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(54) Title: THICKENER COMPOSITION

(57) Abstract: The present invention relates to a thickener system which is suitable for preparing a thickener composition and consists of (A) at least one anionic surfactant A and (B) at least one polymer B which comprises at least one hydrophobic group and at least one hydrophilic group, the concentration of the polymer B in the thickener composition being below the overlap concentration c^* of the polymer, to the use of an inventive thickener system for preparing a thickener composition, to a thickener composition comprising an inventive thickener system and to the use of inventive thickener compositions.



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INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2007/063012

A. CLASSIFICATION OF SUBJECT MATTER

INV. C09K8/035 C09K8/00 C09K3/00 C04B24/00 C11D1/00

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)

C09K C04B C11D

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)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 432 881 A (EVANI SYAMALARAO [US]) 21 February 1984 (1984-02-21) column 3, lines 18-23,55-65 column 7, lines 2-25,55-59 column 8, lines 5-35	1,7,8,14
Y	the whole document	2-6,9-13
X	US 2005/065038 A1 (WEAVER JIMMIE D [US] ET AL) 24 March 2005 (2005-03-24) the whole document	1,7,8,14
Y		2-6,9-13
X	GB 2 383 355 A (SCHLUMBERGER HOLDINGS [VG]) 25 June 2003 (2003-06-25) pages 4,8	1,7,8,14
Y	the whole document	2-6,9-13
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☒ 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

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.

Z document member of the same patent family

Date of the actual completion of the international search

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04/02/2009

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 2007/141731 A (SCHLUMBERGER CA LTD [CA]; SCHLUMBERGER SERVICES PETROL [FR]; SCHLUMBER) 13 December 2007 (2007-12-13) the whole document -----	1,7,8,14
E	WO 2008/065172 A (BASF SE [DE]; STEINBRENNER ULRICH [DE]; OETTER GUENTER [DE]; OSSMER UW) 5 June 2008 (2008-06-05) the whole document -----	1-14

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2007/063012

Box No. 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 No. 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 allsearchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
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.:

1-14

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ 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: 1-14

Thickener system and composition comprising at least one anionic surfactant and at least one polymer which comprises at least one hydrophilic and one hydrophobic group. The concentration of the polymer in the thickener composition is below c*.

Use of thickener system to prepare thickener composition.
Process of preparing thickener composition.

2. claims: 15, 21

The use of a thickener composition according to claim 13 in the development and/or exploitation of underground mineral oil and/or natural gas deposits.

3. claim: 16

The use of a thickener composition according to claim 13 in washing and cleaning compositions.

4. claim: 17

The use of a thickener composition according to claim 13 in formulations for the treatment of leather and textiles.

5. claim: 18

The use of a thickener composition according to claim 13 in hydraulic fluids.

6. claim: 19

The use of a thickener composition according to claim 13 in aqueous compositions for the treatment of surfaces.

7. claim: 20

The use of a thickener composition according to claim 13 in formulations which are used in structural and civil engineering.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4432881	A	21-02-1984	AU 553081 B2	03-07-1986
			AU 7990682 A	12-08-1982
			BR 8200657 A	14-12-1982
			CA 1171188 A1	17-07-1984
			DE 3276437 D1	02-07-1987
			EG 15906 A	30-04-1987
			EP 0057875 A2	18-08-1982
			IN 156183 A1	01-06-1985
			JP 1577040 C	24-08-1990
			JP 2003435 B	23-01-1990
			JP 57155280 A	25-09-1982
			MX 159228 A	08-05-1989
			NO 820350 A	09-08-1982
			NZ 199574 A	31-07-1985
			OA 7011 A	31-03-1983
			PH 20903 A	27-05-1987
			ZA 8200686 A	28-09-1983
US 2005065038	A1	24-03-2005	NONE	
GB 2383355	A	25-06-2003	AU 2002356310 A1	15-07-2003
			CA 2471340 A1	10-07-2003
			CN 1608168 A	20-04-2005
			EP 1456503 A1	15-09-2004
			WO 03056130 A1	10-07-2003
			MX PA04006187 A	19-04-2005
			US 2005107503 A1	19-05-2005
WO 2007141731	A	13-12-2007	US 2007281869 A1	06-12-2007
WO 2008065172	A	05-06-2008	NONE	