



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : H05K 3/40, B41F 15/20	A1	(11) International Publication Number: WO 00/21347 (43) International Publication Date: 13 April 2000 (13.04.00)
(21) International Application Number: PCT/JP99/05530 (22) International Filing Date: 7 October 1999 (07.10.99) (30) Priority Data: 10/285195 7 October 1998 (07.10.98) JP (71) Applicant (for all designated States except US): MAT-SUSHITA ELECTRIC INDUSTRIAL CO., LTD. [JP/JP]; 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501 (JP). (72) Inventors; and (75) Inventors/Applicants (for US only): SEGAWA, Shigetoshi [JP/JP]; 2496-5, Hagyu, Niihama-shi, Ehime 793-0050 (JP). BABA, Yasuyuki [JP/JP]; 1-140, Tenjin, Saijo-shi, Ehime 793-0002 (JP). ISHIKAWA, Katsuyoshi [JP/JP]; 653-4, Muramatsucho, Iyomishima-shi, Ehime 799-0401 (JP). IHARA, Kazuhiko [JP/JP]; 15-18, Miyagawa 3-chome, Iyomishima-shi, Ehime 799-0404 (JP). (74) Agents: IWAHASHI, Fumio et al.; Matsushita Electric Industrial Co., Ltd., 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501 (JP).		(81) Designated States: CN, ID, KR, SG, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>

(54) Title: MANUFACTURING METHOD OF CIRCUIT BOARD, MANUFACTURING APPARATUS FOR IT, AND POROUS SHEET USED IN IT

(57) Abstract

The manufacturing method comprises: (a) a process of feeding a printing stage having a porous member (2) permeable in the direction of thickness; (b) a process of placing a plate (1) for circuit board having pierced holes (6) above said porous member (2); and (c) a process of filling a conductive material (5) in said pierced holes (6) from the upper side of said plate (1) for circuit board by sucking said porous member (2) at prescribed vacuum pressure from the back side of said porous member (2). Said porous member (2) has a porous plate (8) permeable in the direction of thickness and a porous sheet (9) permeable in the direction of thickness placed on said porous plate (8), and said plate (1) is placed on the upper side of said porous sheet (9). Said porous sheet (9) is replaceable and, moreover, a process of replacing said porous sheet is provided. Said porous sheet (9) contains cellulose in the range of approximately 90 wt.% to approximately 98 wt.%, and said cellulose contains softwood kraft pulp in the range of approximately 20 wt.% to approximately 40 wt.% and hardwood kraft pulp in the range of approximately 60 wt.% to approximately 80 wt.%.

