

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
16 September 2021 (16.09.2021)



(10) International Publication Number
WO 2021/180808 A1

- (51) **International Patent Classification:**
C10G 3/00 (2006.01) C10G 65/02 (2006.01)
- (21) **International Application Number:**
PCT/EP2021/056088
- (22) **International Filing Date:**
10 March 2021 (10.03.2021)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
20162755.1 12 March 2020 (12.03.2020) 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, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN,
KP, KR, KW, 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, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

- (84) **Designated States** (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
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).

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- 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))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE

(54) **Title:** COST EFFECTIVE DEOXYGENATION PROCESS WITH GAS RECYCLE

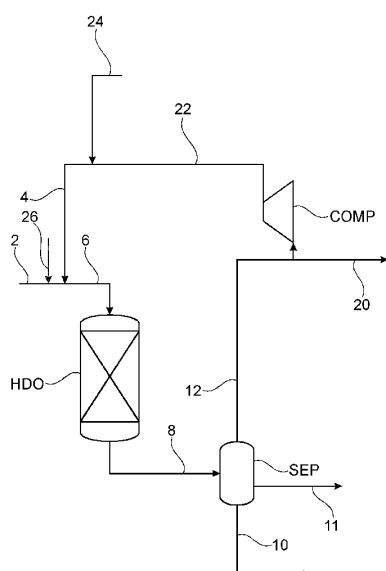


Fig. 1

(57) **Abstract:** The present disclosure relate to a process plant and a method for production of a hydrocarbon mixture from a feedstock stream comprising oxygenates and a make-up hydrogen gas stream, involving directing a feed stream, comprising the feedstock stream comprising oxygenates, the make-up hydrogen gas stream and a hydrogen rich gasstream, to contact a material catalytically active in deoxygenation under active deoxygenation conditions and withdrawing a deoxygenated product stream, characterized in the hydrogen rich gas stream comprising at least 70 vol% hydrogen, at least 0.1 vol% carbon oxides and at least 50 ppmvol H₂S, with the associated benefit that such a method, where carbon oxides are allowed to be present may be realized without requiring a step of purifying said recycled hydrogen rich gas stream, e.g. by use of an amine wash.

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