

(Research Publications)

I. Journal Publications

<i>Sl No.</i>	<i>Authors</i>	<i>Title of paper</i>	<i>Journal</i>	<i>Volume; Year</i>	<i>Page</i>	<i>Indexed in/Q factor/IF; date of acceptance</i>
1.	Anubhav Kumar Sharma, Niranjan Kumar , Alok Kumar Das, Monty Kumar	Ni-Mo-P Coatings on Thrust Plate of a Gear Pump to Enhance its Mechanical, Tribological, and Corrosion Resistance Properties	Proceedings of the institution of mechanical engineers, Part B: Journal of engineering manufacture	Accepted.	--	SCI/Q2/2.6; 4 Jul 2023
2.	Anubhav Kumar Sharma, Pratik Punj, Niranjan Kumar , Alok Kumar Das, Ajit Kumar	Lifetime Prediction of a Hydraulic Pump Using ARIMA Model	Arabian Journal for Science and Engineering, Springer	00(0) https://doi.org/10.1007/s13369-023-07976-6	1-13	SCI/Q2/2.81; 23 May 2023
3.	Ram Krishna, Niranjan Kumar , Pankaj Kumar Gupta	CFD investigation of pressure drop reduction in hydro-transport of multi-sized zinc tailings slurry through horizontal pipes	International Journal of Hydrogen Energy, Elsevier	Vol. 48, Issue 43; https://doi.org/10.1016/j.ijhydene.2023.01.11	16435 - 16444	SCI/Q2/7.14; 10 Jan 2023
4.	Ram Krishna, Niranjan Kumar , Pankaj Kumar Gupta	Numerical prediction of wall erosion using energy approach for the flow of dense slurry in 90° horizontal pipe bend	Powder Technology, Elsevier	Vol. 426; https://doi.org/10.1016/j.powtec.2023.118623	118623 (1-21)	SCI/Q1/5.64; 3 May 2023
5.	M. Bhola A. Kumar N. Kumar	Energy-efficient control of hydrostatic transmission of a front-end loader machine using machine learning algorithm and its sensitivity analysis	Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, Sage Publisher	00(0) https://doi.org/10.1177/09544070221133	1-23	SCI/Q4/1.83; 28 Sept 2022
6.	R.Sreeharsha, N. Kumar , Ajit Kumar, J.P. Tripathi	Modeling and analysis of articulated steering mechanism	Materials Today: Proceedings, Elsevier	62(06); https://doi.org/10.1016/j.matpr.2022.04.471 ; ISSN 2214-7853	3800-3803	SCOPUS; April 2022
7.	R. SreeHarsha, N. Kumar , Vinay Partap Singh.	Determination of Steering Actuator Mounting Points of a Load Haul Dump Machine for Optimum Performance	In Machines, Mechanisms and Robotics, Springer	234; https://doi.org/10.1007/978-981-16-0550-5_70 ; ISBN:978-981-16-0550-5	711-723	SCOPUS; Jul 2021
8.	R. K. Rathore, P. K. Gupta, N. Kumar	Numerical investigation of zinc tailings slurry flow field in a horizontal pipeline	Materials Today: Proceedings, Elsevier	45; https://doi.org/10.1016/j.matpr.2020.11.541	2702–2706	SCOPUS; Jan 2021
9.	G. K. Ghosh, A. Kotia, N. Kumar , & S. K. Ghosh	Optimization and modeling of rheological characteristics for graphene-gear oil based nanolubricant using response surface methodology	Colloids and Surfaces A: Physicochemical and Engineering Aspects, Elsevier	630; https://doi.org/10.1016/j.colsurfa.2021.127605	127605 (1-12)	SCI/Q1/5.518; 18 Sept 2021

