Title (en)

METHOD AND MACHINE TOOL FOR MACHINING PLANAR WORKPIECES. IN PARTICULAR METAL SHEETS

Title (de

VERFAHREN UND WERKZEUGMASCHINE ZUM BEARBEITEN VON PLATTENFÖRMIGEN WERKSTÜCKEN, INSBESONDERE VON BLECHEN

Title (fr)

PROCÉDÉ ET MACHINE-OUTIL SERVANT À L'USINAGE DE PIÈCES EN FORME DE PLAQUE, EN PARTICULIER DE TÔLES

Publication

EP 3515628 A1 20190731 (DE)

Application

EP 17777857 A 20170926

Priority

- DE 102016118175 A 20160926
- DE 102016120151 A 20161021
- EP 2017074283 W 20170926

Abstract (en)

[origin: WO2018055178A1] The invention relates to a method and to a machine tool for machining planar workpieces, in particular metal sheets, wherein an upper tool (11), which can be moved along a reciprocation axis (14) by means of a reciprocation drive device (13) in a direction toward a workpiece (10) to be machined by means of the upper tool (11) and in the opposite direction, is positioned along an upper positioning axis (16) extending perpendicularly to the reciprocation axis (14) by means of at least one motor drive assembly (17), wherein a lower tool (9), which is aligned with the upper tool (11), is positioned along a lower positioning axis (25) by means of at least one motor drive assembly (26), which lower positioning axis is oriented perpendicularly to the reciprocation axis (14) of the upper tool (11), wherein the upper and lower tools (11, 9) are moved in the frame interior (7) of a machine frame (2), wherein the workpiece (10) lies on a workpiece support (28, 29) for machining, wherein the motor drive assemblies (17, 26) are controlled for moving the upper and lower tools (11, 9) by means of a controller (15) and at least one workpiece part (81) is cut from the workpiece (10), wherein, in order to remove the at least one workpiece part (81) cut from the workpiece (10) after the last cutting step, the upper tool (11) is moved outside of a spatial volume (220) which extends above the cut workpiece part (81) and which is formed at least by means of a predefined part of the base area of the workpiece part (81) in the workpiece plane and of a perpendicular to the workpiece part (81) in the workpiece plane and of a perpendicular to the workpiece part (81) in the workpiece plane and of a perpendicular to the workpiece part (81) is removed.

IPC 8 full level

B21D 45/00 (2006.01); B21D 28/06 (2006.01); B21D 43/28 (2006.01)

CPC (source: EP)

B21D 28/06 (2013.01); B21D 43/287 (2013.01); B21D 45/003 (2013.01)

Citation (search report)

See references of WO 2018055178A1

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 2018055178 A1 20180329; CN 109789475 A 20190521; CN 109789475 B 20210601; EP 3515628 A1 20190731; JP 2019529124 A 20191017; JP 6772371 B2 20201021

DOCDB simple family (application)

EP 2017074283 W 20170926; CN 201780059103 A 20170926; EP 17777857 A 20170926; JP 2019515872 A 20170926