

Title (en)

METHOD FOR OPERATING A MACHINE TOOL, AND MACHINE TOOL

Title (de)

VERFAHREN ZUM BETRIEB EINER WERKZEUGMASCHINE UND WERKZEUGMASCHINE

Title (fr)

PROCÉDÉ D'UTILISATION D'UNE MACHINE-OUTIL, ET MACHINE-OUTIL

Publication

**EP 4304814 A1 20240117 (DE)**

Application

**EP 22708571 A 20220302**

Priority

- EP 21162050 A 20210311
- EP 2022055239 W 20220302

Abstract (en)

[origin: WO2022189224A1] The present invention relates to a method for operating a machine tool. The machine tool comprises a tool, in particular a drill bit, and a motor, the motor being a brushless electric motor. An electronically designed speed ratio is implemented in the machine tool, by which a circumferential speed at the tool of the machine tool can be kept essentially constant, wherein a rotational speed spread  $\Delta_n$  of greater than 2 is achieved by a design, sizing and/or control of the motor. In a second aspect, the invention relates to a tool apparatus, for example a core-drilling apparatus, by means of which the proposed method can be carried out. An essential advantage of the invention is that the rotational speed spread  $\Delta_n$  of greater than 2 is reached without a mechanical transmission at the machine tool. Instead, an electronically designed speed ratio is used in the present invention.

IPC 8 full level

**B25F 5/00** (2006.01); **B23D 47/12** (2006.01); **B28D 1/04** (2006.01); **B28D 7/00** (2006.01)

CPC (source: EP US)

**B23D 47/12** (2013.01 - EP); **B25F 5/00** (2013.01 - EP); **B25F 5/001** (2013.01 - US); **B28D 1/041** (2013.01 - EP); **B28D 7/005** (2013.01 - EP);  
**B28D 1/041** (2013.01 - US); **B28D 7/005** (2013.01 - US)

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)

**EP 4056323 A1 20220914**; EP 4304814 A1 20240117; US 2024123593 A1 20240418; WO 2022189224 A1 20220915

DOCDB simple family (application)

**EP 21162050 A 20210311**; EP 2022055239 W 20220302; EP 22708571 A 20220302; US 202218277404 A 20220302