

DEPARTMENT OF MECHANICAL ENGINEERING::VRSEC

FACULTY PUBLICATIONS

AY 2021-22

International Journals

1. P. Kishore Kumar, Mariyappan, N. Vijaya Sai, A. Gopalakrishna, "Effect of Compaction Pressure on Mechanical Properties of powder steel 0.065C-22% Cr-13%Ni-5%Mn-2%", Metal Science and heat Treatment 63, 132-139(2021), ISSN 1573-8973, July 2021, **SCIE, IF 0.566.**
2. Sunil Goone, V. Sridhar, D. Pamu, " Low- temperature electrical characteristics of nanocrystalline BaTiO₃ thin films for cryogenic applications", Materials Letters : X 11 (2021) 100090, ISSN 0167-577X, August 2021. **SCI.**
3. Bapi Raju. V, Rambabu G, " A Construction Heuristic for finding an initial solution to a very large-scale capacitated vehicle routing problem", RAIRO Operations research, ISSN 1290-3868, 55(2021), vol 55, no 4, PP 2265-2283, August 2021, **SCIE, IF:1.21.**
4. V. Rama Krishna, S. Srinivasa Prasad, N. Pardhasardahi, B. Raghava Rao, Hydro-elastic computational analysis of a marine propeller using two-way fluid structure interaction", Journal of Ocean engineering and Science, ISSN : 2468-0133 24th August 2021. **SCIE, IF : 3.408.**
5. Sanjaya K. Sahoo, Srinivas Kuchipudi, R. Narasimha Rao, Manoj K. Buragohain, Ch.Sri Chaitanya "Detection of Planar Defects in Multilayered GFRP Composite Structures using Low-Field Nuclear Magnetic Resonance", Materials Evaluation, 79(9): 897-904, September 2021, **SCIE**
6. Ramanaih kandula, Srinivasa prasad Sanaka, Ratna Prasad , " Thermo-Physical And Fire Properties of Natural Fiber Composites for Energy Saving Applications", Journal of Natural Fibers, March 2022, ISSN : 1544-046X, **SCIE, IF 4.18**
7. Nandagopal Kaliappan, M. Balaji, Ch. Anil Kumar, Haqqani Arshad, N. B. Prakash Tiruveedula, S. Hemavathi, Kibebe Sahile, " Machining Performance of AA2024/5Al₂O₃ Mixed Dielectric Medium", International Journal of Chemical Engineering, ISSN 1687-8078 April 2022, **SCIE, IF 2.257.**
8. Syam Prasad Ammineni, Ch.Naga Raju, D.Linga Raju," Thermal degradation of naturally aged NBR with time and temperature" , Materials research express, no 6, vol 9, June 2022, **SCIE, IF 2.025.**

