VIEW

WHAT'S NEW AT ANDERSON GROUP

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TOPIC "FLATNESS COMPENSATION"

Detecting and compensating uneven surfaces during operation.

The adaptive height compensation **iHOC** corrects the position of the Z-axis, as well as other optionally available units in real time during operation – thus any manual compensation might no longer be required.

The flatness is a criterion for the qualitative description of surfaces

Problem: During machining/clamping workpieces, tolerance limits usually have to be taken into account. As tighter the tolerance limits given in terms of flatness, the more complex it is to achieve. Whenever machining is to be performed on a workpiece surface relative to a real surface (e.g. the workpiece clamping system or the workpiece surface), this often leads to deviations in the resulting dimensional stability of the workpiece.

Cause: Various factors will take effect to the evenness of systems and materials. Here are just mentioned a few like type and quality of materials and their pairings, physical dimensions (dimensions and stiffness) of workpieces and machine elements, but also the environment before and during machining (worker, climatic conditions, machining process, etc.).

Effect: The degree of unevenness of a surface (workpiece as well as clamping system) might vary a lot according to the influencing parameters, thus the

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result in relation to the surface which has to be considered might be more or less static, dynamic, reversible as well as irreversible. Here mechanical as well as climatic influences have a more or less strong effect to the result – the worker has to consider the result of numerous complex factors.

FEATURE iHOC SYSTEM

✓ **Compensation in unevenness of the machining table, the workpiece support or the workpiece surface.**

✓ **The adaptive height compensation (iHOC) corrects the position of the Z-axis, as well as other optionally available units, in real time.**

✓ **The previously determined unevenness in the reference surface is compensated during operation.**

✓ **A systemic lapping, or milling or other manual compensation might no longer be required.**

Solution: By the use of the unique iHOC system, Anderson Europe GmbH has developed an adaptive system that allows the operator to detect any unevenness on workpiece surfaces as well as clamping systems in order to compensate them automatically in real time during machining. The possibilities of the iHOC system go far beyond i.e. to common chuck error compensation, the worker is supported by an easy-to-use application. Whether a surface of a workpiece clamping system (such as a vacuum table)
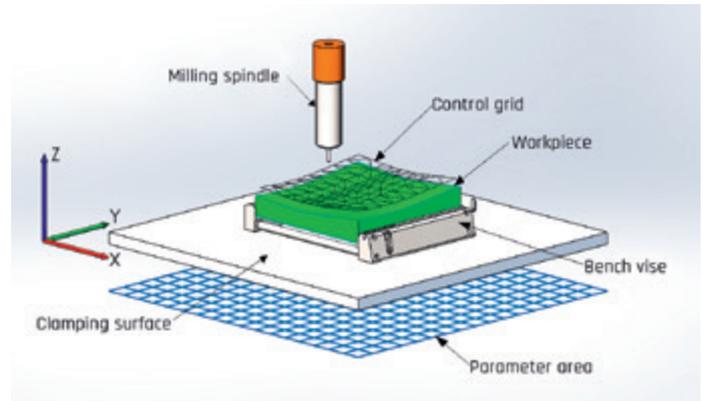

Depth-related correction method with automatic flatness correction, optionally applicable to workpieces or workpiece clamping systems

or an already clamped workpiece (such as plate material) is to be detected and compensated, this is under control of the operator, just by the use of a few simple settings.

Result: An unevenness due to jaw inaccuracies and/or material that is not dimensionally stable can be detected and compensated by the iHOC system of the Anderson Europe GmbH. The worker does not have to apply complicate setup routines on unstable plate material. Also the system supports to eliminate an often common milling of clamping systems such as T-slot table or vacuum plate, using the iHOC system, the surface can be easily and quickly detected – unacceptable unevenness can be compensated same way.

Insight: Whenever depth-related processing is required with respect to a material surface (such as sheet material), the iHOC system developed by the Anderson Europe GmbH offers a simple and secure solution. The worker will be relieved, the result of the processing is qualitatively better and the way of production in total is featured more efficiently.
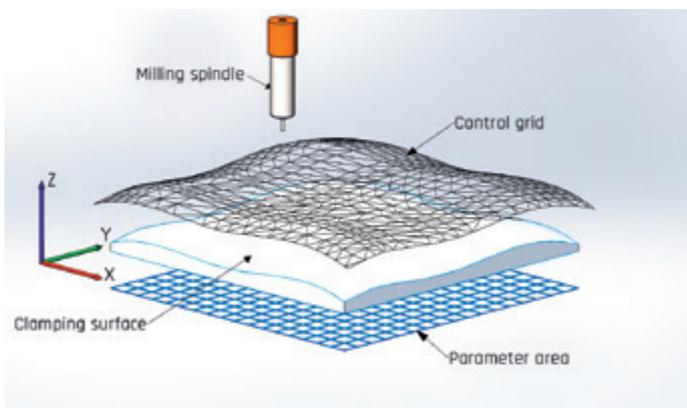
Flatness compensation featured by the adaptive iHOC system, unevenness in the workpiece clamping is detected and compensated during runtime