

Title (en)
METHOD AND DEVICE FOR THE PRODUCTION OF A WORKPIECE WITH INTERNAL TOOTHING, IN PARTICULAR A HOLLOW WHEEL

Title (de)
VERFAHREN UND VORRICHTUNG ZUR HERSTELLUNG EINES WERKSTÜCKES MIT INNENVERZÄHNUNG, INSBESONDERE EINES HOHLRADES

Title (fr)
PROCEDE ET DISPOSITIF DE FABRICATION D'UNE PIECE A DENTURE INTERIEURE, EN PARTICULIER D'UNE ROUE A DENTURE INTERIEURE

Publication
EP 1330320 A1 20030730 (DE)

Application
EP 01992620 A 20011101

Priority
• DE 0104192 W 20011101
• DE 10054399 A 20001102

Abstract (en)
[origin: WO0236287A1] The invention relates to a method and device for the production of a workpiece with internal toothing, in particular a hollow wheel, by using a cup-shaped preform (N), with an essentially cylindrical side wall (N1) and a drift (5), with an outer profile corresponding to the internal toothing to be produced and a moulding tool which reduces the outer diameter of the cylindrical sidewall during a feed motion, whereby material from the cylinder wall region flows into the outer profile (6) of the drift (5). According to the invention, the moulding tool is in the form of a drawing die (14) which guarantees a stretch forming of the cylinder wall region (N1) and that two tool elements, producing an axial pressure in the cylinder wall region (N1) of the preform, engage with the preform during the stretch forming. A reduction in the outer diameter by stretch forming using a drawing die occurs in the method, whereby additional axial pressure is brought to bear on the cylindrical sidewall of the preform during the stretch forming.

IPC 1-7
B21J 5/12; **B21K 1/30**

IPC 8 full level
B21J 5/12 (2006.01); **B21J 13/02** (2006.01); **B21K 1/30** (2006.01)

CPC (source: EP KR US)
B21J 5/02 (2013.01 - KR); **B21J 5/12** (2013.01 - EP KR US); **B21K 1/30** (2013.01 - EP KR US)

Citation (search report)
See references of WO 0236287A1

Cited by
CN102389913A; CN101947621A

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
WO 0236287 A1 20020510; AT E322948 T1 20060415; AU 1584602 A 20020515; DE 10054399 A1 20020627; DE 50109512 D1 20060524; EP 1330320 A1 20030730; EP 1330320 B1 20060412; EP 1700651 A1 20060913; JP 2004512956 A 20040430; KR 100833771 B1 20080529; KR 20030059216 A 20030707; US 2004016281 A1 20040129; US 7231799 B2 20070619

DOCDB simple family (application)
DE 0104192 W 20011101; AT 01992620 T 20011101; AU 1584602 A 20011101; DE 10054399 A 20001102; DE 50109512 T 20011101; EP 01992620 A 20011101; EP 06007394 A 20011101; JP 2002539085 A 20011101; KR 20037005827 A 20030426; US 41563703 A 20030430