

Title (en)  
METHOD OF FORMING A NECK AND FLANGE ON A CYLINDRICAL HOLLOW BODY AND A DEVICE FOR CARRYING OUT THE METHOD

Title (de)  
VERFAHREN ZUR BILDUNG EINES GENECKTEN UND GEBÖRDELTEN ABSCHNITTS AN EINEM ZYLINDRISCHEN HOHLKÖRPER UND VORRICHTUNG ZUM DURCHFÜHREN DES VERFAHRENS

Title (fr)  
PROCEDE POUR LA FORMATION D'UNE ZONE RETRECIE ET BORDEE SUR UN CORPS CREUX CYLINDRIQUE, ET DISPOSITIF POUR LA MISE EN UVRE DE CE PROCEDE

Publication  
**EP 0772501 A1 19970514 (DE)**

Application  
**EP 96914140 A 19960426**

Priority  
• DE 19517671 A 19950513  
• EP 9601767 W 19960426

Abstract (en)  
[origin: US5653138A] A method and an apparatus for forming circumferentially extending necked and flanged parts at an end of a bilaterally open hollow cylindrical body. First and second axially aligned shafts carry axially displaceable first and second inner tools, respectively. Each inner tool has a circumferential body-shaping and a circumferential body-supporting surface. In a first axial position of the two inner tools the shaping surfaces together define a circumferential shaping groove situated inside the hollow body, and the body-supporting surfaces support the hollow body. In a second axial position the two inner tools are at a greater axial distance from one another than in the first position to allow introduction of a hollow body therebetween. A third shaft, carrying an outer tool having a circumferential shaping surface, extends parallel to the first and second shafts. A positioning arrangement is provided for aligning the circumferential shaping surface of the outer tool with the circumferential shaping groove and for radially moving the outer tool towards the two inner tools such that a circumferential portion of the hollow body is deformed and forced into the shaping groove causing the two inner tools to axially spread apart from one another.

IPC 1-7  
**B21D 51/26**

IPC 8 full level  
**B21D 17/04** (2006.01); **B21D 51/26** (2006.01)

CPC (source: EP KR US)  
**B21D 17/04** (2013.01 - EP US); **B21D 19/00** (2013.01 - KR); **B21D 51/2615** (2013.01 - EP US); **B21D 51/263** (2013.01 - EP US)

Citation (search report)  
See references of WO 9635529A1

Cited by  
DE10209154A1; US7100411B2; WO03074208A1

Designated contracting state (EPC)  
AT CH DE ES FR GB IT LI NL

DOCDB simple family (publication)  
**US 5653138 A 19970805**; AT E207393 T1 20011115; BR 9606354 A 19971223; DE 19517671 A1 19961114; DE 19517671 C2 20000713; DE 59607999 D1 20011129; EP 0772501 A1 19970514; EP 0772501 B1 20011024; ES 2165983 T3 20020401; JP 3779997 B2 20060531; JP H10503130 A 19980324; KR 970703824 A 19970809; PL 181040 B1 20010531; PL 317945 A1 19970512; TW 315333 B 19970911; WO 9635529 A1 19961114

DOCDB simple family (application)  
**US 64317796 A 19960506**; AT 96914140 T 19960426; BR 9606354 A 19960426; DE 19517671 A 19950513; DE 59607999 T 19960426; EP 9601767 W 19960426; EP 96914140 A 19960426; ES 96914140 T 19960426; JP 53128296 A 19960426; KR 19960707579 A 19961230; PL 31794596 A 19960426; TW 85105366 A 19960503