

**VOLUME 4 ISSUE 1 MARCH 2025**

Mechanical Engineering Department  
Politeknik Negeri Semarang  
jmeat@polines.ac.id

**JMEAT**



**JOURNAL OF MECHANICAL ENGINEERING  
AND APPLIED TECHNOLOGY**

**<https://jurnal.polines.ac.id/index.php/jmeat>**

**E-ISSN : 3025-2725**

## FOCUS AND SCOPE

### JOURNAL OF MECHANICAL ENGINEERING AND APPLIED TECHNOLOGY

The journal of Journal of Mechanical Engineering and Applied Technology (JMEAT) is a peer-reviewed journal that publishes scientific articles from the discipline of Mechanical Engineering. A variety of topics in Mechanical Engineering can be accepted in this journal, including:

- Manufacture
- Maintenance
- Automotive
- Renewable Energy
- Agriculture
- Health
- Mechatronics

The Journal of Mechanical Engineering and Applied Technology (JMEAT) publishes articles on applied research (top priority), new scientific review articles (non-priority), or comments or criticisms of the articles in JMEAT. The articles published in JMEAT are articles that have been reviewed by peer reviewers.

JMEAT accepts manuscripts or articles in the field of Mechanical Engineering from academics and researchers from both national and international backgrounds. The decision of whether or not to accept a scientific article in this journal is the right of the Editorial Board based on the recommendation of the Peer Reviewers.

## **EDITORIAL TEAM**

### **Editor in Chief:**

**Timotius Anggit Kristiawan, S.T., M.Eng.**

### **Editorial Board:**

Abdul Syukur Alfauzi, S.T., M.T.

Atikah Ayu Janitra, S.Si., M.T.

Trio Setiyawan, S.T., M.T.

Avicenna An-Nizhami, S.T., M. Sc.

Wahyu Isti Nugroho, S.Pd., M.T.

Dita Anies Munawwaroh, S.Si., M.Sc.

Friska Ayu Fitrianti Sugiono, S.Si., M.T.

Muhammad Showi Nailul Ulum, S.Pd., M.T.

Nanang Apriandi Ms, S.T., M.T.

Lazuardi Akmal Islami, S.Si., M.Si.

Mohammad Samsul Bakhri, S.T., M.T.

Indra Fitriyanto, S.Pd., M.T.

### **Reviewers:**

Prof. Dr. Ir. Ampala Khoryanton, S.T., M.T.

Prof. Dr. Ir. Yusuf Dewantoro Herlambang, S.T., M.T.

Prof. Dr. Sri Darmawati, M.Si

Prof. Dr. Purnomo, S.T., M.Eng.

Dr. Eko Saputra, S.T., M.T.

Dr. Hery Tristijanto, S.T., M.Eng.

Dr. Nur Aini Fauziyah, S.Pd., M.Si.

Dr.Eng. Sukmawaty, S.T.P., M.Si.

Dr. Wahyu Dwi Lestari, S.Pd., M.T.

Dr.sc.tech. Ir. Adhy Kurniawan, S.T

**Publisher :**

**Mechanical Engineering Department, Politeknik Negeri Semarang**

### **PREFACE**

"JOURNAL OF MECHANICAL ENGINEERING AND APPLIED TECHNOLOGY Volume 4 Number 1 in March 2026 is the first issue in 2026. Articles published by the Journal of Mechanical Engineering and Applied Technology have been published in Fulltext and Open Access in PDF format online at: <https://jurnal.polines.ac.id/index.php/jmeat> JOURNAL OF MECHANICAL ENGINEERING AND APPLIED TECHNOLOGY only contains articles that originate from research results and have been reviewed by Bestari Partners.

The articles included in the JOURNAL OF MECHANICAL ENGINEERING AND APPLIED TECHNOLOGY are articles that have gone through a process of assessment or review by Bestari Partners and/or the Editorial Board. The author must pay attention to the quality of the contents of the article according to the instructions for writing articles and comments from Bestari Partners which are displayed in each publication or can be downloaded on the journal's website. The number of articles published in this number is five (5) article titles.

The Editorial Board will continue to strive to improve the quality of the journal so that it can become an important reference in the development of Mechanical Engineering and applied technology. The highest appreciation and gratitude to Mitra Bestari along with members of the Editorial Board and all parties involved in the publication of this journal. The Editorial Board also expects scientific articles from readers to be published in Volume 4 Number 1 in March 2026 after going through a review process by the Editorial Board and/or Bestari Partners. Complete writing guidelines for 2026 are featured on the journal's portal.

Greetings,

Chief Editor

**TABLE OF CONTENT**

FOCUS AND SCOPE	ii
EDITORIAL TEAM	iii
PREFACE	iv
TABLE OF CONTENT	v
Analisis Kerusakan Housing Burner Mesin Boiler Type Watertube Kapasitas 2.500 Kg/Jam Di PT. Pratapa Nirmala (Septian Ari Priyanto, Abdul Choliq)	1-6
Perancangan dan Implementasi Sistem Pengukuran Ketinggian dan Volume Air pada Tandon Berbasis Sensor Jarak dan IoT dengan Monitoring melalui Aplikasi Mobile (Deanda Yoga Nur Ikhsan, Moh. Dwi Rizkiyanto, Aria Riskya Putra, Friska Ayu Fitrianti Sugiono)	7-14
Uji Performa Kendaraan Motor Listrik Transmisi Chain dan Van Belt (Wahyu Isti Nugroho, Ahmad Hamim Su'udy, Muhammad Showi Nailul Ulum, Slamet Priyoatmojo, Atikah Ayu Janitra, Ahmad Mamba'udin)	15-18
Penggunaan Teknologi 3D Printing dalam Pembuatan Clamp CNC untuk Mendukung Praktikum CNC (Rizky Wirantara)	19-28
Perencanaan Sistem Kelistrikan Pada Alat Penjernih Air Tipe Portable Berbasis Panel Surya (Aswad Gifari, Ahmadil Amin, Heri Irawan)	29-38
ACKNOWLEDGMENTS TO THE REVIEWS OF THIS PUBLICATION	App.1
AUTHOR GUIDELINES 2025	App.2-4