

Title (en)

TRANSPORT DEVICE HAVING GRIPPING TONGS

Title (de)

TRANSPORTVORRICHTUNG MIT GREIFZANGEN

Title (fr)

DISPOSITIF DE TRANSPORT À PINCES DE PRÉHENSION

Publication

**EP 3448596 A1 20190306 (DE)**

Application

**EP 17719251 A 20170425**

Priority

- CH 5612016 A 20160428
- EP 2017059721 W 20170425

Abstract (en)

[origin: WO2017186673A1] In a transport device for moving workpieces in a multiple-stage forming device, gripping tools (32a, 32b) which are configured as gripping tongs for gripping in each case one workpiece are arranged on a gripping tool carrier which can be moved to and fro between the stages of the forming device. The gripping tools (32a, 32b) are assigned in each case one gripping tool drive, arranged on the gripping tool carrier, for the individual actuation of the gripping tools (32a, 32b) for gripping and releasing a workpiece. The gripping tools have in each case two tong arms (32a, 32b) which can be moved towards one another and away from one another in a linear manner by means of the respective gripping tool drive. The gripping tool drives are configured in each case so as to be servo-controlled electrically or hydraulically. Gripping tongs having tong arms (32a, 32b) which can be moved towards one another and away from one another in a linear manner have the advantage in comparison with gripping tongs having pivotable tong arms that they can dip uniformly into the gripping diameter and can act on the workpiece on both sides at the same angle. Positional control of the tong arms is possible as a result of the servo -controlled configuration of the gripping tool drives.

IPC 8 full level

**B21D 43/05** (2006.01); **B21D 43/10** (2006.01); **B21K 27/04** (2006.01)

CPC (source: EA EP KR US)

**B21D 43/05** (2013.01 - EA EP KR US); **B21D 43/10** (2013.01 - EA EP KR US); **B21K 27/04** (2013.01 - EA EP KR US)

Citation (search report)

See references of WO 2017186673A1

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Designated extension state (EPC)

BA ME

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**WO 2017186673 A1 20171102**; CH 712402 A1 20171031; CN 109070180 A 20181221; EA 201892456 A1 20190329; EP 3448596 A1 20190306; JP 2019514692 A 20190606; KR 20190003519 A 20190109; TW 201742807 A 20171216; US 2019134695 A1 20190509

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**EP 2017059721 W 20170425**; CH 5612016 A 20160428; CN 201780025826 A 20170425; EA 201892456 A 20170425; EP 17719251 A 20170425; JP 2018556330 A 20170425; KR 20187030832 A 20170425; TW 106114108 A 20170427; US 201716096722 A 20170425