MEASURING METHOD, STAGE APPARATUS, AND EXPOSURE APPARATUS

ABSTRACT

An exposure apparatus can mitigate the impact of fluctuations in the refractive index of ambient gas, and improve, for example, stage positioning accuracy. An exposure apparatus radiates an exposure illumination light to a wafer (W) on a wafer stage (WST) through a projection optical system (PL), and forms a prescribed pattern on the wafer (W), and comprises: a scale, which is provided to the wafer stage (WST); a plurality of X heads (66), which detect information related to the position of the scale; a measurement frame (21) that integrally supports the plurality of X heads (66) and has a coefficient of linear thermal expansion that is smaller than that of the main body of the wafer stage (WST); and a control apparatus that derives information related to the displacement of the wafer stage (WST) based on the detection results of the plurality of X heads (66).

Figure 1