

Title (en)
Powder moulding press for producing a pressed product from metal powder

Title (de)
Pulverpresse zur Herstellung eines Presslings aus Metallpulver

Title (fr)
Presse à poudre destinée à la fabrication d'une pièce pressée en poudre de métal

Publication
EP 2103423 A1 20090923 (DE)

Application
EP 08152858 A 20080317

Priority
EP 08152858 A 20080317

Abstract (en)
The lower plunger assembly (1) is equipped with a plate (2) on which the matrix assembly (3) is fitted. Transverse pressing units (4) are also attached to the plate (2). Each has a transverse pressing plunger (5) connected to a linear drive. Each plunger enters an opening (6) into the molding cavity (8) of the matrix (7). It can be pressed in and retracted, transverse to the main pressing direction. A linear drive is used with each transverse pressing unit. The linear drive has a fixed component fastened to the frame and a part moved linearly relative to the fixed component. This is connected to a wedge. The latter has a wedge surface acting on the wedge surface of a second wedge. This wedge is moved essentially at right angles to the first wedge, in a transverse direction. The two wedges are moved along linear guides fitted to the frame of the transverse pressing unit. The pressing position reached by the transverse plunger (5) is limited by an adjustable stop. This is a third wedge which is adjusted transversely with respect to the direction of movement of the first wedge, guided in the frame. It acts against a further wedge surface of the first wedge. The position of the transverse plunger in relation to the matrix assembly is detected by measurement sensors and transmitted to the control unit. Each transverse press plunger is held by a coupler in the respective transverse pressing unit. The transverse pressing unit has a peg projecting into one of a number of bores in the plate, when mounted upon it. Several transverse pressing units can be fitted to the same plate in this way. The bores in the plate are associated with corresponding tapped bores for clamping screws. These are held in suitable recesses in the frame of each transverse pressing unit. The recesses are slot-shaped.

Abstract (de)
Eine Pulverpresse zur Herstellung eines Presslings aus Metallpulver umfasst eine obere Stempelanordnung und eine untere Stempelanordnung (1), in welcher die Matrizenanordnung (3) untergebracht ist, welche den Formhohlraum (8) bildet, in welchen das Metallpulver eingefüllt und danach der Pressvorgang durchgeführt wird. Die untere Stempelanordnung (1) ist mit einer Platte (2) ausgestattet, auf welcher die Matrizenanordnung (3) aufgesetzt ist, und auf welcher Platte (2) Querpressvorrichtungen (4) befestigbar sind. Jede Querpressvorrichtung (4) ist mit einem Querpressstempel (5) ausgestattet, welcher über einen Antrieb linear antreibbar ist und durch eine Öffnung (6) in der Matrize (7) im wesentlichen quer zur Pressrichtung in Querpressrichtung in den Formhohlraum (8) hinein in eine Pressposition drückbar und aus dieser zurückziehbar ist. Dadurch lassen sich Presslinge erzeugen, die Querbohrungen, seitliche Vertiefungen oder seitliche Vertiefungen und Erhöhungen aufweisen, welche während des Pressvorgangs angebracht werden.

IPC 8 full level
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CPC (source: EP US)
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Citation (search report)
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• [X] WO 2007019832 A2 20070222 - DORST TECHNOLOGIES GMBH & CO [DE], et al
• [A] US 3555607 A 19710119 - EPAIN RAYMOND, et al

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