

Title (en)

PROCESS FOR THE HYDROSTATIC SHAPING OF HOLLOW BODIES OF COLD-WORKABLE METAL AND DEVICE FOR IMPLEMENTING IT

Title (de)

VERFAHREN ZUM HYDROSTATISCHEN UMFORMEN VON HOHLKÖRPERN AUS KALTUMFORMBAREM METALL UND VORRICHTUNG ZUR DURCHFÜHRUNG DES VERFAHRENS

Title (fr)

PROCEDE ET DISPOSITIF DE FORMAGE HYDROSTATIQUE DE CORPS CREUX EN METAL DEFORMABLE A FROID

Publication

**EP 0523215 B1 19970903 (DE)**

Application

**EP 92903582 A 19920131**

Priority

- DE 9200060 W 19920131
- DE 4103082 A 19910201

Abstract (en)

[origin: US5303570A] PCT No. PCT/DE92/00060 Sec. 371 Date Sep. 23, 1992 Sec. 102(e) Date Sep. 23, 1992 PCT Filed Jan. 31, 1992 PCT Pub. No. WO92/13653 PCT Pub. Date Aug. 20, 1992. A hollow workpiece having a tubular end portion is deformed by first fitting the workpiece into a die formed with a cavity adapted to receive the workpiece with the end portion of the workpiece projecting along an axis out of the die and then engaging over the projecting end portion of the workpiece a feed sleeve in a pressure-tight fit. The sleeve and workpiece are supported relative to each other such that the holding portion can slide in the sleeve and that the sleeve exerts substantially no axial force on the workpiece. Then an interior of the workpiece is pressurized through the sleeve and to deform the workpiece outward against an inner surface of the die.

IPC 1-7

**B21D 26/02**

IPC 8 full level

**B21C 37/28** (2006.01); **B21D 26/02** (2011.01); **B21D 26/033** (2011.01); **B21D 26/045** (2011.01)

CPC (source: EP US)

**B21C 37/283** (2013.01 - EP US); **B21D 26/033** (2013.01 - EP US); **B21D 26/045** (2013.01 - EP US); **Y10T 29/49805** (2015.01 - EP US)

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB IT LI LU NL SE

DOCDB simple family (publication)

**WO 9213653 A1 19920820**; AT E157571 T1 19970915; BR 9204114 A 19930608; DE 4103082 A1 19920827; DE 4103082 C2 19930916; DE 59208844 D1 19971009; DK 0523215 T3 19971201; EP 0523215 A1 19930120; EP 0523215 B1 19970903; ES 2109339 T3 19980116; JP 2542320 B2 19961009; JP H05504725 A 19930722; US 5303570 A 19940419

DOCDB simple family (application)

**DE 9200060 W 19920131**; AT 92903582 T 19920131; BR 9204114 A 19920131; DE 4103082 A 19910201; DE 59208844 T 19920131; DK 92903582 T 19920131; EP 92903582 A 19920131; ES 92903582 T 19920131; JP 50345792 A 19920131; US 92739892 A 19920923