

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
12 May 2005 (12.05.2005)

PCT

(10) International Publication Number
WO 2005/042672 A1

(51) International Patent Classification⁷: **C10G 31/11**,
C07C 7/144

(21) International Application Number:
PCT/EP2004/052754

(22) International Filing Date:
2 November 2004 (02.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03256952.7 4 November 2003 (04.11.2003) EP

(71) Applicant (for all designated States except US): **SHELL
INTERNATIONALE RESEARCH MAATSCHAPPIJ
B.V.** [NL/NL]; Carel van Bylandtlaan 30, NL-2596 HR
The Hague (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MILLINGTON,
Christopher Russell** [GB/GB]; Pool lane, Ince, Chester
Cheshire CH2 4NU (GB). **NIJMEIJER, Arian** [NL/NL];
Badhuisweg 3, NL-1031 CM Amsterdam (NL).

(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, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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, LU, 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).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: PROCESS FOR UPGRADING A LIQUID HYDROCARBON STREAM WITH A NON-POROUS OR NANO-FIL-
TRATION MEMBRANE

(57) Abstract: The invention provides a process for upgrading a liquid hydrocarbon transportation fuel, wherein an inlet stream of liquid hydrocarbon transportation fuel, preferably diesel or gasoline base fuel is contacted with a non-porous or nano-filtration membrane and a first liquid hydrocarbon outlet stream is recovered as the retentate and a second liquid hydrocarbon outlet stream is recovered as the permeate, wherein the retentate is more than 70 weight % of the inlet stream, and wherein the inlet stream and the first and the second outlet stream each fulfil the requirements for base fuel without further treatment.



WO 2005/042672 A1