

Title (en)

METHOD FOR SHAPING FROM A BLANK OF A HARDENING MATERIAL WITH DIFFERENTIAL COOLING

Title (de)

VERFAHREN ZUM FORMEN EINES ROHLINGS AUS EINEM HÄRTENDEN MATERIAL MIT DIFFERENTIELLER KÜHLUNG

Title (fr)

PROCEDE DE FORMAGE A PARTIR DE FLAN EN MATERIAU TREMPANT AVEC REFROIDISSEMENT DIFFERENTIEL

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2009106571A1] The invention relates to a drawing tool (1) for shaping and cooling a steel part from a blank (6), said tool including: at least one punch (2); and at least one matrix (3); the punch and the matrix each including: at least a first portion (21, 31) corresponding to a hot area (11) of the drawing tool; and at least a second portion (22, 32) corresponding to a cold area (12) of the drawing tool; in the cold area, the second part of the punch and the second part of the matrix are brought into contact with the blank when the drawing tool is closed; characterised in that, in the hot area of the drawing tool, a heating means are provided for heating said hot area to a temperature higher than about 400 °C, and in that, in said hot area, a distance (L) on top of the blank thickness (e) is provided between the punch and the matrix when the drawing tool is closed, is related to the temperature (T) of the hot area, and is given by the formula $T = 100.(6 - L)$, with $L > 0.2$ and $400 < T < 600$, L being in mm and T in °C.

IPC 8 full level

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Citation (search report)

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