

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau



(10) International Publication Number
WO 2011/145086 A8

(43) International Publication Date
24 November 2011 (24.11.2011)

(51) International Patent Classification:
C10G 21/02 (2006.01) *C10G 53/06* (2006.01)

[ID/ID]; Desa Kayen RT 03 RW 43, Depok Sleman, DI Yogyakarta 55283 (ID).

(21) International Application Number:
PCT/ID2011/000001

(74) Agent: -HANDAYANI, Rahajeng; SS&R Legal Consultants, Ariobimo Sentral, 4th & Mezzanine Floor, Jl. H.R. Rasuna Said Kav. X-2 No. 5, Jakarta 12950 (ID).

(22) International Filing Date:
25 April 2011 (25.04.2011)

(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, 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, 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, PE, PG, PH, PL, PT, RO, RS, RU, 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.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
P00201000338 17 May 2010 (17.05.2010) ID

(71) Applicants (for all designated States except US): **PT PERTAMINA (PERSERO)** [ID/ID]; Jl Medan Merdeka Timur No. 1A, Jakarta 10110 (ID). **PT PURA BARUTAMA** [ID/ID]; Jl. Agil Kusumadya No. 203, Kudus 59346, Jawa Tengah (ID).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MELIANA, Yana** [ID/ID]; Komplek Era Mas 2000, Blok B VIII No. 30, Jakarta 13950 (ID). **SUPRIYANTINI, Nunik** [ID/ID]; Boulevard Hijau Blok A2, No. 33, Cluster Adenium, Kota Harapan Indah, Bekasi Barat 17132 (ID). **TUNDANG, Joseph** [ID/ID]; Jalan Sinabung I/9, Kebayoran Baru, Jakarta 12120 (ID). **SUDIYATMOKO, Bambang**

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: PROCESS TO PRODUCE PROCESS OIL WITH LOW POLYAROMATIC HYDROCARBON CONTENT

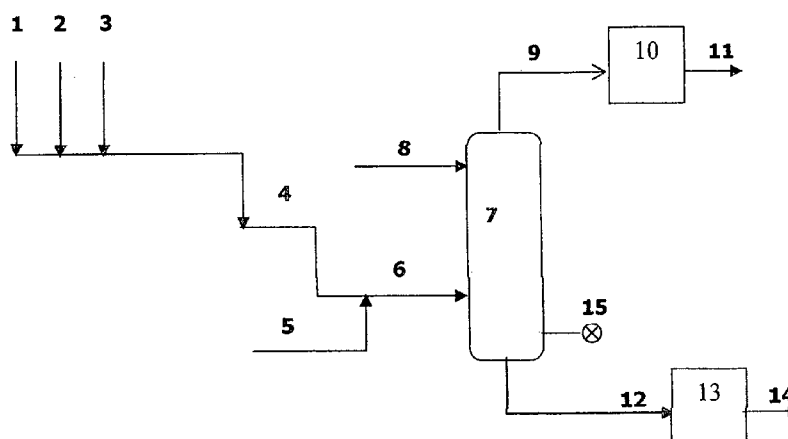


Figure 1.

(57) Abstract: Process for TDAE-1 and TDAE-2 production is initiated with production of DAE Feeds which have kinematic viscosity at 100°C ranges 24-67 cSt, followed by mixing them with solvent to yield Mixture of DAE Feed with density ranges 0.75-0.85 kg/liter and further contacting the Mixture of DAE Feed with solvent, like furfural, NMP and DMSO to facilitate a counter current liquid-liquid extraction, wherein the TDAE-1 and TDAE-2 are produced at ratio of polar solvent to Mixture of DAE Feed ranges 1.7-2.0 and 0.5-1.7, respectively. The PCA content of TDAE-1 and TDAE-2 are less than 3% weight and 3-20% weight. The amount of 8 Grimmer polyaromatics hydrocarbon content in the TDAE-1 and TDAE-2 are the same, that is, less than 10 mg/kg including Benzo (a) pyrene substance as much as less than 1 mg/kg.

**Declarations under Rule 4.17:**

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*
- *of inventorship (Rule 4.17(iv))*

Published:

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

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

28 June 2012

Date of publication of the revised international search report:

16 August 2012

(48) Date of publication of this corrected version:

13 December 2012

(15) Information about Corrections:

see Notice of 13 December 2012

Previous Correction:

see Notice of 16 August 2012