



















(surface roughness and *MRR*) was chosen by the decision maker. The weighting of the criteria according to mathematical methods such as Entropy, Analytic Hierarchy Process (*AHP*), etc. also need to be considered. In the future, these works will be carried out by the authors of this paper.

#### ACKNOWLEDGMENT

This research is funded by University of Transport and Communications (UTC) under grant number T2021-CK-003.

#### REFERENCES

- [1]. D. D. Trung, Influence of Cutting Parameters on Surface Roughness during Milling AISI 1045 Steel, *Tribology in Industry*, Vol. 42, No. 4, pp. 658-665, 2020, <https://doi.org/10.24874/ti.969.09.20.11>
- [2]. K. Dudzik, The possibility of applying acoustic emission method to optimize determination of milling parameters, *WSEAS transactions on Systems and Control*, Vol. 15, pp. 302-310, 2020, <https://doi.org/10.37394/23203.2020.15.31>
- [3]. C. -L. Hwang, Y. -J. Lai, Ting\_Yun Liu, A new approach for multiple objective decision making. *Computers & Operations Research*, Vol. 20, No. 8, pp. 889-899, 1993, [https://doi.org/10.1016/0305-0548\(93\)90109-V](https://doi.org/10.1016/0305-0548(93)90109-V)
- [4]. S. Opricovic, G. -H. Tzeng, Compromise solution by MCDM methods: A comparative analysis of VIKOR and TOPSIS, *European Journal of Operational Research*, Vol. 156, No. 2, pp. 445-455, 2004, [https://doi.org/10.1016/S0377-2217\(03\)00020-1](https://doi.org/10.1016/S0377-2217(03)00020-1)
- [5]. W. Brauers, Optimization methods for a stakeholder society. A revolution in economic thinking by multi-objective optimization, Publisher: springer before Kluwer, <https://doi.org/10.1007/978-1-4419-9178-2>
- [6]. Triantaphyllou, Evangelos, Multi-criteria Decision Making Methods: A Comparative Study, Springer - Science + Business media, 2020, <https://www.springer.com/gp/book/9780792366072>
- [7]. E. Cables Perez , M.T. Lamata , J.L. Verdegay, *RIM-Reference Ideal Method in Multicriteria Decision Making*, *Information Sciences*, vol. 337-338, No. 10, pp. 1-10, 2016, <https://doi.org/10.1016/j.ins.2015.12.011>
- [8]. S. Mufazzal, S. M. Muzakkir, A New Multi-Criterion Decision Making (MCDM) Method Based on Proximity Indexed Value for Minimizing Rank Reversals, *Computers & Industrial Engineering*, pp.1-38, 2018, <https://doi.org/10.1016/j.cie.2018.03.045>
- [9]. V. Gadakh, Application of MOORA method for parametric optimization of milling process, *International journal of applied engineering research*, Dindigul, Vol. 1, No. 4, pp. 743-758, 2011.
- [10]. S. K. Shihab, A. K. Chanda, Multi Response Optimization Of Milling Process Parameters Using Moora Method, *International Journal of Mechanical And Production Engineering*, Vol. 3, No. 4, pp. 67-71, 2015.
- [11]. D. D. Trung, Multi-objective optimization of SKD11 steel milling process by Reference Ideal Method, *International journal of geology*, Vol. 15, pp. 1-16, 2021, <https://doi.org/10.46300/9105.2021.15.1>
- [12]. N. Z. Khan, T. S. A. Ansari, A. N. Siddiquee, Z. A. Khan, Selection of E-learning websites using a novel Proximity Indexed Value (PIV) MCDM method, *Journal of Computers in Education*, Vol. 6, pp. 241-256, 2019, <https://doi.org/10.1007/s40692-019-00135-7>
- [13]. S. Wakeel, S. Bingol, M. N. Bashir, S. Ahmad, Selection of sustainable material for the manufacturing of complex automotive products using a new hybrid Goal Programming Model for Best Worst Method-Proximity Indexed Value method, *Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications*, Vol. 0, No. 0, pp. 1-15, 2020, <https://doi.org/10.1177/1464420720966347>
- [14]. A. Ulutaş, Ç. Karakoy, An analysis of the logistics performance index of EU countries with an integrated MCDM model , *Economics and Business Review*, Vol. 5 (19), No. 4, pp. 49-69, 2019, <https://doi.org/10.18559/ebr.2019.4.3>
- [15]. J. Raigar, V. S. Sharma, S. Srivastava, R. Chand, J. Singh, A decision support system for the selection of an additive manufacturing process using a new hybrid MCDM technique, *Sādhanā*, Vol. 45, No. 101, pp. 1-14, 2020, <https://doi.org/10.1007/s12046-020-01338-w>
- [16]. <http://daunhonchinhhang.vn/product/dau-cat-got-pha-nuoc-tectyl-cool-240/> (at July 20. 2021)