Title (en)

Press brake and related workpiece bending procedure

Title (de

Abkantpresse und zugehöriges Verfahren zum Biegen von Werkstücken

Title (fr)

Presse plieuse et procédure correspondante de pliage de pièces

Publication

EP 1914019 A1 20080423 (EN)

Application

EP 07118338 A 20071011

Priority

IT TV20060182 A 20061018

Abstract (en)

The present invention relates to a press brake (1) comprising at least: - a die (3) that extends substantially along a horizontal longitudinal axis (4) of said press brake, said die being integrally connected to a base (2) of said press brake; and - a punch (5) that extends above said die, substantially along the same horizontal axis as said die, said punch being vertically movable in both directions (50) so as to co-operate with said die to achieve the bending of a workpiece (7); and - regulating means (10) for adjusting the procedure for bending the workpiece. In the press brake, according to the invention, the regulating means include first detecting means (11), which comprise: - light emitting means (12) suitable for emitting a beam of light (13) along the direction in which said die extends, to at least partially illuminate at least a portion of said die and/or of said punch, and/or of the workpiece, and to project the profile, on a predefined plane, of at least a portion of the cross-section of said lower die and/or of said punch, and/or of the workpiece; and - optical sensing means (14) suitable for acquiring an image of said projection, generated by said beam of light. In its further aspect, the present invention relates also to an improved and more reliable bending procedure of a workpiece.

IPC 8 full level

B21D 5/02 (2006.01)

CPC (source: EP)

B21D 5/0209 (2013.01)

Citation (search report)

- [XY] EP 1589279 A2 20051026 SICK AG [DE]
- [XP] WO 2006135961 A1 20061228 LAZER SAFE PTY LTD [AU], et al
- [Y] JP H03114615 A 19910515 AMADA CO LTD
- [Y] JP 2003094116 A 20030402 AMADA CO LTD. et al
- [A] US 4797831 A 19890110 DRESSING PAUL A [US], et al
- [A] US 5483750 A 19960116 OOENOKI TOSHIYUKI [JP], et al
- [A] JP 2004066248 A 20040304 AMADA CO LTD

Cited by

CN110456423A; CN103438836A; CN112246923A; NL1035796C2; EP2614900A1; JP2020099929A; EP2147729A1; CN110023000A; AT511557A1; AT511557B1; CN112601621A; WO2014165885A1; US11980926B2; WO2012155168A1; WO2018090069A1; WO2020137644A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

EP 1914019 A1 20080423; IT TV20060182 A1 20080419

DOCDB simple family (application)

EP 07118338 A 20071011; IT TV20060182 A 20061018