

ABSTRACT

METHOD AND APPARATUS FOR DETECTING DEFECTS IN A CONTINUOUSLY MOVING STRIP OF TRANSPARENT MATERIAL

To detect defects in a continuously moving strip of transparent material, especially a wide thin glass strip, a narrow monochromatic light beam is guided transverse to the motion direction of the moving strip and is coupled into the moving strip, preferably through an edge region of the moving strip, by a transparent liquid arranged between the moving strip and the light source producing the monochromatic light beam. In a first embodiment the monochromatic light beam is inclined to an upper surface of the moving strip through which it passes and is coupled into the moving strip by a transparent liquid whose index of refraction is greater than that of the atmosphere surrounding the moving strip. In a second embodiment the monochromatic light beam is parallel to the upper surface of the strip and is coupled into an edge surface of the continuously moving strip by a transparent liquid whose index of refraction is about equal to that of the moving material. In the first embodiment the light guide system for the light beam includes a prism, whose light outlet surface is parallel to the upper surface of the glass strip. The transparent liquid is arranged between the prism and the glass strip, which is supported on rolls.

(Figure 1a)

