

Title (en)
METHOD FOR MONITORING A MACHINE TOOL, MONITORING APPARATUS, MACHINE TOOL AND COMPUTER PROGRAM PRODUCT

Title (de)
VERFAHREN ZUR ÜBERWACHUNG EINER WERKZEUGMASCHINE, ÜBERWACHUNGSVORRICHTUNG, WERKZEUGMASCHINE UND COMPUTERPROGRAMMPRODUKT

Title (fr)
PROCÉDÉ DE SURVEILLANCE D'UNE MACHINE-OUTIL, DISPOSITIF DE SURVEILLANCE, MACHINE-OUTIL ET PRODUIT PROGRAMME INFORMATIQUE

Publication
EP 3827317 A1 20210602 (DE)

Application
EP 19749283 A 20190725

Priority
• DE 102018118001 A 20180725
• EP 2019070124 W 20190725

Abstract (en)
[origin: WO2020021044A1] A method for monitoring a machine tool is described, in which the movement of a tool is numerically controlled with the aid of a control computer. The method comprises the following method steps: - a reference measurement curve (38) of a monitoring measurement variable, which is related to the movement of the tool, is recorded during a reference movement of the tool controlled by a reference desired value curve (37), - a machining measurement curve (32) of the monitoring measurement variable is recorded during a machining movement of the tool (3) controlled by a machining desired value curve (22), wherein a workpiece is machined by the tool with the machining movement, - the reference measurement curve (38) and the machining measurement curve (32) are temporally related on the basis of the reference desired value curve (37) and the machining desired value curve (22), and - a differential curve (39) of the reference measurement curve (38) and the machining measurement curve (32) is formed and the differential curve (39) is monitored for the exceeding of predetermined limit values. The method can be carried out with the aid of an accordingly configured monitoring apparatus or a machine tool and can be implemented in the form of a computer program product.

IPC 8 full level
B23Q 17/09 (2006.01); **G05B 19/4062** (2006.01); **G05B 19/4065** (2006.01)

CPC (source: EP)
G05B 19/4062 (2013.01); **G05B 2219/37214** (2013.01); **G05B 2219/37234** (2013.01); **G05B 2219/37391** (2013.01); **G05B 2219/42311** (2013.01); **G05B 2219/50197** (2013.01)

Citation (search report)
See references of WO 2020021044A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2020021044 A1 20200130; BR 112021001264 A2 20210420; CN 112602027 A 20210402; DE 102018118001 A1 20200130; EP 3827317 A1 20210602; JP 2021531992 A 20211125

DOCDB simple family (application)
EP 2019070124 W 20190725; BR 112021001264 A 20190725; CN 201980055533 A 20190725; DE 102018118001 A 20180725; EP 19749283 A 20190725; JP 2021528489 A 20190725