

Title (en)
METHOD OF PRODUCING HOMOKINETIC JOINTS

Title (de)
VERFAHREN ZUR HERSTELLUNG VON GLEICHLAUFGELENKEN

Title (fr)
PROCEDE DE PRODUCTION DE JOINTS HOMOCINETIQUES

Publication
EP 1165272 A1 20020102 (DE)

Application
EP 00912491 A 20000221

Priority
• DE 19915879 A 19990408
• EP 0001399 W 20000221

Abstract (en)
[origin: US6516647B1] The invention relates to a method of manufacturing the outer part of a constant velocity joint, the outer part having in the finished condition a hollow chamber with a cylinder-shaped inner wall, in which there are provided ball raceways (1c) which run obliquely of the cylinder axis and are inclined with respect to one another. First, a wobble press die (4) is axially introduced into a goblet-shaped preliminary workpiece (1a) for the outer part having a conically developing inner and outer wall and pre-formed ball raceways (1c) in the inner wall. The preliminary workpiece (1a) is pressed (drawing process) by means of the wobble press die (4), sitting on the floor of the hollow chamber, through an opening in an outer die (2), so that a drawing process is carried out in which the preliminary workpiece (1a) is so cold formed that the inner wall of the hollow chamber is given a cylindrical shape. Thereafter the outer die (2) and the wobble press die (4), having a truncated cone-shaped outer contour, and having elevations (4a) on its outer side corresponding to the ball raceways (1c) and having a lesser diameter than the cylindrical hollow chamber of the drawn preliminary workpiece (1a), are set into a wobbling circular movement relative to one another such that the elevations (4a) of the wobble press die (4) move over the pre-formed ball raceways (1c) on the inner wall of the hollow chamber in a pressing and material shaping manner. Thereafter the wobble press die (4) is axially drawn out of the preliminary workpiece (1a) and finally, the finished joint outer part is ejected from the outer die (2).

IPC 1-7
B21J 9/02; **B21K 1/76**

IPC 8 full level
F16D 3/20 (2006.01); **B21J 5/06** (2006.01); **B21J 5/12** (2006.01); **B21J 9/02** (2006.01); **B21K 1/14** (2006.01); **B21K 1/76** (2006.01)

CPC (source: EP US)
B21J 9/025 (2013.01 - EP US); **B21K 1/762** (2013.01 - EP US); **B21K 1/765** (2013.01 - EP US); **Y10T 29/49689** (2015.01 - EP US)

Citation (search report)
See references of WO 0061317A1

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

DOCDB simple family (publication)
US 6516647 B1 20030211; AT E267063 T1 20040615; DE 19915879 A1 20001012; DE 50006499 D1 20040624; EP 1165272 A1 20020102; EP 1165272 B1 20040519; JP 2003527244 A 20030916; WO 0061317 A1 20001019

DOCDB simple family (application)
US 95839002 A 20020122; AT 00912491 T 20000221; DE 19915879 A 19990408; DE 50006499 T 20000221; EP 0001399 W 20000221; EP 00912491 A 20000221; JP 2000610638 A 20000221