

Review of: "Machinability of Ti6Al4V Alloy: Tackling Challenges in Milling Operations"

Hongchao Ji

Potential competing interests: No potential competing interests to declare.

In this paper, the problems encountered in milling the Ti6Al4V alloy and the solution direction are summarized and analyzed. The results are shown in the form of charts. The author's work not only summarizes the properties of the Ti6Al4V alloy and the problems arising in the processing of the Ti6Al4V alloy, but also summarizes the clear optimization direction for solving the difficult processing of the Ti6Al4V alloy and provides the research basis. The only drawback is that there are some problems in the content and literature of the paper. It is suggested to reply and modify the problems accordingly, and the following suggestions are given:

- 1) The literature cited in the article is relatively old, so it is suggested to cite more relevant literature from the past 10 years to enhance the advancement and reliability of the article.
- 2) The quality of all pictures and tables needs to be improved, and Figure 6 (b) should be placed forward, and the font size of the content in the figures can be adjusted to facilitate readers' understanding.
- 3) The content of the article should be symmetrical so as not to affect the reader's reading senses.
- 4) The paper lacks a specific overview of cooling conditions, so it is suggested to add the results of previous studies to detail the effects of different types of cutting fluids and cutting flow rates on milling.
- 5) The article only briefly describes the effect of the tool coating material; the lack of tool coating thickness on the milling process is not addressed.
- 6) Metallurgical properties should not be added to the machinability factors evaluating the machinability of Ti6Al4V milling.
- 7) As shown in FIG. 5, the transfer path of cutting heat in Ti6Al4V milling should add a cooling lubricant to carry away heat.
- 8) The conclusion of the article is too broad and general, only a general summary of the content, without a complete analysis and specific conclusions.