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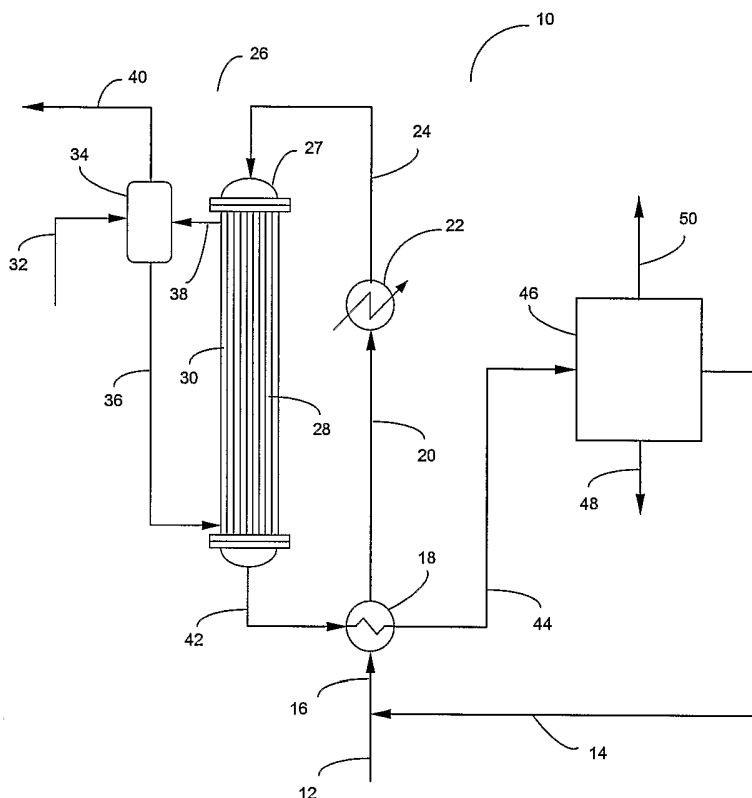
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[Continued on next page]

(54) Title: HYDROCARBON COMPOSITIONS USEFUL FOR PRODUCING FUELS

(57) Abstract: A hydrocarbon composition comprises at least 90 wt.% of C₉ to C₂₀ non-normal olefins, non-normal saturates or combinations thereof based on the weight of the hydrocarbon composition, at least 2 wt.% and not greater than 25 wt.% of C₉ hydrocarbons based on the weight of the hydrocarbon composition, and less than 15 wt.% of C₁₇₊ hydrocarbons based on the weight of the hydrocarbon composition, wherein said hydrocarbon composition has a specific gravity at 15°C of at least 0.730 and less than 0.775. The composition is produced by oligomerization of at least one C₃ to C₈ olefin and an olefinic recycle stream rich in C₉-hydrocarbons. The composition is useful in producing fuel blends, such as jet fuel and diesel fuel.



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European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/004876

A. CLASSIFICATION OF SUBJECT MATTER
INV. C10L1/08 C10G50/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C10L C10G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 89/08090 A (MOBIL OIL CORPORATION) 8 September 1989 (1989-09-08) page 2, line 13 - line 15 page 3, line 7 - line 8 page 7, line 9 - line 10; claims 1,4; figures 1,2	14-16, 20-36
A	----- WO 02/04575 A (SASOL TECHNOLOGY LTD; DU TOIT, FRANCOIS, BENJAMIN) 17 January 2002 (2002-01-17) claims 1,7,11,12	1-13
X	page 12, line 28 - line 29 examples 1,2 ----- -/--	31-36

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/004876

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 03/104361 A (SASOL TECHNOLOGY LTD; MYBURGH, IAN, STRADLING; SCHABERG, PAUL, WERNER) 18 December 2003 (2003-12-18)	1-13
X	claims 1-8,11-14 tables 1-3	31-36
X	----- US 4 855 524 A (HARANDI ET AL) 8 August 1989 (1989-08-08) cited in the application column 12, line 15 - column 17, line 60; claims 1-3; figure 4	14-30
X	----- US 4 919 896 A (HARANDI ET AL) 24 April 1990 (1990-04-24) claim 1; figure 1	14-16, 20-30
X	----- US 4 879 428 A (HARANDI ET AL) 7 November 1989 (1989-11-07) cited in the application column 3, line 39 - line 50 column 4, line 45 - column 5, line 15 column 8, line 21 - line 22; claims 1,4; figure 2	17-30
X	----- US 4 720 600 A (BEECH, JR. ET AL) 19 January 1988 (1988-01-19) column 2, line 58 - column 4, line 51; claim 1; figure 1	17-30

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2006/004876

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-13, 31-36

a hydrocarbon composition

2. claims: 14-16 an dependent Claims 15, 16 and 20-30 relating to Claim 14

a method for producing a hydrocarbon composition

3. claims: independent Claim 17 and dependent Claims 18-30 relating to Claim 17

a method for producing a hydrocarbon composition

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/004876

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