Title (en)

Method for defining a punching tool set for punching of work pieces, such a punching tool set and punching machine with such a punching tool set

Title (de)

Verfahren zum Definieren eines Stanzwerkzeugsatzes zum stanzenden Bearbeiten von Werkstücken sowie Stanzwerkzeugsatz und Stanzmaschine mit einem derartigen Stanzwerkzeugsatz

Title (fr)

Procédé de définition d'un ensemble d'outil de poinçonnage destiné au traitement par poinçonnage de pièces usinées, tel ensemble d'outil de poinçonnage ainsi que machine de poinçonnage dotée d'un tel ensemble d'outil de poinçonnage

Publication

EP 2177290 B1 20130807 (DE)

Application

EP 08018279 A 20081018

Priority

EP 08018279 A 20081018

Abstract (en)

[origin: EP2177290A1] The method involves removing material from a reprocessed die (16) and changing a location of a cutting edge of the die to a punch entry direction. A punch and a metal sheet thickness are assigned to the reprocessed die based on the change in the cutting edge cross-section of the reprocessed die. Independent claims are included for the following: (1) reprocessed die; (2) punch machine; and (3) computer readable medium storing program for reprocessing die.

IPC 8 full level

B21D 28/24 (2006.01)

CPC (source: EP US)

B21D 28/14 (2013.01 - EP US); **B21D 28/246** (2013.01 - EP US); **B21D 28/34** (2013.01 - EP US); **B21D 37/08** (2013.01 - US); Y10T 29/49716 (2015.01 - EP US); Y10T 83/0524 (2015.04 - EP US); Y10T 83/8727 (2015.04 - EP US); Y10T 83/8733 (2015.04 - EP US); Y10T 83/9423 (2015.04 - EP US)

Citation (examination)

- JP 2002273530 A 20020925 - NAKAMURA SEISAKUSHO KK
- JP H10277662 A 19981020 - HITACHI CABLE

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 2177290 A1 20100421; **EP 2177290 B1 20130807**; EP 2522443 A2 20121114; EP 2522443 A3 20121205; EP 2522443 B1 20140730; JP 2011025309 A 20110210; JP 5858595 B2 20160210; US 2010095824 A1 20100422; US 2014202298 A1 20140724; US 8701532 B2 20140422; US 9573182 B2 20170221

DOCDB simple family (application)

EP 08018279 A 20081018; EP 12179637 A 20081018; JP 2009236233 A 20091013; US 201414220576 A 20140320; US 57981209 A 20091015