



ISSN: 2587-1110

Volume 5 Issue 3 June 2021



Editor in Chief: M. Ozcanli



Editor in Chief

Mustafa Ozcanli (Automotive Engineering, Cukurova University, Turkey)

Editors

Sandra Spaszkiewicz (West Pomeranian University of Technology, Poland)

Iva Petrikova (Applied Mechanics, Technical University of Liberec, Czech Republic)
Elżbieta Piesowicz (West Pomeranian University of Technology, Poland)

Tomeh Elias (Vehicles and Engines, Technical University of Liberec, Czech Republic)
Aleksandra Borsukiewicz, West Pomeranian University of Technology, Poland
Alptekin Ergenç (Automotive Engineering, Yildiz Technical University, Turkey)
Hasan Serin (Automotive Engineering, Cukurova University, Turkey)

M. Atakan Akar (Automotive Engineering, Cukurova University, Turkey)
Ahmet Çalık (Mechanical and Metal Technologies, Mersin University, Turkey)

Tayfun Ozgur (Automotive Engineering, Cukurova University, Turkey)

Layout Editor

Ahmet Calik (Mersin University, Turkey)

Secretary

Şafak Yıldızhan (Cukurova University, Turkey)

Indexed / Abstracted in:

TR-Dizin, CrossRef, Index Copernicus, Journal Factor, Rootindexing, ResearchBip, JournalFactor, JIFACTOR, Google Scholar, I2OR, Cosmos Impact Factor, International Innovative Journal Impact Factor (IIJIF), Scientific Indexing Services, InfoBase Index, Scientific Journal Impact Factor

Aims and Scopes

European Mechanical Science (EMS) is an international, peer reviewed journal which publishes full length original research papers, reviews related to all areas of Mechanical Engineering such as: Solid Mechanics, Materials Engineering, Automotive Engineering, Fluid Mechanics, Thermal Engineering, Engine and Power Engineering, Dynamics & Control, Robotics & Mechatronics, Transportation Engineering, Computational Mechanics, Design, Systems, Manufacturing, Bio-Medical Engineering; Process Engineering, Aerospace Engineering. No charges are required from the Authors to publish the articles.EMS is a quarterly published journal operating an online submission and peer review system. It allows authors to submit articles online and track their progress via its web interface.



Contents

— Research Paper

Fracture Analysis of a Case-Hardened Kingpin	92
Tuğrul Soyusinmez, Oğuzcan Güzelipek, Tolga Palandüz, Onur Ertuğrul	
High Voltage Gain Multi-port Bidirectional DC-DC Converter with an Effective Multi-loop Control Strategy for PV/Battery Integrated Systems Murat Mustafa Savrun, Alihan Atay	99
Effect of Fabric Structural Parameters on Various Comfort Properties of Automobile Seat Cover Fabrics Mine Akgun, Hayrünnisa Aydan Kamacı	105
A preliminary Investigation of Surface Micro Modification Effects on the Biocompatibility of 316L Stainless Steel Sıdıka Mine Toker, Erdoğan Serhad Özbulut, Zübeyir Kolçak, Esra Güner	109
Effect of Build Orientation on Mechanical Behaviour and Build Time of FDM 3D-Printed PLA Parts: An Experimental Investigation Meltem Eryildiz	116
Characterization of Mechanical of CTBN Liquid Rubber-Modified Epoxy Cured by Anhydride- and Amine-Based Agent Harun Sepetcioglu	121
Static Analysis of Trailers with Demountable Chassis Tuğba Gedik, Mehmet Vurgun, Banu Özkeser, Erhan Biçer	130
Estimating Global Solar Radiation from Empirical Models: An Application Özgür Ballı	135
Electromagnetic Analysis of Organic Waste and Blust Furnace Slag Mixtures Mustafa Kaan Baltacıoğlu, Mustafa Tunahan Başar, Muharrem Karaaslan, Fatih Özkan Alkurt, Samet Alparslan Arı	148