

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
28 September 2017 (28.09.2017)



(10) International Publication Number
WO 2017/164879 A8

(51) International Patent Classification:
H05B 6/64 (2006.01) *H05B 6/78* (2006.01)
H05B 6/68 (2006.01)

(21) International Application Number:
PCT/US2016/024025

(22) International Filing Date:
24 March 2016 (24.03.2016)

(25) Filing Language: English

(26) Publication Language: English

(72) Inventors; and

(71) Applicants: **DRUGA, Michael, Conley** [US/US]; 3436 Falls River Avenue, Raleigh, NC 27614 (US). **CORONEL, Pablo, Marcelo** [EC/US]; 2000 Jerimouth Dr., Apex, NC 27502 (US). **CHAPMAN, Steven, Lawrence** [US/US]; 6912 Rex Road, Holly Springs, NC 27540 (US). **KENNER,**

Thomas, Henry [US/US]; 310 Easton Ext., Asheboro, NC 27205 (US).

(74) Agent: **KOWALCHYK, Katherine, M.**; Merchant & Gould P.C., P.O. Box 2903, Minneapolis, MN 55402-0903 (US).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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,

(54) Title: MULTI-ZONE PROCESSING SYSTEM FOR APPLYING ELECTROMAGNETIC ENERGY

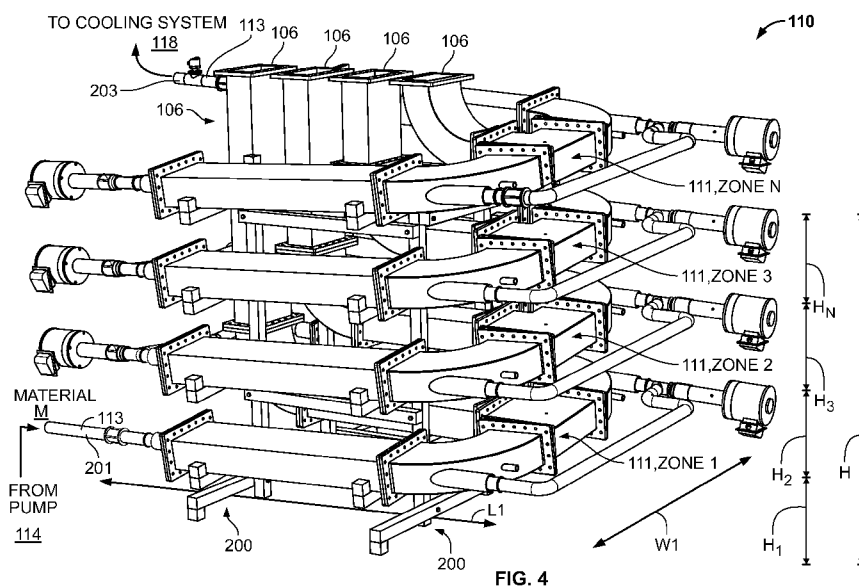


FIG. 4

(57) Abstract: A material processing system for applying electromagnetic energy to a material includes an energy generating system including a plurality of generators. The material processing system also includes a multi-zone applicator for applying the electromagnetic energy from the generators to a material. A control system is also disclosed that controls the generators and measures material temperatures in the multi-zone application in order to obtain a defined temperature profile for the material.

GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

(48) Date of publication of this corrected version:

31 May 2018 (31.05.2018)

(15) Information about Correction:

see Notice of 31 May 2018 (31.05.2018)