

ABSTRACT

In order to reduce a noise component caused by leaked light, the present claimed invention reduces the leaked light that leaks out from a light guide plate to a side of an observation means as much as possible, and also increases the uniformity of the light projected on a workpiece and improves inspection accuracy. A light projecting device comprises a flat plate-shaped light guide plate and a light source body that introduces light into the light guide plate from a side peripheral surface thereof. A plurality of concave parts are formed on one plate surface of the light guide plate, and the light entering the light guide plate reflects off the concave parts while spreading out, and the light is emitted to the outside from the other plate surface of the light guide plate. The surface of each concave part is formed by a smooth concave curved surface. A tangential angle that is an angle between a tangential line at an opening edge of the concave part and the plate surface is set to be greater than or equal to 50° and less than or equal to 85° in a cross-sectional shape of the concave part cut by a plane that is both perpendicular to the plate surface and passing through the center of the concave part.

FIGURE 4