Title (en)

ARTIFICIAL INTELLIGENCE IN DISCRETE MANUFACTURING

Title (de)

KÜNSTLICHE INTELLIGENZ IN DER DISKRETEN FERTIGUNG

Title (fr)

INTELLIGENCE ARTIFICIELLE DANS LA FABRICATION DISCRÈTE

Publication

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Application

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Priority

EP 2019062104 W 20190511

Abstract (en)

[origin: WO2020228932A1] The quality of a workpiece (6) can only be measured once it has been machined. If the workpiece (6) is to be rejected due to deviations, any correlation between these deviations and parameters of the NC program is not apparent. To improve the machining result, each candidate parameter of the NC program thus needs to be varied in a time-consuming trial- and-error procedure. Dynamic behavior of interpolator, position controller, and drive may hence be considered a "black box", the detailed functioning of these control modules remaining largely unclear. Also, the NC program is static and does not change during series production. Even if the behavior of the machines changes over a longer period due to aging, the NC program remains unchanged, resulting in a creeping degradation of workpiece quality. There is typically no adaptation to changing production conditions. As per the invention, machine learning techniques are used, for example, to predict production quality, to optimize, or to reduce the cycle time of CNC machining.

IPC 8 full level

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CPC (source: EP)

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