

ABSTRACT OF THE DISCLOSURE

Title: BACK-FLOW PREVENTION APPARATUS AND METHOD OF OPERATING AN INJECTION APPARATUS

Abstract: A back-flow prevention apparatus includes a screw body; a screw head attached to the screw body; a first resin passage formed on a first ring; a second resin passage formed on a second ring located adjacent to and rotatable relative to the first ring; a drive unit for rotating a screw; and a controller. A rotation restriction mechanism is disposed between the first and second rings such that communication is established between the first and second resin passages or sealing is effected upon rotation of the screw. The controller includes a resin-pressure reduction unit for reducing the pressure of resin in the space located forward of the screw head after completion of a metering step but before initiation of sealing. Since the pressure of resin in the space located forward of the screw head has been reduced when sealing is effected upon rotation of the screw, the resin in the space located forward of the screw head is prevented from flowing in the opposite rotational direction upon rotation of the screw.

Figure for Publication: FIG. 2