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KOLECER Scientific Journal of Mechanical Engineering is an academic journal focused on the publication of research findings in the field of mechanical engineering. It serves as a platform for researchers, academics, and practitioners to share recent discoveries, innovations, and technological developments across various aspects of mechanical engineering. The scope of this journal includes design and manufacturing, engineering materials, energy conversion, control and automation systems, as well as thermal and fluid engineering.

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Foreword

The Editorial Board is pleased to present KOLECER: Scientific Journal of Mechanical Engineering, Vol. 2, No. 1, March 2026. This issue reflects a continued commitment to providing a scholarly platform for the dissemination of high-quality research and applied studies in mechanical engineering and related disciplines. The journal aims to bridge theoretical advancement and practical implementation in addressing current engineering challenges. This volume comprises five peer-reviewed articles that demonstrate both analytical depth and practical relevance. The published works encompass a range of topics, including structural analysis, welding technology, building utility systems, and the development of appropriate technologies for small- to medium-scale industries. Collectively, these contributions highlight the diverse applications of mechanical engineering in addressing contemporary technological and industrial needs.

The first article presents an analysis of the effect of cyclic loading on fatigue and deformation of drone propellers using the finite element method, providing insights into structural reliability and performance. The second article examines the effect of variations in TIG welding current on the tensile strength of stainless steel 304 welded joints, offering significant findings for welding process optimization. The third article discusses the design of a clean-water distribution (plumbing) system for a permanent villa in Wayang Windu, addressing practical challenges in building utility systems.

Further contributions include the development of a gas burner-based rotary drum coffee roasting machine aimed at improving production efficiency and product consistency for small- to medium-scale users. The final article presents the design and fabrication of a cracker dough-cutting machine for household industries, with a capacity of 78 kg/h and driven by a 1/6 HP electric motor, to enhance production efficiency and operational performance.

The Editorial Board extends its sincere appreciation to the authors for their valuable contributions, as well as to the reviewers for their rigorous and constructive evaluations that ensure the academic quality of this publication. It is hoped that the articles presented in this issue will serve as valuable references for researchers, practitioners, and students, and will encourage further research and innovation in the field of mechanical engineering.

Editorial Team

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