

Abstract of the Disclosure:

CONTROL DEVICE FOR MOTOR-DRIVEN INJECTION MOLDING
MACHINE WHICH CONSUMES LESS ELECTRIC POWER

In a control device for a motor-driven injection molding machine which comprises a mold clamping system comprising a servo-motor and a ball screw mechanism, the ball screw mechanism comprises a screw shaft and a nut for use in converting rotation of the servo-motor into rectilinear motion. The control device comprises a pattern generator for generating a set pattern for the clamping force. The pattern generator calculates, in response to application of a set clamping force, a travel distance S_0 of a predetermined movable member in the mold clamping system according to the set clamping force and generates the set pattern having an allowable range of deviation $2\Delta S$ that is defined by an upper limit ($S_0 + \Delta S$) and a lower limit ($S_0 - \Delta S$) relative to the travel distance S_0 calculated. The mold clamping system continuously decreases, by rotating the screw shaft in the reverse direction during a predetermined clamping time interval T_f , such that the clamping force is within the range defined by the allowable range of deviation $2\Delta S$, after the clamping force reaches the value defined by the upper limit ($S_0 + \Delta S$).

(Fig. 2)