for the encouraging recommendation for the revised draft.

1. The tense through all the manuscript should keep consistent. Sometimes, the authors use the present tense, and sometimes the authors use the past tense. For example, on page 3 line 106, “The sample is formed by compaction” should be “The sample was formed by compaction”.

   **Author’s response:** Authors are very sorry for this mistake. We have corrected “The sample is formed…” to “The sample was formed”, see the page 3 line 106.

   Another problem was corrected from “the upper and lower surfaces of the sample are flattened” to “the upper and lower surfaces of the sample were flattened”, see the page 4 line 107.

2. There are some grammar errors, which should be properly corrected. For example, in page 5 line 127, “(a)-(e) is correspond to the F-s curve” should be “(a)-(e) are correspond to the F-s curve”.

   **Author’s response:** We have corrected “Figure. 7, (a)-(e) is correspond to…” to “Figure. 7, (a)-(e) are correspond to”, see the page 5 line 127.

3. There should be a space between numbers and units. For example, on page 6 line 143, “4mm” should be “4 mm”.

   **Author’s response:** We have corrected from “According to the F-s curve, the shear force corresponding to the 4mm” to “According to the F-s curve, the shear force corresponding to the 4 mm”, see page 6 line 143.

4. In Figure 9, all the conditions are expressed in the same color and style lines, which is hard to clearly see the details.

   **Author’s response:** Authors are very sorry for this mistake, figure 7, figure 9 and figure 11 were redrew in different colors to express clear details. See lines 150, 234 and 270.

5. Other places in the manuscript have also been modified by the authors.