10.	A. Haldar, S. Chatterjee A. Kotia N. Kumar S. K. Ghosh	Analysis of rheological properties of MWCNT/SiO ₂ hydraulic oil nano-lubricants using regression and artificial neural network	International Communications in Heat and Mass Transfer, Elsevier	116; https://doi.org/10.1016/j.ichmatmasstransfer.2020.104723	104723 (1-12)	SCI/Q1/6.782; 1 Jul 2020
11.	Sree Harsha, N. Kumar A. Kumar	A critical review on Load Haul Dump Steering system	Proc ImechE Part I: J Systems and Control Engineering	234 (2); https://doi.org/10.1177/0959651819847813	160 - 182	SCI/Q4/1.59; 3 May, 2019
12.	M.Bhola N. Kumar S. K. Ghoshal	Reducing fuel consumption of Front End Loader using Regenerative Hydro-static drive configuration-An experimental study	Energy, Elsevier	162; https://doi.org/10.1016/j.energy.2018.08.006	158-170	SCI/Q1/8.857; 1 Aug 2018
13.	A. K. Pandey, K. Dasgupta, N. Kumar	Steady-State Performance Investigation of Closed-Circuit Hydrostatic System- A Practical Approach	Kuwait J.	46 (1); 1048129/kjs	76-83	SCI/Q4/1.59; 3 May 2019
14.	Alok Vardhan, K. Dasgupta, N. Kumar Santosh Kr Mishra	Steady-state performance investigation of open-circuit hydrostatic drives used in the rotary head of drill machine	Proc IMechE Part E: J Process Mechanical Engineering	233 (1); https://doi.org/10.1177/0954408917738973	3-20	SCI/Q3/1.448; 21 Sept 2017
15.	A. K. Pandey, K. Dasgupta, N. Kumar , A. Vardhan.	Leakage analysis of bent axis hydro- motors: An experimental study	Journal of Chinese Society of Mechanical Engineers	38 (1)	93-98	SCI/Q4/0.274; 7 Feb. 2017
16.	A Vardhan, K. Dasgupta, N. Kumar.	Comparison of the steady-state performance of hydrostatic drives used in the rotary head of the drill machine	Braz. Soc. Mech. Sci. Eng.	39 (11); https://doi.org/10.1007/s40430-017-0803-z	4403 - 4419	SCI/Q2/0.963; 10 May, 2017
17.	M. E. Hasan, S. K. Ghoshal, K. Dasgupta, N. Kumar.	Dynamic analysis and estimator design of a hydraulic drive system	Braz. Soc. Mech. Sci. Eng.	39 (4); https://doi.org/10.1007/s40430-016-0594-7	1097–1108	SCI/Q2/0.963; 15 July 2016
18.	Vardhan, A., Pandey, A. K., Dasgupta, K., Kumar, N.	Selection of hydraulic components for body hoist control of dumper	Journal of mines metals and fuels	64(5-6), 2016	148-154.	Scopus (Impact Factor:0.122)
19.	Kumar, A., Kumar, A., Shreeharsha, R., Kumar, N.	Operational characteristics of a fixed displacement hydraulic pump.	<i>Journal of mines metals and fuels</i>	64(5-6), 2016	161-164	Scopus (Impact Factor:0.122)
20.	N. Kumar , K. Dasgupta, S K Ghoshal.	Dynamic Analysis Of A Closed Circuit Hydrostatic Summation Drive Using Bent Axis Motors	Proc IMechE Part I: J Systems and Control Engineering.	229 (8) ; https://doi.org/10.1177/0959651815583197	761–777	SCI/Q4/ 0.889; 23 Mar 2015
21.	N. Kumar , K. Dasgupta.	Steady-state performance investigation of hydrostatic summation drive using bent-axis hydraulic motor	Proc IMechE Part C: J Mechanical Engineering Science	229 (17) : https://doi.org/10.1177/0954406214559410	3234-3251	SCI/Q3/2.0; 21 Oct 2014
22.	D. Kumar, J. Das, N. Kumar	Study on PID controller used in electro-hydraulic actuation system	International Journal of Applied Engineering Research	10 (69)	108-112	Scopus; 2015
23.	R. Paswan, J. Das, N Kumar , A. Kumar,	Performance Analysis of Directional Control Valve: An Overview	Applied Mechanics and Materials	592	1983-1987	Scopus/0.130; 2014

