

Title (en)

METHOD FOR DETERMINING THE WEAR STATE OF A TOOL, AND DEVICE FOR SAID METHOD

Title (de)

VERFAHREN ZUR BESTIMMUNG EINES VERSCHLEISSZUSTANDES EINES WERKZEUGS UND VORRICHTUNG HIERFÜR

Title (fr)

PROCÉDÉ POUR DÉTERMINER UN ÉTAT D'USURE D'UN OUTIL ET DISPOSITIF CORRESPONDANT

Publication

EP 4399502 A1 20240717 (DE)

Application

EP 22782468 A 20220907

Priority

- DE 102021210051 A 20210910
- EP 2022074878 W 20220907

Abstract (en)

[origin: WO2023036828A1] The invention relates to a method for determining the wear state of a tool (2) and/or at least one cutting edge (3). A test measurement is carried out on at least one sacrificial workpiece (11, 21) by means of a test machining process in a new state of the tool (2) or of the at least one cutting edge (3), wherein the test machining process is monitored by means of at least one measuring device comprising at least one sensor (12), and measurement values of the test measurement can be stored in a storage device (13). After workpieces (4) have been machined by the tool (2) or by the at least one cutting edge (3) in a defined manner, at least one additional test measurement is carried out on the sacrificial workpiece (11, 21) by means of a test machining process which is monitored by the measuring device comprising the at least one sensor (12). The wear state of the tool (2) and/or of the at least one cutting edge (3) is determined using the ascertained measurement values. The tool (2) is moved relative to the sacrificial workpiece (11, 21) at a defined feed rate and in a defined feed direction (32), and the sensor (12) records a force exerted onto the sacrificial workpiece (11, 21) by the tool (2), the direction of the recorded force being oriented at a defined angle relative to the feed direction (32).

IPC 8 full level

G01N 3/58 (2006.01)

CPC (source: EP)

G01N 3/56 (2013.01); **G01N 3/58** (2013.01)

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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

DE 10202209160 A1 20230316; DE 112022004346 A5 20240620; EP 4399502 A1 20240717; WO 2023036828 A1 20230316

DOCDB simple family (application)

DE 10202209160 A 20220902; DE 112022004346 T 20220907; EP 2022074878 W 20220907; EP 22782468 A 20220907