

Title (en)

Engraved forming tool for forming by means of a pressure medium

Title (de)

Werkzeuggravur eines Umformwerkzeuges zum Umformen mittels Wirkmedium

Title (fr)

Outilsage de formage gravé pour formage par fluide sous pression

Publication

EP 0974411 B1 20011114 (DE)

Application

EP 99113024 A 19990706

Priority

DE 19833550 A 19980724

Abstract (en)

[origin: EP0974411A1] The mold has a micro-surface structure at the mold wall to prevent distortion and surface damage at the workpiece when being shaped under pressure. The mold to shape a workpiece by inner pressure which forces it against the mold wall, has a pressure medium feed to press the workpiece (W) against the wall surface (2) which has a surface microstructure. The wall microstructure surface does not affect the workpiece (W) surface, and prevents a buildup between the workpiece and the wall, holds the workpiece in place, and can hold a lubricant. The microstructure also acts on the workpiece material flow during the shaping action. The microstructure is formed by a laser, electro-erosion, ultrasonic erosion, scraping or etching. The microstructures are about equal to the dimensions of the molecules of the pressure medium, with a width of 100 μm and a depth/height of 100 μm .

IPC 1-7

B21D 26/02

IPC 8 full level

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CPC (source: EP US)

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Cited by

EP2314461A3; DE102010037958A1; DE102010037958B4; WO0222304A1

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DOCDB simple family (publication)

EP 0974411 A1 20000126; **EP 0974411 B1 20011114**; AT E208667 T1 20011115; DE 19833550 A1 20000203; DE 19833550 B4 20051027; DE 59900418 D1 20011220; ES 2169581 T3 20020701; US 6286351 B1 20010911

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