

Title (en)

MODULAR FORMING TOOL, MODULAR FORMING TOOL SET, AND METHOD FOR PRODUCING SUBSTANTIALLY ROTATIONALLY SYMMETRICAL PARTS

Title (de)

MODULARES UMFORMWERKZEUG, MODULARER UMFORMWERKZEUGSATZ UND VERFAHREN ZUM HERSTELLEN VON IM WESENTLICHEN ROTATIONSSYMMETRISCHEN TEILEN

Title (fr)

OUTIL DE FORMAGE MODULAIRE, ENSEMBLE D'OUTIL DE FORMAGE MODULAIRE ET PROCÉDÉ DE PRODUCTION DE PIÈCES SENSIBLEMENT SYMÉTRIQUES EN ROTATION

Publication

EP 4171844 A1 20230503 (DE)

Application

EP 21730495 A 20210527

Priority

- DE 102020116567 A 20200624
- EP 2021064192 W 20210527

Abstract (en)

[origin: WO2021259586A1] The invention relates to a modular forming tool (1), more particularly a pressing tool, preferably for producing substantially rotationally symmetrical parts, the forming tool comprising at least one primary tool (10), more particularly a core, at least one reinforcement tube (30) and at least one auxiliary tool (50). The forming tool (1) extends in a longitudinal direction (L). The primary tool (10) has a workpiece-processing surface (12), a lateral surface (14) and two end surfaces (16). The workpiece-processing surface (12) contacts a workpiece or is designed to contact a workpiece. The lateral surface (14) delimits the primary tool (10) in a radial direction (R). The end surfaces (16) delimit the primary tool (10) in the longitudinal direction (L). The reinforcement tube (30) has an inner lateral surface (32) and an outer lateral surface (34). The lateral surface (14) of the primary tool (10) is pressed, indirectly and/or directly, into the reinforcement tube (30) such that the primary tool (10) is secured with respect to the reinforcement tube (30) in the radial direction (R). The inner lateral surface (32) and the outer lateral surface (34) each have a press fit. The auxiliary tool (50) is delimited in the longitudinal direction (L) by top surfaces (56). The auxiliary tool (50) is outwardly delimited in the radial direction (R) by a circumferential surface (54). The circumferential surface (54) has a clearance fit in the radial direction (R).

IPC 8 full level

B21C 3/02 (2006.01); **B21C 3/12** (2006.01); **B21J 13/02** (2006.01); **B21J 13/03** (2006.01); **B21K 1/46** (2006.01)

CPC (source: EP US)

B21C 3/12 (2013.01 - US); **B21J 13/02** (2013.01 - EP); **B21J 13/03** (2013.01 - EP US); **B21K 1/46** (2013.01 - EP); **B21C 3/02** (2013.01 - EP); **B21C 3/12** (2013.01 - EP)

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 102020116567 A1 20211230; **DE 102020116567 B4 20241010**; CN 116033977 A 20230428; EP 4171844 A1 20230503; MX 2022016435 A 20230130; US 2023241667 A1 20230803; WO 2021259586 A1 20211230

DOCDB simple family (application)

DE 102020116567 A 20200624; CN 202180044876 A 20210527; EP 2021064192 W 20210527; EP 21730495 A 20210527; MX 2022016435 A 20210527; US 202118010287 A 20210527