

Title (en)

Method and apparatus for forming hollow metallic profiles supported by internal pressure

Title (de)

Verfahren und Vorrichtung zur innendruckgestützten Umformung von metallischen Hohlprofilen

Title (fr)

Procédé et dispositif pour le formage de profils creux métalliques soutenu par pression interne

Publication

EP 0633075 B1 19970409 (DE)

Application

EP 94890118 A 19940708

Priority

AT 134693 A 19930708

Abstract (en)

[origin: EP0633075A1] In the method described for forming hollow metallic profiles with the assistance of internal pressure to give workpieces (1) provided with branches or the like (12), a liquid pressure medium is fed to the interior of the blank, which is mounted in a die (2) and is brought into engagement at its two ends with movable press rams (3, 4), and the blank is pressed into at least one cavity (7) in the die (2) with the aid of the press rams, expanding in the process; during this procedure, the pressure (pi) of the pressure medium in the interior of the blank, which is closed off by the press rams (3, 4) and is heat-treated before the pressing operation, is controlled as a function of the progress made in pressing, the pressure (pi) being set in such a way in process phases in which there is little stretching of the material of the blank that essentially the yield strength of the material is just reached, whereas, in process phases in which the stretching is great, the pressure (pi) is increased in order to raise the breaking elongation of the material. <IMAGE>

IPC 1-7

B21C 37/29; **B21D 26/02**

IPC 8 full level

B21C 37/29 (2006.01); **B21D 26/02** (2011.01); **B21D 26/037** (2011.01)

CPC (source: EP)

B21C 37/294 (2013.01); **B21D 26/037** (2013.01)

Cited by

EP1010480A1; FR2787357A1; US6202460B1; US7832244B2; EP0985465B1

Designated contracting state (EPC)

AT CH DE ES FR GB IT LI SE

DOCDB simple family (publication)

EP 0633075 A1 19950111; **EP 0633075 B1 19970409**; **EP 0633075 B2 19991222**; AT A134693 A 19991015; AT E151317 T1 19970415; DE 59402350 D1 19970515; ES 2102801 T3 19970801; ES 2102801 T5 20000416

DOCDB simple family (application)

EP 94890118 A 19940708; AT 134693 A 19930708; AT 94890118 T 19940708; DE 59402350 T 19940708; ES 94890118 T 19940708