

**Review of ‘Numerical and Experimental Simulation of Extreme Operational Conditions for Horizontal Axis Wind Turbines Based on the IEC Standard’  
(MS No.: WES-2020-76.R1)**

by Kamran Shirzadeh et al.

The revised manuscript has largely been improved in its content, however, the technical standard is, in my opinion, still lacking in places. The language will also need a throughout proofread (e.g. see my comments on pages 1-4). I am generally satisfied with the content of this proposed review, and I would, therefore, recommend the manuscript’s publication in WES once its presentation is improved. However, my full endorsement of the manuscript will require addressing the following further points.

**Replies to my comments**

- Numerical Analysis. Please specify ‘surface curvature, surface growth rate and mesh density were left to default values’ in the revised manuscript.
- Exp. details. The added paragraph ‘The seven cables from all the cobra probes....to digital converter card’ does not address my comment. This section still lacks actual details necessary for repeatability purposes. Please add those in your next review.
- Results. Please include some form of your reply to my question on ‘error exist in horizontal shear’.

**Further comments**

- abstract - I suggest replacing ‘proper’ with ‘appropriate’.
- page 2, 65 - I suggest replacing ‘cause’ with ‘can cause’.
- page 2, 65 - I suggest replacing ‘All these together’ with ‘All these phenomena together’.
- page 3, 95 - I suggest replacing ‘This standard’ with ‘The ICE’.
- page 4, 110 - I suggest replacing ‘at figure 1’ with ‘in figure 1’.
- figure 3 - I do not see what this figure adds to the manuscript. I would suggest removing it altogether.
- page 12, 235 - I suggest replacing ‘According to Figure 5a &b showing the relative errors between velocities at each height, the largest disconformities....’ with ‘Figure 5a &b show the relative errors between velocities at each height. The largest disconformities....’
- page 12, 245 - I suggest replacing ‘at figure 6’ with ‘in figure 6’. Please rephrase this throughout the manuscript.

- page 16, 300 - The mismatch in Re is substantial, which is understandable. The authors should limit their discussion on convincing their audience that this is not a strong limiting factors of their work, rather than including general statements on how to increase the Re.
- figure 9 - I remain convinced that figures 1 and 9 should be collated. The blue line can be described at first, then the dashed red line discussion can be left to page 18.
- page 19, 345 - This sentence is unclear. I suggest rephrasing it for clarity.
- page 21, 355 - This sentence is unclear. I suggest rephrasing it for clarity.
- page 24, 395 - I suggest replacing 'As mentioned earlier' with 'As previously discussed'.
- page 24, 395 - The first sentence starting with 'However' is unclear. I suggest rephrasing it for clarity.
- page 28, 405 - I suggest replacing 'with the theory' with 'to the theory'.
- figures 12&13 - The authors insist on not discussing all subfigures, although these are now at least introduced. I have already pointed out that this is far from best practice.
- My concern regarding the lack of a well-structured conclusion section to this work has not been fully addressed. I will not recommend publication of this manuscript without substantial improvements to this section. E.g. page 29, 420 - The first paragraph needs rephrasing for clarity. Page 29, 420 - When the authors say 'despite our simplified assumptions for developing the CFD model', do they mean 'which highlights the limitations of our idealised CFD modelling'? Page 29, 425 - The authors state '...more distorted...'. What does this refer to?

Please do review this section thoroughly.