9. M. Bala Chennaiah, K. Dilip Kumar, B. Sudheer Kumar, “Characterization of zinc oxide nanoparticles – herbal synthesized coated with *Ocimum tenuiflorum*”, *Advances in Materials and Processing Technologies*, 11 June 2021, ISSN 2374-0698 PP:2214-7853, <https://doi.org/10.1080/2374068X.2021.1934642>. **SCOPUS, ESCI.**
10. Jyoti Menghani, Akash Vyas, Satish More, Christ Paul, Amar Patnaik, “Parametric investigation and optimization for CO₂ Laser Cladding of AlFeCoCrNiCu Powder on AISI 316”, *High Temperature Materials and Processes* July 2021, 40, 265-280, **SCOPUS.**
11. Ch. Nagaraju, Ch. Hari Krishna, R Venkata Kiran, Pardha Saradhi Dandamudi, “An intelligent system for predicting roll pressure in the cold rolling of Ti6Al4V”, *Engineering Research Express* 3, September 2021, 035046, PP 1-11, **SCOPUS, ESCI.**
12. Supraja Reddy. B, Ram Gopal Reddy.B, “Influence of Process Parameters and tool on mechanical and metallurgical properties of pure copper and aluminum alloy AA7075 dissimilar friction stir welded joints”, *International Journal of Engineering Trends and Technology*, ISSN 2231-5381, vol 69, issue 9, 73-79, September 2021. **SCOPUS.**
13. Kolhalkar N R, Krishnan V L, Pandit A A, Somkuwar R G, Shaaikh J A., “Design and Performance Evaluation of a Novel End-Effector with Integrated Gripper Cum Cutter for Harvesting Greenhouse Produce”, *International Journal of Advanced Technology and Engineering Exploration*. 2021; 8 (84): pp. 1479-1489. DOI:10.19101/IJATEE.2021.874507. November 2021, **SCOPUS.**
14. V.V. Spandana, G. Jamuna Rani, K. Venkateswarlu, V. V. Venu Madhav, “Effect of Ytria stabilized zirconia and titanium oxide Thermal Barrier coating on engine performance”, *International Journal of Engineering Transactions C: Aspects* Vol.35, No. 12, December 2021 PP 2611-2616, ISSN 1735-9244,**SCOPUS.**
15. Prakash Babu Kanakavalli, Satish R More “Determining optimal parameters using Taguchi’s design of experiments (DOE) for improving the quality of biogas generation process” *Engineering Research Express* Vol 4 (2022) ISSN: 2631-8695, May 2022, **SCOPUS, ESCI.**
16. Satish R More, Dhananjay V Bhatt, Jyoti V Menghani and Rahul K Jagtap, “CFD Simulation and Experimental Results Validation of Slurry Erosion Wear using Slurry

Pot Test Rig”, TRENDS IN SCIENCES 2022; 19(11): 4524, ISSN :[2774-0226](https://doi.org/10.48048/tis.2022.4524) June 2022, <https://doi.org/10.48048/tis.2022.4524>, **SCOPUS**.

17. Praveen, Anchupogu, G. Jamuna Rani, and B. Balakrishna. "Effect of MWCNTs as nano additives in C. Inophyllum biodiesel blend (CIB20) on the performance and emission parameters of a diesel engine." *Materials Today: Proceedings* (2021), [Volume 50, Part 6](https://doi.org/10.1016/j.matpr.2021.11.158), 2022, Pages 2581-2586, ISSN : 2214-7853 , February 2022, <https://doi.org/10.1016/j.matpr.2021.11.158>, **SCOPUS**.
18. Ponnaganti Gopinadh Chowdary, Ch.Sri Chaitanya, Sammeta Venkata Satya Swamy Sai Charan, [Avinash James](#)’ [Sudanagunta Sai Naveen](#) “Evaluation of mechanical properties of Banyan/glass fiber reinforced epoxy composites”, *AIP Conference Proceedings* vol 2469, issue 1, PP 020007(1-7), ISSN :1551-7616 March 2022, <https://doi.org/10.1063/5.0080430>, **SCOPUS**,
19. K. Ramanaiah, A.V. Ratna Prasad, K. HemaChandara Reddy “Eco friendly sisal fiber /poly lactic acid composite material for thermal insulation applications”, *Composite Materials for Extreme loading, Lecture Notes in Mechanical Engineering*, Nov 2021, ISSN : 2195-4364 , ISBN :978-981-16-4138-1, pp 113–118, **SCOPUS**,
20. M. Nageswara Rao, K.Prakash Babu , Kiran Kumar Dama, Santosh Kumar Malyala & Prem Kumar Chaurasiya “Flexible Manufacturing System Simultaneous Scheduling Through Palmer Heuristic Algorithm” *Technology Innovation in MechanicalEngineering , Lecture Notes in Mechanical Engineering book series (LNME)*, ISSN : 2195-4364, pp 1013–1021, ISBN: 978-981-16-7909-4 29 April 2022 **SCOPUS**
21. M. Nageswara Rao, K. Prakash Babu, T. Vijaya Kumar, Santosh Kumar Malyala & Sanjay Kumar Singh “Simultaneous Scheduling with J N D Gupta Heuristic Algorithm with Mean Tardiness” *Technology Innovation in MechanicalEngineering , Lecture Notes in Mechanical Engineering book series (LNME)*, pp 1001–1012, ISBN: 978-981-16-7909-4 ,29, ISSN : 2195-4364, April 2022, **SCOPUS**,
22. M. Nageswara Rao, K. Prakash Babu, G. R. Sanjay Krishna, T. Vijaya Kumar & Upendra Rajak “Implementation of Campbell, Dudek, Smith Algorithm in Flexible Manufacturing System with Mean Tardiness” *Technology Innovation in MechanicalEngineering ,Lecture Notes in Mechanical Engineering book series*

