

Dear authors,

I would like to thank you for the interesting work on a potential new, more flexible, methodology, to perform the fatigue life assessment and verification of FOWT.

I think that this material is original enough to be published, but I made a number of major and minor comments in order to enhance its readability and potential to be adopted by the larger researcher community.

MAJOR

- Page 1, Line 24: "The site specific design of floating offshore wind turbines (FOWT) requires..."

Having talked with some of the floating support structure designers and manufacturers, the tendency seem to be to be able to have wind turbine agnostic designs, as well as applicable to geographical areas rather than specific locations.

I think in here it would be better to say the "site specific verification of the design against fatigue..."

- Page 3, line 28: "Some experience with both approaches has already been established in the past:..."
It is not clear to the reviewer the improvement, or the potential improvement, of the proposed methodology with respect to the methodologies listed here.

There should be a clear paragraph/couple of statements here about this aspect.

- Page 5, line 2: "The potential-flow model was established prior to the present work using the panel-code Ansys AQWA"

This statement is quite general, and the details of the approach used in Ansys AQWA should be described.

- Page 10, line 2: "In this study a total of 5400 environmental points are used, which are considered to be sufficient for the convergence of the results."

Could you please justify this statement? This should be done by either showing any sensitivity analysis done, or citing relevant previous articles/reports.

- Page 10, line 7: "A run-in period of 600s is added to each simulation in order to mitigate influences of transients at the beginning of the simulations"

Has a sensitivity analysis been done to determine this value? Or is it based on previous experience? Please justify an/or cite relevant previous literature.

- Page 18, line 9: "Figure 14 shows the accumulation of normalized DELs from equation (10) towards the full sum of DELs as described in equation (9) (Figure 14, left)."

The explanation for the left graph of figure 14 should be expanded, since at the moment it is not very clear. Examples, similarly to the example given for the middle graph, should be given.

MINOR

- Page 2, line 5: "Due to the simultaneous occurrence of wind, wave and current loads as well as the complex structural interactions of the components within the system (i.e. RNA, tower, substructure and station keeping system)"

It seems an incomplete statement.

- Page 2, end, and Page 3, start, and throughout the article

"(Passon, Damage equivalent wind-wave correlations on basis of damage contour lines for the fatigue design of offshore wind turbines, 2015), (Passon & Branner, Condensation of long-term wave climates for the fatigue design of hydrodynamically sensitive offshore wind turbine support structures, 2016),"

No need to cite the title as well.