



European Project Semester

PROJECT OUTLINE

Project dates: March – June 2027

Title: Integrating a rotary module into a Laser welding machine for laser treatment use

Project activity areas: research, assembly, design, testing

Keywords: research, design, assembly, testing

Tutor's name and coordinates

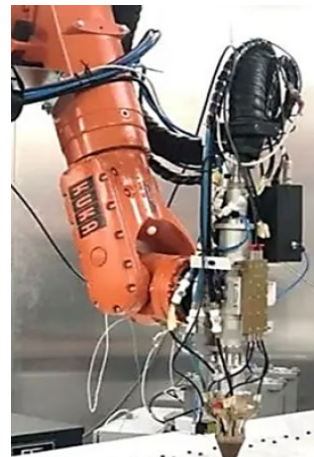
Client – End-user: C. Keller, LGP, UTTOP
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Project origin

ENIT

Project technical background:

The idea of this project is to acquire existing or create new rotary module to integrate it into a laser welding machine existing in UTTOP. This rotary module will be then used to apply laser treatment to 3D printed metal parts that are of cylindrical shape. If successful, it is expected that the laser treatment will enhance the durability of the parts. Students are expected to do all the necessary testing until a satisfactory laser treatment is obtained, and mechanical testing in the lab will also be conducted. The supervisors have the knowledge to guide the students through the different phases of the project.



Studied topics:

- Definition of requirements and technical specifications
- Analysis of the existing technologies and adopting a design
- Search and purchase of necessary components
- Mounting and testing of the rotary module in the laser machine
- Analysing the obtained lased surface
- Mechanical testing of at least 2 samples (with and without laser treatment)