

Editorial Note

Energy plays an important role in the development of human society to date. The demand for energy steadily rises with the increasing world population and living standards. Therefore, energy usage and utilization shall be based on the sustainable development and better ecological environment in order to assure the availability of energy for our future generations. Indonesia was known among one of the largest fossil fuels producers and up to now our energy supply still relies heavily on fossil fuels. However, the depletion of Indonesia's fossil energy deposit, soaring of oil price and constant growth of national energy consumption had forced the Indonesian government to take all necessary measures to solve the energy problem including exploiting the potential of using bio-energy sources, improving the efficiency of energy use and finding new alternative sources of energy (renewable energy). These issues have become very important subjects to be addressed by scientists and engineers in this country.

The Department of Mechanical Engineering, Faculty of Industrial Technology, Institut Teknologi Sepuluh Nopember, Indonesia, proudly organized an International Conference on Mechanical Engineering – ICOME 2013, with its theme “The Significance of Alternative Energy Towards Eco-Mobility Era”. ICOME 2013 that was held in Mataram, Indonesia on September 12-14, 2013 is aimed to gather national and international front liners, researchers, scientists, government and industrial professionals to present and discuss their research and finding, particularly in alternative energy sectors and Mechanical Engineering areas in general. The conference also provided a golden opportunity to develop new collaborations and meet experts on the fundamentals, applications, and products in the area of Mechanical Engineering and related disciplines.

It is our pleasure to present selected collection papers from ICOME 2013 in this edition of Applied Mechanics and Materials (AMM). All of the contributing papers in this book have been thoroughly peer reviewed by experts in the related areas in order to meet the scientific publication standards. This book is divided into several sections to accommodate a wide range of research in the area of Mechanical Engineering which includes (i) Energy Conversion; (ii) Mechanical Design; (iii) Manufacturing Processes and Technologies; and (iv) Material Science and Engineering

The 1st International Conference on Mechanical Engineering and the publication of this book, would not have been possible without the hard work of a lot of dedicated personals. Therefore, we would like to thank you all of the authors who have spent tremendous amount of time to contribute their findings and all of the reviewers for their dedications, comments and suggestions such that the published papers have met the international journal standard. The last but not least, we would also like to thank you all the committee members, individuals and sponsors who have supported and contributed in ICOME 2013. We hope that this book serves as a high quality archive of research findings, as well as establishes future directions of research in the related topics.

Editor-in-chief

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