

Abstract of the Disclosure

The present invention provides a method and an apparatus for forming an optical element readily and stably by measuring a change in the shape of a glass material and using its data for the forming process without injuring the glass material and its molds. The apparatus comprises, for heating and forming the glass material (1) into a desired shape, an upper mold (2) joined with a heating member (15) having heaters 6a built therein, a lower mold (3) joined with a heating member 16 having heaters 6b built therein, a set of an upper shaft (7), a lower shaft (8), and a cylinder (9) for applying two or more level of the forming pressure, a nozzle 13 for holding and conveying the glass material (1), a rotary table (11) having a group of pockets (12) provided therein, means for calculating and controlling the speed of a movement of the molds, means for gradually increasing or decreasing the forming pressure in response to the speed of the movement of the molds to control the forming process, a sensor (10) for measuring the movement of the mold, and means for performing a controlling the forming process according to a setting temperature which is higher than the transition temperature of the glass material (1), the movement of the molds, and the speed of the movement of the molds.