

International Conference on Advances in Materials Processing & Manufacturing Applications (iCADMA 2020)

Held online due to COVID-19

IOP Conference Series: Materials Science and Engineering
Volume 1017

Jaipur, India
5 - 6 November 2020

ISBN: 978-1-7138-3321-5
ISSN: 1757-8981

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

This work is licensed under a Creative Commons Attribution 3.0 International Licence.
Licence details: <http://creativecommons.org/licenses/by/3.0/>.

No changes have been made to the content of these proceedings. There may be changes to pagination and minor adjustments for aesthetics.

Printed with permission by Curran Associates, Inc. (2021)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

MODELLING OF WEDM PARAMETERS USING TAGUCHI & FUZZY LOGIC	1
<i>Siddharth Sharma, Ashish Goyal, Love Kishore Sharma</i>	
UNCONTAMINATING CONCRETE MIX USING SUGARCANE BAGASSE ASH: A REVIEW ON ITS HARDENED PROPERTIES	9
<i>R B Philip, G N Das, S K Kuriakose, D Jacob, A S Prabha</i>	
A6061/B4C MMCS FABRICATION, EXPERIMENTAL INVESTIGATION AND PREDICTION OF PROPERTIES	16
<i>C S Shyn, R Rajesh, M Dev Anand</i>	
NETWORK IN SEQUENTIAL FORM: COMBINE TREE STRUCTURE COMPONENTS INTO RECURRENT NEURAL NETWORK	29
<i>Swaleha Zubair, Anjani Kumar Singha</i>	
DETERMINATION OF STANDARD OXYGEN TRANSFER RATE IN VENTURI AERATION SYSTEM	36
<i>Anamika Yadav, Avinash Kumar, Sudipto Sarkar</i>	
ADOPTING ZERO ACCIDENT VISION IN INDIA: A CONCEPTUAL FRAMEWORK	46
<i>Jai Narain, Makkhan Lal Meena, Govind Sharan Dangayach, Amar Patnaik</i>	
PARAMETRIC OPTIMIZATION OF TIG WELDING OF DUPLEX STAINLESS STEEL WITHOUT FILLER ROD BY PCA METHOD	60
<i>S. Mondal, G. Nandi, P. K. Pal</i>	
CORROSION RESISTANT SUPERHYDROPHOBIC ALUMINUM ALLOY: A REVIEW	69
<i>Bijayani Panda</i>	
SUSTAINABLE CONSTRUCTION USING EPS BEADS IN LIGHT WEIGHT BLOCKS TO FORM INNOVATIVE FOAM CONCRETE AS A GREEN BUILDING MATERIAL.....	77
<i>A S Moon, Dr. A Patel</i>	
ROLE OF MICRO-FACTORS ON MICROSTRUCTURE AND ON THE TRIBOLOGICAL PERFORMANCE OF HVOF COATINGS: A REVIEW	86
<i>Alok Vats, Amar Patnaik, M L Meena, Dinesh Shringi</i>	
SCHEMATIC REVIEW OF PLASMA ARC OXIDATION PROCESS FOR MG ALLOY BIO IMPLANTS	96
<i>Priya Jadhav, Arunkumar Bongale, Satish Kumar</i>	
INFLUENCE OF MACHINING PARAMETERS ON TAPER SQUARE AREAS DURING SLANT TYPE TAPER PROFILING USING WIRE ELECTRIC DISCHARGE MACHINING.....	105
<i>I. V. Manoj, S Narendranath</i>	
AN INSIGHT: MACHINING OF TITANIUM ALLOYS & ASSOCIATED TOOL WEAR.....	114
<i>Mangal Singh Sisodiya, Vivek Bajpai</i>	
OPTIMIZATION OF ABRASIVE WEAR BEHAVIOUR OF CENOSPHERE FILLED BASALT- EPOXY COMPOSITES USING TAGUCHI APPROACH.....	123
<i>Vikas sharma, M L Meena, A K Chaudhary, Sundeep Kumar</i>	

