Wind Energ. Sci. Discuss.,
https://doi.org/10.5194/wes-2019-60-RC1, 2019

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Interactive comment on "Development and feasibility study of segment blade test methodology" *by* Kwangtae Ha et al.

Anonymous Referee #1

Received and published: 30 October 2019

[major questions] 1. In the introduction, the authors said a problem related to the availability of test rigs for testing 100m+ blades due to their large fatigue bending moments, and then introduced a novel segment test methodology. This kind of description may lead to a misconception. The target bending moment at the blade root must be the same, no matter whether a full-length blade is tested or not. For the segment test case, the target bending moment at the root of the root segment is the same as that of the full-length blade. The author should modify the introduction. 2. For the segment testing method, the optimization for the test setups were performed. However, there was no description on the optimization of the overload distribution in Figure 3 for the full-length testing method. Since the authors compared the extents of the overloads for the two testing methods, test setups for the two testing methods must be optimized

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first and then the results shall be compared. 3. In Figure 12, for the segment testing method, the lack of the applied fatigue bending moments between the blade length of 50% and 70% is crucial for the blade certification. Since the purpose of the authors' research is developing a new efficient testing method for the blade certification, the authors must suggest a plausible solution about the crucial problem. Without that, it becomes just a paperwork not able to be used in real industry.

[minor comments] Line 15: IEC 61400-23 was published in 2014, not 2012. Line 17: the authors should remove "etc." because in the standard describes the three tests for determining blade properties. Line 18: the official terminology used in the standard is "static tests", not static load test. Line 19: the official terminology used in the standard is "fatigue load tests", not fatigue load test. Line 20: the official terminology used in the standard is "post fatigue static tests", not static load test after fatigue test. Line 84: "the variables, M, F, w, and c", but in Figure 4 the subscript c is not the variable. Line 93: "Error! Reference source not found."

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