

SUBSTRATE DEFECT INSPECTION METHOD AND SUBSTRATE DEFECT INSPECTION APPARATUS

ABSTRACT

A substrate defect inspection method includes: irradiating a target substrate with an EUV beam; guiding a scattered reflected beam from the target substrate to a light receiving surface by using a second focusing optical system; and determining that a defect is present at an irradiation spot of the target substrate with the EUV beam when an intensity of the received scattered reflected beam exceeds a predetermined threshold; the method further including, before the irradiation of the target substrate with the EUV beam: a reflectance acquisition step of acquiring a reflectance of the target substrate to the EUV beam; and a threshold computation step of setting the predetermined threshold based on the reflectance acquired in the reflectance acquisition step. A substrate-defect inspection method and apparatus which set a threshold indicative of detection sensitivity in a dark-field inspection using reflected beam from a target substrate which enables highly-reliable phase defect inspection.

Fig 1.