

Title (en)
Method and apparatus for punching a workpiece

Title (de)
Verfahren und Vorrichtung zum Lochen eines Werkstückes

Title (fr)
Procédé et dispositif de poinçonnage d'une pièce à usiner

Publication
EP 0920932 B1 20010808 (DE)

Application
EP 98120235 A 19981028

Priority
DE 19747607 A 19971028

Abstract (en)
[origin: EP0920932A1] The punch (10) advances to cut the wall of the workpiece (8), and returns to free the rotating cutting edge (22) of the tool (2). The movement is superimposed by an oscillating motion, and/or the high pressure engaging on the wall of the workpiece is applied by the pressure medium (D) in the same rhythm as the vibrations. Punching takes place during non/oscillating de/increasing high pressure of the medium.

IPC 1-7
B21D 28/18; B21D 26/02; B26F 1/40

IPC 8 full level
B21D 26/02 (2006.01); **B21D 28/18** (2006.01); **B21D 28/28** (2006.01); **B26F 1/40** (2006.01)

CPC (source: EP)
B21D 28/28 (2013.01)

Cited by
DE102015106859B4; DE102015106859A1; WO2016177824A1

Designated contracting state (EPC)
AT BE DE ES FR GB IT NL PT

DOCDB simple family (publication)
EP 0920932 A1 19990609; EP 0920932 B1 20010808; AT E203937 T1 20010815; DE 19747607 A1 19990506; DE 59801162 D1 20010913; ES 2162380 T3 20011216

DOCDB simple family (application)
EP 98120235 A 19981028; AT 98120235 T 19981028; DE 19747607 A 19971028; DE 59801162 T 19981028; ES 98120235 T 19981028