

Editorial Comments:

Manuscript Title: Experimental research of the durability and wearing of UHMWPE with different coatings

Manuscript ID: 2014_BJAST_15679

Comments and suggestion

The reviewers have done their good job in review and gave comments/suggestions for the manuscript quality improvement. If the authors disagreed with some points raised by the reviewers, they should response to (defend on) the comments and not left the manuscript unchanged. In addition, the authors should not just delete the sentences when questioned by reviewer. Give justification and clarification accordingly.

In addition, the following comments should be considered.

[1]. In page 2, line 69, see sentence "UHMWPE (Chirulen (ISO5834-2, from POLY Hi SolidurMediTECH Company))". **The details of UHMWPE should be put into the experimental.**

[2]. In page 2, line 72-73, see sentence "...to identify what coating withstood 10 000 working cycles in the best way". Justification of 10,000 working cycles should be included in the manuscript text.

[3]. The following sentence is not clear.

"The roughness of Zr coating is the minimum; however, it includes large agglomerates of granules (1.5X1.7 mm)".

"ZrO₂ showed the worst mechanical properties: it can be seen from the SPM photo that the surface of this material wore to the maximum extent and residue on UHMWPE was the smallest".

"Zrir ZrO₂ mean values of particles size $\pm$ SD after the friction tests changed the most significantly".

"After comparing SPM surface morphology images of coatings prior to the friction tests and after them and the statistical evaluation, we can state that Co+TiO₂ coating has demonstrated the best durability and the highest abrasion resistance". What is means by "best durability and highest abrasion resistance"?

[4]. English editing is highly needed.

[5]. The Abstract should be rewrite.

Author's Feedback:

I thank all the reviewers for their comments.

1.Details of UHMWPE I have put into **Materials and Method**.

2. 10,000 cycles- it is not very many. Actually, a person makes such amount of cycles a day. But this number has been used in the initial experiments. These tests also showed that some surfaces are not suitable for further research.

3. "The roughness of Zr coating is minimal; however, it includes large agglomerates of granules (1.5X1.7 mm)".

"ZrO₂ showed the worst wear resistance: it can be seen from the SPM photo that the surface of this material wore to the maximum extent. Moreover, the amount of ZrO₂ on UHMWPE remained the smallest".

"Zr and ZrO₂ coatings after the friction tests changed the most significantly".

The coating, which has changed little or hasn't changed at all after the friction test has highest abrasion resistance.

4. The paper has been edited by the person who passed an IELTS exam. I would like to ask if that could be considered as a proper editing?

5. Abstract:

In the paper UHMWPE coating with different materials is analysed. Such coatings are made using magnetron sputtering method. The friction tests of these coatings are accomplished. SPM surface morphology images of coatings are analysed before and after the friction test. It was determined that Co+TiO₂ coating altered the least after the friction tests. For this reason, its durability and wear resistance is the highest in comparison with all the analysed coatings.