Thank you for your review. Answers and comments can be found below in blue.

This paper reviews the life calculation methods in the literature for oscillating bearings failed by roller contact fatigue. The review is thorough and has sufficient details. Places that need to be improved are below:

Using “recommendation” in the title is misleading. Please change it to “Review of life calculation methods on rolling contact fatigue for oscillating bearing with use examples” or like

We think that recommendations are an essential part of the review though and would therefore like to keep the term in the title.

Page 1, line 16, please elaborate on which conditions rolling contact fatigue will occur. Similarly, what conditions wear will appear. Do authors know the likelihood of rolling contact fatigue occurrence in wind turbine applications?

Unfortunately we know of no solid references on rolling contact fatigue occurrence in wind turbine applications. From anecdotal conversations, it doesn’t seem to be a huge problem. However, with the sudden growth that turbines are still experiencing, we suspect that past failures do not necessarily inform the future: Turbines that have been running for 20 years are very different from the ones being built today and new challenges may appear. This is why it is important to validate the bearing with a calculation even if such failures were rare before.

Changed paragraph to incorporate information on wear and rolling contact fatigue risk factors:

Small oscillation amplitudes are generally seen to be a risk factor for wear, particularly in grease lubricated bearings (Behnke and Schleich, 2022; Stammler, 2020; Grebe, 2017; FVA, 2022b). However, wear can also be prevented by a number of measures (Schwack, 2020; Wandel et al., 2022) and it is definitely possible for rolling contact fatigue to occur without wear2 even for oscillating amplitudes as low as $\theta = 1^\circ (\phi = 2^\circ)$. Rolling contact fatigue, on the other hand, is always a possible failure mechanism even in a properly designed bearing (Sadeghi et al., 2009), except for very low loads (Ioannides et al., 1999), at which there is dispute about its occurrence (Zaretsky, 2010). In many cases, such as large oscillation amplitudes, or the use of oil lubrication, wear is unlikely to occur and thus, rolling contact fatigue becomes a more important focus.

Figure 4 and Figure 5 can put sub figures side by side to use blank space.

We believe the final layout will change into a double-column layout where each of these figures can take up one column only.

In some places, language needs to be further polished. Such as combining short paragraphs, Page 14, at the end of chapter 2, please summarize and compare the various life calculation methods using tables or other forms. Please add discussions on the differences among various approaches. Table 1 is great and please expand the discussion around it.

Table 1 and Figure 7 intended to summarize (and compare) the methods, we are unsure how to extend this information. The references only give limited information themselves so interested readers would ideally look up these references themselves. As now updated, we do not necessarily recommend so. Excerpt from update Sec. 4.1:

For general users seeking to apply a life calculation, ISO related approaches are preferred to non-ISO related ones due to their simplicity and the fact that there is much more empirical basis underlying them. In case of an invariant load direction and oscillation amplitude θ, various methods are shown in the figure. Among the ISO related ones, that by Menck can be considered to be most accurate, however, it is also complicated to apply. A less accurate (i.e., an approximated) but simpler method will be most useful for most readers. Among the approximated ISO related methods for an invariant load direction and θ, “Bins with Palmgren-Miner” is the recommended approach due to its wide use in many areas. Among the non-ISO related methods, Table 2 gives an overview of advantages and disadvantages of each method. Since only users with very specific aims will refer to these methods, it is up to readers to take their own decision as to which of these methods, if any, to use.

Page 15, experimental validation. As discussed, appropriate experimental validation is currently lacking for the discussed life calculations methods in general. Although correct, this statement can give impressions that all the discussed calculation methods might not be reliable. I would recommend expanding this chapter by including discussions on future work – gaps in the current literature and lack of experimental validation. If experimental validation, what test needs to be performed?

New section 5 “Current challenges and critical future work” has been added to address this topic.

Chapter 4.2 and 4.3 describes examples not in wind turbines, indicated otherwise in the title. These sections can be removed.

We would like to keep these examples so that the review can also be useful for other applications outside of the wind industry, but the title has been changed accordingly.

Will the authors consider perform experiments to validate these discussed life calculation methods in the future?

We are currently in the process of performing such experiments in the scope of the HAPT2 project, among others.