Two axis trochoidal platform design

- Definition of trochoidal tool path
- Control design
- Software design
- Validation of the desired path(with different parameters) with image processing

Link mechanism design for press applications

Steps in the project:

1- Kinematic analysis of 6 link drive mechanism
2- Kinematic synthesis of the mechanism for the given force output
3- Inverse kinematics for the given speed profile
4- Manufacturing of the mechanism for given application

Enviromental test chamber design (İklimlendirme kabini tasarımı)

- Sensörlerin belirlenmesi
- Kabin control algoritmasının tasarlanması
- Mekanik tasarım

WAAM

Wire Arc Additive Manufacturing (WAAM) is a production process used to 3D print or repair metal parts. It belongs to the Direct Energy Deposition (DED) family of Additive Manufacturing processes. WAAM is executed by depositing layers of metal on top of each other, until a desired 3d shape is created. It is a combination of two production processes: Gas Metal Arc Welding (GMAW) and additive manufacturing. GMAW is a welding process used for joining metal parts using an electric arc, and additive manufacturing is the industrial term for 3D printing. The production of parts using WAAM is carried out by a welding robot integrated with a power source. A welding torch attached to the robot is used to melt the wire feedstock to build 3D parts.

Tasks

- **Design of robotic arm,**
- **Attachment of gas metal arc welding torch to robotic arm**
- **Control design of the unit**
- **Material characterization**