

Review of: "The Influence of Hot Extrusion on The Mechanical and Wear Properties of an Al6063 Metal Matrix Composite Reinforced With Silicon Carbide Particulates"

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Potential competing interests: No potential competing interests to declare.

The paper can be accepted, but certain corrections need to be made to improve its overall quality.

- Expand the abstract.
- Aluminum and aluminum alloys are increasingly being used in various technical fields, including the aviation, space, military, automotive, and electronics industries. Provide a more detailed explanation of the applications of aluminum and aluminum composites. Refer to the following works for guidance: <https://doi.org/10.17559/TV-20130905094303>, <https://doi.org/10.1088/1742-6596/2212/1/012029>, <https://doi.org/10.1007/s12633-022-02216-2>.
- The introduction is quite brief. Expand it with relevant studies in this field. Highlight the good characteristics of aluminum and aluminum alloys. Explain why composite materials are formed. What are the characteristics of composites with an aluminum base? Describe their mechanical and tribological properties.
- At the end of the introduction, state the main contribution of the paper and how it differs from similar works in this field. Why should this paper be published?
- Specify whether it is about the mass or volume content of reinforcements.
- Provide the chemical composition of the base aluminum.
- Why was this method of obtaining composites chosen (stir casting)? What are its advantages and disadvantages compared to other casting methods?
- In Figures 1 and 2, provide the deviation of the measured mechanical characteristics of the base alloy and the composite. How many repetitions were performed for the measurements of mechanical characteristics?
- In Figures 3-5, also provide the standard deviations of the measured values. How do they differ from the results in the literature? Display the mechanical characteristics (density, hardness, etc.) for all composite materials and the base material.
- Show the metallographic structure of the base alloy and the obtained composites.

- What material is the tribometer disk made of (what is the hardness of the disk)? What are the dimensions of the disk?
- Describe how the wearrate was determined. How was the measurement conducted?
- How many times was the experiment repeated, and which values were analyzed regarding the wear rate and friction coefficient?
- Provide a description of the equipment and state which standard was used for tribological testing.
- Display the metallographic structure of worn surfaces.
- Provide clearer images of worn surfaces.
- What is the main wear mechanism?
- The paper lacks discussion and analysis of results!!! Compare the obtained results with those of other researchers. Refer to the following works: <https://doi.org/10.26552/com.C.2023.056>].
- Based on an extended analysis and discussion, expand the concluding remarks.