

Review of: "Investigating the Mechanical and Tribological Effects of MoS₂ Reinforcement in AZ91 Magnesium Alloy: A Comprehensive Experimental Study"

Juan Manuel González Carmona

Potential competing interests: No potential competing interests to declare.

The information related to MoS₂ found in the materials and methods section seems disconnected from the document. I consider that it should be taken into account for the introduction section, where it should be limited to the influence that the material has on the reinforcement of the alloy or similar alloys. It is not clear why the argument is made about the electrical properties of the material.

How was the composition reported in Table 1 obtained?

I consider that some type of reference should be located in Figure 1 in order to verify the dimensions of the tool. Also, improve the quality of the images.

Locate the company and model of the equipment used to carry out the friction stir welding process.

Table 3 should show the standard deviation in addition to the average.

What is the hardness of the alloy before the friction stir process?

Showing photographic evidence of the metallographic characteristics of the modified alloy and evidence of the measurement of the grain sizes, how were the grain sizes measured? A statistical distribution of data, at least the mean and standard deviation, should be presented.

What are the instabilities of the curve presented in Figure 3 due to?

No evidence of EDS spectra is observed in Figures 6.