

ABSTRACT OF THE DISCLOSURE

Title: INJECTION APPARATUS AND METHOD OF CONTROLLING THE SAME

Abstract: An injection apparatus which can reduce frictional resistance which acts on resin during an injection step to thereby prevent variation in a reference position and improve quality of molded products. The injection apparatus comprises a heating cylinder; a screw disposed within the heating cylinder to be rotatable and reciprocable, the screw having a flight portion in which a flight is formed on an outer circumference of a screw body, and a screw head disposed at a front end of the flight portion; a first drive unit for rotating the screw; a second drive unit for advancing and retracting the screw; a screw-advancement control unit for driving the second drive unit in an injection step in order to advance the screw at a predetermined screw speed; and a flight speed control unit for driving the first drive unit in the injection step in order to advance the flight at a flight speed that is apparently lower than the screw speed. Since the frictional resistance acting on resin in the vicinity of the inner circumferential surface of the heating cylinder can be reduced, during the injection step, the injection force can be made to correspond to the injection pressure, so that a sufficiently large injection pressure can be generated.

Figure for Publication: FIG. 3