PRESS RELEASE

Precision engineering applied to machine tools

- *The Tekniker technology centre will present its inspection and measurement solutions at BIEMH whose aim is to improve the capabilities of industrial equipment.*
- *Visitors to the organisation's stand will see an industrial robot demonstrator in operation with absolute positioning accuracy under 0.1 mm (the same thickness of a sheet of paper) covering the entire work volume.*

[Eibar, June 1, 2022] - In a context in which different industrial sectors are undergoing transformations affecting environmental, energy and digital issues, the machine tool sector is fully aware of these changes. advanced manufacturing must deliver efficient and sustainable production with regard to energy and environmental requirements and also incorporate digital elements to enhance operations and any resulting additional services.

The ultimate goal of the Advanced Manufacturing strategy deployed by the **Tekniker** Technology Centre, a member of the Basque Research and Technology Alliance (BRTA), is to make further progress with regard to optimising and developing new processes aimed at enhancing manufacturability, accuracy and, ultimately, competitiveness. Consequently, the technology centre's high degree of technological specialisation is fundamental in terms of, for instance knowledge concerning materials and cutting-edge technologies such as laser. Equally important is the development of high added-value mechatronic products, metrology and the deployment and optimisation of industrial processes.

It will be during the upcoming edition of the International Machine Tool Biennial when the technology centre will showcase its range of solutions designed to improve the levels of absolute positioning accuracy for robots to allow them to not only perform repetitive movements accurately, but also achieve levels of precision when moving to cover the entire work volume.

This knowledge that has been incorporated to Tekinker's technological offer of inspection and measuring options can also be used to improve machine tool accuracy. There are parameters such as the size of the workpiece and the machine tool, variations in environmental conditions or the measuring technology itself that should be given particular attention.

Therefore, rapid and automatic verification procedures are being developed together with simulations of measuring procedures or hardware and software designs to perform measurements on machine tools.

It is in this regard, that Tekniker is making available to companies and manufacturers in-house knowledge on how to digitise different processes and machines in the area of predictive maintenance. By fitting sensors and developing systems connected to monitoring platforms and anomaly detection algorithms it is possible to monitor the condition of equipment at all times.

The demonstrator at BIEMH

As regards the international trade fair, Tekniker will operate an industrial robot featuring absolute positioning accuracy under than 0.1 mm (the same thickness as a sheet of paper) to showcase its inspection and measurement solutions for the entire work volume.

The solution has been designed to meet the ever-increasing needs of machine tool manufacturers with regard to incorporating robots in production processes to perform ancillary and complementary operations such as workpiece loading and unloading or finishing.

The technology centre will present these capabilities aimed at improving the degree of accuracy of production and handling equipment from its stand at the International Machine Tool Biennial situated in Hall1, aisle C14.

This project has an impact on SDG 9 – Industry, innovation and infrastructures and contributes towards the economic pillar of sustainable development and society as a whole.

Concerning Tekniker

Tekniker is a technology centre specialised in Advanced Manufacturing, Surface Engineering, Product Engineering and ICTs for production. Its mission is to provide growth and wellbeing for society at large via R&D&I and further the competitiveness of the industrial fabric in a sustainable manner. Tekniker is a member of the Basque Research and Technology Alliance (BRTA).

Further information:

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