

Title (en)
ECCENTRIC GEAR FOR A MACHINE TOOL

Title (de)
EXZENTERGETRIEBE FÜR EINE WERKZEUGMASCHINE

Title (fr)
ENGRENAGE EXCENTRIQUE POUR MACHINE-OUTIL

Publication
EP 4251371 A1 20231004 (DE)

Application
EP 21810008 A 20211110

Priority
• EP 20210196 A 20201127
• EP 2021081220 W 20211110

Abstract (en)
[origin: WO2022111875A1] The invention relates to a machine tool (1), in particular a tube extrusion press, comprising a drive (8), an output shaft (11), a screw gear (12) and a linear actuator (13), wherein a torque generated by the drive (8) can be transmitted to the linear actuator (13) via the output shaft (11) and the screw gear (12) connected to the output shaft (11). The invention is characterized in that the screw gear (12) includes an inner screw part (42) having an external screw thread (50), and an outer screw part (40) having an internal screw thread (48), the internal screw thread (48) interacting with the external screw thread (50) via at least one bearing roller (44) which has at least one circumferential groove (53) by means of which the bearing roller (44) engages into the external screw thread (50) and the internal screw thread (48). The machine tool can have particularly high energy efficiency while being cost-effective to manufacture.

IPC 8 full level
B25B 27/10 (2006.01); **B21D 39/04** (2006.01); **B25B 25/00** (2006.01); **H01R 43/042** (2006.01)

CPC (source: EP US)
B21D 39/046 (2013.01 - EP US); **B21D 39/048** (2013.01 - EP US); **B25B 25/005** (2013.01 - EP); **B25B 27/10** (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)
EP 4005733 A1 20220601; CN 116490299 A 20230725; CN 116507434 A 20230728; EP 4005735 A1 20220601; EP 4005735 B1 20240410; EP 4005735 C0 20240410; EP 4251370 A1 20231004; EP 4251371 A1 20231004; US 2023405779 A1 20231221; US 2023415218 A1 20231228; WO 2022111875 A1 20220602; WO 2022111998 A1 20220602

DOCDB simple family (application)
EP 20210196 A 20201127; CN 202180073617 A 20210913; CN 202180079187 A 20211110; EP 2021075036 W 20210913; EP 2021081220 W 20211110; EP 21156580 A 20210211; EP 21778362 A 20210913; EP 21810008 A 20211110; US 202118035413 A 20210913; US 202118037255 A 20211110