

Abstract

Method and apparatus for calibration of a movement path and/or of an angular position of a holding apparatus in a device for producing electrical assemblies as well as a calibration substrate

Known methods calibrate the movement path and/or the angular position of holding apparatuses in devices for producing electrical assemblies by means of optical measurements of the position of models (2) of electrical components which are fitted to a calibration substrate (1). This is done by using markings (4) on the models (2) and local reference marks (3) on the calibration substrate (1). Printed circuit board cameras, which are used as optical sensors, have pronounced camera distortion, which makes calibration harder.

The method according to the invention, the apparatus and the calibration substrate (1) are used to determine a sensor correction factor in which the position of two correction marks (5, 6), which are applied to the calibration substrate (1) with a predetermined nominal separation (a) and in a predetermined position with respect to one another, are measured using the printed circuit board camera, and the results of the measurement are compared with the nominal separation (a).

FIGURE 1