

ABSTRACT

METHOD OF INSPECTING DEFECTS, AND METHOD OF MANUFACTURING MASK BLANK, TRANSFER MASK AND SEMICONDUCTOR DEVICE

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10 Provided is a method of inspecting defects, which together with being able to
carry out a highly precise defect inspection in an inside region, enables a defect
inspection to a peripheral region to be carried out automatically and accurately without
damaging a mask blank, a mask blank substrate or a defect inspection apparatus. In
the method of inspecting defects of a mask blank or a mask blank substrate, a mask
blank or a mask blank substrate has two opposing main surfaces and a side face, one of
the main surfaces has an inside region and a peripheral region, the boundary between
the inside region and the peripheral region is located at a distance d from a plane
15 containing the side surface, the distance d is such that $d \geq 1$ mm, and the method of
inspecting defects includes carrying out a defect inspection to the inside region using an
optical measurement method in which working distance (WD) is such that $WD \leq 0.5$
mm and a defect inspection to the peripheral region is carried out using an optical
measurement method in which WD is such that $WD > 0.5$ mm.

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Fig. 1