	S. K. Mishra, S. Kumar.					
24.	R. Paswan, J. Das, N Kumar , A. Kumar, S. K. Mishra, S. Kumar.	Hydraulic Circuit in Damper: An Overview	Applied Mechanics and Materials	592	2056- 2060	Scopus/0.130; 2014
25.	J. Das, S. Kumar, S. K. Mishra, A. Kumar, N. Kumar , R. Paswan.	Modern Advancement of Hydraulic Motor: A Review	Applied Mechanics and Materials	592	2179- 2183	Scopus/0.130; 2014
26.	J. Das, S. Kumar, S. K. Mishra, A. Kumar, N Kumar , R. Paswan.	Study of Energy Saving System for Hydrostatic Drive-A Review	Applied Mechanics and Materials	592	2210- 2214	Scopus/0.130; 2014
27.	R. Paswan, J Das, N Kumar , A. Kumar, S. K. Mishra, S. Kumar.	Simulation Study on Different Energy Efficient Hydraulic System: An Overview	Applied Mechanics and Materials	592	2234- 2238	Scopus/0.130; 2014
28.	J. Das, S. K. Mishra, A. Kumar, N. Kumar , S. Kumar, R. Paswan.	Study of Energy Recycling in Electro-Hydraulic System	Applied Mechanics and Materials	592	2244- 2248	Scopus/0.130; 2014
29.	J. Das, S. K. Mishra, A. Kumar, N. Kumar , S. Kumar, R. Paswan.	Study on Hybridization of Hydraulic System Used in Heavy Machinery	Applied Mechanics and Materials	592	2249- 2253	Scopus/0.130; 2014
30.	Kumar, A., Kumar, N. , Dasgupta, K., Das, J., Kumar, R.	Analysis of Steady State Performance of an Open Loop Drive of a Hydraulic Motor used in Hydrostatic Transmission System	International Journal of Current Engineering and Technology	Special Issue- 2	407- 412	Scopus; 2014
31.	K. Dasgupta, S. K. Ghoshal, N. Kumar .	Modelling and simulation of a Hydrostatic Transmission System using Two Motor Summation Drive	Journal of Modeling, Simulation, Identification and Control	1(3)	89- 104	Google Scholar; 2013
32.	K. Dasgupta, N. Kumar* , R. Kumar.	Steady State Performance Analysis of Hydrostatic Transmission System using Two Motor Summation Drive	J. Inst. Eng. India, Sec. C, Springer India	94 (4)	357- 363	Scopus; 2013
33.	Kumar, N.	Optimization of autofrettage- reautofrettage percent and shrink-fit combination for optimum fatigue life in multilayer pressure vessels	Journal of Applied Mechanics Engineering	1(3)	100- 113	Scopus; 2012
34.	Kumar, N. , Mandal, D. K., Mondal, S. C., Acharyya, S. K.	Optimization of Shell thickness in Multilayer Pressure Vessel and Study on Effect of Number of Shells on Maximum Hoop Stress	Int. J. Eng. Sci. Technol	3, 2011	2693- 2700.	Google Scholar; 2011
35.	Kumar, N. , Mondal, S. C.,	Optimum autofrettage pressure and shrink-fit combination for minimum	Int. J. Eng. Sci. Technol	3, 2011	4020- 4030.	Google Scholar; 2011

	Mandal, D. K., Acharyya, S. K.	stress in multilayer pressure vessel				
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* Best paper award by the journal.

