PRESS RELEASE

Precision technology for new aeronautical production systems

- *Tekniker participates in a project led by Aernnova to improve the accuracy of their robots in several assembly operations.*
- *Based on mathematical models, the centre will develop a customised solution to incorporate calibration to the production process.*
- *This technology will not only help to increase efficiency but will also serve to optimise resources and reduce costs.*

[Eibar, 30 May 2023] – Although the boom experienced by automation in the case of manufacturing processes in the aeronautical sector has served to enhance competitiveness and increase production capabilities, solutions are still needed to improve the performance of new production systems.

It is in this context that the **Tekniker** technology centre is currently involved in a project whose ultimate goal is to design a solution for **Aernnova** that will improve the accuracy of the robots the company is using to perform several aircraft assembly operations at the Berantevilla plant in Araba (Basque Country).

Tekniker, a research group specialised in precision engineering and metrology, will provide all the knowledge and expertise required by this aeronautical company to carry out their initiative.

More specifically, Unai Mutilba, the researcher in charge of the project, explains that “it is a customised solution that characterises Aernnova robots and the extent to which they can be applied to drilling or assembly processes”. Consequently, the team will “provide mathematical models showing how the robots operate”.

The Tekniker researcher also explains that “this implementation will not only improve the accuracy of these production resources but also increase productivity and reduce production costs.”

The centre will develop a mathematical model that will show and predict how robots operate and explain what has to be done with regard to geometric composition and rigidity in order to improve system accuracy in several working positions. At a later stage, the team will incorporate this model to robot control systems to improve their accuracy.

As repeatability, and not accuracy, is the main strength of a robot, metrology techniques must be applied to these resources.

The Tekniker researcher explains that research work focused on these technologies will allow aeronautical firms such as Aernnova “to offer products that are more profitable and sustainable; assembly line efficiency will be increased, delivery times will be shortened, quality will be better and consumption of resources will be optimised to achieve significant savings with regard to manufacturing costs so that ever-growing levels of demand in the aeronautical sector can be met.”

In this initiative led by Aernnova, scheduled to close in 2025, four SMEs from the aeronautical sector will be collaborating with Tekniker whose role will consist in acting as a supporting technological partner in its capacity as a member of the Basque Network of Science, Technology & Innovation. The project is also supported by the Spanish Ministry of Science and Innovation under the PTA2022 Technological Aeronautical Programme sponsored by CDTI.

More about Aernnova

With a track record of more than 30 years in the aeronautical sector, Aernnova is a leading company in terms of designing and manufacturing aerostructures and aircraft components such as wings, stabilisers and fuselages for outstanding OEMs operating in the aerospace business. The company designs and/or manufactures aerostructures for more than 30 models of aircraft and has a large customer base.

More about Tekniker

Tekniker is a technology centre specialised in advanced manufacturing, surface and material engineering, and ICTs for production. Its mission consists in furthering growth and wellbeing

for society at large through R&D&I actions and enhancing the competitiveness of the industrial fabric in a sustainable manner. Tekniker is a member of the Basque Research and Technology Alliance (BRTA).

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