

ABSTRACT

A vertical control method for use in a lithography machine, comprising the following steps: step 1: before scanning exposure, controlling a vertical measurement sensor (5) to measure a workpiece (6) to acquire data of the overall shape of the workpiece; step 2: executing global levelling on the basis of the data of the overall shape of the workpiece; and step 3: when performing scanning exposure of each exposure field, using the vertical measurement sensor to measure in real time the partial shape of the workpiece and, on the basis of a height value in the Z direction, an inclination value around the X direction, and an inclination value around the Y direction in the partial shape of the workpiece, controlling at least one of a mask stage (3), a workpiece stage (7), and a projection objective (4) to move vertically to complement the partial shape of the workpiece in real time, such that the upper surface of the workpiece in each exposure field coincides with a reference focal plane (42) of the exposure field. The present vertical control method can flexibly select a vertical control scheme, improving the precision of vertical control.