

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
3 May 2007 (03.05.2007)

PCT

(10) International Publication Number
WO 2007/048825 A3

(51) International Patent Classification:
A61L 31/08 (2006.01)

(21) International Application Number:
PCT/EP2006/067825

(22) International Filing Date: 26 October 2006 (26.10.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
MO 2005 A 000283
28 October 2005 (28.10.2005) IT

(71) Applicant (for all designated States except US): **I.B.S. INTERNATIONAL BIOMEDICAL SYSTEMS S.P.A.** [IT/IT]; Via San Nicolò, 14, I-34121 Trieste (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MARESTA, Aleardo** [IT/IT]; Via Ravennana, 435, I-48100 Ravenna (IT). **RAVAGLIOLI, Antonio** [IT/IT]; Via Don Minzoni, 7/1, I-48018 Faenza (IT).

(74) Agents: **BORSANO, Corrado** et al.; Corso di Porta Vittoria 9, I-20122 Milan (IT).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

— with international search report

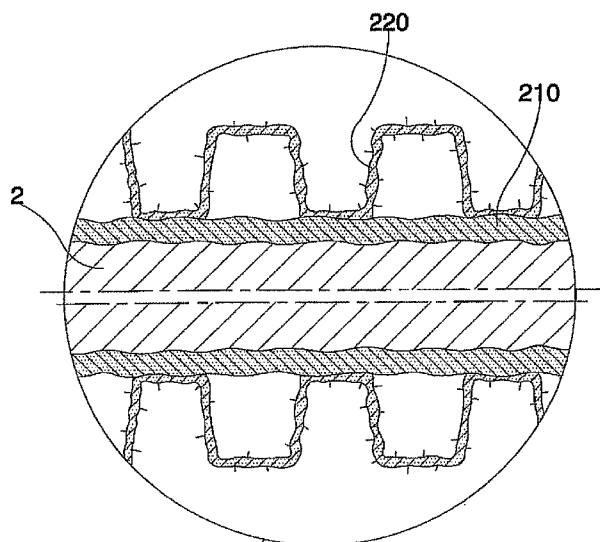
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

11 October 2007

[Continued on next page]

(54) Title: A METHOD FOR PRODUCTION OF A COATED ENDOVASCULAR DEVICE



(57) Abstract: A method of coating a endovascular device that includes coating of a tubular body's surface by at least a thin layer (s) of an inert and biocompatible titanium based material. This method is performed by the following steps in succession: Deposition of a first Titanium layer (21). First nitrogen treatment of said first titanium layer (21) by transmission of high ionic currents on the substrate (Closed Field UnBalanced Magnetron Sputter Ion Plating) to obtain the transformation of at least a part of said first titanium layer (21) in a first layer of titanium nitride ceramic coating (210). Deposition on this said first layer of titanium nitride ceramic coating (210) of a second titanium layer (22). Second nitrogen treatment of said second titanium layer (22) by transmission of high ionic currents on the substrate (Closed Field UnBalanced Magnetron Sputter Ion Plating) to obtain the transformation of at least a part of said second titanium layer (22) in a second layer of titanium nitride ceramic coating (220).

WO 2007/048825 A3



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.