


5.8.1. A. Book/Book chapters

Table 5.8.1.A List of book/book chapters published with author details

S.No	Title of the Book/Book chapter	Year of publication	Name of the authors	Name of the publisher
1	Industrial Engineering	2022	Dr.S.Krishnamohan	RK Publication
2	Smart Engineering	2022	Dr.N.Ramanujam	RK Publication
3	Composite Materials	2021	Dr.s.Krishnamohan	Notion Press
4	Power plant Engineering	2021	Dr.S.Chockalingam	A.R.S Publication
5	On the Assessment of Microhardness and Microstructure of Electro Discharge Coated Magnesium Alloy	2020	Dr.V.Navaneethakrishnan	EMERGING TRENDS IN ENGINEERING AND TECHNOLOGY, Page .No. 210
6	Microstructure and Mechanical Properties of Thermoplastic Polyurethane/Jute Cellulose Nanofibers (CNFs) Nanocomposites	2021	Dr.Sivaraman	Springer Singapore
7	Computational analysis of provisional study on white layer properties by EDM vs WEDM of aluminium metal matrix composite	2022	Dr.M.Kathiresan	Woodhead publishing reviews-Mechanical Engineering Series

Table.5.8.1.b. Consolidated List of Book/Book chapters

Faculty Publication	2021-2022	2020-2021	2019-2020	2018-2019
Book/Book chapter	6	1	-	-

  
 HEAD OF THE DEPARTMENT  
 Department of Mechanical Engineering  
 S.O.S. Pillay Engineering College  
 Rajahmundry

Dr. S.Krishnamohan received the B.E degree in Mechanical Engineering from Bharathidasan University, Trichy, Tamilnadu, India in 1996 and M.E degree in production engineering from Annamali University, Chidambaram, Tamilnadu, India in 2001. He has teaching Experience of about 22 years and Industrial experience about 6 years. He received his Ph.D degree in Annamalai University. He has been with the department of Mechanical Engineering, E.G.S. PILLAY Engineering College, Where he is currently a Professor and Dean. His research interest includes the Manufacturing engineering, Composite material, Materials science and Welding.

Dr. RAJASEKARAN .P is a Associate professor in Department of Mechanical Engineering and head of quality practices and industry cell , Er. Perumal manimekalai college of Engineering Hosur. He completed doctrare in Annauniversity chennai . He had been in teaching and research for past 15 years . He has published number of research papers in international/ National journals and conferences .His research areas include composite materials , optimization ,manufacturing and low cost automation .

Dr. Prakash T did his doctoral research degree in specialization: Metal Matrix Composites with Friction Stir Welding. An accomplished Teaching Professional with more than 18 years of teaching experience and 6 years of research experience. Published more than 15 research papers in SCI and Scopus indexed international journals. Published Book Chapters and Articles in Welding society. Three Patents published and many in process. Guided several UG and PG students.

VIJAYKIRAN BURA Studied at BVC College of Engineering, Odelaevu for his B.Tech Mechanical Engineering degree and graduated from JNTU Hyderabad, in 2006. He secured M.Tech in Advanced Manufacturing Systems in 2010 from JNTU Hyderabad and Pursuing PhD in the area of composite materials in JNTU Kakinada. Published more than 15 technical papers in national and international journals and conferences. He is also a member of several Indian and International Professional bodies.



# COMPOSITE MATERIALS



**Dr. S. KRISHNA MOHAN**  
**Dr. P. Raja Sekaran**  
**Dr. T. Prakash**  
**VIJAYKIRAN BURA**



Dr. S. Krishnamohan received the B.E degree in Mechanical Engineering from Bharathidasan University, Trichy, Tamilnadu, India in 1996 and M.E degree in production engineering from Annamalai University, Chidambaram, Tamilnadu, India in 2001. He has teaching Experience of about 22 years and Industrial experience about 6 years. He received his Ph.D degree in Annamalai University, Chidambaram, Tamilnadu, India in 2015. He has been with the department of Mechanical Engineering, E.G.S.PILLAY Engineering College, Where he is currently a Professor and Dean.



