

Indian Journal of Engineering & Materials Sciences

<http://www.niscair.res.in>; <http://nopr.niscair.res.in>; Impact Factor: 0.794 (JCR 2018)

VOLUME 27

CODEN : IEMSEW 27 (2) 133-498

NUMBER 2**April 2020**

ISSN : 0971-4588 (Print); 0975-1017 (Online)

CONTENTS

Composite building materials from natural fibers/ agro-forest residues	137
Richa Singh, Brajeshwar Singh, Manorama Gupta & Hina Tarannum	
Tribological investigation of HVOF-spray Cr ₃ C ₂ -25NiCr and WC-10Co-4Cr coated turbine steel under varied slurry erosion conditions	150
Mithlesh Sharma, Deepak Kumar Goyal & Gagandeep Kaushal	
On the axial bearing capability of construction steel tube considering the uniform corrosion effect	168
Huajie Wang, Zhiwei Zhang, Hongliang Qian, Gang Song, Jiangbo Wang & Feng Fan	
Additive manufacturing of composite materials by FDM technology: A review	179
Andrei Danut Mazurchevici, Dumitru Nedelcu & Ramona Popa	
Plastic/packaging waste separation from MSW and its conversion and used as value-added products in different applications: An eco-sustainable approach	193
Beenu Raj, Jagdish Kumar & Velidandi Venkata Lakshmi Kanta Rao	
Experimental determination of residual flexural strength and critical buckling load of impact-damaged glass/epoxy laminates	209
Züleyha Aslan & Sakine Kiratli	
Mechanical properties and kinetics of boride layers on AISI D2 steel produced by plasma paste boriding	221
Mourad Keddad, Natalia Makuch, Michal Kulka & Andrzej Miklaszewski	
Excellence of Al-metal matrix composite fabricated by gas injection bottom pouring vacuum stir casting process	234
Mukul Kataria & Sanjay Kumar Mangal	
Optimization and investigation of process parameters in single point incremental forming	246
Ajay Kumar & Vishal Gulati	
Microspheres based on black sand mineral as a photocatalyst for photocatalytic hydrogen production under UV light	256
AndrésLópez-Vásquez, Alis Pataquiva-Mateus & Pilar Delgado-Niño	
Study of surface integrity and effect of process parameters in wire electrical discharge turning of Ti-6Al-4V	267
Akash Nag, Ashish Kumar Srivastava, Amit Rai Dixit, Amitava Mandal & Alok Kumar Das	
Growth kinetics of Fe ₂ B layers formed on the AISI 4150 steel by different approaches	277
Jorge Zuno-Silva, Mourad Keddad, Martin Ortiz-Domínguez, Milton Elias- Espinosa, Alberto Arenas-Flores, Felipe Cervantes-Sodi & José Angel Reyes-Retana	
Anchoring the CFRP strengthening of concrete bridge decks: A comparison of methods	288
Tian Shuai, Miao Zhenkun & Sun Bo	
Application of hybrid AHP-TOPSIS technique in analyzing the braking performance sensitivity of organic-ceramic fibrous reinforced friction composites	300
Mukesh Kumar	
Machining performance enhancement of EN-31 diesteel using MWCNT mixed rotary EDM	309
Rajesh Bajaj, Amit Rai Dixit, Arun Kumar Tiwari & Nitin Kumar Chauhan	
Optical, structural and thermal properties of hybrid PVA/CaAl ₂ ZrO ₆ nanocomposite films	320
Gayitri Hebbur Maheshwarappa, Murad Al-Gunaid, Siddaramaiah & Akkanagowda Patel Gnana Prakash	

Fabrication of prototype connecting rod of PLA plastic material using FDM prototype technology Nagendra Kumar Maurya, Vikas Rastogi & Pushpendra Singh	333
Tensile fracture behaviour of high carbon high manganese steel with single-phase austenite structure Zhimin Ding, Jiaqi Li & Rui Feng	344
Influence of micro-structural parameters on fatigue life of discontinuous reinforced metal matrix composites Abhishek Tevatia & Sunil Kumar Srivastava	348
Influence of bearing raceway surface topography on the level of generated vibration as an example of operational heredity Paweł Zmarzły	356
Ultrafast microwave-assisted synthesis of various zinc oxide nanostructures Viney Ghai, Kshitiz Sharma, Jashan Sanger, Harpreet Singh & Prabhat Kumar Agnihotri	365
Effect of laser remelting on the microstructure and mechanical properties of meta inert gas welded low carbon mild steel Sathyavageswaran Sathish	373
Ductile fracture and microstructure of a bearing steel in hot tension Yuanming Huo, Tao He, Yong Xue, Menglan Shen, Wanbo Yang & Yujia Hu	382
Optimization of cylindrical grinding process parameters using meta-heuristic algorithms Rajasekaran Rekha, Neelakandan Baskar, Mallasamudram Ramanathan Anantha Padmanaban & Angappan Palanisamy	389
Unsteady flow of CNT-water nanofluid past a stretching sheet with slip effect Santosh Chaudhary	396
Microstructure, texture, and mechanical properties of two-pass extruded Mg-5Li-1Al sheet Ruihong Li, Bin Jiang, Zhijun Chen, Fusheng Pan & Xiaomei Zhang	404
Characteristic investigation of cutting-force measuring dynamometers Shahroz Akhtar Khan, Mohammad Sikandar Azam, Somnath Chattopadhyay & Harish Kumar	410
Effect of surface mechanical attrition on microstructure and mechanical properties of hypoeutectoid steel Prashant Tadge & Chandrabalan Sasikumar	418
Machinability analysis and characterization of aluminium hybrid metal matrix composite using WEDM Venkatesan Subbaian, Kingston Barnabas Jacob & Ravindran Durairaj	424
A Unique pipe-like C_3N_4 with enhanced photocatalytic degradation of organic pollutant Maxwell Selase Akple	431
The effect of CFRP strengthening on the behavior of deficient steel beams under concentrated and distributed loading Amir Hamzeh Keykha	438
Drift analysis of a Pd loaded SnO_2 based linalool sensor Priyanka Kakoty, Manabendra Bhuyan & Karen Das	445
Effect of Nano-Silica on the physical, mechanical and thermal properties of the natural rubber latex modified concrete Marina Leyan Varghese, Richu John Babu, Suraj Menon R, Reny Rajan, Vinayak Venu Gopal, Ancheli Siby Jacob, Vinny Ann Titus, Mini Mathewa & Soney Chathukulam George	452
Optimization of wear parameters for aluminium 4% fly-ash composites Subramaniam Magibalan, Palanisamy Senthilkumar, Chinnamuthu Senthilkumar & Muthusamy Prabu	458
Design and analysis of decagonal photonic crystal fiber with elliptical air hole core for liquid sensing Kuntal Panwar, Ritu Sharma, Varshali Sharma, Namrata Saxena & Santosh Chaudhary	465
Effect of material and machining features in electric discharge machining of 6061Al/rock dust composites Kumarasamy Soorya Prakash, Pudhupalayam Muthukutti Gopal & Raghavan Nair Rahul	471
Multifactor optimization for development of hybrid aluminium matrix composites Swarndeeep Singh, Rupinder Singh & Simranpreet Singh Gill	481
Microstructural characterization and mechanical properties of mini specimen of research reactor fuel cladding Sungkono, Maman Kartaman Ajiriyanto & Sri Ismarwanti	490