Goddeeris develops tool holder for vibration-free machining

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Goddeeris, a Roeselare based industrial supplier, specialises in the machining of complex castings. During machining, it is essential to prevent vibrations. These vibrations can be caused by a combination of tool geometry, machine, clamping and forces at specific frequencies. This ultimately leads to more downtime, accelerated tool wear and an unacceptable product finish. Vibrations are also one of the biggest challenges for companies performing heavy machining operations.

Optimisation of the milling process

Goddeeris reached out to Sirris to find a vibration-free way to mill large castings. As part of a joint VLAIO (Flemish Agency for Innovations and Entrepreneurship) SME development project, Sirris and Goddeeris found a solution to the vibration-free milling of large castings. A dampened tool holder was developed that can be applied flexibly. The tool can be adjusted and adapted according to the machining required.

Tests, sensor measurements and simulations were combined to research the vibration behaviour, for which Sirris used the CutPro vibration simulation software. The number and size of the peaks were reduced (by a factor of 2 to 3) to lengthen the life cycle of the cutting tools and to improve surface quality. This also reduced tool breakages and machine downtime.

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