Dr. Joshua Gnana Sekaran is Working as an professor in the Department of mechanical engineering at CSI College of Engineering, ooty, The Nilgiris. He graduated in Mechanical Engineering at Bharathiyar University, Chennai, Tamilnadu, India. He secured Master of Science in Birla Institute of technology Pilani, Rajasthan India. He completed his Ph.D. in the field of Powder Metallurgy Anna University Chennai, India. He is in teaching profession for more than 30 years. He has presented number of papers in National and International Journals, Conference and Symposiums



Dr. S. Karthik is working as a Lecturer in the Department of Mechanical Engineering (Sandwich), CIT Sandwich Polytechnic College, Coimbatore, TamilNadu, India. He holds the Doctoral Degree in Mechanical Engineering from Anna University, Chennai, TamilNadu, India. He has more then twelve years of teaching experience. He has presented more than three research papers at International Journals and Conferences. His main area of interest includes Engineering Design and Composite Materials



Dr. P. Sekhar Babu received Doctorate Degree (Ph.D.) in Mechanical Engineering in the year 2006 and working as Professor of Mechanical Engineering. Has 25 years of teaching experience enriched with 15 years as Principal of various reputed Engineering Colleges. Has published 40 research papers in international journals and conferences with Scopus and UGC care indexing. Reviewer for international journals and Governing Body member for two Engineering Colleges. Expert member for NBA and NAAC accreditation process. Two patents are published for his research work.



# Industrial Engineering

Dr. S. Krishnamohan  
Dr. Joshua Gnana Sekaran  
Dr. S. Karthik  
Dr. P. Sekhar Babu



Dr. N. Ramanujan received the B.E degree in Mechanical Engineering from Madras University, Chennai, Tamilnadu, India in 1993 and M.Tech. degree in Advanced Manufacturing Engineering from SAS-TRA University, Thanjavur, Tamilnadu, India in 2005. He has teaching Experience of about 25 years and Industrial experience about 2 years. He received his Ph.D degree in Annamalai University, Chidambaram, Tamilnadu, India in 2017. He has been with the department of Mechanical Engineering, E.G.S.PILLAY Engineering College, Where he is currently a Professor and Dean. His research interest includes the Manufacturing engineering, Composite material, Materials science and Welding.



Dr. Santosh Kumar Sahu working as an Assistant Professor in the Department of Mechanical Engineering at Veer Surendra Sai University of Technology, Burla. He graduated in Mechanical Engineering at Synergy Institute of Engineering & Technology, MTech - Production Engineering at NIT, Rourkela, Odisha, India and secured Ph.D. in Mechanical Engineering at Jadavpur University, Kolkata, West Bengal, India. He is in teaching profession for more than 12 years and presented 45 number of papers in National and International Journals, Conference and Symposiums. He has published four books and five patents.



Dr. Priyadarshi Tapas Ranjan Swain completed his bachelor's degree in Mechanical Engineering from BPUT Odisha in the year 2009 after which he finished his master's degree in Thermal Engineering Specialization in 2012 from SOA University. He started his career as an Assistant Professor in the Department of Mechanical Engineering VSSUT, Burla in 2017 and awarded with the doctoral degree from NIT, Rourkela in 2018. He has been guiding 2 Ph.D scholar and 6 students have completed their Master's degree under his supervision.



Mr. VUAYKIRAN BURA is a Sr. Assistant Professor in the Department of Mechanical Engineering having 12 years of teaching and 2 years of Industrial Experience in reputed Engineering colleges like BVRIT in Telangana and BVCFE in Andhra Pradesh. Pursuing Ph.D. in the area of Composite materials at University College of Engineering Kakinada. Did his Master's and bachelor's degrees in Advanced Manufacturing Systems from JNTU Hyderabad. Published more than 15 Papers in National and International conferences and journals. Guided several UG and PG Students.



