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.

This study used the response surface method (RSM) and AI-based models of artificial neural networks (ANNs) and adaptive neuro-fuzzy inference systems (ANFISs) to model and optimize the MRR and TWR for milling API 5ST TS-90 alloys.

However, it needs some major revisions before making the final decision. Presented follows are comments:

Abstract:

The abstract must be rewritten. The abstract should be state briefly the principal results and major conclusions.

Introduction:

The scientific contribution of this work is not clear, it is strongly recommended to present a table that summarizes the bibliographic review and highlights the real contribution of this research compared to other articles. I recommend to authors read the references to upgrade and qualify better the manuscript:

DOI: https://doi.org/10.30684/etj.v39i2A.1768

Research Design:

The authors have informed Central composite design (CCD) was used with the aid of Design Expert Software to develop a three-level experimental matrix made up of twenty (20) experimental runs based on input parameters (depth of cut, feed rate and spindle speed) and their respective ranges. The authors should better specify the type of DoE methods and limits they have applied to be clarify for the readers. I recommend the authors to read the references to upgrade and qualify better the manuscript:

https://doi.org/10.1016/j.matpr.2021.12.224

https://doi.org/10.1080/00986445.2021.1922394

Artificial Neural Network (ANN)

The type of ANNs explored in this works is somewhat limited. Other types of ANN might have better performance in this

particular task. I recommend the authors to read the references to upgrade and qualify better the manuscript:

https://doi.org/10.3390/catal11091034

https://doi.org/10.3390/catal13071125

Conclusion

Future scope of work and the scientific reason behind these results should be added in the conclusion section.

For these reasons I recommend to be accepted this manuscript after major revision.