

Title (en)  
High performance bending machine with reduced energy dispersion

Title (de)  
Hochleistungsbiegepresse mit verringertem Energieverlust

Title (fr)  
Presse à plier à performance élevée avec perte d' énergie réduite

Publication  
**EP 1302252 B1 20040901 (EN)**

Application  
**EP 02079123 A 20021004**

Priority  
JP 2001006636 U 20011011

Abstract (en)  
[origin: EP1302252A1] A bending machine comprises a bending unit (8) moved by hydraulic actuators (12, 15) controlled by a variable displacement hydraulic pump (16) provided with an electronic closed-loop flow rate, pressure and power control system (25, 29, 35, 37, 39) including an electrically controlled proportional valve (25). The valve (25) includes a valve spool (26) for the control of the swivel angle of the pump (16) and a proportional solenoid (27) for moving the valve spool (26) to a position corresponding to a desired swivel angle of the pump (16). The control system (25, 29, 35, 37, 39) includes an inductive position transducer (35), a pump swivel angle transducer (37), a pump pressure transducer (39) and a programmed electronic control unit (29) which receives position, swivel angle and pressure signals (34, 36, 38) from said transducers (35, 37, 39) and predefined pressure, power and flow rate commands (30, 31, 32) and supplies a control signal (28) to said proportional solenoid (27). <IMAGE>

IPC 1-7  
**B21D 5/04**

IPC 8 full level  
**B21D 5/00** (2006.01); **B21D 5/04** (2006.01)

CPC (source: EP KR US)  
**B21D 5/00** (2013.01 - KR); **B21D 5/04** (2013.01 - EP US)

Cited by  
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