

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
12 December 2002 (12.12.2002)

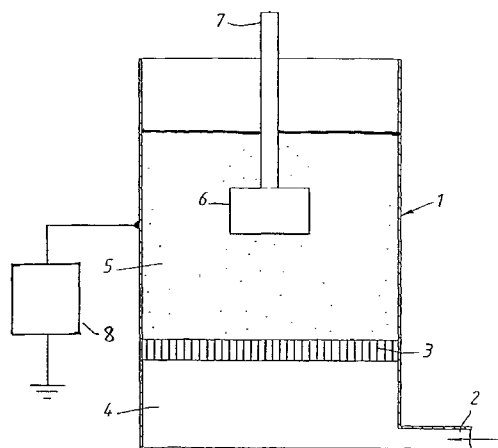
PCT

(10) International Publication Number
WO 02/098577 A1

- (51) International Patent Classification⁷: **B05C 19/02**, (74) Agents: **COULSON, Antony, John** et al.; Abel & Imray, 20 Red Lion Street, London WC1R 4PQ (GB).
B05D 1/24
- (21) International Application Number: PCT/GB02/02790 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 6 June 2002 (06.06.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 0113783.5 6 June 2001 (06.06.2001) GB (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicant (*for all designated States except US*): **INTERNATIONAL COATINGS LIMITED** [GB/GB]; P.O. Box 20980, Oriel House, 16 Connaught Place, London W2 2ZB (GB).
- (72) Inventors; and (75) Inventors/Applicants (*for US only*): **KITTLE, Kevin, Jeffrey** [GB/GB]; 19 Denwick Close, Chester-le-Street, Co. Durham DH2 3TL (GB). **FALCONE, Michele** [IT/IT]; Via Italia Libera, 14, I-22100 Como (IT).
- Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: POWDER COATING PROCESS WITH ELECTROSTATICALLY CHARGED FLUIDISED BED



(57) Abstract: A process for forming a coating on a conductive substrate, including the steps of: establishing a fluidised-bed of a powder coating composition, thereby effecting tribostatic charging of the powder coating composition, the fluidised-bed including a fluidising chamber at least a part of which is conductive, applying a voltage to the conductive part of the fluidising chamber, immersing the substrate wholly or partly in the fluidised bed, whereby charged particles of the powder coating composition adhere to the substrate, the substrate being either electrically isolated or earthed, withdrawing the substrate from the fluidised-bed and forming the adherent particles into a continuous coating over at least part of the substrate. The process offers advantages in terms of coating substrate areas which, because of the Faraday cage effect, are inaccessible in conventional electrostatic powder coating processes, and also enables the formation of thinner coatings than are obtainable by conventional fluidised-bed processes. Further advantages include uniformity and speed of coating.



WO 02/098577 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.