

Title (en)

Method for hydroforming a hollow body having at least a branch portion, and apparatus used for carrying out this method

Title (de)

Verfahren und Vorrichtung zum Innenhochdruckumformen eines Hohlkörpers mit mindestens einer Abzweigung

Title (fr)

Procédé et dispositif d'hydroformage d'un corps creux avec au moins une partie ramifiée

Publication

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Application

EP 04425207 A 20040324

Priority

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Abstract (en)

A method and an apparatus for hydroforming a hollow body (4) with at least a branch portion (24) includes a step of hydroforming a protrusion on a wall of a hollow body, which protrusion is for defining the branch portion, a step of shearing the end wall (22a) of the protrusion (22) and a step of outwardly deforming the circumferential edge of the opening (22b) formed by the shearing step, all the above mentioned steps being performed within a hydroforming die.

IPC 1-7

B21D 26/02

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CPC (source: EP)

B21D 26/035 (2013.01)

Citation (search report)

- [X] US 5765420 A 19980616 - SCHAEFER AUGUST WILHELM [DE]
- [A] GB 470485 A 19370813 - EDWARD SHELTON CORNELL JR
- [A] DE 19909928 A1 20001207 - AUDI AG [DE]
- [A] DE 19751402 A1 19990602 - MANNESMANN AG [DE]
- [A] EP 1010480 A1 20000621 - TUBES ET FORMES [FR]
- [X] PATENT ABSTRACTS OF JAPAN vol. 2002, no. 02 2 April 2002 (2002-04-02)

Cited by

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