

MEASURING APPARATUS AND METHOD, PROCESSING APPARATUS AND METHOD, PATTERN FORMING APPARATUS AND METHOD, EXPOSURE APPARATUS AND METHOD, AND DEVICE MANUFACTURING METHOD

ABSTRACT

An encoder system (39X₁, 39X₂, 39Y₁, 39Y₂, 62B, 62D, 62A, 62D) good in the short-term stability of a measured value measures position information on a moving object (WTB) in an XY plane with high accuracy without the influence of the air turbulence. A surface position measuring system (74, 76) measures position information on the moving body in the direction of Z-axis perpendicular to the XY plane with high accuracy without the influence of the air turbulence. Both the encoder system and the surface position measuring system directly measure position information on the top surface of the moving body, thereby enabling simple and direct control of the position of the moving body.

FIGURE 3