Review of: "Optimized Material Removal and Tool Wear Rates in Milling API 5ST TS-90 Alloy: AI-Driven Optimization and Modelling with ANN, ANFIS, and RSM"

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Potential competing interests: No potential competing interests to declare.

After reading the manuscript entitled “Optimized Material Removal and Tool Wear Rates in Milling API 5ST TS-90 Alloy: AI-Driven Optimization and Modelling with ANN, ANFIS, and RSM” by Chinedum et al., I can say that the author(s) have attempted an good technique to improve machinability. Still, there is a chance for some improvements :

1. The procedure of tool wear measuring is not clear. Please described applied method with more details and some actual picture to measure tool wear.
2. Please, explain the importance of the Variable Parameters and their levels in the present work, as shown in Table 4.
3. Please, mention why the MRR, and TWR were observed as response quality characteristics.
4. Fig. 1 is difficult to understand. Please include text marking.
5. Moreover, face centred central composite designs are not rotatable. Why do the authors use such a design of experiment approach? How do the authors select the levels of the parameters?
6. Paper presents interesting ideas, however, more details should be provided concerning the artificial neural network. Please clearly describe the the size and the structure of neural network. Moreover, precise technical details should be provided considering the training process of ANN.
7. In addition please provide the estimation, how parameters of ANN may influence on accuracy of prediction.
8. Please provide conclusions in more quantitative way, considering accuracy estimation.
9. There are previous researches are also available on similar approach. Author(s) are invited to cite them appropriately (if found suitable): https://4spepublications.onlinelibrary.wiley.com/doi/full/10.1002/pc.26204 https://link.springer.com/article/10.1007/s12008-022-00957-3 https://link.springer.com/article/10.1007/s12633-022-02128-1 https://www.worldscientific.com/doi/abs/10.1142/S0218625X22410025