

Wind Energ. Sci. Discuss., referee comment RC2
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Comment on wes-2021-124

Mohammad Mahfouz (Referee)

Referee comment on "Experimental investigation of mini Gurney flaps in combination with vortex generators for improved wind turbine blade performance" by Jörg Alber et al., Wind Energ. Sci. Discuss., <https://doi.org/10.5194/wes-2021-124-RC2>, 2022

The paper investigates the effects of Mini Gurney flaps and vortex generators on the aerodynamic performance of the blades. The paper uses zig zag tape to simulate the effect of the increase of leading edge roughness due to aging. Then it checks how adding flaps and vortex generator can enhance the aerodynamic performance of the blades. Moreover, the paper checks the effect of designing the Gurney flaps and the vortex generators as part of the blade design at an early stage.

The work builds on the previous work done and presents a literature review of works on Gurney flaps and vortex generators.

However, the paper presented can be shortened by removing many sections without affecting the results. Moreover, The presentation of the work in the current structure makes it hard to follow the research goals. The reviewer made some suggestions to shorten the work . I believe there are even more sections in the paper that can be shortened by the authors. I also made some comments to improve the structure of the work in order to make it easier to follow and understand. Finally, a better way of presenting the results and emphasizing on the main findings of the paper would add much value to the work done.

All in all, the work is innovative and adds to the research on passive flaps and vortex generators and can benefit both the research community and the industry to enhance the performance of wind turbines.

Please also note the supplement to this comment:

<https://wes.copernicus.org/preprints/wes-2021-124/wes-2021-124-RC2-supplement.pdf>