

“Effect of scour on the fatigue life of offshore wind turbines and its prevention through passive structural control” (Manuscript number: wes-2023-149 – first revision)

Thank you very much for the comprehensive revision of the manuscript. My questions have been answered completely. I only think that some more of your answers should be added to the manuscript. Therefore, I have a few last suggestions, which should be considered in a final minor revision.

Points to be added to the manuscript:

- 1) Previous comment no. 7: Could you please add the matrices $\mathbf{C}_T = \begin{bmatrix} 0 & \dots & 0 \\ \vdots & \ddots & \vdots \\ 0 & \dots & c_T \end{bmatrix}$ etc. to the manuscript. In your answer, the definition of \mathbf{C}_T it is very, but in the manuscript, it can still be improved.
- 2) Previous comment no. 10: In your answers, you nicely explain that and why you neglect the nonlinearity of the soil matrix. In the paper, it is only mentioned in the conclusions. Perhaps, you can add one more sentence to Section 2.3.
- 3) Previous comment no. 13: According to the reference paper “t is the thickness through which a crack will most likely grow. And $t = t_{ref}$ is used for thickness less than t_{ref} . In fact, when t is more than t_{ref} , t is the actual thickness of the pile.” In your case, $t > t_{ref}$. Hence, t is the actual thickness of the pile. I suggest adding this to the manuscript.
- 4) Previous comment no. 15: In your answers, you explain that N_c is obtained by the rainflow counting algorithm in MATLAB. As the reader might not know this, you should add an explanation how N_c is obtained to the manuscript.
- 5) Previous comment no. 17: You comprehensively explain the reason for putting the TMD in the tower. I think that this explanation is not required to be repeated in the manuscript. Nonetheless, in the manuscript, it should be pointed out that the TMD could/should be rotatable as well (second last sentence of your explanation in the answers).
- 6) Previous comment no. 24: You give a description of the difference between the modelling of operating and parked conditions in the answers. However, none of the explanation is added to the manuscript. Perhaps, you add the most important points of it to the manuscript as well.