II. Conference Publications

Sl. No.	Authors	Title of paper	Conference Details
1.	Anubhav Kr. Sharma, Monty Kumar, Niranjan Kumar , Alok Kr. Das	Improvement in Tribological Properties of Thrust plate of Gear Pump Through Flame Spattering in Diverse Cooling Medium	7 th International Conference on Production and Industrial Engineering (CPIE 2023), 10 th to 12 th March 2023, NIT Jalandhar.
2.	Ram Krishna, Niranjan Kumar , Pankaj Kumar Gupta	CFD Prediction of Erosion Zone in Pipe Bends Due to Flow of Solid-Liquid Mixtures	Proceedings of the Chemical Engineering Congress (CHEMCON 2022) 75 th Annual Session (Platinum Jubilee) of Indian Institute of Chemical Engineers, December 27-30 2022, HBTU, Kanpur, India. (2022) 357-60.
3.	Ram Krishna, Niranjan Kumar , Pankaj Kumar Gupta	Pressure Drop Optimization at 90° Bend Horizontal Pipeline for Dense Slurry Flow using CFD	Proceedings of the Chemical Engineering Congress (CHEMCON 2022) 75 th Annual Session (Platinum Jubilee) of Indian Institute of Chemical Engineers, December 27-30 2022, HBTU, Kanpur, India. (2022) 357-60.
4.	Ram Krishna, Niranjan Kumar , Pankaj Kumar Gupta	Computational Analysis of Elbow Wear Due to High Concentration Slurry Flow	Proceedings of the Chemical Engineering Congress (CHEMCON 2022) 75 th Annual Session (Platinum Jubilee) of Indian Institute of Chemical Engineers, December 27-30 2022, HBTU, Kanpur, India. (2022) 357-60.
5.	Shivdutt Sarkar, Mohit Bhola, Harsha Rowdur, Niranjan Kumar	Fuzzy PID Control of Hydro-Motor Speed Used in Heavy Earth Moving Machineries	1 st International Conference on Recent Advancement of Mechanical Engineering (ICRAME) 2020, NIT Silchar, 7 th to 9 th Feb 2020. Pp.- 83-94.
6.	R. Sreeharsha, N. Kumar , V.P.Singh	Determination of Steering Actuator Mounting Points of a Load Haul Dump Machine for Optimum Performance	4 th International and 19 th National Conference on Machines and Mechanisms, (iNaCoMM 2019), December 5 th -7 th 2019, IIT Mandi.
7.	R. Sreeharsha, M. Bhola, N. Kumar , A. Vardhan	Energy Saving Analysis Using Pilot Operated Counter Balance Valve	1 st International Conference on Future Learning Aspects of Mechanical Engineering (FLAME - 2018), Amity University ISBN: 978-93-5321-379-4
8.	M. Bhola, R. Sreeharsha, N. Kumar	Electrical Energy Regeneration of Hydraulic-Split Power Transmission System Using Fuel Efficient Controller	IFK 2018, RWTH University, Aachen, Germany, 19-21 March, 2018 pp.-72-81 ISBN: 3-95886-215-2, 978-3-95886-215-9
9.	Chandraker, R., Kumar, N. Gupta, Pankaj	Complex Model Analysis of Damped Rotor Using Finite Element Method	Proceedings of the 3 rd National Conference on Mining Equipment: New Technologies, Challenges & Applications (MENTCA-2018) February 9 th - 10 th , 2018, IIT (ISM) Dhanbad pp. 105-109.
10.	Sriharsha, R., Kumar, N. , Kumar, A.,	Impact of used Hydraulic Fluids on Environment	Proceedings of the 33 rd National Convention of Environmental Engineers on Status of

	Naik, D. B.		Technological Advancement to MEET the Environmental Norms for Indian Mining and Allied Industries. August 24 th -25 th , 2017, Directorate General of Mines Safety, Dhanbad.
11.	Vardhan, A., Pandey, A. K., Dasgupta, K., Kumar, N.	Selection of hydraulic components for body hoist control of dumper	Proceedings of the 2 nd National Conference on Mining Equipment: New Technologies, Challenges & Applications (MENTCA-2015) October 9 th - 10 th , 2015, ISM Dhanbad, India (pp. 123-130).
12.	Pandey, A. K., Vardhan, A., Kumar, N. Dasgupta, K	A Comparative study on Leakage Behaviour of Fixed and Variable Displacement Bent Axis Hydro-motors	Proceedings of the 2 nd National Conference on Mining Equipment: New Technologies, Challenges & Applications (MENTCA-2015) October 9 th - 10 th , 2015, ISM Dhanbad, India (pp. 140-145).
13.	M. K. Barnwal, N. Kumar, A. Kumar, J. Das,.	Effect of Hydraulic Accumulator on the System Parameters of an Open Loop Transmission System	Proceedings of 5 th International & 26 th All India Manufacturing Technology (AIMTDR 2014), December 12 th –14 th , 2014, IIT Guwahati, pp. 304-1-5.
14.	N. Kumar, K. Dasgupta, F. Ahmad.	Analysis of leakage flow characteristics in bent axis motors	Proceedings of the 1 st international and 16 th national conference on machines and mechanisms (iNaCoMM2013), December 18 th -20 th , 2013, IIT Roorkee. pp. 318-323.