(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
12 March 2009 (12.03.2009)

PCT

(10) International Publication Number
WO 2009/030647 A1

(51) International Patent Classification:
C08F 10/02 (2006.01) *C08L 23/06* (2006.01)
C08F 2/00 (2006.01)

(21) International Application Number:
PCT/EP2008/061372

(22) International Filing Date: 29 August 2008 (29.08.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
07253486.0 3 September 2007 (03.09.2007) EP

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(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, BR, BW, BY, BZ, CA, CH, 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, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, 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, ST, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
— *of inventorship (Rule 4.17(iv))*

Published:
— *with international search report*

(54) Title: SLURRY PHASE POLYMERISATION PROCESS

(57) Abstract: Process for producing a multimodal polyethylene in at least two loop reactors connected in series, in which 20-80wt% of a high molecular weight (HMW) polymer is made in suspension in a first reactor and 20-80wt% of a low molecular weight (LMW) polymer is made in suspension in a second reactor, one polymer being made in the presence of the other in either order, wherein the ratio of the average activity in the LMW reactor to the average activity in the HMW reactor is from 0.25 and 1.5, where average activity in each reactor is defined as the rate of polyethylene produced in the reactor (kgPE/hr) / [ethylene concentration in the reactor (mol%) x residence time in the reactor (hours) x feed rate of catalyst into the reactor (g/hr)], residence time being defined as the mass of the polymer in the reactor (kg)/the output rate of polymer from the reactor (kg/hr), and the volumes of the two reactors differ by less than 10%.

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