INFLUENCE OF DEPOSITION PARAMETERS ON TRIBOLOGICAL PERFORMANCE OF HVOF COATING: A REVIEW	133
<i>Alok Vats, Arun Kumar, Amar Patnaik, M L Meena</i>	
ANALYSIS OF A STRUCTURE FOR EFFICIENT ENERGY UTILIZATION USING DESIGN BUILDER.....	144
<i>B Bharath, Abdus Sami, Kartikeya Rastogi</i>	
DEVELOPMENT OF AN INTERNET OF THINGS (IOT) BASED LOCKOUT/TAGOUT (LOTO) DEVICE FOR ACCIDENT PREVENTION IN MANUFACTURING INDUSTRIES	155
<i>S Kumar, S M Tauseef</i>	
FRACTURE ANALYSIS OF EDGE CRACKED FGM PLATE UNDER COMPRESSIVE LOAD ALONG CRACK	167
<i>Kundan Mishra, Achchhe Lal, B. M. Sutaria</i>	
NUMERICAL STUDY OF HEAT TRANSFER ENHANCEMENT THROUGH A CIRCULAR TUBE FITTED WITH AND WITHOUT RECTANGULAR CUT TWISTED TAPE INSERT.....	176
<i>M U Hakim, M W Hridoy, M I Islam, M S Rayhan</i>	
CUMULATIVE POST-BUCKLING BUCKLING BEHAVIOR OF SMART SANDWICH STRUCTURE.....	185
<i>Achchhe Lal, Kanif Markad</i>	
AN EXPERIMENTAL STUDY ON MACHINING OF AISI H - 13 STEEL USING DIMPLE- TEXTURED AND NON-TEXTURED TUNGSTEN CARBIDE CUTTING TOOLS.....	193
<i>G. Vignesh, Debabrata Barik, S. Aravind, P. Ragupathi, M. Arun</i>	
DISSIMILAR METAL WELDS USED IN AUSC POWER PLANT, FABRICATION AND STRUCTURAL INTEGRITY ISSUES	200
<i>Sanjay Singh, Alok Bihari Singh, Manoj Kumar, M L Meena, G S Dangayach</i>	
COMBUSTION ANALYSIS OF POROUS RADIANT BURNER FOR COMMERCIAL COOKING APPLICATIONS	212
<i>Loveneesh Sharma, Satbir Singh Sehgal, Ravinder Tonk, Saurabh Chhabra</i>	
OPTIMIZATION OF FGM COMPOSITION FOR BETTER ENVIRONMENT MATERIAL	221
<i>Mrinal Gautam, Manish Chaturvedi</i>	
REVIEW: TECHNOLOGICAL DEVELOPMENT OF HEAT TRANSFER ENHANCEMENT IN TWO PHASE FLOW BY USING PASSIVE METHOD	228
<i>Gajanan Z. Jadhav, K K Gupta Dr.</i>	
STUDY & ANALYSIS OF TIRE WEAR CHARACTERISTICS OF TATA LPO 1618	237
<i>Gaurav Gohane, Anmol Indurkar, Palash Chimurkar, Sandip Patle, Suraj Kumar Nagina, Swapnil Tirpude, Ujwal Bawane</i>	
COMPARATIVE EXPERIMENTAL INVESTIGATION OF EROSION BEHAVIOUR OF AA2024/B4C AND AA6061/B4C METAL MATRIX COMPOSITES WITH PARTICULATE COATING.....	247
<i>S Vijay, Ch Srinivasa Rao, J Laxmi Lalitha</i>	
EFFECT OF CONCENTRATION OF NAOH TREATMENT ON MECHANICAL PROPERTIES OF EPOXY/SISAL FIBER COMPOSITES	254
<i>D Yadav, G R Selokar, A Agrawal, V Mishra, I A Khan</i>	

USANCE OF INDUSTRIAL 4.0 TECHNIQUE TO OVERCOME THE PANDEMIC SITUATION OF COVID-19	262
<i>Vaibhav Bhardwaj, Pankaj Agarwal, Soumya Ranjan Nayak, Mangal Singh Sisodiya, Vijander Singh</i>	
INVESTIGATION OF RHEOLOGICAL AND PERFORMANCE CHARACTERISTICS OF OXIDIZED POLYETHYLENE POLYMER BLENDED WITH SBS MODIFIED BITUMEN	268
<i>Ajay Kumar Mandrawalia, Arun Gaur, Abhishek Mittal</i>	
A LITERATURE REVIEW ON INJECTION MOULDING PROCESS BASED ON RUNNER SYSTEM AND PROCESS VARIABLES	276
<i>P D Kale, P D Darade, A R Sahu</i>	
COMPARATIVE STRUCTURAL ANALYSIS OF VARIOUS COMPOSITE MATERIALS BASED UNMANNED AERIAL VEHICLE'S PROPELLER BY USING ADVANCED METHODOLOGIES	284
<i>M Ramesh, R Vijayanandh, G Raj Kumar, Vijayakumar Mathaiyan, P Jagadeeshwaran, M Senthil Kumar</i>	
OVERVIEW ON HARDFACING PROCESSES, MATERIALS AND APPLICATIONS.....	293
<i>R. R. Garbade, N. B. Dhokey</i>	
PROCESS IMPROVEMENT USING SIX-SIGMA (DMAIC PROCESS) IN BEARING MANUFACTURING INDUSTRY: A CASE STUDY.....	302
<i>Manish Bhargava, Sanjay Gaur</i>	
INCREASE PRODUCTIVITY OF VERTICAL ROLLER MILL USING SEVEN QC TOOLS	316
<i>Praveen Pareek, Dr. Vijayendra Singh Sankhla</i>	
COMPUTATIONAL STUDY OF SMALL VANADIUM AND CHROMIUM OXIDE CLUSTERS: EFFECT OF HYDROGENATION.....	332
<i>Ankur Chahal, Haider Abbas</i>	
STUDY THE REDUCTION OF MILL SCALE WITH LEAN GRADE COAL THROUGH RI- RDI.....	337
<i>Deepika Shekhawat, Vikas Kukshal, M K Banerjee, Amar Patnaik</i>	
A SHORT REVIEW ON POLYMER, METAL AND CERAMIC BASED IMPLANT MATERIALS	349
<i>Deepika Shekhawat, Amit Singh, Ashray Bhardwaj, Amar Patnaik</i>	

Author Index