(LNME), pp 867–878, ISBN: 978-981-16-7909-4 ,29 , ISSN : 2195-4364, April 2022
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23. M. Nageswara Rao, K. Prakash Babu, Kiran Kumar Dama , Santosh Kumar Malyala & Upendra Rajak “AGVs and Machines Scheduling with Campbell, Dudek, Smith Algorithm” Technology Innovation in Mechanical Engineering , Lecture Notes in Mechanical Engineering book series (LNME), pp 879–887, ISBN:978-981-16-7909-4 ,29, ISSN : 2195-4364, April 2022**SCOPUS.**
24. M. Nageswara Rao, K. Prakash Babu, Kiran Kumar Dama , Santosh Kumar Malyala & Upendra Rajak “Implementation of Jatinder N. D. Gupta Algorithm for FMS Scheduling Problems”Technology Innovation in Mechanical Engineering , Lecture Notes in Mechanical Engineering book series (LNME), pp 837–845, ISBN:978-981-16-7909-4 ,29, ISSN : 2195-4364, April 2022 **SCOPUS.**
25. M. Nageswara Rao, T. Vijaya Kumar, K. Prakash Babu, G. R. Sanjay Krishna, Prem Kumar Chaurasiya & Anshul Raj “Mean Tardiness with Heuristic in Intelligent Manufacturing System” Technology Innovation in Mechanical Engineering , Lecture Notes in Mechanical Engineering book series (LNME), pp 989–999,ISBN: 978-981-16-7909-4 ,29, ISSN : 2195-4364, April 2022 **SCOPUS.**
26. M. Nageswara Rao, T. Vijaya Kumar, K. Prakash Babu, G. R. Sanjay Krishna & Sanjay Kumar Singh “Implementation of Priority Rules in Flexible Manufacturing System Scheduling with Mean Tardiness” Technology Innovation in Mechanical Engineering , Lecture Notes in Mechanical Engineering book series (LNME), pp 977–988, ISBN: 978-981-16-7909-4 ,29, ISSN : 2195-4364, April 2022**SCOPUS.**
27. M. Nageswara Rao, Kiran Kumar Dama , T. Vijaya Kumar, K. Prakash Babu & Upendra Rajak “Implementation of Branch and Bound Algorithm in FMS with Mean Tardiness” Technology Innovation in Mechanical Engineering , Lecture Notes in Mechanical Engineering book series (LNME), pp 889–901, ISBN:978-981-16-7909-4 ,29, ISSN : 2195-4364, April 2022 ,**SCOPUS.**
28. Kolhalkar, N., Krishnan, V. L., Somkuwar, R., Pandit, A., Design of IoT-based Mechatronic Module for Real-Time Yield Monitoring During Harvesting of Greenhouse Produce and Vineyards, (2022) International Review of Mechanical Engineering (IREME), vol 16, no1, pp. 48-55. (DOI: <https://doi.org/10.15866/ireme.v16i1.21827>), **SCOPUS.**

29. J. Karthik, SK. Meghana, P. Satheesh Kumar Reddy, “Automated Cast Quality Inspection using Deep Learning”, International Journal of Mechanical and Production Engineering Research and Development, ISSN (P): 2249–6890; ISSN (E): 2249–8001 Vol. 11, Issue 4, Aug 2021, 165-172, Paper Id.: AUG202114.

