Dear Reviewer,

We would like to thank the Reviewer for valuable comments, which in our opinion contributed to increasing the quality of the paper. All suggestions and comments have been carefully thought out, and the corresponding revisions have been made to the paper. In addition, we have supplemented the incorporated changes with specific answers given below.

Yours sincerely,

Comments and Suggestions for Authors

To improve the manuscript, the authors should take the following considerations:

(1) The authors presented the worn surfaces of friction grooves: (a) Ball on disc; (b) Linear test using a SEM microscope in Figure 10. The authors should provide and discuss worn surfaces of friction grooves: Ball on disc; and Linear test using a transmission electron microscopy (TEM) microscope as well to gain a better understanding of the microstructure of surfaces.

Answer:

Thank you for your valuable comment. Despite your recommendation, we decided not to include the TEM microscope images for the following reasons. We are of the opinion that the SEM images of wear that we have included in the article are sufficiently described for understanding microstructure of surfaces. Also, in other similar published studies (and our previous studies), the authors described the microstructure of surfaces only on the basis of SEM images. We do not have the possibility to perform a TEM analysis in the near future. Nevertheless, we agree with you that TEM images could offer additional valuable information for a better understanding of worn surfaces and their microstructure.

(2) The authors presented the comparison of microhardness of plastically deformed surfaces of friction grooves in Figure 12. However, this manuscript does not contain much error analysis on the composite performance which is highly required for readability purposes. It is suggested the authors should place the standard deviations of the microhardness of plastically deformed surfaces of friction grooves for the reliability and readability of the present research.

Answer:

Thank you for your valuable comment. We added the standard deviations of the microhardness of plastically deformed surfaces to the graph and we also added the text at the beginning of chapter 3.4.

Thank you once again for your valuable questions, advice and comments, which will certainly raise our publication to a higher level, and with your help we will be able to present our contribution to a wide professional public.