

Title (en)

Method of hydroforming of plates and apparatus for carrying out the same

Title (de)

Verfahren zum Hochdruckumformen von Blechen und Vorrichtung zur Durchführung des Verfahrens

Title (fr)

Procédé d'hydroformage de toles et dispositif pour sa mise en oeuvre

Publication

EP 1190786 B1 20041013 (FR)

Application

EP 01450017 A 20010925

Priority

FR 0012208 A 20000926

Abstract (en)

[origin: EP1190786A1] The hydroforming procedure, in which a sheet metal blank (1) is shaped against the surface of a die (5') by fluid forced into a matrix cavity (3'), is carried out with a clearance (j) between the blank holder (2') and the die held at a value preventing the formation of a crease between the die and matrix (4'). The size of the clearance is determined by the pressure of the fluid in the matrix cavity and the position of the die relative to the matrix.

IPC 1-7

B21D 22/20

IPC 8 full level

B21D 22/20 (2006.01)

CPC (source: EP US)

B21D 22/205 (2013.01 - EP US)

Cited by

CZ299907B6; DE10334483A1; DE10334483B4

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)

EP 1190786 A1 20020327; EP 1190786 B1 20041013; AT E279275 T1 20041015; CA 2357854 A1 20020326; CA 2357854 C 20081118; DE 60106362 D1 20041118; DE 60106362 T2 20051020; ES 2230255 T3 20050501; FR 2814387 A1 20020329; FR 2814387 B1 20021206; US 2002035859 A1 20020328; US 6588244 B2 20030708

DOCDB simple family (application)

EP 01450017 A 20010925; AT 01450017 T 20010925; CA 2357854 A 20010925; DE 60106362 T 20010925; ES 01450017 T 20010925; FR 0012208 A 20000926; US 96235001 A 20010926