

Title (en)

Method and device for producing three-dimensional products by forming and fine-blanking operations

Title (de)

Verfahren und Werkzeug zum Herstellen von durch Umform- und Feinschneidvorgänge erzeugte dreidimensionale Beschlge

Title (fr)

Mthode et dispositif de production de pices tridimensionnelles par des oprations de formage et de dcoupage fin

Publication

EP 1914022 A3 20080430 (DE)

Application

EP 06090153 A 20060901

Priority

EP 06090153 A 20060901

Abstract (en)

[origin: US2008053181A1] A method and tool for the production of three-dimensional attachments out of a flat strip by forming and fine blanking operations, especially for car seat components or the like. The flat strip is fed into a tool, at least one plate is stamped out of the plate in the tool, the plate is processed into an attachment in multiple processing steps, at first by fine blanking, in a following second step the developed burrs are flattened and then without finishing the attachment is removed from the tool ready for mounting. Attachments with complex geometry can be produced by combined fine blanking and forming operations in such a way, that mountable and burr-free parts with very small tolerances, high accuracy and process safety can be provided at effective costs. Simultaneous forming and fine blanking of the plate is carried out in the first process stage, wherein the plate is completely cut out of the flat strip and the position, form and location of the inner form created by the forming during the complete cutting out is aligned to the outer contour of the plate, and in the second stage, by centering the plate before flattening the burr, which developed during fine blanking at the outer and inner contours, according to its outer contour and simultaneously orienting the plate according to location and form of the shape of the inner form created in the plate in such a way, that the burr at the fine blanked surfaces can be flattened directly in the tool.

IPC 8 full level

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CPC (source: EP KR US)

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Citation (search report)

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EP3797893A1

Designated contracting state (EPC)

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Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

US 2008053181 A1 20080306; **US 8365569 B2 20130205**; AT E427798 T1 20090415; CA 2569180 A1 20080301; CA 2569180 C 20140401; DE 502006003393 D1 20090520; DK 1914022 T3 20090810; EP 1914022 A2 20080423; EP 1914022 A3 20080430; EP 1914022 B1 20090408; ES 2324678 T3 20090812; JP 2008055507 A 20080313; JP 5191151 B2 20130424; KR 101493522 B1 20150213; KR 20080020949 A 20080306; MX 2007010529 A 20090210; PL 1914022 T3 20091130; PT 1914022 E 20090604; SI 1914022 T1 20090831

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