Shashank Shukla (Advanced manufacturing technology)

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PROFILE:

- Highly self-motivated Ph.D. candidate with demonstrated research expertise growing improvement in machinability of titanium alloys.
- Rich experience in Experimental techniques: High speed micro machining, electrical discharge machining (EDM),
- Admirable experience in material characterization techniques: 3D Optical profilometer, Optical microscope, FESEM, XRD
- Experience in modeling and computer simulation, using Autocad, ProE, ABAQUS
- Computer skills: Microsoft office, LaTeX.

EDUCATION:

Indian institute of technology (ISM) Dhanbad, India
PhD, Manufacturing Engineering, June 2022 (Expected)

SGSITS, Indore, India (CGPA: 8.2/10)
M.E., Tribology & maintenance engineering, May 2017

RGPV, Bhopal, India (CGPA: 7.09/10)

RESEARCH INTEREST:

- Improvement in machinability of super alloys (high strength alloys) by applying modification in microstructure, advanced machining process
- Fabrication of miniature product by using: high speed micro milling, micro EDM process.
- Reliability study and failure analysis of cutting tool during machining of high strength alloys.

ENGINEERING RESEARCH EXPERIENCE:

- Modification in microstructure of Ti-6Al-4V alloy
- High speed milling of Ti-6Al-4V alloy
- Development of novel maglev EDM

TEACHING EXPERIENCE:

IIT (ISM) Dhanbad, India, Department of mechanical engineering
Teaching assistant
Computer added manufacturing
Micro manufacturing
Advances in manufacturing
Workshop

PUBLICATIONS:
Patent

- A machine structure to reduce vibration of micro-milling machine. (Published) Application no.201931049978, Patent office journal no. 30/2020 Dated 24/07/2020
- Magnet driven servo mechanism for macro/micro electrical discharge machining (EDM). (Published) Application no. 202031054445 A, Patent office journal no. 06/2021 Dated 05/02/2021

Book Chapter

- Shashank Shukla, Vivek Bajpai, "Cryogenic Machining", In book: Innovations in Manufacturing for Sustainability, pp.29-52, Springer International Publishing, 2018 (Published)

Paper

- Shashank Shukla, Vivek Bajpai, "Effect of cryogenic quenching on microstructure and microhardness of Ti-6Al-4V alloy", Materials Letters 267 (2020) 127532, 2020 (Published) (Q2) Impact factor: 3.423
- Arnab Das, Shashank Shukla, Mohan Kumar, Chitransh Singh, M.L. Chandravanshi, Vivek Bajpai, "Development of vibration free machine structure for high-speed micro-milling center", International Journal of Advanced Manufacturing Technology (2021) (Published) (Q2) Impact factor: 3.226
- Mangal Singh, Shashank Shukla, Vivek Bajpai "Feasibility analysis of Novel Maglev EDM by comparing with conventional micro EDM" Scientific Reports (Accepted) (2022) (Q1) Impact factor : 4.379
- Shashank Shukla, Mangal singh, Vivek Bajpai "Characterization and evaluation of novel maglev EDM with existing EDM" International Journal of Advanced Manufacturing Technology (Under Revision) (2022) (Q2) Impact factor: 3.226

International Conference

- Deepak Choudhary, Shashank Shukla, "Comparative study of conventional and hybrid turning processes using modeling and experimental techniques", International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 2019), IIT Indore (Published)