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ABSTRACT

MOTOR-DRIVEN MOLD CLAMPING DEVICE AND MOLD CLAMPING METHOD

A motor-driven mold clamping device includes a toggle mechanism for advancing and retracting a movable platen toward and away from a fixed platen, and a servo motor adapted to drive the toggle mechanism via a ball screw mechanism. The toggle mechanism, the movable platen, and the fixed platen are configured such that a mold clamping force is controlled with a knicking in the toggle mechanism being in a predetermined range such that the servo motor is driven with a current which is controlled to be at or near a rated current therefore, in order to maintain the mold clamping force. A method of controlling mold clamping force includes the steps of providing the toggle mechanism, and the servo motor as discussed above, and controlling the mold clamping force by appropriately configuring the knicking in the toggle mechanism to be in a predetermined range such that the servo motor is driven with a current which is at or near a rated current.

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