Abstract

1. Method of checking for the presence of connection balls of components, in particular of ball grid arrays.

2.1. With known methods, the light reflection (6) from connection balls (2) which is produced upon illumination (5) is evaluated by an image-evaluating unit (15). Metallic impurities (3) can likewise lead to light reflections (11) which are then misinterpreted. The novel method is intended to avoid these misinterpretations.

2.2. The image-evaluating unit additionally detects the lateral shadow (7) cast by the connection balls (2) when illuminated laterally by a light source (5), which shadow differs from the shadow (12) cast by a metallic impurity (3). By jointly detecting the reflection and shadow, the image-evaluating unit detects both metallic impurities (3) and dark impurities (4) of the same size as the shadow of a connection ball.

2.3. Checking for the presence of connection balls on components in automatic component-mounting machines.

3. Figure 1.