International Conferences:

1. P. Ravi Chandra, M. Jogendra Prasad, “The effect of piston -velocity programs on fuel -air mixing characteristics of a buoyant vortex ring”, 15th international conference on heat transfer, fluid mechanics and thermodynamics, pp 2144-2339, 26-28th July 2021, Virtual.
2. Gavireddi Abhinav bharat, Alluri Sai Nandini, Malladi Jogendra Prasad, “Generative Design of a Quad-copter Frame”, ASME International Conference on Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS 2021), September 14-15 2021, Virtual.
3. Mounika G, Dilli Babu, Vijaya Sai N, “Experimental Investigation on Geometrical accuracy of FDM 3D Printer Using CMM”, Virtual International Conference on Product Design, Development and Deployment (PD3 -2021), 11th& 12th September 2021.
4. N. Ravi Kumar, “Comparison of Tensile Properties of AL5154/SIC/TIB2 with AL7075/6063 Metal Matrix composites”, Virtual International Conference on Product Design, Development and Deployment (PD3 -2021), 11th& 12th September 2021 held at VIT AP.
5. Pidathala Siva, Vallabhaneni Balakrishna Murthy, “Numerical simulation of a composite shell for underwater application Using CFD and FEA”, E3S web of Conferences, 309, 01155(2021) ICMED 2021, organized by dept of Mechanical and Electrical Engineering, GRIET , Hyderabad, on 24-26, September 2021.
6. G. Jamuna Rani, Gangadhar Rao P, Konuru Srinivasa Rao, M. Ravi Teja, “ Design and Optimization of 200 Ton H-Type Hydraulic Press”, E3S web of Conferences, 309, 01155(2021) ICMED 2021, October 6-9th October 2021.

7. K. Srinivas, K. Mahesh Babu, AHR Madhuri, "Performance and emission characteristics of fumigated butanol on a duel fuel mode hcci engine"E3S web of Conferences, 309, 011228(2021) ICMED 2021, October 6-9th October 2021.
8. Kanchibotla Hima Teja, Srivalli Gollamudi, Balakrishna Murthy Vallabhaneni, "A Solution of Scour at bridge pier through computational fluid dynamics (CFD) simulations, "International Conference on Advances in Structural Mechanics and Applications (ASMA -2021) , 6th to 8th October 2021, organized by department of Civil Engineering, NIT Silchar, India.
9. I Manoj Kumar, V. Leela Krishnan, "Design of Internet of Things based System for Ensuring Reliable Performance of Solar Powered Quadrotor", Proc. CIMS 2021 organized jointly by Dr. B R Ambedkar NIT Jalandhar and Punjab Engineering College, Chandigarh, 11-13th November 2021.
10. Ch. Sri Chaitanya, P. Gopinadh Chowdary, G. Chitti Babu, and R. Narasimha Rao, Development of Close Celled Cenosphere Based Polymer Syntactic Foams, 3rd Innovative Product Design and Intelligent Manufacturing Systems International Conference [IPDIMS-2021], December 30-31, 2021, National Institute of Technology Rourkela, Rourkela, India.
11. Mukesh CH.S.N.B Venkateswarao A, Md. Mukheem and V. Balakrishna Murthy V, " Numerical Simulations on Alignment of Sacrificial Piers in Scour Reduction", 66th Congress of the Indian Society of Theoretical and Applied Mechanics (ISTAM), 3rd -5th December 2021, organized by ISTAM and VIT -AP University, Amaravathi, AP., PP 72
12. Mulupuri Gnana Deepthi Keziya, Mullapudi Sri Lasya, Balakrishna Murthy V, " , Analysis of scour formation at bridge abutments", 66th Congress of the Indian Society of Theoretical and Applied Mechanics (ISTAM), 3rd -5th December 2021, organized by ISTAM and VIT -AP University, Amaravathi, AP., PP 100
13. Sri Pavan Krishna A, Mohan Sai Raju, Mukesh CH.S. N. S. B, Balakrishna Murthy.V, " Numerical Simulations on Effectiveness of Sacrificial Piers in Scour reduction", 66th Congress of the Indian Society of Theoretical and Applied Mechanics (ISTAM), 3rd -5th December 2021, organized by ISTAM and VIT -AP University, Amaravathi, AP, PP 74
14. Obulasu Tapela, G. Dilli Babu, G. Ranga Janardhana, " An analysis of the behaviour of peepal fiber reinforced polyester composites for tensile, flexural and

