Response to Reviewer 2

Dear Reviewer 2,

Thank you so much for your comments concerning our manuscript entitled “Adhesive and Cohesive Cracking Analysis of Bitumen–Filler Mastics Using an Energy-Based Crack Initiation Criterion” (ID: sustainability-2151818). Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our research. We have studied comments carefully and made corrections which we meet with approval. The main corrections in the paper and the responds to the reviewer’s comments are as following:

The manuscript presents an interesting topic. However, the reviewer has the following comments to improve the quality of the manuscript.

- **Issue 1**: Abstract should be improved and present quantitative results.

  ***Response**: We really appreciate the reviewer’s suggestion. We revised the abstract and added more quantitative results.*

- **Issue 2**: Title should be modified.

  ***Response**: Thanks a lot for the reviewer’s advice. We modified the title of this paper and highlight the key point of this study.*

- **Issue 3**: Literature review should be extended. Some suggested studies: https://doi.org/10.1080/14680629.2020.1826347, https://doi.org/10.1007/s41062-018-0190-z, https://doi.org/10.1007/s41062-019-0230-3 .

  ***Response**: It is a really valuable suggestion to improve this manuscript. We extended the literature review based on the suggested studies.*

- **Issue 4**: The authors should enhance the discussion section by comparing the findings of this studies with previous studies (the first suggested study can be used for comparison).

  ***Response**: We really appreciate the reviewer’s valuable suggestion. We added more discussion and comparison with the findings of the previous studies especially the first suggested, which is highlighted by green color in the section of results and discussion.*

- **Issue 5**: A recommendation for the practioners should be lighted

  ***Response**: We really appreciate the reviewer's valuable suggestion. We added some recommendation based on the finding of this study in the conclusion and summary section highlighted by green color.*

- **Issue 6**: limitations should be discussed

  ***Response**: Thanks a lot for the reviewer's advice. We added the illustration about the limitations of the developed model in the end of conclusion highlight by green color.*

Special thanks to you for your good comments.

We tried our best to improve the manuscript and made some changes in the manuscript. These changes will not influence the content and framework of the paper. We appreciate for Editors/Reviewers' warm work earnestly, and hope that the correction will meet with approval. Once again, thank you very much for your comments and suggestions.

With kind regards,

Zhiyang Liu, Haipeng Wang, Jiangcai Chen, Peng Cui