

Title (en)

METHOD FOR PRODUCING A WORKPIECE THREADED HOLE

Title (de)

VERFAHREN ZUR ERZEUGUNG EINER WERKSTÜCK-GEWINDEBOHRUNG

Title (fr)

PROCÉDÉ POUR PRODUIRE UN TROU FILETÉ DE PIÈCE À TRAVAILLER

Publication

EP 4126433 A1 20230208 (DE)

Application

EP 21704523 A 20210210

Priority

- DE 102020109035 A 20200401
- EP 2021053188 W 20210210

Abstract (en)

[origin: WO2021197696A1] The invention relates to a method for producing a workpiece threaded hole (1) by means of a tapping tool, the method comprising a drilling stroke (B), in which the rotating tapping tool is driven into the workpiece (5) in a drilling direction to an intended drilling depth (tB), such that a screw-thread-free pilot hole (51) is formed, and comprising a screw-thread stroke (G), in which the tapping tool produces an internal screw thread (9) in the pilot hole (51) at a screw-thread advancing rate (vf) and a screw-thread rotational speed (n), which is synchronized with the screw-thread advancing rate. According to the invention, a reversing stroke (R1) is carried out after the drilling stroke (B), in which reversing stroke the tapping tool is led out of the pilot hole (51) in a reversing direction counter to the drilling direction. Subsequently, the tapping tool executes a controlled lateral movement radially by a radial offset ($\Delta r1$) in an offset stroke (V1). Thereafter, the radially adjusted, rotating tapping tool is guided in a circular rotational motion along a circular path (53) about the hole axis (A) in the screw-thread stroke (G).

IPC 8 full level

B23G 5/20 (2006.01)

CPC (source: EP US)

B23G 1/32 (2013.01 - US); **B23G 5/20** (2013.01 - EP 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)

DE 102020109035 A1 20211007; **DE 102020109035 B4 20221124**; CN 115335172 A 20221111; EP 4126433 A1 20230208; JP 2023519004 A 20230509; JP 7470812 B2 20240418; US 2023094117 A1 20230330; WO 2021197696 A1 20211007

DOCDB simple family (application)

DE 102020109035 A 20200401; CN 202180022508 A 20210210; EP 2021053188 W 20210210; EP 21704523 A 20210210; JP 2022558543 A 20210210; US 202117798157 A 20210210