- impact strengths”, International conference on third Innovative Product Design and Intelligent Manufacturing Systems (IPDIMS) during 30th and 31st December 2021, organized by Department of Industrial design and Department of mechanical Engineering of NIT Rourkela.
15. G. Dilli Babu, D. Siva Kumar, M. Bala Chennaiah, K. Sivaji Babu, “ Experimental Investigation and Optimization of IRB6700 ABB Robot Spot welding process Parameters” , International conference on third Innovative Product Design and Intelligent Manufacturing Systems (IPDIMS) during 30th and 31st December 2021, organized by Department of Industrial design and Department of mechanical Engineering of NIT Rourkela
 16. M. Bala Chennaiah, G. srivalli, Design and Fabrication of Regenerative Roller Braking Syatem”, International conference on third Innovative Product Design and Intelligent Manufacturing Systems (IPDIMS) during 30th and 31st December 2021, organized by Department of Industrial design and Department of mechanical Engineering of NIT Rourkela
 17. Sulochana G, Venkata Prasad Ch, Bhatti S K, “ The influence of Emission Characteristics of Hybrid Biodiesel with Nano-Particles by using CFD”, International Conference on Materials and Technologies , organized by NIT Raipur, Raipur India, on 28th-29th January 2022.
 18. Hari Krishna Chirala, Nagaraju Cherukuri, Sai Saran K and Davidson MJ, “Effect of ZrO₂ on the Heterogenous distribution of Hardness in Upsetting Test of Al% ZrO₂ using Experimental and Finite Element Investigations”, International Conference on Futuristic Advancements in Materials, Manufacturing and Thermal Sciences (ICFAMMT 2022) , 20th-22nd January , 2022 at IITRAM Ahmedabad, Gujarat, India
 19. A. N. Phani Deepthi, V. Vasu, S. Srinivasa Prasad, Kethan Bayaneni” Experimental investigation of thermal conductivity for human dermal layers”, International Conference on Advances in Mechanical Engineering, Industriial Informatics and Management, Department of Mechanical Engineering, National Institute of Technology, Raipur, 25th-26th February 2022
 20. Srinivasa prasad sanaka, Mounica Sunkara, Keziya Mulupuri, Anusha Bayana, “ Development of Cost -Effective High-Pressure Water Pump Fire Fighting System, “ International Conference on Advances in Mechanical Engineering, Industriial

Informatics and Management, Department of Mechanical Engineering, National Institute of Technology, Raipur, 25th-26th February 2022, PP 26.

