MACH4D

2022

A project by

eit Manufacturing

Co-funded by the European Union

Sensor integrated high speed machining for Zero-Defects

Sustainable Production | Digitalisation | Circular Economy

Project consortium

voestalpine ONE STEP AHEAD. | TU WIEN TECHNISCHE UNIVERSITÄT WIEN | IFT Institut für Fertigungstechnik und Photonische Technologien | WALTER | ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΑΤΡΩΝ UNIVERSITY OF PATRAS | LMS Laboratory for Manufacturing Systems & Automation | MyTOOL IT

Summary

The aim of the activity was to bring to market a new sensory milling head, with the scope of upgrading large scale machining to a High-Speed Zero-Defect process.
The milling head is based on the Sensory Tool Holder, which has been developed by TU Wien together with MyTool IT and Schunk. This development goes beyond the state of the art, integrating vibration and temperature monitoring modules with a specific interface between milling head and tool holder for energy and information transfer in a single tool system that also provides adaptive control of milling process parameters for large scale machining. The milling head is commercialized by Walter tools and MyTool IT in accordance with a user and sales agreement. Voestalpine HPM is acting as an end user for this product, having a large experience in large scale machining. Other markets such as aerospace, energy, etc. contribute to scale up the solution after the project.

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