

Dr. E. PAVITHRA Ph.D. (Anna University, Chennai)
CENTER FOR FEA AND CFD SIMULATIONS
 Associate Professor/Department



ORCID ID: 0000-0002-8345-191X

SCOPUS ID: 54394045200

Email: drepavithra@veltech.edu.in

Mobile: +91 99620 17333

Research Areas

Material characterization of super alloys, high temperature fatigue analysis, cryogenics of milling cutters, behavioral properties of steel hoses on corrosion and bellows expansion joint.

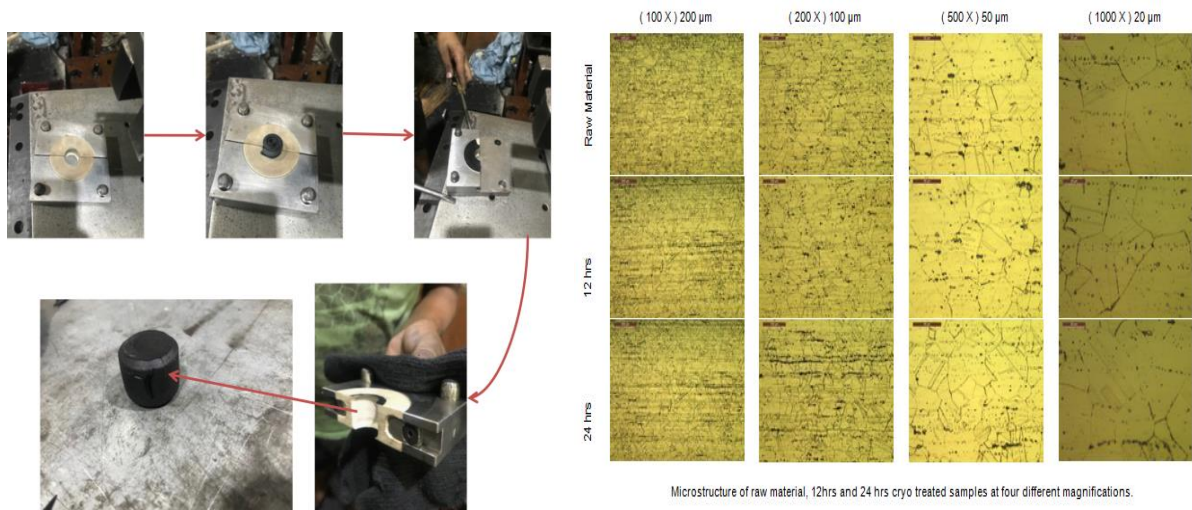
Projects & Publications Summary

Project		Publication Count		Citation Count			Impact Factor	
Completed	00	SCI	06	Citations	Google	SCOPUS	21.069	
Ongoing	03	SCOPUS	08		43	57		
Submitted	04	Books	00		h-index	04		05
		Books chapters	00		i10index	03		03

National/International Collaboration

- Metallic Bellows (I) Pvt Ltd (MBIPL), Chennai – Bellows and Slide and Swivel Joint
- Madras Hydraulic hose Pvt Ltd, Chennai – Metal Hoses
- Aeronautical Development Agency, Bangalore - Slide and Swivel Joint, Fuel System Components and Pressure Measuring Instruments.

Research snippets



Research facilities

- Software(s) Modelling software (CATIA) FEM solver – Ansys FEM CFD Solver – Ansys CFD
- Hardware(s)
 High End Server – 2 nos. for simulation/computation
 Workstation – 15 nos. for modelling and meshing

Outline of Research Works

- Design and development of slide and swivel joint (SSJ), fuel system components (FSC), and pressure measuring instruments (PMI). (Sponsored by *DRDO-TDF, GoI - Ongoing*)
- Characterization of Hastelloy and ULTEM material based injection tooling for automotive components (Sponsored by *VEL TECH SEED FUND -Completed*)
- Investigation on the metal hoses and characterisation study on corrosion resistance.
- Study of milling cutters using cryogenic medium

Details of Funded Projects

S.No	Project Title	Funding agency	Amount (Rs.)	Duration	Collaboration
1.	Design and Development of Slide and Swivel Joint	DRDO - TDF	16,00,000/-	2021-23 (Ongoing)	MBIPL and ADA
2.	Design and Development of Fuel System Components	DRDO - TDF	9,00,000/-	2021-23 (Ongoing)	MBIPL and ADA
3.	Design and Development of Pressure Measuring Instruments	DRDO - TDF	7,00,000/-	2021-23 (Ongoing)	MBIPL and ADA
4.	Characterization of Hastelloy and ULTEM material based injection tooling for automotive components	VEL TECH SEED FUND	1,00,000/-	2018-19 (Completed)	-

Recent Best 5 SCI Publications

- M. Arun Prasad, **E. Pavithra**, G. Dharmalingam & D. Siva Prakasham, Characterisation and structural transformation of yttria dispersed austenitic steel through VHP, 2021, Materials Science and Technology, 37:13, 1139-1151, (Impact Factor 1.96).
- M Arun Prasad, **E Pavithra**, Vacuum Hot Pressed Novel 21-4N Valve Steel Strengthened by Y-Ti-O Through High-Energy Ball Milling, 2020, Journal of Materials Engineering and Performance, Springer (Impact factor – 1.819).
- C Rathinasuriyan, **E Pavithra**, R Sankar, VS Kumar, Current Status and Development of Submerged Friction Stir Welding: A Review, 2020 International Journal of Precision Engineering and Manufacturing-Green Technology, Springer (Impact factor – 5.671).
- Yuvaraj, N., **Pavithra, E.**, Shamli, Investigation of surface morphology and topography features on abrasive water jet milled surface pattern of SS 304, 2019, Journal of Testing and Evaluation, ASTM,(Impact factor – 1.264).
- **Pavithra, E.**, Study of mechanical and metallurgical properties of Hastelloy X at cryogenic condition, 2019, Journal of Materials Research and Technology, Elsevier (Impact Factor 5.039).

Books

- *NIL*

Patents

- Guided support wheel for punctured two wheelers, 2020 – Filed

- Security surveillance system for the safety of the vulnerable society, 2019 – Filed

Fellowships/Awards/Recognitions

- NIL

PhD Thesis Guidance

Scholar Name	Thesis Title	University	Status	Year
1. Arun Prasad M	Development and investigation of oxide dispersion strengthened 21-4N ASS for high temperature applications	Vel Tech, Avadi	Completed	2020
2. Devi C	Experimental Investigation on Cryo treated milling cutter	MGR University	Ongoing	2019
3. Karthick M	Experimental and Numerical Investigation on turing of aerospace material.	Vel Tech, Avadi	Ongoing	2021

Editorial/Review Activities

- Reviewer - Part C: Journal of Mechanical Engineering Science