21. K. Ramanaiah, Srinivasa Prasad Sanaka, Chilaka Moses Aravind, K. Hemachandra Reddy, “ Experimental and numerical investigations of sustainable thermal insulation competence of natural fibre reinforced composite”, International Conference on Advances in Mechanical Engineering, Industrial Informatics and Management, Department of Mechanical Engineering, National Institute of Technology, Raipur, 25th-26th February 2022,
22. Srinivasa Prasad sanaka, N. Pardhasaradhi, K. Durga Rao, Sravani Vemuri, ‘ Analysis on structural and Acoustic Response of Marine Propeller”, International Conference on Advances in Mechanical Engineering, Industrial Informatics and Management, Department of Mechanical Engineering, National Institute of Technology, Raipur, 25th-26th February 2022, PP 44.
23. M. Suamlatha, Kesava Rao BBS, Karuna Kumar G, Surya Vamsi S “ Investigation of Tensile, Hardness and Corrosion Tests on TIG Welded Martenstic Stainless Steel (AISI 410) Plates”, International Conference on Advances in Mechanical Engineering, Industrial Informatics and Management, Department of Mechanical Engineering, National Institute of Technology, Raipur, 25th-26th February 2022,
24. Venkateswarlu alaapati, Naga Bharadwaj purighella, Sri Charan Sanagalaa, Gaurav S Kumar “Semi- Automatic Farming”, International Conference on Advances in Mechanical Engineering, Industrial Informatics and Management, Department of Mechanical Engineering, National Institute of Technology, Raipur, 25th-26th February 2022, PP 30
25. Vemuluri Vasu, A. N. Phani deepthi, “Performance analysis of domestic refrigeration system using Zink Oxide Nano lubricant”, International Conference on Advances in Mechanical Engineering, Industrial Informatics and Management, Department of Mechanical Engineering, National Institute of Technology, Raipur, 25th-26th February 2022, PP50
26. G. Chittibabu, Ch. Sri Chaitanya, Babar Pasha Mahammod, Manoj Gupta, Syed Ismail and R. Narasimha Rao, Tribological Behaviour of Titanium Carbide Reinforced Aluminum Composite Materials, International Conference on Smart Materials and Structures [ICSMS - 2022], February 15-16, 2022, Vasireddy Venkatadri Institute of Technology, Nambur, India.

27. Ch. Sri Chaitanya, G. Chittibabu, Babar Pasha Mahammod, T. Bharath Kumar, A. Charan Reddy, C. Pranaya Joshi, and R. Narasimha Rao, Compression Deformation Models of Cenosphere Reinforced Polymer Syntactic foams, International Conference on Smart Materials and Structures [ICSMS - 2022], February 15-16, 2022, Vasireddy Venkatadri Institute of Technology, Nambur, India.
28. Peddakondigalla Venkateswara Babu, K. Satyanarayana, V. Kiran Kumar, SK. Abdul Saleem, Ch Sri Chaitanya, Syam Kumar Chokka, Syed Ismail, Effect of Graded layers on Void formation in Metal Based Functionally Graded Materials, International Conference on Smart Materials and Structures [ICSMS - 2022], February 15-16, 2022, Vasireddy Venkatadri Institute of Technology, Nambur, India.
29. Lakshmipathi Rao. N, Raju. M, Balaji.M, Nagarjuna. U, Sudheer D,” Fabrication and analyzing the properties of brick which is made of shredded surgical masks and ground granulated blast-furnace slag”, International conference on Recent Trends in engineering Technologies and Engineering -ICRTETE-2022, Organized by International Institute of research in Multidisciplinary -skill development trust , on 24th April 2022.
30. K.Nikhil Chand, V.V.Venu Madhav, P.Phani prasanthi, Ch. Sri Chaitanya, A.V.S.S.K.S. Gupta, V. V. Spandana, “Fracture behaviour of a composite lamina under Mechanical, Thermal and Thermo- Mechanical loading conditions”, 5th International Conference on Design, Analysis, Manufacturing and Simulation ICDAMS-2022, organized by Saveetha School of Engineering, Chennai, 18-19th May 2022
31. D. Yaswanth Sai, V.V.Venu Madhav, P.Phani prasanthi, Ch. Sri Chaitanya, A.V.S.S.K.S. Gupta, V. V. Spandana, “Fracture behaviour of a Rectangular Composite lamina with a Virtual Crack Under Different Loading Conditions”, 5th International Conference on Design, Analysis, Manufacturing and Simulation ICDAMS-2022, organized by Saveetha School of Engineering, Chennai, 18-19th May 2022.