21.Dear Ms. Bella Li and dear reviewers,.

Re: Manuscript ID: processes-2418828 and Title: Application of Life Cycle of Aeroengine Mainshaft Bearing Based on Digital Twin

Thank you for your letter and for the reviewers' comments concerning our manuscript entitled " Application of Life Cycle of Aeroengine Mainshaft Bearing Based on Digital Twin"

(ID: processes-2418828)Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our researches. We have studied comments carefully and have made correction which we hope meet with approval. The main corrections in the paper and the responds to the reviewer's comments are as flowing:

Responds to the reviewer's comments:

Reviewer:

l. Response to comment: (Some details like grammars need to be checked carefully，such as line 253，273，454.)

Response: Thank you for pointing out the English errors in the paper. The errors you pointed out have been corrected in the article, and some other English errors in the article have also been corrected.

2.Response to comment: (There are figures are a little bit vague，it’s better to replace them with clearer ones.)

Response: Some unclear numbers have been replaced, such as Figures 3 and Figures 4.

3.Response to comment: (In chapter 3，the manufacturing process of the bearing is divided into several parts，and author introduce the detailed contents from the operation model，metallurgical process，heat treatment process，and grinding process. However the part of the design of structure is ignored，author need to explain .)

Response: The core of the manufacturing process based on digital twins in the article is control and interaction at each manufacturing stage, thus ignoring the structural design part of bearings. However, digital twins can also be well applied in structural design, as discussed in line 273 of the paper.

4.Response to comment: (In the figure 9，by using the SVM twice，the crack size are all predicted as 3mm and 6mm，author need to describe this and add some explanations.)

Response: The paper lacks an explanation of the experimental method and has been added in line 357 of the article.

5.Response to comment: (RUL is short for remaining useful life，author use RUL as the abbreviation of remaining service life incorrectly.)

Response: Thank you for pointing out the errors, which have been corrected in the article.

6.Response to comment: (Some figures are not well marched in the place that author mentioned ，it is suggested to add more sentences to describe.)

Response:

7.Response to comment: (It is supposed to add more overall summary of the applications in conclusion part.)
Response: At the end of Chapter 3, Section 4.3, and Conclusion, modifications have been made to emphasize the core idea of the article.

Sincerely,

Dr. Li, Yunfeng

感谢您指出文章的英语错误，您指出的错误已在文章中修改，还修正了一些文章中的其他英语错误。

一些不清晰的数字已经更换，例图 3-图 4 等。

文章中的基于数字孪生的制造工艺部分的核心是在每个制造环节上的控制和交互，因此忽略了轴承的结构设计部分，但数字孪生也可以很好的应用在结构设计上，在文章中 273 行进行了讨论

文章中缺少了实验方法的解释，已在文章 357 行添加了。

感谢您的指出的错误，该类错误已在文章中修改。

对部分图片的解释比较少，论文主要想叙述应用数字孪生之后的成果，更多的去叙述一些方法的作用，因此减少了对图片的解释。
在文章第三章结尾部分、4.3 部分和结论部分都修改进行了修改，重点阐述文章的核心思想。

非常感谢您对本篇论文的评论，您所指出的问题我有在很认真的修改，所以回复您的时间比较晚了，再次非常感谢您！