Report of expert lecture on Modeling and Optimization of Laser Bending

Event Name: Expert Lecture

Date of the Event: 30th September, 2023

Duration of the Event: 2.5 hours

Mode: Online

Organizing Committee:

Chief Patrons: Dr. Sandip N. Jha **(**Hon'ble Chairman)

Patrons: Dr. Samir Kumar Varma (Hon'ble Vice-Chancellor)

Dr. Brajendra Nath Tripathi (Dean Academics)

Convenors: Dr. Kunal Kishor Chandan (HoD, Department of Mechanical Engineering)

Dr. Gulshad Nawaz Ahmad (Asst. Professor)

Dr. Rajesh Kumar (Asst. Professor)

Objective of the Programme: The objective of guest lecture on modeling and optimization of laser bending is likely to educate the participants about the theoretical framework, computational techniques, and practical application related to the process. This could include discussing the mathematical models used to simulate laser bending, optimization algorithms employed to improve efficiency and precision, as well as real world examples showcasing the application of these methods in various industries. The lecture is scheduled on 30th September 2023, and a renowned academician from NIT Calicut, Dr. Vikash Kumar will deliver the lecture.

Bio-Sketch of Dr. Vikash Kumar: Dr. Vikash Kumar is working as an Assistant professor in the Department of Mechanical Engineering, NIT Calicut. His research area includes Advanced Manufacturing Processes and Laser-based Manufacturing Processes. Dr. Vikash has almost one year of experience as a consultant in Beta Tank Robotics Private Limited, Bangalore. He worked for 1.5 years as a faculty in Department of Mechanical Engineering, IIEST Shibpur. Dr. Vikash has completed his Ph.D. from the Department of Mechanical Engineering, IIT Guwahati. He received his M.Tech. degree with distinction from the Department of Mechanical Engineering with specialization in Manufacturing Engineering at IIT (ISM) Dhanbad. During his Ph.D. and M.Tech., he has published papers in reputed SCI journals, such as the Measurement, Optics & Laser Technology, and Engineering Optimization. He has received Best paper Award in "AIMTDR 2021" Conference.

Programme Details: In this expert lecture Dr. Vikas Kumar has shared his insight knowledge on the topic "Modeling and Optimization of Laser Bending" to our faculty and students. He has shared both theoretical and practical knowledge on the topic that would surely broaden the knowledge base of the audience. The lecture covers a broad spectrum of crucial areas, including: Modeling techniques, Optimization strategies, and Case studies. More than 110 participants from the different departments of Sandip University, Madhubani have participated in the programme. The participants were exposed to underlying theories behind laser bending for

next-generation manufacturing. Laser bending has emerged as a transformative technology in contemporary manufacturing processes, with applications spanning across various industries such as aerospace, automotive, electronics, and more. Its precision, adaptability, and cost-effectiveness have made it a game-changer.

Programme Schedule

Sl. No	Topic	Time
30/09/2023, Saturday		
1	Introduction of expert	11:00 AM
2	Session by **Dr. Vikash Kumar** Assistant Professor, Department of Mechanical Engineering, NIT Calicut **Research Interests: Laser forming, Laser welding, FEM Simulation**	11:10 AM
3	Valedictory function: (a) Overview of the session (b) Closing remarks	1:20 PM onwards
4	Notice about feedback form	1:40 PM onwards
5	Feedback from audience	4:00 PM onwards

Glimpses of Lecture Session: