

PET フィルム上への密着性に優れた銅回路形成技術

松井 貴一*, 渡辺 充広**, 杉本 将治**, 北村 佳子***, 太田 哲司***, 本間 英夫*,**

Good Adhesive Copper Wiring Formation Technology on PET Film

Kiichi MATSUI*, Mitsuhiro WATANABE**, Masaharu SUGIMOTO**, Keiko KITAMURA***,
Tetsuji OTA*** and Hideo HONMA***

* 関東学院大学工学部 (〒236-8501 神奈川県横浜市金沢区六浦東1-50-1)

** 株式会社関東学院大学表面工学研究所 (〒239-0806 神奈川県横須賀市池田町4-4-1)

*** 株式会社きもと (〒160-0022 東京都新宿区新宿2-19-1)

*Faculty of Engineering, Kanto Gakuin University (1-50-1 Mitsuura-Higashi, Kanazawa-ku, Yokohama-shi, Kanagawa 236-8501)

**Kanto Gakuin University Surface Engineering Research Institute (4-4-1 Ikeda-cho, Yokosuka-shi, Kanagawa 239-0806)

***Kimoto Co., Ltd. (2-19-1 Shinjuku, Shinjuku-ku, Tokyo 160-0022)

Abstract

In recent years, as electronic devices have become smaller and multi-functionalized, printed wiring boards (PWBs) have required correspondingly higher density and more integration. Generally, organic materials are used as the insulating material on PWBs. The formation of a conductive layer for wiring on these insulators is a key technology. In particular, a conductive layer with excellent adhesion strength is needed for manufacturing fine-pitch PWBs. We studied the formation of a conductive layer on PET film without the roughening of the resin surface associated with conventional oxidizing agents. A thin layer of hydrophilic polymer was formed on the surface of the PET film, followed by electroless copper plating. The sample obtained by subsequent electroplating had sufficient adhesion strength of 0.8 kN/m.

Key Words: *PET Film, Electroless Copper Plating, Copper Wiring, Adhesion Strength, Hydrophilicity*