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APPENDIX

The tables below show the average dielectric velocity at the primary gap width of the slotted tool for various input variables in relevance to chapter 5 section 5.3.

1. Effect of gap width on the average dielectric velocity (cm/s) at IEG (primary gap)

Tools	Gap width (µm)	Position		
		I	II	III
Slotted tool 1	30	0.04	0.11	0.17
	40	0.18	0.53	0.86
	50	0.28	0.85	1.37
Slotted tool 2	30	0.317	0.753	1.074
	40	0.267	0.696	1.004
	50	0.235	0.648	0.984
Slotted tool 3	30	0.274	0.676	1.012
	40	0.23	0.619	0.944
	50	0.195	0.562	0.874
Slotted tool 4	30	0.381	0.742	0.986
	40	0.338	0.718	0.957
	50	0.307	0.695	0.887

2. Effect of nozzle inlet velocity on the average dielectric velocity (cm/s) at IEG (primary gap)

Tools	Nozzle velocity (cm/s)	Position		
		I	II	III
Slotted tool 1	1	0.28	0.85	1.37
	10	0.28	0.85	1.37
	50	0.25	0.77	1.32
Slotted tool 2	1	0.235	0.649	0.985
	10	0.235	0.648	0.984
	50	0.197	0.567	0.935
Slotted tool 3	1	0.196	0.562	0.875
	10	0.195	0.562	0.874
	50	0.155	0.477	0.821
Slotted tool 4	1	0.308	0.696	0.887
	10	0.307	0.695	0.887
	50	0.273	0.634	0.846

3. Effect of tool diameter on the average dielectric velocity (cm/s) at IEG (primary gap)

Tools	Tool dia (µm)	Position I	Position II	Position III
Slotted tool 1	300	0.126	0.411	0.72
	400	0.195	0.61	1.093
	500	0.284	0.845	1.37
Slotted tool 2	300	0.111	0.324	0.522
	400	0.171	0.482	0.734
	500	0.235	0.648	0.984
Slotted tool 3	300	0.091	0.284	0.489
	400	0.14	0.417	0.562
	500	0.195	0.562	0.874
Slotted tool 4	300	0.152	0.368	0.519
	400	0.248	0.555	0.642
	500	0.307	0.695	0.887

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BOOK CHAPTER

1. **S. A. Mullya** and G. Karthikeyan, Comparative Study of Dielectric and Debris Flow in Micro-Electrical Discharge Milling Process Using Cylindrical and Slotted Tools, Advances in Unconventional Machining and Composites, Proceedings of AIMTDR 2018, pp. 17-26, Springer Nature Singapore Pte Ltd. 2020, ISBN 978-981-32-9470-7.

Biography of Student

Mr. Satish Anand Mullya

Mr. Satish A. Mullya is an Assistant Professor in the Department of Mechanical Engineering at Annasaheb Dange College of Engineering and Technology Ashta, Sangli Maharashtra, India. He has over 9 years of teaching experience. He completed his graduation in Production Engineering in 2007 from K. B. P. College of Engineering and Technology Satara affiliated to Shivaji University Kolhapur and Masters in Computer Integrated Manufacturing (Mechanical) from NIT Warangal, Andhra Pradesh in 2012. He teaches various courses to undergraduate students such as Control Engineering, Strength of Materials, CAD CAM, CIM. His area of interest is CAD, CAM, CFD, Production Engineering, EDM. He is currently pursuing Ph.D. at BITS Pilani K K Birla Goa campus, Goa and his area of research is related to the micro ED milling. He has published over 10 research papers in the peer-reviewed international journal/conferences.

Biography of Ph.D. Guide

Dr. G. Karthikeyan

Dr. G. Karthikeyan had his graduation in Mechanical Engineering from Moogambigai College of Engineering Pudukottai, Tamil Nadu, Masters in Manufacturing Technology from Regional Engineering College, Trichy, and Ph.D. from Indian Institute of Technology, Kanpur in 2012. He has worked as a Maintenance Engineer at M M Forgings, Viralimalai. Tamilnadu. Then he joined teaching profession as a Lecturer at SASTRA University, Thanjavur, Tamilnadu. Presently, he is working as an Assistant Professor in the Department of Mechanical Engineering, BITS Pilani K K Birla Goa Campus, India. He has published over 20 research papers and PI for DST research project.

Biography of Ph.D. Co-Guide

Dr. Ranjit S. Patil

Dr. Ranjit S. Patil had his graduation in Mechanical Engineering from Dr. BAMU, Aurangabad (MS), ME in Heat & Power Engineering (IC Engines group) at Government College of Engineering Karad, Ph.D. from Indian Institute of Technology Guwahati, Post-Doctoral Fellow (PDF) from ENEA (Nuclear) Research Centre of Government of Italy. He has published over 30 research papers from his research work in reputed International conferences, Book chapters, and Journals. He is presently working as a Head Department of Mechanical Engineering at BITS Pilani K K Birla Goa campus, Goa. He is the recipient of INSA Visiting Scientist Fellowship Award for the year 2014-15 by Government of India. He is also recipient of OPERA (Outstanding Potential for Excellence in Research and Academics) Award by BITS Pilani for his excellence in Research and Teaching. His areas of research interests are Renewable Energy Resources, IC Engines, Fluidization Engineering and Circulating Fluidized Bed (CFB) Boiler, Hydrodynamic and Heat Transfer Characteristics associated with Nano-fluids used in Micro-tubes, Multi-Phase Flow.