Extremely High-Speed Laser Processes For Sustainable And Flexible Manufacturing

Kick-off of the HORIZON EUROPE project LASERWAY

Press release

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Czech Technical University in Prague is pleased to announce the kick-off of the European collaborative project LASERWAY.

The project gathers a consortium of 16 partners and is coordinated by IDEKO in Spain:

Participant No	Participant organisation name	Country
1 (Coordinator)	IDEKO S COOP	
2	FAGOR ARRASATE S COOP	
3	PRECITEC GMBH & CO KG	
4	FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV	
5	FUNDACION TEKNIKER	
6	COMPO TECH PLUS SPOL SRO	
7	CESKE VYSOKE UCENI TECHNICKE V PRAZE	
8	ModuleWorks GmbH	
9	VIDEO SYSTEMS SRL	
10	SISTEMA AZUD SA	
11	ECOMATTERS B.V.	
12	FAGOR AUTOMATION S COOP	
13	ACUNITY GMBH	
14	TEMATYS	
15	AERNNOVA ENGINEERING DIVISION SAU	
16	CEDRAT TECHNOLOGIES SA	

The LaserWay project aims to revolutionize the manufacturing industry by replacing conventional, inefficient, and environmentally harmful methods with highly flexible production lines based on high-speed laser technology. Laser blanking, laser micro-drilling, and extreme high-speed laser material deposition (EHLA) are the three laser manufacturing technologies selected for their potential to create more sustainable manufacturing processes and products.

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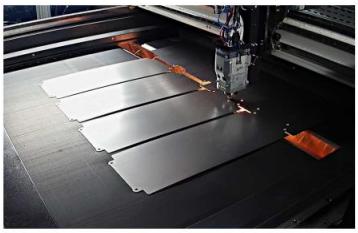
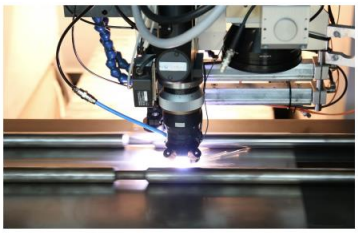


Laser Blanking



Micro Drilling

EHLA

The project focuses on developing WayFASTER machines to improve the performance of the laser technologies through lightweight designs, vibration control techniques, and program optimizations tailored for high-speed laser applications. WayBETTER Photonics aims to ensure precise delivery of the laser beam at extreme speeds, targeting three laser technologies with unique demands. The WaySTRONGER integration concept aims to enhance the sustainability, resilience, and flexibility of current manufacturing processes by integrating new technologies mechanically and digitally.

The project's success will provide a competitive edge for industries, such as automotive and aerospace, by reducing processing times, improving material usage, and enhancing end-product quality. The advancements made through the LaserWay project will drive innovation in high-speed laser processing, solidifying Europe's position as a global leader in advanced manufacturing technologies.

The LaserWay project is an european project funded under Horizon Europe Framework Programme (HORIZON)

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1 About Czech Technical University in Prague

The project will be implemented by Faculty of Mechanical Engineering at CTU in Prague, Research Center of Manufacturing Technology (RCMT). The main goal of the workplace is to create a research professional base for the Czech engineering production industry, to educate a new generation of young researchers and, last but not least, to be a well-equipped research, education and training workplace. Equally important is the research into new solutions and new promising technologies for the near future. In the field of research and development of production machines and technologies, the main task is to educate experts who will cooperate with machine manufacturers in solving a number of technical issues and will provide industrial practice with the latest professional knowledge. Through theoretically and experimentally verified knowledge, these specialists can contribute to increasing the technical level of production machines and thus increase their competitiveness in demanding world markets.

Main topics:

Optimized composite structures for machine tools

Toolpath optimization between CAM and CNC to reduce cycle time

2 More information

LASERWAY's website: https://LASERWAY.eu

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