

Title (en)

METHOD FOR SETTING THE TRAVEL OF A PRESS BRAKE

Title (de)

VERFAHREN ZUR EINSTELLUNG DER BAHN EINER ABKANTPRESSE

Title (fr)

PROCEDE DE REGLAGE DE LA COURSE D'UNE PRESSE-PLIEUSE

Publication

EP 1401593 A1 20040331 (FR)

Application

EP 02703430 A 20020315

Priority

- CH 0200154 W 20020315
- CH 4902001 A 20010316

Abstract (en)

[origin: WO02074463A1] The invention relates to a method for setting the travel of a press brake comprising at least one sensor, which measures a physical parameter (p) that varies with the force exerted by the punch on a piece of sheet metal placed on the die, and an electronic device that controls the displacement of the mobile apron between a top dead centre and a bottom dead centre (BDC). Said electronic device is provided with computing means for correcting the bottom dead centre value according to the measurement taken for said displacement and for the physical parameter (p). The difference in thickness between the real thickness of the sheet metal and the set value (e) for the sheet metal thickness is measured during bending; instantaneous bending angle alpha under the load of the piece is calculated as a function of the displacement, taking account of said difference in thickness and the geometric parameters of the punch and the die; the bearing force (f) of the punch on the piece is calculated using the value of the physical parameter (p); the sequence of values for the instantaneous bending angle/bearing force pair (alpha , f) is taken and compared to a reference curve (alpha , f)_{ref} which is pre-recorded during a bending operation involving the same material, and the electronic control device calculates a bottom dead centre correction taking account of the deviation between the (alpha , f) pairs and reference curve (alpha , f)_{ref}, said difference in thickness and the deformations in the press.

IPC 1-7

B21D 5/02

IPC 8 full level

B21D 5/02 (2006.01)

CPC (source: EP US)

B21D 5/02 (2013.01 - EP US)

Citation (search report)

See references of WO 02074463A1

Cited by

US7607329B2; WO2008119090A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

WO 02074463 A1 20020926; AT E297272 T1 20050615; CN 1286590 C 20061129; CN 1496289 A 20040512; DE 60204568 D1 20050714; DE 60204568 T2 20060524; EP 1401593 A1 20040331; EP 1401593 B1 20050608; ES 2244749 T3 20051216; JP 2004520939 A 20040715; JP 4050619 B2 20080220; US 2004111177 A1 20040610; US 7079919 B2 20060718

DOCDB simple family (application)

CH 0200154 W 20020315; AT 02703430 T 20020315; CN 02806558 A 20020315; DE 60204568 T 20020315; EP 02703430 A 20020315; ES 02703430 T 20020315; JP 2002573164 A 20020315; US 47206803 A 20030916