

Title (en)
METHOD AND DEVICE FOR CLOSED-LOOP CONTROL OF RAM MOVEMENT AND RAM FORCES IN MULTI-POINT SERVO HYBRID PRESSES

Title (de)
VERFAHREN UND VORRICHTUNG ZUR REGELUNG DER STÖSSELBEWEGUNG UND DER STÖSSELKRÄFTE AN MEHRPUNKT-SERVO-HYBRID-PRESSEN

Title (fr)
PROCÉDÉ ET DISPOSITIF PERMETTANT DE RÉGULER LE MOUVEMENT DU COULISSEAU ET LES FORCES DU COULISSEAU SUR DES SERVOPRESSES MULTIPONTS HYBRIDES

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Application
EP 17727473 A 20170406

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Abstract (en)
[origin: WO2017174077A1] The invention relates to a method for the closed-loop control of ram movement and ram forces in multi-point servo hybrid presses, In said method, the servo-electric drive associated with each pressure point or each pressure point group of the ram has a combinatorial interaction, as a main function by means of a pressure wave function, with drives integrated into the press as a secondary function in the form of hydraulic pressure pads in the pressure points of the ram drive and/or as process pads acting as machine- or die pads, such that with a reduced drive power a high closing force of the ram is achieved before and during the closed-position phase of the latter for forming and hardening the hot-formed pressed part and a low opening force of the ram is achieved after the closed-position phase, and that in order to compensate any process fluctuations occurring as a result of varying mechanical and thermal variables influencing the characteristics of the hot-formed shaped parts, each hydraulic pad in the pressure points of the ram and/or each process pad can be closed-loop controlled independently of one another in a path- and force-dependent manner before, during and after the closed-position phase of the ram in the region of the lower reversing point, in order to achieve active closed-loop control of the immersion depth and inclination in combination with the servo-electric main drive.

IPC 8 full level
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Citation (search report)
See references of WO 2017174077A1

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