TECNALIA OpenHouse

TECNALIA IN A NUTSHELL

Founded: 2011
Location: Bilbao, Spain
Technology: Laser
Industry: Automotive, Aeronautics
Website:
https://www.tecnalia.com/en/scopes-of-action/smart-manufacturing

ABOUT TECNALIA

TECNALIA is the largest center of applied research and technological development in Spain, a benchmark in Europe and a member of the Basque Research and Technology Alliance. Collaborates with companies and institutions to improve their competitiveness, people's quality of life and achieve sustainable growth. The main scopes of action are: smart manufacturing, digital transformation, energy transition, sustainable mobility, personalised health, urban ecosystem and circular economy.
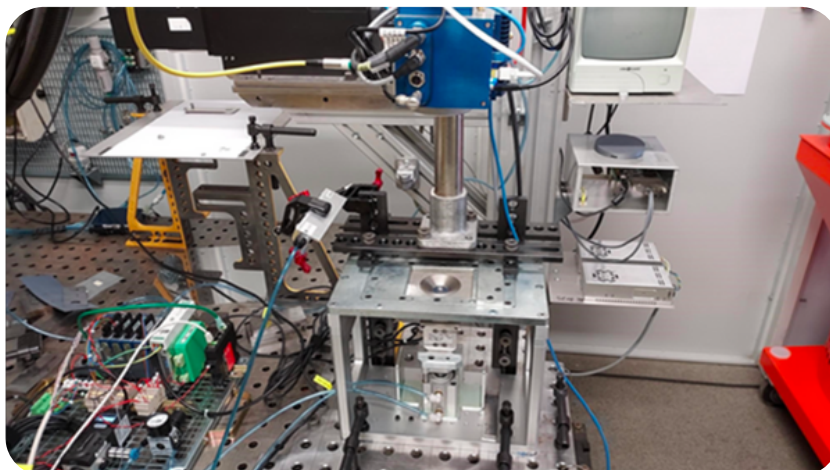
TECNALIA PILOT LINE

In TCN OpenHouse the laser head, laser source, infrared camera for process control and a specific clamping device are integrated. The data generated by these devices is injected into an implementation based on Intrasoft platform and thus into a generic database. The implementation uses AAS (Asset Administration Shell) technology for digitally representing the objects of the machine. The database serves as input into an analytics module that controls whether the laser process is right or wrong and has or not to be stopped and the decision is sent to the laser control module.

TCN OpenHouse is composed by laser technology for joining composite-metal components, flexible clamping devices, process monitoring and robotic handling. The implementation based on Intrasoft platform that uses AAS modelling for digitally representing the sensors of the machine is novel and currently being in a research phase on European projects.

SERVICES OFFERED

1 **Viability study**

Viability study and setup of the process of join fiber reinforced thermolpastic composites to metals

2 **Process Monitoring**

Pre-series and/or process integration at end user facilities - Very limited pre-series production only for quality validation. TECNALIA will transfer the technology to the client for own production.

3 **Training**

Training of process viability, setup and integration

4 **Analytics**

Analytics based on digital twin AAS model.

VALUE PER SERVICE

- Viability is free of charge except if complex fixing systems will be needed. Materials and fixing tooling will be provided by the client.
- Pre-series and/or process integration at end user facilities - After viability confirmation, TECNALIA and the client will agree the scope and the price for technology transfer.
- Analytics based on digital twin AAS model will need the establishment of a specific scope and price with the client.