

CONVEYORIZED VACUUM APPLICATOR AND METHOD OF APPLYING
A DRY FILM RESIST TO A PRINTED CIRCUIT BOARD

Abstract

An improved method of and apparatus that is continuously automatically operative in an in-line system is described for applying under heat, vacuum and mechanical pressure a dry film photoresist-forming layer to printed circuit boards (136) that already have been prelaminated by the loose application thereto of the dry film resist as discrete cut sheets within the confines of the surface of the boards whereby a laminate without entrapped air bubbles and closely conforming to the raised circuit traces and irregular surface contours of the printed circuit board is obtained. Featured is a conveyORIZED vacuum laminator (18) comprising heated upper and lower platens (96,94) adapted to be moved into sealing engagement to form a vacuum lamination chamber (16), and disposed between the platens are two independent belt conveyor systems (20,22) that act as heat shields to prevent the printed circuit board and the loosely applied dry film from being heated up too rapidly in the vacuum chamber by the residual heat given off by the upper and lower platens before the film can be completely evacuated. This prevents premature tacking of the dry film to the board and enables all of the air entrapped between the film and the board surface to be drawn off before the application of heat and mechanical pressure, so as to ensure complete conformance of the dry film around the circuit traces and surface contours.

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