Dr. N. Ramanujan

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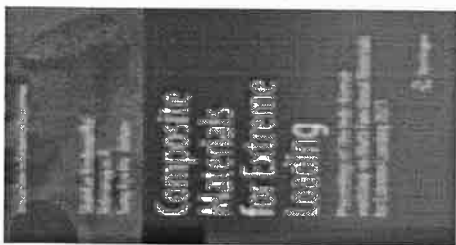


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authors \_\_\_\_\_ Authors and affiliations

G. Sivaraman, B. K. Rajagopal, C. Wang

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### Abstract

Inconel 7 Ni-based super alloy was fabricated through selective laser melting (SLM) technique. Drilling operation was performed on the cylindrical component produced through SLM technique. During drilling process the thrust force was measured by varying the process parameters like drilling speed and feed rate. Near net shape component can be produced through SLM process and in case a need for additional machining operations like drilling is required for assembly purpose, this report will help to understand the behavior of the material and selection of optimum cutting parameters.

A case study is presented, with a view to understand the drilling operation on a Metal Additive Manufactured part analyzing the thrust force with respect to varying the process parameters, i.e. cutting rate and revolution of drilling bit, is studied and presented with the experimental results.



Recent Trends in Manufacturing and Materials Towards Industry 4.0 pp 805–816 | Cite as

## Microstructure and Mechanical Properties of Thermoplastic Polyurethane/Jute Cellulose Nanofibers (CNFs) Nanocomposites

N. Sai Sivaswani, M. N. Ervina Eftan, C. K. Kok, A. K. Aestina & V. Sivaraman

Conference paper | First Online: 19 February 2021

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### Abstract

Cellulose nanofibers (CNFs) are linear polymer that exhibits high stiffness and strength due to extensive intermolecular and intramolecular hydrogen bonds among the molecules. These nano materials are taking place in replacing synthetic fiber as reinforcement in nanocomposites. This present work investigates the potential used of CNFs in improving microstructural and mechanical properties of thermoplastic polyurethane (TPU) nanocomposite. Cellulose nanofibers used in this work was extracted from jute fiber via chemomechanical method. Neat TPU and TPU/jute CNFs nanocomposite were successfully prepared by using melt blending method. In addition, the morphology and mechanical properties of prepared neat TPU and TPU/jute CNFs nanocomposite were evaluated through field emission scanning electron microscope (FESEM), shore durometer and vickers micro hardness. FESEM micrograph reveals that the jute CNFs exhibited a uniformly dispersed in TPU matrix. The incorporation of jute CNFs result in increases of 20.13% hardness strength of prepared nanocomposites.

### Keywords

Microstructure Nanocomposites Nanomaterials Jute Polymer

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About this paper

# On the Assessment of Microhardness and Microstructure of Electro Discharge Coated Magnesium Alloy

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U. Elaiyaran<sup>1\*</sup>, V. Satheesh Kumar<sup>2</sup>,  
C. Senthilkumar<sup>3</sup>, V. Navaneethakrishnan<sup>4</sup>

## Abstract

*Electrical discharge coating (EDC) is the surface modification process, is used to develop the hard composite coating on the workpiece surface with powder metallurgy electrode. In this present investigation, mixture of WC/Cu composite coating is deposited on the ZE41A magnesium alloy by using this technique. Parameters (compaction pressure, current and pulse on time) on micro hardness and microstructure are studied. EDC with low compaction pressured electrode, high current and pulse on time provides the higher material deposition rate (MDR) and micro hardness (MH). Further, deposited surface is characterized by scanning electron microscope (SEM) and energy dispersive spectroscopy (EDS). Craters and globules observed at deposited surface that affects the roughness.*

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<sup>1</sup>Department of Mechanical Engineering, Karpaga Vinayaga College of Engineering and Technology, Madhuranthagam, India-603308

<sup>2</sup>Department of Mechanical Engineering, Government college of Engineering, Salem, India-636011

<sup>3</sup>Department of Mechanical Engineering, University College of Engineering, Panruti, India-607106

<sup>4</sup>Department of Mechanical Engineering, EGS Pillay Engineering College, Nagai, India-611002