

Recently Completed Research Projects
at
Production and Industrial Engineering Department
BIT Sindri

Sl No.	Project Details
1.	Development of 3D Printed User-Specific Assistive Devices for Persons with Disabilities in India Name of the Faculty: Dr. Sumanta Mukherjee (PI) Amount: INR 12.63 lacs Funding Agency: NPIU-MHRD, Govt. of India Collaborating Institute: IIT Kharagpur Status: Completed
2.	Design and Development of a Proof-of-Concept Model of a Doubly Curved Membrane Based Gossamer Space Structures Name of the Faculty: Dr. Mukesh Chandra (PI) Amount: INR 9.75 lacs Funding Agency: NPIU-MHRD, Govt. of India Collaborating Institute: IIT-ISM Dhanbad Status: Completed
3.	Investigation to Fatigue and Vibration Characteristics of Rolling Element Bearing Name of the Faculty: Dr. Surya Narayan Panda (PI) Amount: INR 8.30 lacs Funding Agency: NPIU-MHRD, Govt. of India Collaborating Institute: IIT-ISM Dhanbad Status: Completed
4	Optimization Technique for Smooth Supply Chains of Medical Equipment and Essential Medicine during COVID-19 Pandemic Name of the Faculty: Dr. Kashif Hasan Kazmi (PI) Amount: INR 2.90 lacs Funding Agency: BIT Sindri (Under TEQIP III) Status: Completed

Ongoing Research Projects

at

Production and Industrial Engineering Department

BIT Sindri

1	Vibration-assisted Laser Welding Process of Super Alloy and its Quality Analysis Name of the Faculty: Dr. Manowar Hussain (PI) Amount: INR 9.86 lacs Funding Agency: DRDO, Hyderabad Collaborating Institute: IIT-ISM Dhanbad Status: Ongoing
2	Automated Design and 3D Printing-based Fabrication of Cost-effective Patient-specific Cranioplasty Implants Name of the Faculty: Dr. Sumanta Mukherjee (PI) Amount: INR 33.61 lacs Funding Agency: AI4ICPS- IIT Kharagpur Collaborating Institute: NIT Durgapur, PGIMER Chandigarh Status: Ongoing
3	Portable Additive Remanufacturing System for Ultra-fast Onsite Repair of Worn-out and Corroded Components of Mining Equipment Name of the Faculty: Dr. Sumanta Mukherjee (PI) Amount: INR 25.71 lacs Funding Agency: TEXMIN, IIT-ISM Dhanbad Collaborating Institute: IIT-ISM Dhanbad Status: Ongoing
4	Improving Robotic Additive Manufacturing Process Stability and Deposition Quality through Advanced Path Planning Techniques Name of the Faculty: Dr. Kashif Hasan Kazmi (PI) Amount: INR 7.00 lacs Funding Agency: JCSTI (DHTE), Govt. of Jharkhand Status: Ongoing
5	In-situ Monitoring and Quality Control using Acoustics Emission Sensing in Wire-Arc Additive Manufacturing: Implementation of State-of-the-Art Machine Learning Techniques Name of the Faculty: Dr. Mukesh Chandra (PI) Amount: INR 6.80 lacs Funding Agency: JCSTI (DHTE), Govt. of Jharkhand Status: Ongoing
6	Enhancing deposition quality in robotic wire arc additive manufacturing components through Machine Learning Techniques Name of the Faculty: Prof. Prakash Kumar (PI) Amount: INR 8.20 lacs Funding Agency: JCSTI (DHTE), Govt. of Jharkhand Status: Ongoing
7	Wire arc additive manufacturing of multi-material components using submerged arc process Name of the Faculty: Dr. Sumanta Mukherjee (Co-PI)

	Amount: INR 6.80 lacs Funding Agency: JCSTI (DHTE), Govt. of Jharkhand Collaborating Institute: NIT Jamshedpur Status: Ongoing
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