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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))

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(54) Title: ADDITIVE USEFUL FOR STABILIZING CRUDE OIL

(57) Abstract: Crude oils, especially heavy crude oils that are subject to instability on storage or during transportation can be treated with additives in order to stabilize the crude oil in regard to precipitating contaminants such as asphaltenes. Alkylphenol resins with at least a second component selected from the group consisting of a fatty acid amides, mannich resins and mixtures thereof are effective additives for stabilizing crude oils.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/079013**A. CLASSIFICATION OF SUBJECT MATTER***C10L 1/183(2006.01)i, C10L 1/224(2006.01)i, C07C 39/06(2006.01)i, C07C 233/01(2006.01)i, C10M 159/16(2006.01)i*

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)

IPC C10L 1/183, C10L 1/224, C07C 39/06, C07C 233/01, C01M 159/16

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 practicable, search terms used)

eKIPASS (KIPO internal) "additive & crude oil & alkylphenol resindewax & fatty acid amide & mannich resin and similar tems "

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,12,0678 A(STEPHEN et al.)19.SEP.2000 See the whole document	1-5,16-20
Y	See the whole document	6-15
X	US 6,914,036 B2(SPLADING) 05.JUL.2005 See the abstract, column 2 line 48~ column 6 line 59, EXAMPLES, whole claims	1-5,16-20
Y	See the abstract, column 2 line 48~ column 6 line 59, EXAMPLES, whole claims	6-15
Y	US 6,176,886 B1(LOPER et al.)23.JAN.2001 See the whole document	1-20

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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"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

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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